

UNITED STATES BUREAU OF EDUCATION

BULLETIN, 1909: NO. 4

WHOLE NUMBER 404

## THE TEACHING STAFF OF SECONDARY SCHOOLS IN THE UNITED STATES

AMOUNT OF EDUCATION  
LENGTH OF EXPERIENCE  
SALARIES

By EDWARD L. THORNDIKE  
TEACHERS COLLEGE  
COLUMBIA UNIVERSITY



WASHINGTON  
GOVERNMENT PRINTING OFFICE

1909

## CONTENTS.

	Page.
LETTER OF TRANSMITTAL.....	5
Introduction.....	7
I. The nature of the data and sources of error.....	7
Errors in the amount of education reported.....	10
Errors in length of experience.....	12
II. The teaching staff of public secondary schools.....	13
Salaries.....	13
Education.....	14
Experience in teaching.....	15
III. The teaching staff of private secondary schools.....	18
Salaries.....	18
Education.....	19
Experience in teaching.....	19
IV. Men teachers and women teachers compared.....	20
V. Tabular summary.....	22
VI. Public and private secondary school teachers compared.....	23
VII. The influence of length of experience upon efficiency in teaching.....	25
VIII. The relation of length of experience to amount of salary in certain community groups.....	29
IX. The relation of length of experience and of length of education to amount of salary in Ohio, Illinois, Wisconsin, Georgia, Texas, and California.....	39
List of references on teachers' salaries.....	53
INDEX.....	59

## LETTER OF TRANSMITTAL.

DEPARTMENT OF THE INTERIOR,  
BUREAU OF EDUCATION,

Washington, March 22, 1909.

SIR: In pursuance of the recommendation of Prof. Edward L. Thorndike, of Columbia University, who, at my request, has assisted this office in the rearrangement of its statistical schedules, the plan has been adopted of separating the regular statistical inquiries of the Bureau of Education into two divisions. The inquiries of the first division are made annually as heretofore, and are published in the Annual Report of the Commissioner of Education. Those of the second division are arranged in a series of five, one of them to be conducted each year, and the five-year cycle to be repeated in each successive five-year period; the results of the inquiries of this second division to be reported in various issues of the Bulletin of the Bureau of Education.

According to the present plan the inquiries of this cycle will be made as follows:

First year, the teaching force.

Second year, the body of learners ("pupils" and "students").

Third year, the curriculum.

Fourth year, the fiscal side of educational administration.

Fifth year, special education.

The manuscript which I have the honor to transmit herewith is the first of these special reports in the five-year series. It presents a variety of significant facts with reference to the education, experience, and salaries of teachers in our secondary schools. It seems clear that such facts, which have not been so fully presented in any former publication, will be of use in many ways to the authorities in charge of our educational systems and to that general public on whose opinion our systems of education must rest. I have the honor to recommend, accordingly, that it be published as one number of the Bulletin of the Bureau of Education for the current year.

Very respectfully,

ELMER ELLSWORTH BROWN,  
*Commissioner.*

The SECRETARY OF THE INTERIOR.

# THE TEACHING STAFF OF SECONDARY SCHOOLS IN THE UNITED STATES.

## INTRODUCTION.

This bulletin reports facts concerning the salaries, the amount of education, and the amount of experience in teaching of men and of women in public and in private secondary schools in the United States. It shows the typical condition and the variations from it of each fact for each group, and makes certain obvious comparisons between the groups. The author has attempted also to answer the important but somewhat intricate questions concerning the relation of education, experience in teaching, and personal gifts to financial recompense and to efficiency in teaching, of which they are, under certain conditions, a measure.

The types and variations in respect to salary, extent of education, and length of experience in teaching are estimated, for the country as a whole, from the data for approximately five thousand teachers, who were chosen so as to represent impartially the entire teaching staff in each of the groups. They may be easily calculated for the men and women teachers in public high schools of several States separately from data given in Section IX. The relations of education and experience in teaching to salary are estimated for several States and other significant local units separately. Differences in the cost of living and in other economic conditions make any estimates of these relations for the whole country too ambiguous to be of service.

### I.—THE NATURE OF THE DATA AND THE SOURCES OF ERROR.

The data obtained from secondary schools concerning the status of their teachers came in response to the blank reprinted below. The data were not furnished at all in the case of some few public schools and many private schools. They were incomplete in still other cases, the optional list of individualized facts naturally being omitted as a general rule by the very large high schools.

There is probably a tendency on the part of those private schools which are below the standard in their locality in respect to the salaries and preparation of their staff, to withhold the data more frequently than is done by those which are above the standard. I should, in fact, consider that to estimate for private secondary schools as a whole from the selected group that do report, it would be proper to figure the non-reporting institutions as about 10 per cent lower than those reporting, in salaries and in the length of education of the staff.

## THE TEACHING STAFF OF SECONDARY SCHOOLS.

There is a tendency to include in the reports teachers of the elementary grades; but this error can be detected by means of certain facts reported in the general blank. The staff of the United States Bureau of Education eliminated such cases from the records.

*Special inquiry blank of the Bureau of Education.*

The information under "Special," in all probability, will not be asked for again for at least five years. It is therefore of the utmost importance that it be given in complete form and of course with great pains to attain perfect accuracy.

## SPECIAL.

Give below the number of teachers (including the principal) receiving in each the approximate annual salary indicated. In case of a private school state how many of each salary receive board and lodging in addition.

	Less than \$400.	\$400 to \$499.	\$500 to \$599.	\$600 to \$699.	\$700 to \$799.	\$800 to \$899.	\$900 to \$999.	\$1,000 to \$1,099.
Men.....								
Women.....								
Board and lodging.....								

	\$1,100 to \$1,199.	\$1,200 to \$1,299.	\$1,300 to \$1,399.	\$1,400 to \$1,499.	\$1,500 to \$1,599.	\$2,000 to \$2,499.	\$2,500 to \$2,999.	\$3,000 or more.
Men.....								
Women.....								
Board and lodging.....								

Give number of teachers (including the principal) who have had regular high school, normal, college, or other higher education beyond the elementary school extending over the periods indicated.

	Less than 1 year.	1 up to 2 years.	2 up to 4 years.	4 up to 6 years.	6 up to 8 years.	8 up to 9 years.	9 up to 10 years.	10 years or more.
Men.....								
Women.....								

Give number of teachers (including the principal) who have taught (previous to the year 1906-7) the number of years indicated.

	Less than 1 year.	1 year.	2 years.	3 years.	4 years.	5 years.	6 years.	7 years.
Men.....								
Women.....								
	8 years.	9 years.	10 to 14 years.	15 to 19 years.	20 to 24 years.	25 to 29 years.	30 to 34 years.	35 years or more.
Men.....								
Women.....								

**ALTERNATIVE FORM**

In lieu of the statistics asked for in the three special tables above, it would be more useful to the bureau to have the same information given in the form indicated in the table below. In column (A) give the name of the individual teacher; (B) sex; (C) salary per year in cash; (D) state whether or not board and lodging are included; (E) state the subjects which he, or she, teaches; (F) the number of years the teacher spent as a student in high school; (G) number of years as a student in a regular normal school, or other school of higher education beyond the high school; (H) years of teaching experience previous to this year.

The information given below will be treated as confidential with respect to the institution and individuals. In case the information requested be given in the following table, the summarized statistics asked for in the three special tables above may be omitted.

[illegible]

(Signature and title of officer making this report.)

(Post-office and street address.)

In the case of salary amounts there is the possibility, especially in the case of private schools in cities, that teachers who give only part of their time in return for the salary will be included without a note to that effect. This will, however, happen only rarely, for the institutions concerned will naturally protect themselves against any too low estimate of their salary schedule. Where some teachers receive much less than the general average for the school I have therefore been very cautious in including them. There are perhaps a very few such cases of part-time salaries included in the case of private schools in cities. On the other hand, there are counterbalancing cases of teachers in private schools who are required to give more time to the work for which the salary is paid than is the case in public high schools.

The inequality in the length of the school year for which the salary is given is not exactly a source of error, but is a factor which must be considered in interpreting the salary amounts, and particularly the variations toward very low amounts, which come largely from the Southern States.

It is not desirable to raise the salaries for school years of less than the standard length, for the reason that, after all, the salary as it stands is, in most cases, the teacher's income. We do not know that

he gets or can get a proportionate increase by utilizing the excess of leisure that he has. He probably very rarely does. It seems best, then, to omit any hypothetical correction of the data and to trust to the reader to remember that the average length of year for which the salaries stated are given is somewhat under the standard 180 school days, and also that some of the very low salaries are for short years. The length of year is not much below the standard, for the schools concerned are high schools, very few of which are situated in communities unable to support a full school year; and the very lowest salaries are often for a standard school year.

#### ERRORS IN THE AMOUNT OF EDUCATION REPORTED.

The reports on the amount of education are the least secure and unambiguous. There is, on the one hand, a tendency to neglect the definite request to include years in high school in the computation. A record of 4 years in high school and 4 years beyond high school in the alternative form will thus be sometimes counted in the "4 up to 6 years" column instead of the "8 years" column. There is also a tendency to misunderstand the meaning of "up to" as "up through," and thus to score 4 years in the "2 up to 4 years" column, 6 years in the "4 up to 6 years" column, and so on. The form of the blank was designed to give opportunity for properly counting parts of a year (as, for instance, attendance on summer sessions), but it would have been a less evil, perhaps, to have used the headings "1 year," "2 years," "3 years," "4 years," "5 years," and so on. There is, on the other hand, a tendency to estimate, as belonging to high-school education, years which should, by the customary definitions, count only as elementary education, and to estimate as collegiate education years which, by the customary definitions, should count only as secondary education. The alternative form gives a check upon the first two of these errors of the reporting officers in the many cases where it, as well as the upper part of the special form, is filled out.

In the cases where it is not filled out, usually cases of large schools, the internal evidence of the record or knowledge obtained from other sources can serve as a check. If, for instance, in a large Massachusetts high school we have a record like the following:

2 up to 4	4 up to 6	6 up to 8	8 up to 10	9
0	2	7	2	0

it is almost a certainty that the reporting officer put the sixes in the "4 up to 6" column, the eights in the "6 up to 8" column. For the completion of four years in high school and four years in college is so general amongst the teachers in Massachusetts high schools that the existence of a school of 11 teachers with only 2 of that degree of education is far less likely than the existence of error in the report.

In estimating the condition of the secondary school staff in general with respect to length of education from the returns of the present census I have, where both are given, taken the alternative form record in preference to the general distribution, have eliminated teachers in elementary grades, and have omitted from the calculation cases where it seemed highly probable that the reporting officer misunderstood the blanks; but I have not interfered with the reporting officer's judgment as to what constitutes elementary education or education in advance of it. If the undetected misunderstandings of the request to include high-school education and of the meaning of "up to" outweigh the overestimations of the length of teachers' education beyond a typical elementary school, the general results will rate the length of the education of secondary school-teachers too low. If the reverse is the case, they will rate it too high.

I have gone to the pains of measuring the influence of these combined opposite errors in the case of public high schools by a special inquiry sent to 1,000 individual teachers, the following letter and form being used:

DEPARTMENT OF THE INTERIOR,  
BUREAU OF EDUCATION,  
Washington,

DEAR SIR: In order to verify the accuracy of the records of this bureau concerning the high school teachers of the United States, there is need of a more detailed report from several hundred teachers.

Will you, accordingly, be so good as to answer the questions on the accompanying blank, returning the answers in the inclosed envelope at once. The facts as to your individual record will be held by this bureau as confidential information, only the summaries of returns being published.

Very respectfully,

ELMER ELLSWORTH BROWN,  
*Commissioner of Education.*

DEPARTMENT OF THE INTERIOR,  
BUREAU OF EDUCATION,  
WASHINGTON.

Name of teacher, .....

Post-office and street No. ....; State, .....

Give the following facts regarding your education and preparation for teaching in the schools named:

In elementary schools of—

(Give city or village and State.)

....., from 18... to .... (i. e., .... years).

....., from 18... to .... (i. e., .... years).



## THE TEACHING STAFF OF SECONDARY SCHOOLS.

In high schools of—

(Give city or village and State.)

....., from 18... to .... (i. e., .... years).

....., from 18... to .... (i. e., .... years).

In normal schools—

(Give name of institution and State.)

....., from 18... to .... (i. e., .... years).

....., from 18... to .... (i. e., .... years).

In colleges or universities—

(Give name of institution and State.)

....., from 18... to .... (i. e., .... years).

....., from 18... to .... (i. e., .... years).

Give the number of years you have taught in each of the several places, naming them below:

(Give city or village and State.)

....., from 18... to .... (i. e., .... years).

....., from 18... to .... (i. e., .... years).

....., from 18... to .... (i. e., .... years).

....., from 18... to .... (i. e., .... years).

Salary received for the—

First year, \$..... Sixth year, \$.....

Second year, \$..... Seventh year, \$.....

Third year, \$..... Eighth year, \$.....

Fourth year, \$..... Ninth year, \$.....

Fifth year, \$..... Tenth year, \$.....

The returns from this special inquiry show that in the case of public high schools neither of these errors of great magnitude in the original reports, and that they nearly counterbalance each other.

## ERRORS IN LENGTH OF EXPERIENCE.

The reports concerning length of experience in teaching are subject to five sources of error, one of which is important. These are: First, the tendency to report roughly, especially in round numbers; second, the tendency to avoid a statement of 0 years; third, the possible tendency of some women to reduce the number of years; fourth, the tendency of a school system to be generous in rating its staff for

amount of experience; and fifth, the tendency to report the number of years of experience in the present school system, instead of the total number. This last source of error is the important one, because its frequency and its amount of influence can not well be measured. For the other four, rational allowances can be made, so that no one of them does any harm of consequence. But the magnitude of the influence of the fifth, due to the misunderstandings of individuals or recording officers, can not be foretold. I have therefore gone to some pains to measure it with the help of the special inquiry described above.

The special inquiry shows that the error of reporting experience in the present school only is very rare in the case of the individualized returns, being made by only about one teacher in fifty. It is probably somewhat more frequent in the cases where the general table is made out by the school principal or secretary.

There is another tendency which is not really an error, except in view of the wording of the blank, and of the fact that in the presentation of the data it is desirable to estimate the length of experience up to the year in which the given salary is received. This is the tendency of a person whose career is, say, 1904-5, first year of teaching, salary \$500; 1905-6, second year of teaching, salary \$600; 1906-7, third year of teaching, salary \$725—to report, salary, \$725; experience, three years. This occurs in over a third of the cases.

If the reader will bear in mind the nature of the data, he will nowhere be misled by the summaries that follow. In cases where the conclusions are subject to any considerable influence from the above-mentioned sources of error in the original reports, the fact will be stated.

## II.—THE TEACHING STAFF OF PUBLIC SECONDARY SCHOOLS.

*Salaries.*—The salaries of men teachers in public high schools range from less than \$300 to \$3,500. If the principals of the schools are included the upper limit becomes \$5,000. There is no one salary that can properly be called typical in the sense of representing a tendency about which all the salaries cluster closely. If one were compelled to choose one amount as the most likely amount to be received by a teacher or principal (in the vast majority of our high schools the principal is a working teacher, giving much over half of his time to class instruction and class management), the amount would be \$700. Their median salary is \$900; that is, of the men engaged in public high-school work there are as many who receive less than \$900 as there are receiving more than \$900. Of a hundred such men 5 receive less than \$500, 51 receive from \$500 up to \$1,000, 27 from \$1,000 up to \$1,500, 10 from \$1,500 up to \$2,000, and 7 from \$2,000 up. Over half

(53 per cent) of them receive from \$600 to \$1,000, inclusive.<sup>a</sup> Figure 1 repeats these facts, and gives at a glance the general financial status of the men engaged in public high schools in the United States.

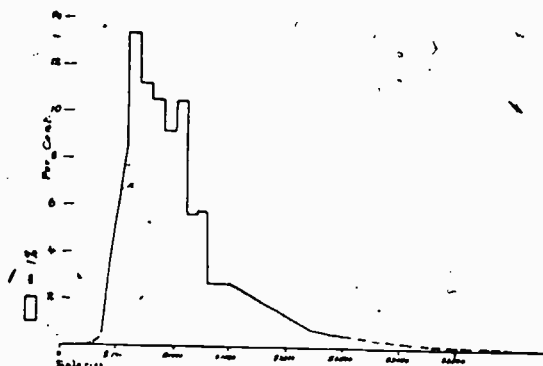


FIG. 1.—Relative frequencies of different annual salaries of men teachers in public high schools. The horizontal line is a scale of salary amounts from 0 up. The total area equals 100 per cent. The area inclosed between perpendiculars erected at any two points on this horizontal scale gives the frequency (in percentages) of salaries between the two amounts corresponding to the two points. The dash line is derived from estimates from too few cases to be very reliable.

The salaries of women engaged in public high-school work range from less than \$200 to the group \$2,500–\$2,999. As with the men, there is no one salary amount which is typical in the sense of representing a true central tendency; \$550 would be the most suitable choice if a choice had to be made. Nor would it be so misleading as the corresponding \$700 would be in the case of men; for half of the salaries are between \$400 and \$675, inclusive. The median salary is \$650. Of a hundred women 22 receive less than \$500, 59 from \$500 up to \$1,000, 14 from \$1,000 up to \$1,500, and 5, \$1,500 and over. Figure 2 summarizes the general financial status of women engaged in public high-school work.

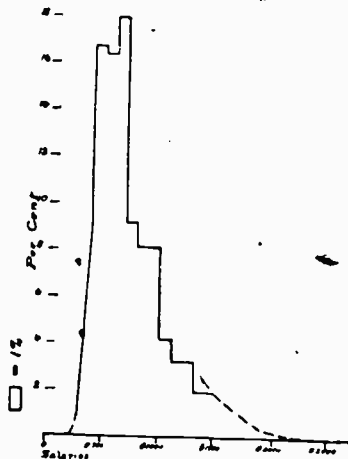


FIG. 2.—Relative frequencies of different annual salaries of women teachers in public high schools. For explanation of the diagram, see the legend of figure 1.

*The teachers' education.*—The number of years that the man engaged in secondary school work spent as a student in high school, normal school, college, or other institution beyond the elementary

<sup>a</sup> The \$1,000–\$1,099 group is composed, to about four-fifths of its membership, of salaries of exactly \$1,000.

school ranges from 0 to 13, or possibly higher in a few cases. There is no close adherence to any one type the country over, though 8 years is the most common length. The median length is 7 years. Of a hundred men 10 have had less than 4 years beyond the elementary school, 45 have had from 4 up to 8 years, 30 have had 8 years, and 15 have had 9 years or more. Three-fifths have had 6, 7, or 8 years. Figure 3 shows the facts.

The length of education beyond the elementary school in the case of women teachers ranges from 0 to 12 years, or possibly higher in a few cases. The typical condition is 8 years. There are somewhat more women who have had 8

years or more than those who have had 7 years or less. Of a hundred women, 6 or 7 have had less than 4 years beyond the elementary school, 40 or 41 have had from 4 up to 8 years, 41 to 42 have had 8 years, and 11 or 12 have had 9 years or more. Figure 4 shows the facts.

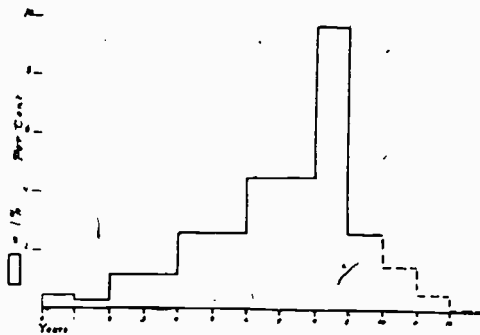


FIG. 3.—Relative frequencies of different amounts of education of men teachers in public high schools. The horizontal line is a scale of length of education beyond the elementary school (in years). The total area equals 100 per cent. The area enclosed between two perpendiculars erected at 0 and 1 gives the per cent of teachers reported with less than 1 year's education beyond the elementary school, and similarly for any other such area. The dash line is derived from estimates from too few cases to be entirely reliable.

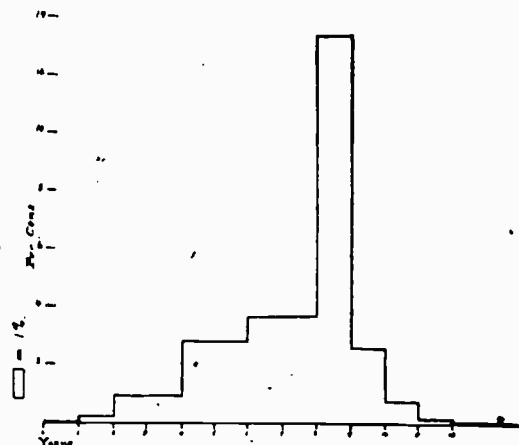


FIG. 4.—Relative frequencies of different amounts of education of women teachers in public high schools. For explanation of the diagram see the legend of figure 3.

*Experience in teaching.*—The amount of experience in teaching, previous to the year for which the salary was reported, as measured in years, ranges for the men from 0 to beyond 50, though there are

only about three in a hundred who have taught over 30 years. The inquiry for a typical length would, of course, be absurd. The median is probably 8 years. That is, as many public high-school men have taught over 9 years as have taught 7 years or less. Figure 5 gives the facts as reported concerning the amount of experience of the men

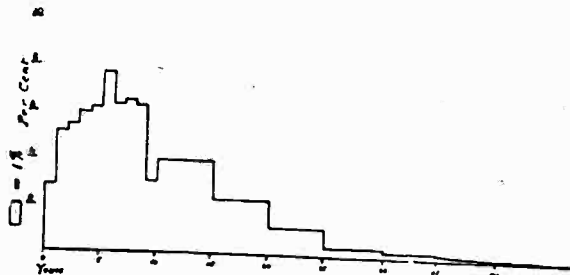


FIG. 5.—Relative frequencies of different amounts of experience in teaching of men teachers in public high schools (as reported). The horizontal line is a scale of length of experience (in years) from 0 up. The total area equals 100 per cent. The area inclosed between perpendiculars erected at any two points on the horizontal scale gives the approximate per cent of teachers reported with experience of the amounts included between those two points.

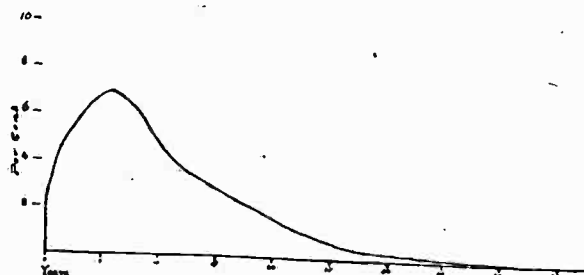


FIG. 6.—Same as figure 5, but corrected for overreports of 5 and 10 years and for the rough grouping above 10 years.

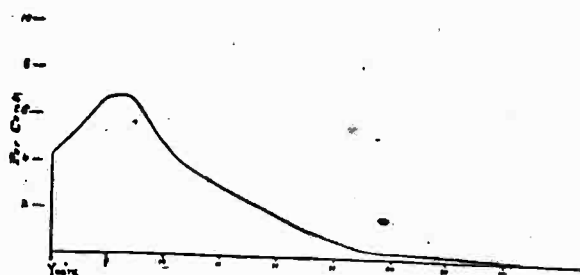


FIG. 7.—Same as figure 6, but corrected also for reports of experience in present position only and for the tendency to include the year for which the salary reported was received.

teachers and principals. Figure 6 gives the same facts corrected for the tendency to rough report and to overreport round numbers. Figure 7 gives an estimate corrected also for the tendency to report the length of experience in the present position, to report cases of

0 years inaccurately, and to include the year for which the salary reported was received.

The length of experience ranges, for women, from 0 years to beyond 50, with about two in a hundred who have taught over 30 years. The median is probably 6 years. That is, probably as many public

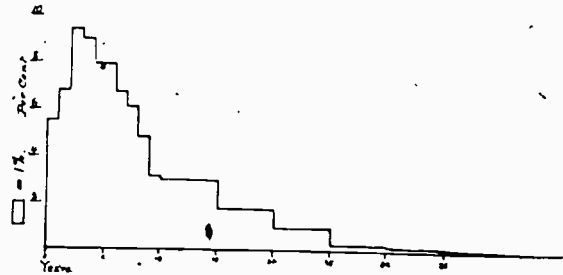


FIG. 8.—Relative frequencies of different amounts of experience in teaching of women teachers in public high schools (as reported). For explanation of the diagram see the legend of figure 5.

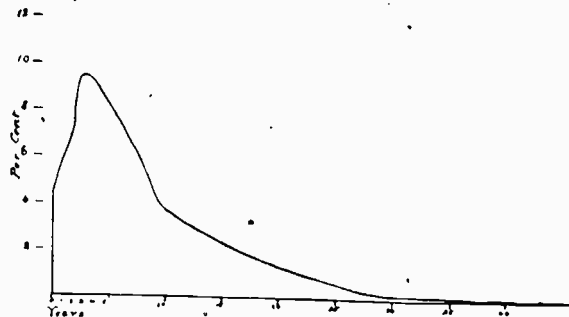


FIG. 9.—Same as figure 8, but corrected for overreports of 5 and 10 years and for the rough grouping above 10 years.

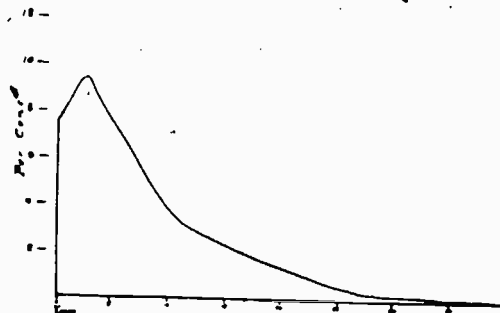


FIG. 10.—Same as figure 9, but corrected also for reports of experience in present position only and for the tendency to include the year for which the salary reported was received.

high-school women have taught 7 years or more as have taught 5 years or less. Figure 8 gives the facts as reported. Figures 9 and 10 correspond to figures 6 and 7, giving for women the same information that figures 6 and 7 give for men.

## III.—THE TEACHING STAFF OF PRIVATE SECONDARY SCHOOLS.

*Salaries.*—The salaries of men engaged in private secondary-school work range from less than \$300 (no provision of board or lodging being made by the school) to an unknown upper limit which

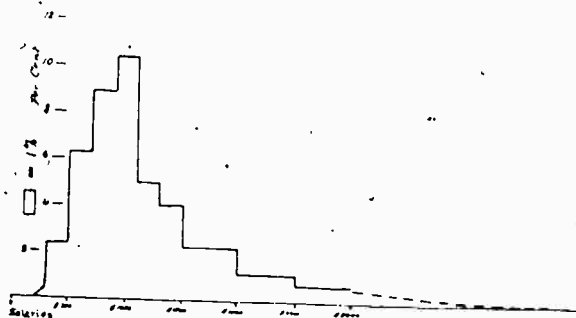


FIG. 11.—Relative frequencies of different annual salaries of men teachers in private secondary schools. For explanation of the diagram see the legend of figure 1.

is at least \$7,000.<sup>a</sup> Making an allowance, in those cases where board and lodging are provided as a part of the compensation, of from \$100 to \$500 according to the general probability of their value, the median salary is \$1,000. Of a hundred men, 4 or 5 receive less than \$500, 41 from \$500 up to \$1,000, 28 from \$1,000 up to \$1,500, 12 or 13 from \$1,500 up to \$2,000, and 13 or 14 from \$2,000 up. Figure 11 gives the financial status of this group.

The salaries of women engaged in private secondary-school work range from less than \$200<sup>b</sup> to an unknown

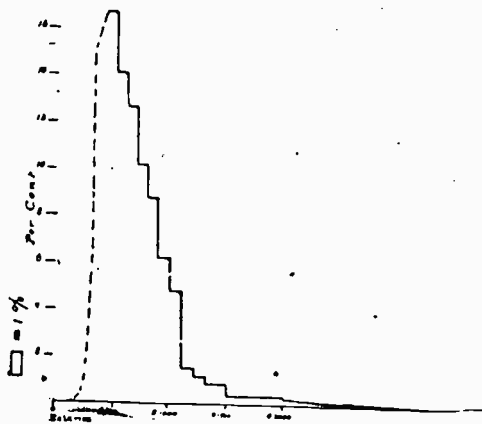


FIG. 12.—Relative frequencies of different annual salaries of women teachers in private secondary schools. For explanation of the diagram, see the legend of figure 1.

upper limit which is at least \$3,500. Making an allowance for the provision of board and lodging of from \$100 to \$500 according to their probable values, the median salary is \$600, or a trifle less.

<sup>a</sup> Teachers who are the owners of private schools in some of the large cities may in some cases exceed this figure by a considerable amount, but their income is then to be considered as a salary for educational services plus a profit from business sagacity and enterprise and risk.

<sup>b</sup> One of the private schools is reported as having 14 secondary and 38 elementary pupils with only one teacher, "but she teaches 12 hours out of every 24," teaching everything from "the fifth grade to Cleopatra." She is reported as having studied 3 years in a high school and 4 years beyond the high school, and as receiving no salary except board and lodging.

Of a hundred women 35 or 36 receive less than \$500, 52 from \$500 up to \$1,000, 9 or 10 from \$1,000 up to \$1,500, and 3 \$1,500 or over. Figure 12 shows the general facts of their financial status.

*The teacher's education.*—The length of education beyond the elementary school ranges in the case of private high-school men from 0

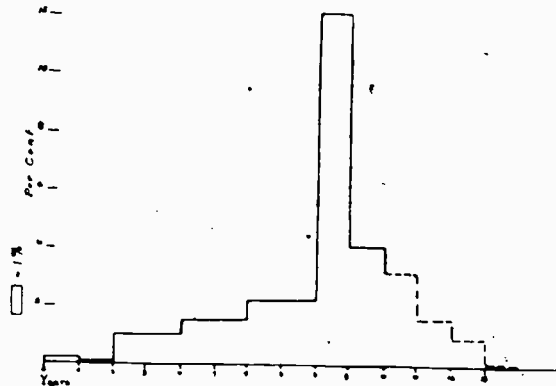


FIG. 13.—Relative frequencies of different amounts of education of men teachers in private secondary schools. For explanation of the diagram, see the legend of figure 3.

to 13 years or more; the typical length reported is 8 years, and the number reported with 8 years or more equals the number reported with 7 years or less. Of a hundred men, as reported, 7 or 8 have had less than 4 years, 24 have had from 4 up to 8 years, 37 or 38 have had 8 years, and 31 have had 9 years or more. Figure 13 shows the facts.

The length of education beyond the elementary school in the case of private high-school women ranges from 0 to 13 years. There is no

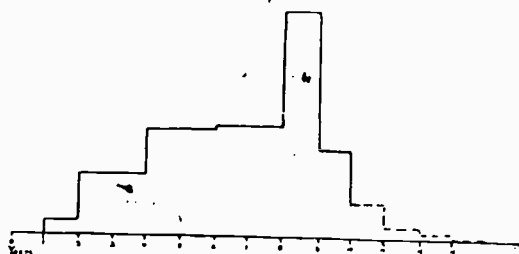


FIG. 14.—Relative frequencies of different amounts of education of women teachers in private secondary schools. For explanation of the diagram see the legend of figure 3.

clearly typical condition, 8 years being the most frequent, but 7 years being the median length. There are somewhat more women who have had 7 years or more than have had 6 years or less. Of a hundred women, 14 or 15 have had less than 4 years, 46 have had from 4 up to 8 years, 24 have had 8 years, and 15 or 16, 9 years or more. The facts are shown in figure 14.

*Experience in teaching.*—Of the private high-school men, about 4 per cent have taught 30 years or more. Probably as many have



taught 9 years or more as have taught less than 9 years. Figure 15 gives the facts as reported.

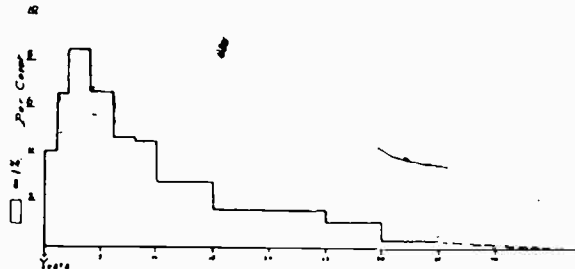


FIG. 15.—Relative frequencies of different amounts of experience in teaching of men teachers in private secondary schools. For explanation of the diagram see the legend of figure 5.

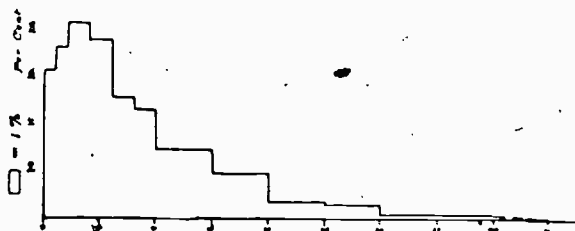


FIG. 16.—Relative frequencies of different amounts of experience in teaching of women teachers in private secondary schools. For explanation of the diagram see the legend of figure 5.

Of the private high-school women, only 2½ per cent have taught 30 years or more. Probably as many have taught 7 years or more as have taught less than 7 years. Figure 16 gives the facts as reported.

#### IV.—MEN TEACHERS AND WOMEN TEACHERS COMPARED.

Figures 17, 18, and 19 show the differences between men and women engaged in public secondary education with respect to salaries, amount of education, and amount of experience, as reported. That men are paid more is of course a familiar fact, but that they have less education as a preparation has been unnoticed, and that they remain in teaching so little longer than women is a fact which flatly contradicts common opinion. It is also to be noted that there is not so much difference in the pay for the same (or ostensibly the same) work as the average salaries usually quoted mislead one into believing. The average salaries are compounded in part of, and overinfluenced by, the few large salaries paid to heads of departments, principals, and those whom we may call "managing teachers," who, without official recognition in title, are expected to do the lion's share in the organization and control of the school. All these are

\* The influence of the sources of error described in Section I is so nearly the same for men and for women that the comparison may be made from the data as reported without risk of any error worth considering.

much more often men than women. Consequently, whereas in our group the average salary of a man is about 41 per cent greater than that of a woman, the median salary is 38.5 per cent greater, and the modal salary (that is, the most frequent or most typical salary) is only 33.3 per cent greater.

Only one-fifth of the women reach the median salary for a man; over five-ninths of the women have as long an education as has the

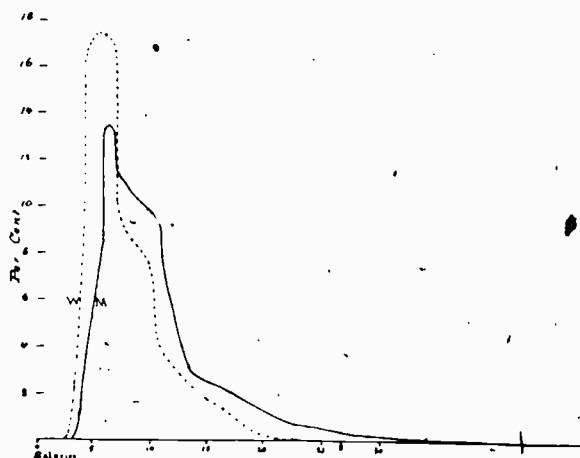


FIG. 17.—Men and women teachers in public high schools compared with respect to salaries. The continuous line incloses the surface of frequency for men's salaries. The dotted line incloses the surface of frequency for women's salaries. The horizontal scale gives the salaries in hundred of dollars.

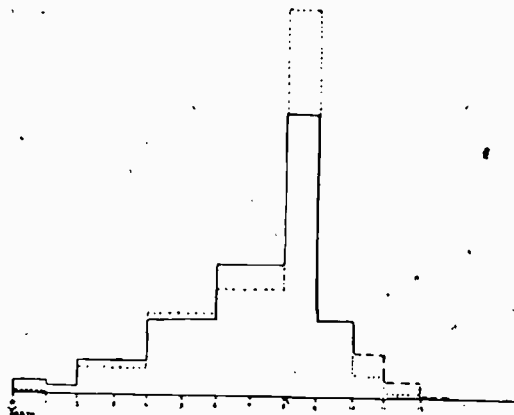


FIG. 18.—Men and women teachers in public high schools compared with respect to amount of education. The continuous line refers to men; the dotted line to women.

median man; not quite two-fifths of the women have taught as long as the median man. Or, turning the comparison the other way, about four-fifths of the men reach the median salary for a woman; two-fifths of the men have had as long an education as has the median woman; three-fifths of the men have taught as long as the median woman.

With the teachers in private secondary schools two of these relations are different. The difference in salary increases, only one-eighth of the women reaching the median salary for a man. The differ-

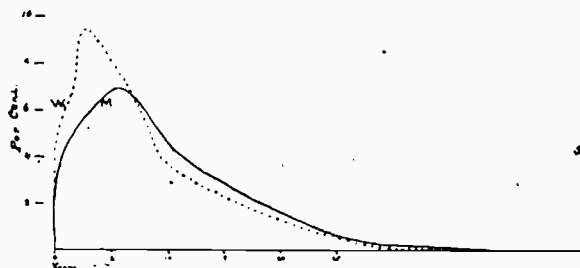


FIG. 19.—Men and women teachers in public high schools compared with respect to length of experience in teaching. The continuous line refers to men; the dotted line to women.

ence in education is reversed, only a fourth (27 per cent) of the women equalling or exceeding the median man. The comparison as to experience results as it does with the public high school teachers.

#### V.—TABULAR SUMMARY.

Tables 1, 2, and 3 summarize the data as reported for men and women teachers, in public and private secondary schools, with respect to salary, length of education beyond the elementary school, and length of teaching experience.

TABLE 1.—Relative frequencies of different annual salaries of secondary school-teachers (in percentages).

Each entry in the table gives the percentage of teachers of the class stated at the top of the column who receive the salary stated at the left of the entry.

Salaries.	Public schools.		Private schools.					
	Men.	Women.	Men (estimated). <sup>a</sup>	Women (estimated). <sup>a</sup>	Men, plus board and lodging (observed). <sup>b</sup>	Women, plus board and lodging (observed). <sup>b</sup>	Men, without board and lodging (observed). <sup>c</sup>	Women, without board and lodging (observed). <sup>c</sup>
Less than \$400.....	0.8	4.9	2.6	18.7	4.1	35.2	2.8	19.8
\$400 to \$499.....	3.9	16.7	2.1	16.7	8.7	16.7	2.3	15.8
\$500 to \$599.....	6.8	15.8	5.6	14.1	11.6	16.7	4.3	15.2
\$600 to \$699.....	13.4	17.9	6.9	12.7	18.6	10.7	7.3	12.6
\$700 to \$799.....	11.2	9.2	9.2	10.3	14.0	9.9	8.1	8.9
\$800 to \$899.....	10.5	7.4	8.6	8.6	8.7	3.4	6.8	9.5
\$900 to \$999.....	9.2	8.8	10.8	6.2	4.7	1.3	9.4	4.6
\$1,000 to \$1,099.....	10.5	4.2	10.0	4.8	9.9	2.1	10.6	6.3
\$1,100 to \$1,199.....	5.6	1.8	3.2	1.5	1.8	.5	2.5	2.7
\$1,200 to \$1,299.....	5.7	4.7	6.7	1.2	2.8	.4	6.3	1.2
\$1,300 to \$1,399.....	2.5	1.8	2.8	.9	.6		3.1	.7
\$1,400 to \$1,499.....	2.7	2.0	5.3	.8	1.8		6.8	.4
\$1,500 to \$1,999.....	10.0	4.7	12.7	1.9	8.7	.4	14.4	2.6
\$2,000 to \$2,499.....	4.2	.3	6.2	.9	1.8	2.6	6.3	.6
\$2,500 to \$2,999.....	2.0		3.7	.5	.6		4.8	
\$3,000 and over.....	1.4		3.5		1.8		4.1	

<sup>a</sup> The estimating concerned is the assignment of a probable cash value to board and lodging in those cases where they were received by the teacher in addition to his cash salary.

<sup>b</sup> These columns give the frequencies of different cash salaries for those teachers who received also board and lodging.

<sup>c</sup> These columns give the frequencies of different cash salaries for those teachers who did not receive any further compensation in the shape of board and lodging.

TABLE 2—Relative frequencies of different amounts of education of secondary school-teachers beyond an elementary school course (in percentages)

Years of education beyond elementary course.	Public schools.		Private schools.	
	Men.	Women.	Men.	Women.
Less than 1.....	1.6	0.1	0.6	0.0
1.....	.9	.6	.2	1.5
2 up to 4.....	7.6	5.8	6.5	13.0
4 up to 6.....	16.1	17.5	9.7	22.6
6 up to 8.....	28.5	22.9	14.1	23.4
8.....	30.2	41.4	37.8	24.0
9.....	8.2	8.1	12.8	9.4
10 or more.....	6.8	3.4	18.3	6.0

TABLE 3—Relative frequencies of different amounts of experience in teaching of secondary school-teachers (in percentages).

Years of teaching experience.	Public schools.		Private schools.	
	Men.	Women.	Men.	Women.
Less than 1.....	2.9	5.5	4.1	6.4
1.....	5.2	6.8	6.6	7.4
2.....	6.5	9.4	10.0	8.8
3.....	6.0	9.0	6.9	8.2
4.....	6.2	7.9	7.8	8.2
5.....	7.7	7.9	5.7	7.2
6.....	6.3	6.7	4.9	7.2
7.....	6.5	6.1	4.5	3.3
8.....	6.3	4.8	5.1	7.2
9.....	3.1	3.2	4.1	2.3
10 to 14.....	25.8	38.6	35.4	39.0
15 to 19.....	29.9	28.7	24.3	27.2
20 to 24.....	20.4	15.1	14.0	14.8
25 to 29.....	12.0	9.0	8.0	9.9
30 to 34.....	5.9	5.1	8.8	3.7
35 to 39.....	2.2	1.7	5.7	2.9
40 to 44.....	1.7	1.5	1.6	1.0
45 and over.....	1.4	.4	2.3	1.6

## VI.—PUBLIC AND PRIVATE SECONDARY SCHOOL TEACHERS COMPARED.

It is a well-known fact that public secondary education has been increasing more rapidly than private in respect to number of students, number of teachers, annual expenses, and the like. It is therefore of interest to compare the two with respect to the present condition of the teaching staff.

If the reports from public high schools in general and from private high schools in general are compared, one gets the following results: The public high-school men teachers are paid about a tenth less and have had, roughly, a half year less of education. The public high-school women teachers, on the contrary, are paid about a tenth more than the private high-school women, and have had, roughly, a year more of education. In length of experience there is no appreciable difference.

But such a comparison may be misleading, if taken at its face value, for two reasons. First, a much smaller proportion of the

private schools send the information, and, as already remarked, there are good reasons for believing that those which withhold it are not quite so well off in the pay they give to their teachers or the amount of education which their teachers have received as those which do report. That is, the figures of tables 1, 2, and 3 represent the condition of a superior<sup>a</sup> selection of the private schools. In the second place, the less well-paid and less well-trained teachers in the public high schools are found in the rural high schools with one or two teachers. In one sense it is fair to compare these schools with the private high schools and academies, as they are both cooperating in secondary education. In another sense it is not fair, because the private schools often require residence away from home at a distance. Under the same conditions the pupils of public high schools could attend a public high school much better equipped than the one-teacher or two-teacher schools in their immediate neighborhood. That is, to make the comparison by the general census perfectly fair, there should be private high schools distributed geographically in just the same fashion as the public high schools.

I have, therefore, made the comparison by taking public and private secondary schools where both exist in the same locality, asking, that is, the question, "In any one city, will the pupil who attends the local public secondary school be taught by a staff as well paid and as well educated as the pupil attending the local private secondary school?" Since the matter is not one of very great importance to educational welfare, I have measured the difference in only 19 cities. The fact in these is, with almost entire uniformity, that the staff of the public school is better paid. Whether each city is given a weight proportional to its size or is weighted like all the others, the general result is found that the public high-school man is paid at least 15 per cent more than the private high-school man, and the public high-school woman at least 30 per cent more than the private high-school woman. The facts appear in Table 4. The public high-school teachers in these cities have also had a more extended education, though in view of the influences described on pages 10-11 it is not possible to assign an exact percentage.

TABLE 4.—Relative frequencies of different salaries in public and private secondary schools in the same localities. Percentages estimated from 19 cities.

Salaries.	Men.		Women.	
	Public schools.	Private schools.	Public schools.	Private schools.
Less than \$800.....	0	1	1	10
\$800 to \$999.....	4	24	26	59
\$1,000 to \$1,499.....	24	22	49	27
\$1,500 to \$1,999.....	31	22	21	3
\$2,000 and over.....	31	21	3	2

<sup>a</sup> Or superior to a greater degree than in the case of public high schools.

## VII.—THE INFLUENCE OF LENGTH OF EXPERIENCE UPON EFFICIENCY IN TEACHING.

Among the most important of the measurements which students of education are trying to make are measurements of the extent to which natural capacity, academic training, professional courses of study, and actual experience contribute respectively to efficiency in teaching. The difficulty in measuring these relations consists, chiefly, in the absence of objective and reliable measures of efficiency in teaching.

The 1907 special data may be used to contribute to the study of this problem in the case of secondary school teachers in the following way: The private schools of a single community presumably give salaries in a fairly close proportion to what they judge to be efficiency in teaching—that is, approximately free competition obtains and the salary is to some extent a measure of the teacher's efficiency. The closeness of the approximations will depend upon the extent to which the authorities of these schools are governed by economic rather than sentimental or idealistic considerations in adjusting salaries and upon the extent to which their judgments of the efficiency of teachers are correct.

The differences in salary among teachers of the same sex in private secondary schools of the same community may then be taken as to some degree parallel to the differences in their teaching efficiency; and in so far as any two communities are alike in the cost of living and the attractiveness of life and in so far as there is competition between them for the services of teachers the two may be treated as one for the purposes of this inquiry.

The data available are rather meager, for the reasons stated in Section I, and to utilize what there are fully would require an enormous expenditure of time. I have therefore studied the relation of salary to length of experience amongst teachers in private secondary schools in only the following five cases:

Men's salaries: Private secondary schools for boys in New York City.

Men's salaries: Private secondary schools for boys in Boston, Worcester, and Philadelphia.

Women's salaries: Private secondary schools for girls in New York City.

Women's salaries: Private secondary schools for girls in Boston and Cincinnati.

Men's salaries: Private secondary schools for boys or boys and girls in towns of Massachusetts and Connecticut.\*

Making the comparisons separately for each of these groups and then measuring the general tendency of the fact in the five cases, we

\* In this case the towns are not alike in the cost of living, but as a rule the greater attractiveness of life in the more expensive towns is sufficient to make an approximate balance.

have the result shown in figure 20, which relates the amount of salary to the amount of experience in teaching. So far as the data go, they support the hypothesis that the full effect of experience in teaching on efficiency in the work of a private secondary school is reached in three years, the slight rise from twenty on being probably attributable to the higher wages for executive work as head of a department, or to the sentiment which leads private school authorities to maintain or increase salaries after long service, even though a more efficient person could be obtained for a less amount.

Unfortunately the private schools rarely sent the individualized data requisite for such a study, so that the measurement above made might undergo modifications of fairly large extent upon receipt of full information.

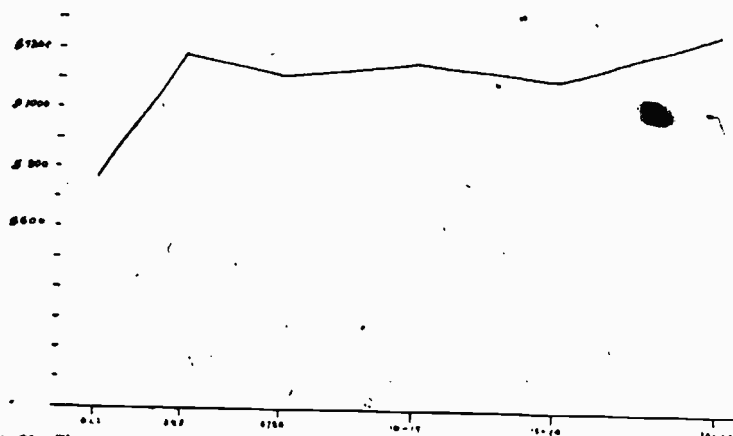


FIG. 20.—The relation of length of experience to salary in the case of the private school teachers of a single community or of several communities alike in the value of the dollar (to a teacher). Calculated from the data described on page 25. The horizontal line is the scale of length of experience in years. The vertical scale is for the amount of annual salary.

Such facts as appear in figure 20 are in sharp contrast to those within the public system of a large city. In the latter it is customary to advance the salaries of those whose appointments are renewed, and also, though less often, to determine the amount of the salary of a teacher entering the system from another city partly on the basis of the length of time he has taught. New York City is a notable case. I show in figures 21 to 29 the consequent relation of salary to experience in New York, Boston, St. Louis, and Cleveland, so far as the incomplete returns of the optional individual records permit.

Because of this incompleteness, the curve for any one of these cities may vary considerably from what it would have been had a full individualized report been sent. The general impression from the four taken together will, however, be accurate.

It may be well to warn ourselves that even if it were true that experience after the first four or five years does not greatly add to the efficiency of a public high-school teacher, still it can not be said that the customary practice in our large cities wastes money in paying for

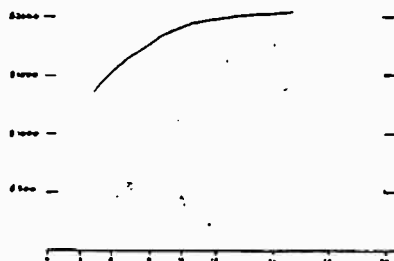


FIG. 21.—Relation of length of experience to salary in case of public high-school teachers. Men teachers (excluding principals) of New York City.

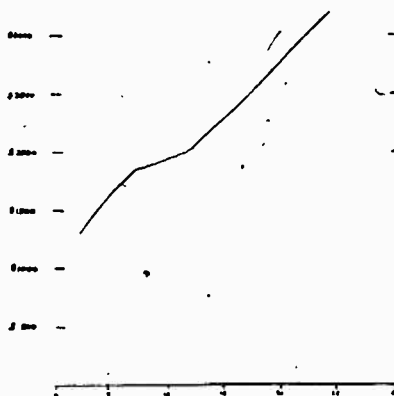


FIG. 22.—Relation of length of experience to salary in case of public high-school teachers. Men teachers of Boston.

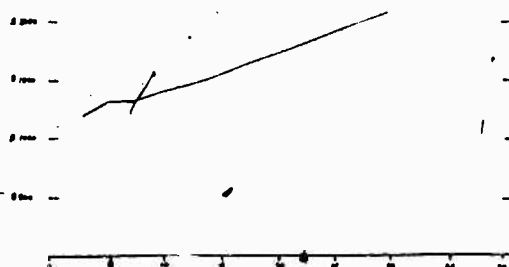


FIG. 23.—Relation of length of experience to salary in case of public high-school teachers. Men teachers of St. Louis.

a false symptom of efficiency; for, even if the teachers of five years' experience equaled those of ten, it might still be wise to pay the latter more. In the first place, the salary schedule as a whole decides



the teacher in his choice amongst positions. It is not a fixed \$1,000 that he accepts, but \$1,000 plus \$100 advance annually up to \$2,000.

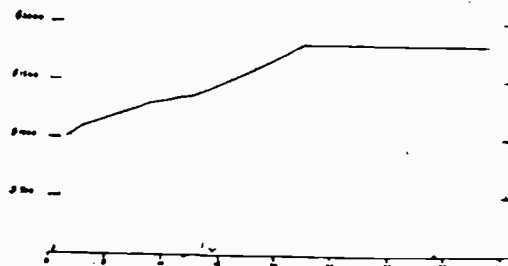


FIG. 24.—Relation of length of experience to salary in case of public high-school teachers. Men teachers of Cleveland.

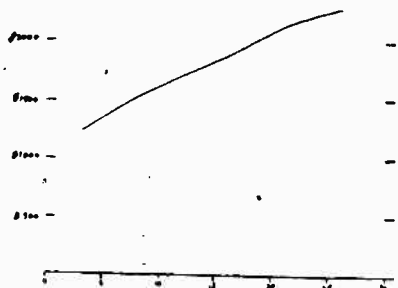


FIG. 25.—Relation of length of experience to salary in case of public high-school teachers. Men teachers of New York, Boston, St. Louis, and Cleveland.

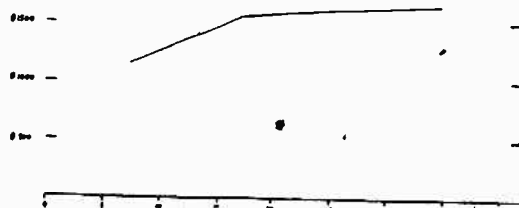


FIG. 26.—Relation of length of experience to salary in case of public high-school teachers. Women teachers of Boston.

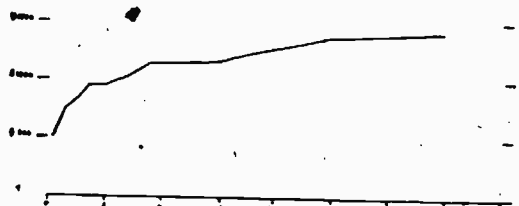


FIG. 27.—Relation of length of experience to salary in case of public high-school teachers. Women teachers of St. Louis.

The advance with time is really a feature in the bargain. In the second place, it may be wise for a city to pay its teachers what will

maintain a certain standard of living, rather than what will just purchase the required efficiency; and on this principle the head of a family, at least, should be advanced with age or with some other still more accurate measure of the size of his family. In the third place, the premium on experience has the administrative advantage of encouraging the adoption of teaching as a permanent profession and of preventing frequent changes in the local teaching staff. It is also

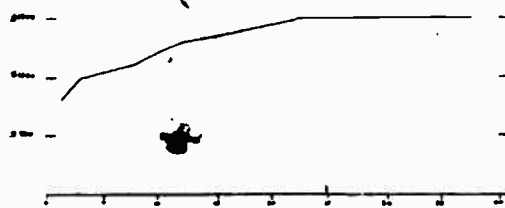


FIG. 28.—Relation of length of experience to salary in case of public high-school teachers. Women teachers of Cleveland.

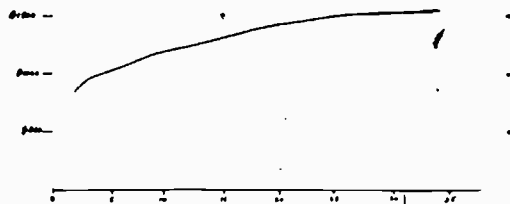


FIG. 29.—Relation of length of experience to salary in case of public high-school teachers. Women teachers of Boston, St. Louis, and Cleveland.

free from the difficulties of competition for promotion on the grounds of pure merit.

It is well, on the other hand, to note that the premium paid for experience may deprive a city of the best services obtainable for the price it has to pay, may retain the less competent too surely, and may discourage the entrance to and continuance in the profession of that very desirable class who would prefer to work under a system of competitive promotion by merit.

#### VIII.—THE RELATION OF LENGTH OF EXPERIENCE TO AMOUNT OF SALARY IN CERTAIN SPECIAL COMMUNITY GROUPS.

This whole matter of the relation of salaries, our ostensible measure of efficiency, to length of experience in case of teachers in secondary schools would well repay a more elaborate study than the present writer can undertake, or is indeed possible from the data at hand. If the influence of the cost of living and the value of life could be accurately determined for each locality; if the data for supervising officers could be kept separate, to be combined with that of the class

teachers only at one's discretion; if the conditions in each State and in those smaller or larger districts which possess significant educational unity could be all fully treated; if the influence of the length and quality of the educational preparation of the teachers could be eliminated as a disturbing factor; and if certain other precautions could be taken—one might hope to know with exactitude just what is paid for experience pure and simple and to secure some actual evidence concerning what ought to be paid for it.

The data from public schools can not be used directly as evidence concerning the relation of amount of experience to degree of efficiency, because free competition does not exist the country over, or even probably within any one section of it that provides a wide range of high school salaries with a constant cost for living of the same value. The mere facts as to the relation that actually does exist between salary and length of experience under the given complex conditions are, however, important. I have therefore made the somewhat tedious calculations for the following cases:

- A 1. The men teachers, excluding principals, in cities and towns of New Jersey that are suburbs of New York City.
- A 2. The women teachers in the same cities and towns.
- A 3. The men teachers, including principals, in the same cities and towns.
- B 1. The men teachers in Massachusetts outside of Boston.
- B 2. The women teachers in the same cities and towns.
- C 1. The men teachers (including principals) in Indiana (taking about 100 schools in alphabetical order).
- C 2. The women teachers in the same cities and towns.

In the first of these cases the cost of living roughly balances with the value of life, the same salary being about as desirable in the more expensive as in the less expensive towns. In the second case this is not so universally true, though there are, in the writer's opinion, very few of the cheaper towns which could take away a teacher from the more expensive ones by offering him the same salary. In the case of Indiana the writer is unable to estimate the disturbing effect of variations in the cost of living for a life of equal value to a teacher.

I shall present the facts in one or more of three ways: First, in diagrams (figures 30, 31, 32, 33, and 34) in which a short dash stands for an individual, its position along the horizontal axis denoting the individual's length of experience and its position along the vertical axis denoting the amount of salary. These figures show to the eye the entire fact of the relationship. Second, in diagrams (figures 36, 37, 38, 39, and 40) showing only the central tendencies<sup>a</sup> of salary

<sup>a</sup> That is, the values around which the individual salary-amounts cluster most closely; the values which would be taken as the types, if one had to choose single values as typical.

amounts related to different lengths of experience. Third, in a verbal statement rehearsing the essential facts of the relationship. In this verbal statement the word "maximum" refers to the maximum central tendency for any one length of experience, not to the highest single salary received.

The reader may be aided in realizing the degree of dependence of salary on experience by making diagrams like those of figures 30-34, and what the facts would be if the order of individuals with respect to salary were identical with the order with respect to amount of experience. This I have done in one case (men teachers in Indiana) as a sample (figure 35).

In the New Jersey suburban cities and towns the maximum salary tendency for men, excluding principals, is reached after fifteen years, the teachers then receiving nearly 80 per cent more than during the first and second years of service. If principals are included the maximum reached after fifteen years is somewhat over twice the average salary of the first and second years.

For women the maximum is not reached until after twenty years. It is about 60 per cent more than the average salary of the first and second years.

In Massachusetts the apparent maximum for men (excluding principals) is reached only after fifteen years, the teachers then receiving about twice as much as during the first year of teaching and about 90 per cent more than the average of the first and second years' salaries. If principals are included, the maximum is not reached until after twenty-five or thirty years and is two and a half times as large as the salary for the first year, and 125 per cent larger than the average salary of the first and second years.

For women the maximum is not reached until after twenty years (or even more). It is twice the salary of the first year and about 90 per cent more than the average salary of the first and second years.

In Indiana the apparent maximum for men is reached in six years, the teacher thereafter receiving 30 per cent more than he did the first year or two. If we could follow actual individuals, however, we should find that they often progressed to the superintendencies of counties and towns, so that the true maximum would be reached later and would be higher.

The maximum for women is reached or very nearly reached in eight years, the teacher then receiving about 30 per cent more than during the first and second years of teaching.

Certain common opinions due to the knowledge of many single cases are verified by these wider summaries of fact. First, there is an unwillingness on the part of large high schools to experiment with teachers of little or no experience. The smaller schools are very

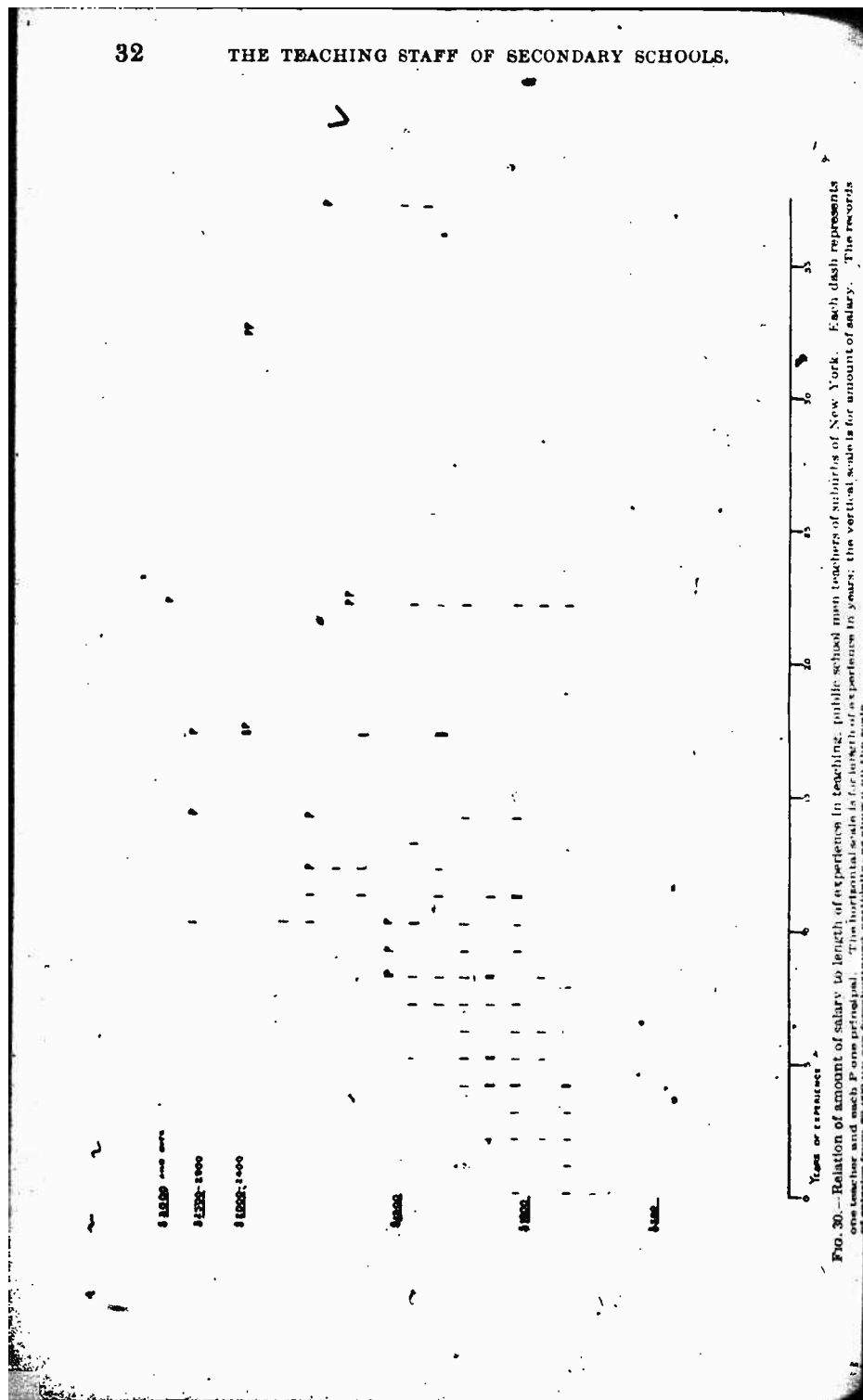


FIG. 30.—Relation of amount of salary to length of experience in teaching, public school main teachers of suburbs of New York. Each dash represents one teacher and each P one principal. The horizontal scale is for length of experience in years; the vertical scale is for amount of salary. The records are taken from the New York State Department of Education, Bureau of Statistics, 1910-1911.

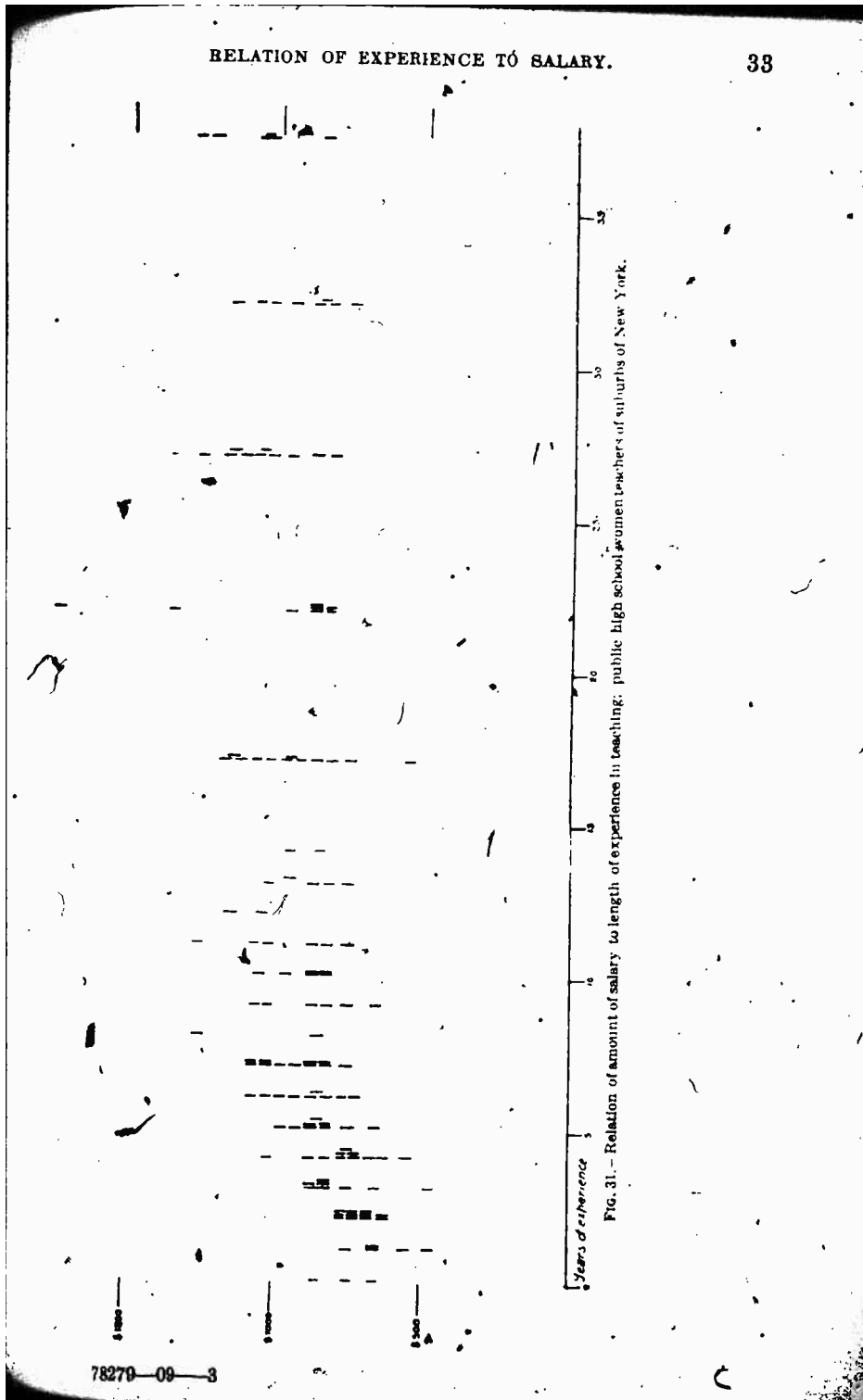


FIG. 31. — Relation of amount of salary to length of experience in teaching: public high school women teachers of suburbs of New York.

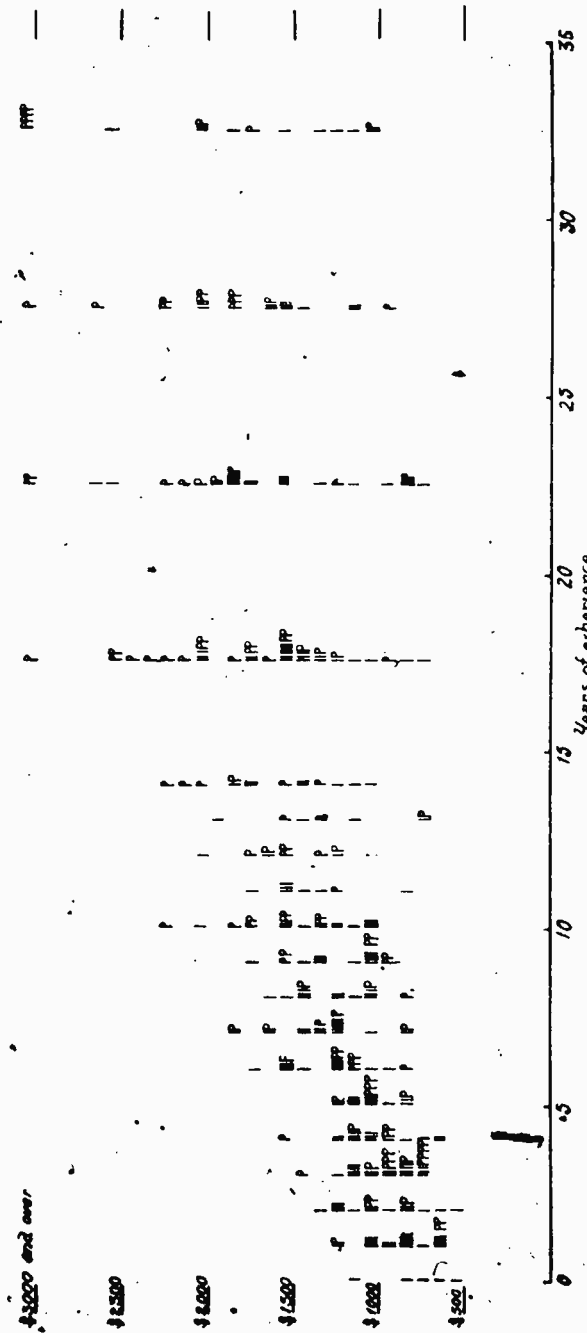


FIG. 32.—Relation of amount of salary to length of experience in teaching; public high school men teachers of Massachusetts (excluding Boston).

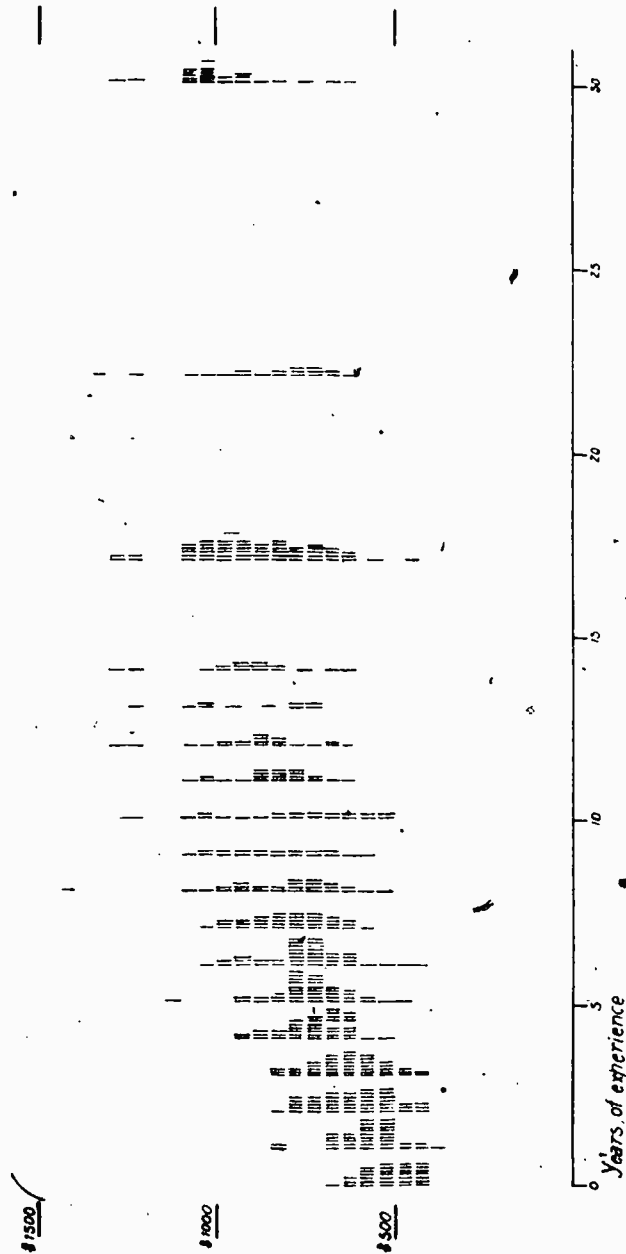


FIG. 33.—Relation of amount of salary to length of experience in teaching; public high school women teachers of Massachusetts (excluding Boston).



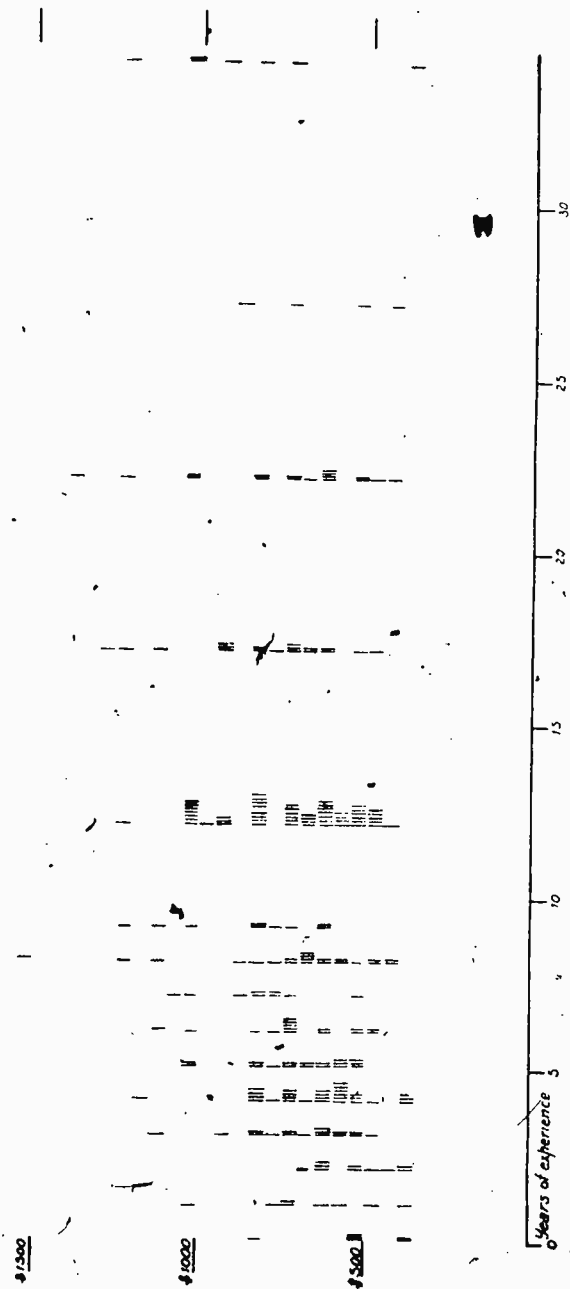


FIG. 34. --The relation of amount of salary to length of experience in teaching, public high school men teachers of Indiana.

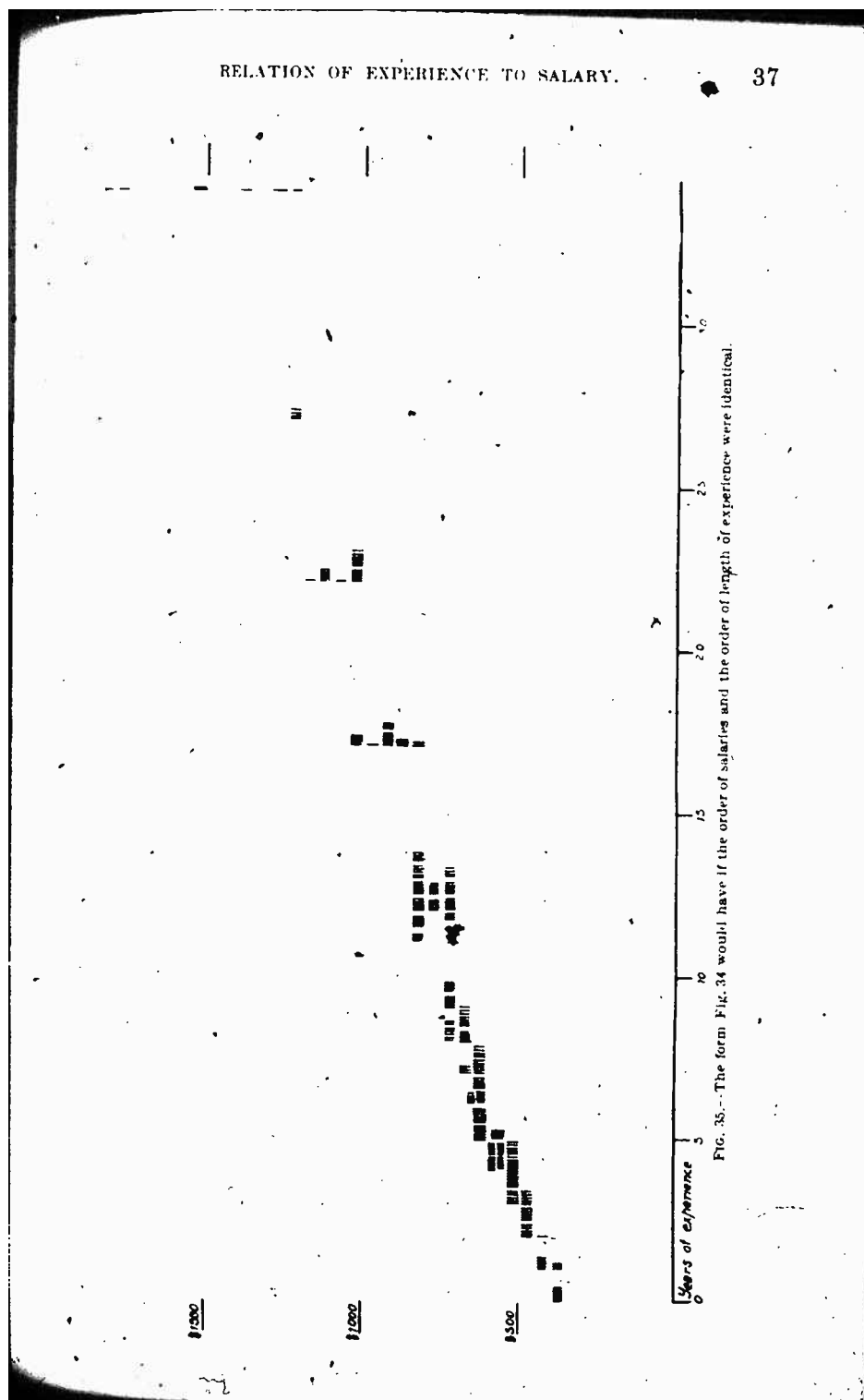


FIG. 35.--The form Fig. 34 would have if the order of salaries and the order of length of experience were identical.

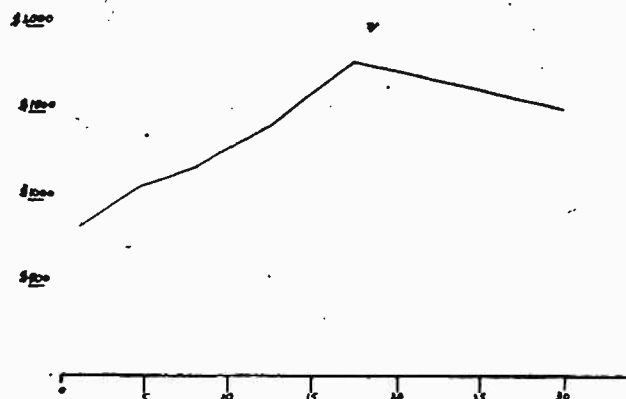


FIG. 36.—The central tendency of the facts of Fig. 30. (Men teachers in New York suburbs.)

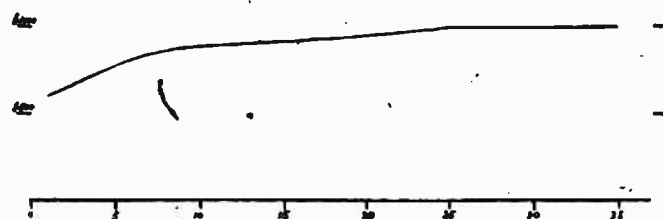


FIG. 37.—The central tendency of the facts of Fig. 31. (Women teachers in New York suburbs.)

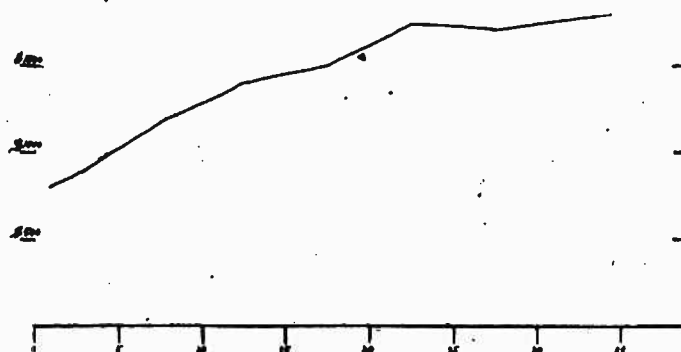


FIG. 38.—The central tendency of the facts of Fig. 32. (Men teachers of Massachusetts.)

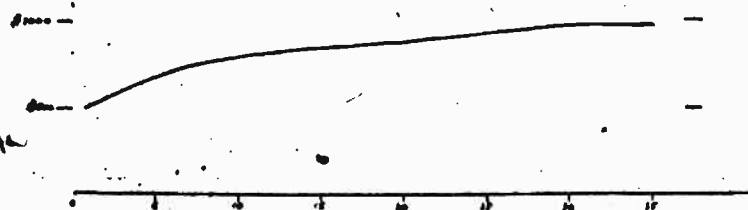


FIG. 39.—The central tendency of the facts of Fig. 33. (Women teachers of Massachusetts.)

likely equally unwilling, but are forced by their less adequate financial provision to make such an experiment oftener. There is thus a fairly large migration of teachers from school to school. Second, the rate of progress in income is very unequal, some teachers reaching

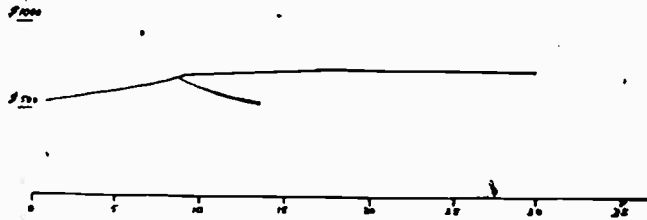


FIG. 40. — The central tendency of the relationship of amount of salary to length of experience in teaching; public high school women teachers of Indiana.

nearly the maximum salary in five or six years, while others teach for fifteen years or more without advancing appreciably. Men continue to advance through promotion to principalships after their chances for advance as regular teachers cease. The advance in salary due to experience in teaching is most rapid at first.

#### IX. THE RELATIONS OF LENGTH OF EXPERIENCE AND OF LENGTH OF EDUCATION TO AMOUNT OF SALARY IN OHIO, ILLINOIS, WISCONSIN, GEORGIA, TEXAS, AND CALIFORNIA.

If one does not seek to restrict the localities used in the comparison to those in which the same salary is equally desirable, the number of cases may of course be greatly increased, to such an extent, in fact, that the relation of salary to length of experience may be studied separately for teachers of each different amount of education. The relation of salary to the amount of education for teachers of each amount of experience may also be determined.

I have so studied all the individualized reports from the public high schools of Ohio, Illinois, Wisconsin, Georgia, Texas, and California.<sup>a</sup> It must be borne in mind that the large schools rarely sent in individualized reports and so are rarely included in these data. This is, of course, an advantage in that it makes the data less diverse with respect to the cost of living and the value of life.

In the case of Georgia, Texas, and California, I shall simply present the facts with practically no discussion, since, in spite of the utilization of all the reports, the data are too few for an exact determination of the relationships in question. (See Table 9, sections A to F, pp. 49-52.)

<sup>a</sup>In this work I have had the assistance of Miss Elizabeth Rusk, assistant in educational psychology at Teachers College, Columbia University, who compiled the data from the original returns.

For Ohio, Illinois, and Wisconsin the computations start with preliminary tables like the following (Table 5):

TABLE 5.—Table of frequencies of salaries of teachers of 8 years education and 0, 1, or 2 years of experience in teaching (women in Ohio).

Quantity.	Frequency. (Number of teachers.)	Quantity.	Frequency. (Number of teachers.)	Quantity.	Frequency. (Number of teachers.)
\$399.....	4	\$550.....	1	\$695.....	1
\$405.....	2	\$560.....	1	\$700.....	1
\$450.....	11	\$570.....	1	\$720.....	2
\$465.....	1	\$585.....	1	\$750.....	1
\$475.....	2	\$590.....	1	\$780.....	2
\$485.....	1	\$600.....	5	\$800.....	5
\$495.....	4	\$630.....	3	\$1,000.....	1
\$500.....	4	\$650.....	1		
\$540.....	8	\$675.....	2		

There are 528 such tables, but with some blanks (3 States  $\times$  2 sexes  $\times$  11 lengths of education  $\times$  8 lengths of experience, namely: 0-2, 3-5, 6-9, 10-14, 15-19, 20-24, 25-29, 30 and over). I shall refer to these 528 tables as the original tables.

From a thorough study of these tables it is clear that the relations to be investigated are substantially the same in the three States. (The median salary for each of the groups is as shown in Table 6.) I therefore combine the data from the three States.

A study of the same tables also shows that there is no sure appreciable difference as regards frequency of salaries for teachers of 0, 1, 2, and 3 years of education beyond the elementary schools. I therefore combine the data for these four groups. The data for 10 years of education are too few to give reliable determinations. Hence I omit them.

The data for the groups of "25-29" and "30 and over" years of experience are too few to give reliable determinations, and there is surely no great difference between these two groups. So I combine these also.

The 98 tables resulting I have grouped as columns of the various sections of Tables 7 and 8, since averages or medians fail to show the very important range of variations amongst teachers of the same length of education and length of experience. For reasons of economy in printing and convenience to the reader they are presented with a much coarser scale of salary amounts than the original tables.<sup>a</sup> These 98 columns furnish the material for answering any questions about the relationship of salary to amount of experience and to amount of education in the case of these groups of teachers, and for comparisons with the status of this relationship at any date in the future. To these tables I refer the expert student of education.

It is practically impossible to summarize in words the relationship between salary and length of experience, because of its complexity.

<sup>a</sup> These were kept on a scale by single dollars.

There is no uniform tendency for a given difference in length of experience to be accompanied by a constant gross or percentile difference in salary. The upper range of salaries varies with experience more than the average salary. The relation is different in the case of those of much and those of little education. There are other eccentricities. For an adequate measurement of the relation the reader must examine every detail of the tables (7 and 8). I shall state only those general facts which are of most significance to educational administration. These are as follows:

THE RELATION OF SALARY TO EXPERIENCE IN THE CASE OF MEN  
TEACHERS.

The high-school authorities in the three States under consideration pay the average male high-school teacher on the average \$28 (i. e., 4 per cent of the usual salary for the first three years of teaching) for each year of experience from 1 to 12 years, \$8 a year for each year from 12 to 22, and little or nothing for each year thereafter. The superior teachers show larger differences with experience. The men who have had the most education not only are paid more at the start, but also show larger differences with the first 10 or 15 years of experience, those with 8 years beyond the elementary school showing differences with experience that are about five times as large as those of men with 0-3 years, over twice as large as those of men with 4-6 years, and one and a half times as large as those of men with 7 years.<sup>a</sup> The differences between the salaries of those with 10-15 and those with 20-30 years of experience seem to be on the average the same for those of little and those of much education.

THE RELATION OF SALARY TO EXPERIENCE IN THE CASE OF WOMEN  
TEACHERS.

The school authorities in the three States in question pay the average female high-school teacher on the average \$27 (i. e., 5 per cent of the usual salary for the first 3 years of teaching) for each year of experience from 1 to 22 and apparently even to 30 or over. The superior teachers show larger differences with experience. The women who have had the most education not only are paid more at the start, but also show larger differences, not only for the first 10 or 15 years of teaching, as with men, but throughout. Women with 8 years of education beyond the elementary school show differences

<sup>a</sup>The somewhat awkward form of verbal statement used here and later is necessary to avoid giving the impression that the same person would receive the advance and discounts described if he had the increase in experience or education or the decrease in the latter corresponding to the differences described. Such may be true, but it does not necessarily follow from our facts. For education and experience not only alter individuals from what they were or would have been, but also select individuals. The teachers who have taught 30 years are a selected group of those who have taught 2 years and their salaries need not be equal to what the latter would attain if they taught 18 years longer. The teachers who studied 8 years may be different by nature as well as by training from those who studied only 4 years.

with experience that are five times as large as those of women with 0 to 3 years, over twice as large as those of women with 4 to 6 years, and over one and a half times as large as those of women with 7 years.

#### THE RELATION OF SALARY TO LENGTH OF EDUCATION.

It is also impossible to state the relation between salary and length of education adequately in words. There is again in this case no uniform tendency, though the eccentricities are here not so marked. There is also a special difficulty in that the increases from 0 to 9 years of education do not mean additions of equal amounts of the same thing. For instance, the group with 8 years of education are mostly college graduates, while the group with 6 years of education have rarely completed two years of a college course. Tables 7 and 8 tell the whole story, certain features of which I shall repeat in verbal form.

The high-school authorities in the three States pay the average male high-school teacher on the average \$90 (or one-seventh of the usual salary for the first 3 years of teaching) less, if he is one year short of the standard 8 years; they pay him on the average \$220 (or one-third of the usual salary for the first 3 years) less, if he is 3 years short of that standard; and \$325 (or over half that salary) less, if he is 6 years short of that standard. For a year in addition to the standard they pay him on the average \$90 more. All these differences are smaller for those of little experience in teaching and greater for those of much.

The corresponding figures for women teachers are \$75, \$150, and \$275 less, for 1, 3, and 6 years short of the standard 8 years, and \$45 more for 1 year over that standard. These amounts are, respectively, one-seventh, two-sevenths, over half, and one-eleventh of the usual salary for the first three years of teaching.

It is evident that school authorities reward the kind of man or woman who has secured a thorough education; and that, in so far as their practice is a natural selection of one means of securing efficient teachers, premiums for advanced education are desirable in formal salary schedules. The figures indeed suggest that the premiums now given in such formal salary schedules are too low in the case of education and too high relatively in the case of experience in teaching.

Neither experience in teaching nor amount of education is so important in determining relative salaries as the differences amongst teachers in other respects; that is, in native gifts and in the quality rather than the quantity of their education. That teachers of the same amount of experience and education vary enormously as to salaries is shown by every group recorded in the tables. For instance,

of the men who have taught from 10 to 14 years and who had 8 years education in advance of the elementary schools, some receive four and even five times as much per year as others.

In the case of the estimates made above for the teachers of Ohio, Illinois, and Wisconsin, and in the case of all the facts of Tables 6, 7, 8, and 9, the reader should bear in mind that the calculations are based upon the individualized returns only, and hence include only a part of the entire teaching staff of the States in question. In particular, it should be borne in mind that the largest cities—those paying the largest salaries and having as a rule teachers of more than average education and experience—oftenest omitted the individualized section of the report blank.

TABLE 6.—The relation of salary to length of experience in teaching and to extent of education.

[The entries for salaries are medians.]

A.—MEN TEACHERS OF OHIO.

	Length of experience in years.							
Years of education.	0 to 2.	3 to 5.	6 to 9.	10 to 14.	15 to 19.	20 to 24.	25 to 29.	30 and over.
0.		\$450		\$550			\$765	\$900
1.			\$540					440
2.		1,000	445					
3.		450	400		\$520	\$580		
4.	\$520	450	552	1,250	635	1,000	570	900
5.	500	590	675	618	765	810		
6.	657	636	675	758	783	706	900	640
7.	556	710	750	880	950	850	1,007	1,700
8.	630	800	900	1,200	1,250	1,165	975	1,850
9.	742	805	950	1,150	1,000	1,150	3,000	1,100
10.	800	500	1,200	1,300	1,065	1,850	1,150	1,650

B.—MEN TEACHERS OF ILLINOIS.

0								
1	\$510						\$600	
2			\$760	\$800				
3	600	\$642		650	\$720		480	
4	595	610	680	675		\$825		\$2,000
5		562	675	880	880	1,675	1,300	2,000
6	675	680	810	900	810	1,000	1,125	1,150
7	800	800	850	1,000	1,290	1,081	1,400	
8	700	900	950	1,100	1,100	1,600	1,700	3,000
9	825	765	1,400	1,400	1,200	855	1,000	3,000
10	467		1,250	1,350	1,600	1,900	2,450	2,400

C.—MEN TEACHERS OF WISCONSIN.

0								
1								
2	\$610	\$755	\$1,050	\$1,200				
3		855	720	770				
4		765	950	720	\$1,000	\$1,400		\$2,000
5	495	900	720	1,200	600	700		
6	640	625	720	950	1,400	855		
7	720	785	810	1,080	1,000	1,300		
8	630	750	925	1,125	1,000	1,600		
9	740	900	1,000	1,800	2,000			
10		800	1,125	1,580		2,650		1,850



44 THE TEACHING STAFF OF SECONDARY SCHOOLS.

TABLE 6.—The relation of salary to length of experience in teaching and to extent of education—Continued.  
D.—WOMEN TEACHERS OF OHIO.

Years of education.	Length of experience in years.						
	0 to 2.	3 to 5.	6 to 9.	10 to 14.	15 to 19.	20 to 24.	25 to 29.
0.		\$520			\$553		\$1,200
1.							
2.	\$320	360	\$560				
3.	510	390	350	\$450	425	\$500	570
4.	480	495	675	710	1,150	750	1,200
5.	500	600	540	890	330	880	509
6.	450	450	727	700	600	750	660
7.	585	555	640	765	800	1,200	1,000
8.	540	675	750	1,200	1,000	1,350	1,100
9.	648	700	680	1,050	1,300	1,000	
10.		780	400	1,200	1,200	1,450	617

E.—WOMEN TEACHERS OF ILLINOIS.

0.	\$595		\$400			\$425	
1.				\$480		400	
2.	480	\$812	630			1,500	
3.	400	400	540	480		1,200	
4.	485	510	480	467	\$520	875	\$1,500
5.	300	540	560	900	900	900	2,000
6.	500	525	605	760	800	700	810
7.	515	540	580	770	800	900	1,300
8.	550	675	800	900	950	1,250	1,350
9.	562	690	837	1,050	975	2,000	1,500
10.		850	800	1,150	1,150		

F.—WOMEN TEACHERS OF WISCONSIN.

0.	\$450						
1.							
2.	540	\$495	\$405				
3.		736		\$1,400		\$430	
4.	540	625	540	1,000	\$1,300	1,350	
5.	480	550	868	650	1,300	540	\$760
6.	466	562	500	825	730	780	1,150
7.	495	675	725	610	1,175		650
8.	540	680	720	725	750	1,100	
9.	734	700	720	750	706	1,300	
10.	900	645	740	850	800	1,350	

TABLE 7.—Relations between salary, amount of education, and extent of experience of male high-school teachers in Ohio, Illinois, and Wisconsin.  
[The entries in the table give the number of teachers in each case.]

A.—MEN OF 0 TO 3 YEARS OF EDUCATION.

Salaries.	Years of experience.						
	0 to 2.	3 to 5.	6 to 9.	10 to 14.	15 to 19.	20 to 24.	25 and over.
Under \$400.		2	1				
\$400 to \$499.		10	7	4	2		
\$500 to \$599.	1	3	6	11	3		1
\$600 to \$699.	4	7	6	6	9		6
\$700 to \$799.	2		5	8	3		2
\$800 to \$899.	1	2		1	3		1
\$900 to \$999.			1	2	2		
\$1,000 to \$1,099.		1	4	2		2	
\$1,100 to \$1,199.					1		
\$1,200 to \$1,299.							
\$1,300 to \$1,399.				1			
\$1,400 to \$1,499.							1
\$1,500 to \$1,599.				1		1	
\$1,600 to \$1,699.					1		
\$1,700 to \$1,799.							
\$1,800 to \$1,899.							
\$1,900 to \$1,999.							
\$2,000 to \$2,099.							
\$2,100 to \$2,199.							
\$2,200 to \$2,299.							
\$2,300 to \$2,399.							
\$2,400 to \$2,499.							
\$2,500 and over.							

RELATION OF EXPERIENCE AND EDUCATION TO SALARY. 45

TABLE 7.—Relations between salary, amount of education, and extent of experience of male high-school teachers in Ohio, Illinois, and Wisconsin—Continued.

B.—MEN OF 4 YEARS OF EDUCATION.

Salaries.	Years of experience.						
	0 to 2.	3 to 5.	6 to 9.	10 to 14.	15 to 19.	20 to 24.	25 and over.
Under \$400.		2	1				
\$400 to \$499.	4	10	5	4	1	1	1
\$500 to \$599.	7	8	4	4	3	2	
\$600 to \$699.	4	11	11	11	4	1	5
\$700 to \$799.	2	2	6	3	6	2	1
\$800 to \$899.		3	2	6		3	
\$900 to \$999.			4	2	1	1	1
\$1,000 to \$1,099.		4	3	2	3	1	1
\$1,100 to \$1,199.				2			
\$1,200 to \$1,299.		1	2	2			
\$1,300 to \$1,399.				4	1	1	1
\$1,400 to \$1,499.				2	2	1	4
\$1,500 to \$1,999.				2	1	2	2
\$2,000 to \$2,499.							
\$2,500 and over.							

C.—MEN OF 5 YEARS OF EDUCATION.

Under \$400.		1					
\$400 to \$499.	4	3	2	1			
\$500 to \$599.	2	8	5	7	1	2	
\$600 to \$699.	2	6	8	9			
\$700 to \$799.		3	9	3	5	3	
\$800 to \$899.		1	3	4	3	3	
\$900 to \$999.		1	1	1	2	2	
\$1,000 to \$1,099.		3	1	2	2		
\$1,100 to \$1,199.		1			1		1
\$1,200 to \$1,299.		1	2	4	1		2
\$1,300 to \$1,399.				2			
\$1,400 to \$1,499.				2	2	2	
\$1,500 to \$1,999.							1
\$2,000 to \$2,499.						4	3
\$2,500 and over.							1

D.—MEN OF 6 YEARS OF EDUCATION.

Under \$400.	1	1					
\$400 to \$499.	4	8	6	2		1	
\$500 to \$599.	10	10	11	5		1	1
\$600 to \$699.	11	19	14	17	4	4	4
\$700 to \$799.	9	11	15	9	3	4	1
\$800 to \$899.	4	6	15	11	5	5	
\$900 to \$999.		4	3	8	2	3	2
\$1,000 to \$1,099.	1	2	5	10	4	5	
\$1,100 to \$1,199.			2	6			
\$1,200 to \$1,299.		1	4	3	3	1	2
\$1,300 to \$1,399.				5	1		2
\$1,400 to \$1,499.				1	2	1	
\$1,500 to \$1,999.				1	1		3
\$2,000 to \$2,499.					1		
\$2,500 and over.							

E.—MEN OF 7 YEARS OF EDUCATION.

Under \$400.							
\$400 to \$499.	6	4	1				
\$500 to \$599.	2	3	4	2	1	1	
\$600 to \$699.	5	11	8	6	3	4	
\$700 to \$799.	3	11	3	9	2	1	
\$800 to \$899.	2	5	9	4	3	2	2
\$900 to \$999.	1	9	4	7	1	1	
\$1,000 to \$1,099.	1	3	4	3	2	4	1
\$1,100 to \$1,199.		2	3	3			
\$1,200 to \$1,299.	1			1		1	
\$1,300 to \$1,399.			2	5	2	3	
\$1,400 to \$1,499.			1	1	1	1	
\$1,500 to \$1,999.				2	4	1	2
\$2,000 to \$2,499.					1		2
\$2,500 and over.							1

## THE TEACHING STAFF OF SECONDARY SCHOOLS.

TABLE 7.—Relations between salary, amount of education, and extent of experience of male high-school teachers in Ohio, Illinois, and Wisconsin—Continued.

## F.—MEN OF 8 YEARS OF EDUCATION.

Salaries.	Years of experience.						
	0 to 2.	3 to 5.	6 to 9.	10 to 14.	15 to 19.	20 to 24.	25 and over.
Under \$400.							
\$400 to \$499.							
\$500 to \$599.	15	2	1		1		
\$600 to \$699.	23	13	6	3	1	2	1
\$700 to \$799.	35	23	15	1	1	1	2
\$800 to \$899.	22	27	19	7	5	2	2
\$900 to \$999.	15	25	16	10	8		1
\$1,000 to \$1,099.	1	27	18	12	3	4	1
\$1,100 to \$1,199.	3	20	23	8	8	6	4
\$1,200 to \$1,299.	2	8	9	7		2	2
\$1,300 to \$1,399.		3	7	5	5	2	1
\$1,400 to \$1,499.		2	3	8	4	1	2
\$1,500 to \$1,999.			0	20	13	11	6
\$2,000 to \$2,499.				2	1	3	3
\$2,500 and over.				1	2	3	4

## G.—MEN OF 9 YEARS OF EDUCATION.

Under \$400.							
\$400 to \$499.							
\$500 to \$599.		2	1	1			
\$600 to \$699.		1	3	2	1		1
\$700 to \$799.		2	8	1	1		
\$800 to \$899.		1	5	4	1		
\$900 to \$999.		3	6	3	3	2	
\$1,000 to \$1,099.			1	4	4		
\$1,100 to \$1,199.		1	3	3	1		1
\$1,200 to \$1,299.			4	5	1		
\$1,300 to \$1,399.			2	3	5		
\$1,400 to \$1,499.			4	3	2	1	
\$1,500 to \$1,999.			3	6	1	2	1
\$2,000 to \$2,499.				1	4		
\$2,500 and over.							2

TABLE 8.—Relations between salary, amount of education, and extent of experience of female high-school teachers in Ohio, Illinois, and Wisconsin.

[The entries in the table give the number of teachers in each case.]

## A.—WOMEN OF 0 TO 3 YEARS OF EDUCATION.

Salaries.	Years of experience.						
	0 to 2.	3 to 5.	6 to 9.	10 to 14.	15 to 19.	20 to 24.	25 and over.
Under \$400.	1	3	1				
\$400 to \$449.	1	5	2		1		
\$450 to \$499.	2	3		3	1		1
\$500 to \$549.	1	1	2	1	1	1	
\$550 to \$599.			1				1
\$600 to \$649.			1			1	1
\$650 to \$699.							
\$700 to \$749.			1				
\$750 to \$799.							
\$800 to \$849.		2					
\$850 to \$899.							
\$900 to \$949.							
\$950 to \$999.							
\$1,000 to \$1,099.							
\$1,100 to \$1,199.							
\$1,200 to \$1,299.							
\$1,300 to \$1,399.						1	
\$1,400 to \$1,499.							
\$1,500 to \$1,999.						1	3
\$2,000 and over.							

RELATION OF EXPERIENCE AND EDUCATION TO SALARY. 47

TABLE 8.—*Relations between salary, amount of education, and extent of experience of female high-school teachers in Ohio, Illinois, and Wisconsin—Continued.*

B.—WOMEN OF 4 YEARS OF EDUCATION.

Salaries.	Years of experience.						
	0 to 2	3 to 5	6 to 9	10 to 14	15 to 19	20 to 24	25 and over.
Under \$400	2	2	1			1	
\$400 to \$449	3	3	2	1			
\$450 to \$499	3	1	4	1			
\$500 to \$549	3	7	2	4	1	2	1
\$550 to \$599		1					
\$600 to \$649	2	5		1	2		2
\$650 to \$699			1	1	1		
\$700 to \$749	1	2		3		2	2
\$750 to \$799			1		2	1	1
\$800 to \$849	1						
\$850 to \$899	1		2			1	
\$900 to \$999						1	
\$1,000 to \$1,099				1			
\$1,100 to \$1,199					1		
\$1,200 to \$1,299						2	6
\$1,300 to \$1,399				2	3	3	1
\$1,400 to \$1,499					2	1	1
\$1,500 to \$1,999						1	6
\$2,000 and over							

C.—WOMEN OF 5 YEARS OF EDUCATION.

Under \$400	1	5	1	1	1		
\$400 to \$449	1	1	2		1	1	
\$450 to \$499		2	1				
\$500 to \$549	2	6	1			2	
\$550 to \$599	2				1		
\$600 to \$649	2	3	2				
\$650 to \$699	1						
\$700 to \$749	1		1	1			
\$750 to \$799			1	1			
\$800 to \$849						1	
\$850 to \$899			1			1	
\$900 to \$949					1	1	
\$950 to \$999						1	
\$1,000 to \$1,099		2	1	1			
\$1,100 to \$1,199							
\$1,200 to \$1,299		1					1
\$1,300 to \$1,399							
\$1,400 to \$1,499				1	1	1	
\$1,500 to \$1,999						1	1
\$2,000 and over							1

D.—WOMEN OF 6 YEARS OF EDUCATION.

Under \$400	1	1	1				
\$400 to \$449	5	3	3	1	1	1	
\$450 to \$499	12	11	2	3	1		
\$500 to \$549	6	12	6	2	3	1	
\$550 to \$599	6	4	1	2		1	1
\$600 to \$649	2	3	1	2	1		
\$650 to \$699		2	8	6	3	2	1
\$700 to \$749		1	3	3	3	1	
\$750 to \$799		2	3	3	2	5	1
\$800 to \$849	1	2	3	3	3	1	1
\$850 to \$899		2	4	1	2		1
\$900 to \$949		1	1	2	2	1	
\$950 to \$999							
\$1,000 to \$1,099				3			
\$1,100 to \$1,199							1
\$1,200 to \$1,299				2			
\$1,300 to \$1,399			1	2	1	1	1
\$1,400 to \$1,499					1		
\$1,500 to \$1,999				1	1	1	2
\$2,000 and over							

TABLE 8.—*Relations between salary, amount of education, and extent of experience of female high-school teachers in Ohio, Illinois, and Wisconsin—Continued.*

## E.—WOMEN OF 7 YEARS OF EDUCATION.

Salaries.	Years of experience.						
	0 to 2.	3 to 5.	6 to 9.	10 to 14.	15 to 19.	20 to 24.	25 and over
Under \$400.		1					
\$400 to \$449.	1	1	1				
\$450 to \$499.	9	2	2	1			
\$500 to \$549.	7	8	7	1	1		
\$550 to \$599.	2	2	2	1			
\$600 to \$649.	2	2	4		1	1	
\$650 to \$699.		4	1		1		
\$700 to \$749.	1	6	1	6			1
\$750 to \$799.			3	6	4	1	
\$800 to \$849.		1	2	2	1		1
\$850 to \$899.		1	2	2			
\$900 to \$949.			1		1	1	
\$950 to \$999.							
\$1,000 to \$1,099.				1	2	1	2
\$1,100 to \$1,199.				1	1		1
\$1,200 to \$1,299.				1	1	1	
\$1,300 to \$1,399.			1		1		
\$1,400 to \$1,499.				1	1		1
\$1,500 to \$1,999.						2	5
\$2,000 and over.				1			

## F.—WOMEN OF 8 YEARS OF EDUCATION.

Under \$400.	3						
\$400 to \$449.	9			1			
\$450 to \$499.	50	11		1			
\$500 to \$549.	52	29	5		1	2	
\$550 to \$599.	27	15	0				
\$600 to \$649.	34	38	14	3			
\$650 to \$699.	16	31	25	1	2	1	2
\$700 to \$749.	8	28	22	17	3		
\$750 to \$799.	4	17	16	2	3	1	
\$800 to \$849.	7	15	19	5	3		
\$850 to \$899.	1	2	7	4	3	1	
\$900 to \$949.	2	3	10	6	1	2	
\$950 to \$999.		1	4			1	
\$1,000 to \$1,099.	1	9	6	2	2		2
\$1,100 to \$1,199.		2	5	1	1		1
\$1,200 to \$1,299.		2	4	9			
\$1,300 to \$1,399.			6	9	3	1	3
\$1,400 to \$1,499.			2	7	5	3	1
\$1,500 to \$1,999.				3	2	5	4
\$2,000 and over.					1	1	1

## G.—WOMEN OF 9 YEARS OF EDUCATION.

Under \$400.	1	1					
\$400 to \$449.	1						
\$450 to \$499.	2	1					
\$500 to \$549.	2	2	1				
\$550 to \$599.	2		3				
\$600 to \$649.	3	3					
\$650 to \$699.	1	4	4	1			
\$700 to \$749.	1	9	7	3	2		
\$750 to \$799.	1	3	3	1			
\$800 to \$849.	1	2	4	2	1		
\$850 to \$899.	2	2	2	1			
\$900 to \$949.	1	2	3	2	1		
\$950 to \$999.			1	1			
\$1,000 to \$1,099.			1	1	1	1	
\$1,100 to \$1,199.			2	1			
\$1,200 to \$1,299.							
\$1,300 to \$1,399.				3	1	1	
\$1,400 to \$1,499.				1			
\$1,500 to \$1,999.					1		1
\$2,000 and over.						1	

# RELATION OF EXPERIENCE AND EDUCATION TO SALARY. 49

TABLE 9.—The relation of salary to length of experience and to length of education (beyond the elementary school). —

## A.—MALE PUBLIC HIGH-SCHOOL TEACHERS OF GEORGIA.<sup>a</sup>

Years of education.	Length of experience in years.						
	0 to 2.	3 to 5.	6 to 9.	10 to 14.	15 to 19.	20 to 24.	25 and over.
2.		\$1,200	\$540				
4.	\$540	1,400	600				\$1,650
5.	740	675	1,000				
6.	700	1,400	600	\$1,000			
	1,100	400	900	1,200			
	1,200	675	600	700	630	\$1,500	
		850	630	900 (2)		1,600	
		900	720 (2)	1,500			
		1,400	750				
7.	675	675	900				
	800	675 (2)	800				
	900 (2)	800	1,000 (2)	800	900	900	
	1,200	900	1,200	1,000 (4)	1,450		
		1,300	1,200	1,200	1,600		
		1,600	1,450				
8.	540	900	520	675	1,500	1,500	
		1,200	750	1,000			
			810	1,100			
				1,400			
9.		720		600	750		900
		1,125		660	1,000		
				1,000	1,500 (2)		
				1,035			
10.			750	1,600	1,600		
			1,035	1,600			

## B.—FEMALE PUBLIC HIGH-SCHOOL TEACHERS OF GEORGIA.

3.				\$600			
4.	\$150	\$300	\$300				
	360	400	400				
	450	500					
5.	400	400	340	450	\$540		
	800	450	400 (2)				
			450 (3)				
6.	280	300		400	675		
	400 (2)	585		450			
	450			720			
7.	540	300	450 (2)	485			
	500	540	900				
8.	450	500		485			
				720			
9.		485 (2)					
10 and over.				800			

## C.—MALE PUBLIC HIGH-SCHOOL TEACHERS OF TEXAS.<sup>b</sup>

0.				\$350			
1.	\$315		\$350				
2.	375		495	900	\$675 (2)		\$900
3.		\$500	450	540		\$500	
		675		1,125			
4.	500	400	495	480	600		
	630	525	790	630			
		600 (4)		900			
		675					
5.	405	400	400	360	405	1,000	
	540	480	450	450	630		
	700	600	540	500	900		
	810 (2)	800	700 (2)	700			
		810	850	750			

<sup>a</sup> There are also 15 individuals reporting doubtful lengths of education, of whom probably 5 had less than 5 years beyond the elementary school.

<sup>b</sup> There are also 62 individuals reported with doubtful amounts of education, of whom 25 had probably less than 5 years beyond an elementary school course.

## THE TEACHING STAFF OF SECONDARY SCHOOLS

TABLE 9.—The relation of salary to length of experience and to length of education (beyond the elementary school)—Continued.

C.—MALE PUBLIC HIGH-SCHOOL TEACHERS OF TEXAS—Continued.

Years of education.	Length of experience in years.						
	0 to 2.	3 to 5.	6 to 9.	10 to 14.	15 to 19.	20 to 24.	25 and over.
5		\$900 (2)	\$865 1,048	\$760 900			
6	\$400 450 540 900	450 525 (2) 560 585 600 630	540 750 800 1,200	450 585 720 900 (2) 1,000 1,060 1,300	\$640 700 (2) 765 800 900 1,000 (2)	\$500 685 900 1,000 (2) 1,100	
7	675	600 (4) 675 680 800 (2) 810 900 (2)	400 700 810 900 1,105	630 675 720 800 900 (3) 1,100 1,300	540 675 1,200 1,385	540 675	\$495 600 945
8	540 (2) 630 640 700 720 850 855	585 (2) 600 640 680 700 (2) 720 755 775 810 (3) 855 900 (2) 1,000 (4) 1,100 1,125 1,200 (2)	425 630 720 (2) 795 810 825 900 945 1,000 (2) 1,100 (2)	560 1,100 1,200 (2) 1,400	500 (2) 900 (2) 1,000 1,060 1,200 1,342 1,500	637 720 900 1,000 (2) 1,200 1,500	600 700 900 1,000 1,100 (2) 1,275
9		720 725 765 900	900 1,100 1,200	700 765 900 1,000 1,200	1,200 (2) 2,000	810	807
10	1,000	785 990 1,080	600 1,000 1,200 1,500	630 1,500 2,000	600 1,000 1,060 1,100 1,500		1,500 2,000

D.—FEMALE PUBLIC HIGH-SCHOOL TEACHERS OF TEXAS.\*

2	\$400	\$315	\$382				
3		450 495	785 810		\$540		
4	405 420 450	400 (2) 540 565	450 495 600	\$320 810	400 1,060		
5		320 415 540 (3) 630 675	405 440	900	440 (2) 630 675	450 520	
6	320 400 425 630 640	320 445 450 495 525 600 720	400 465 500 (3) 540 565 630 720 810	390 450 (2) 540 565 630 720 810	500 520 630 765 (2)	675 795	\$765
7	400 510 600 680 640	300 495 500 540 580	450 540 585 675 720 1,200	480 630 675 720	785 900	690	855

\* There are also 32 individuals reported with doubtful amounts of education, of whom 18 had probably less than 5 years beyond an elementary school course.



RELATION OF EXPERIENCE AND EDUCATION TO SALARY. 51

TABLE 9.—The relation of salary to length of experience and to length of education (beyond the elementary school)—Continued.

D.—FEMALE PUBLIC HIGH-SCHOOL TEACHERS OF TEXAS—Continued.

Years of education.	Length of experience in years.						
	0 to 2.	3 to 5.	6 to 9.	10 to 14.	15 to 19.	20 to 24.	25 and over.
7	\$675	\$700					
8	405	300	\$480	\$675 (2)	\$500	\$675	\$450
	495 (2)	360	630	855	720		
	500	450 (4)	810		795		
	675 (2)	495					
		540 (2)					
		585					
		675					
		680 (2)					
		700					
		795					
10	540	810	585			360	

E.—MALE PUBLIC HIGH-SCHOOL TEACHERS OF CALIFORNIA.\*

3		\$1,200					
		1,500	\$1,100	\$1,200		\$1,700	\$1,000
4	\$1,000		1,250	1,100	\$1,500		
5	1,500		1,200	1,500	1,350		
6	1,020	900	1,000	1,200 (2)	1,000		1,100
	1,200	1,200 (2)	1,200 (2)	1,300	1,400		1,200
	1,500	1,250	1,500	1,350	1,500		1,300
				1,500	1,800		1,800
		720 (2)	1,045	1,500	1,200	1,800	2,282
	600	900	1,100	1,600	1,500		1,200
	1,400	1,125	1,200 (4)	1,750			1,320
	1,500	1,300 (2)	1,250	3,000			1,500
		1,250	1,500				1,800
		1,500 (1)	1,700				2,400
			2,000				2,700
8	720	720	720				1,250
	765	1,000 (3)	1,000	1,000	1,400	1,500	1,320
	850	1,200 (6)	1,200 (2)	1,100	1,500 (3)	1,650	1,400
	900 (3)	1,212	1,250	1,210	1,600 (2)		1,650
	950	1,250	1,340	1,250	1,800 (4)		
	1,100	1,377	1,350	1,300	2,000		
	1,160	1,400 (2)	1,400	1,332			
	1,250 (2)	1,500 (2)	1,500 (2)	1,350			
	1,250		1,600	1,400			
	1,500		1,800 (2)	1,440			
			2,000	1,500			
			2,250	1,550			
				1,650			
				1,800 (4)			
				2,000			
				2,200			
				2,400			
9	1,000	720	850	900	1,000	1,250	1,000
	1,200	950	1,045	1,500 (3)	1,180		1,500
	1,250	1,100 (2)	1,050	1,617	1,332		
		1,250	1,200 (2)	1,650	1,650		
		1,300	1,210		1,780		
		1,425	1,350				
		1,500 (2)	1,500 (2)				
10	1,500	1,500	1,125	1,100 (2)	1,500 (3)		1,300
			1,350	1,145		1,000	
			1,380	1,200 (2)		1,100	
			1,400	1,250 (2)		1,200	
			1,480	1,500 (3)		1,400	
			1,500	1,550			
			1,650	1,600 (2)			
				1,617			
				1,620			
				1,700			
				1,750 (3)			
				2,200			

\* There were also 37 individuals with doubtful amounts of education, of whom probably 10 had less than 5 years beyond the elementary school.



TABLE 9.—*The relation of salary to length of experience and to length of education (beyond the elementary school)*—Continued.

## F.—FEMALE PUBLIC HIGH-SCHOOL TEACHERS OF CALIFORNIA.\*

Years of education.	Length of experience in years.					
	0 to 2.	3 to 5.	6 to 9.	10 to 14.	15 to 19.	20 to 24.
0.....	\$750					
2.....	450		\$805		\$1,000	
3.....			1,332			
4.....	900	\$1,000		\$950		\$1,100
5.....	800	750	1,000	900	1,000	\$850
6.....	900			1,100	1,300	1,400
7.....				1,210		1,380
8.....				1,250	1,680	1,000
9.....					1,300	1,100
10.....						1,680 (1)
11.....	350		900	700	1,500	1,000 (2)
12.....	450			1,200		1,100
13.....	750					1,320
14.....	900 (2)					1,500
15.....	475	900 (4)	900 (5)	300	1,000	
16.....	900 (2)	1,000 (9)	1,000 (6)	900	1,200	1,200
17.....	950	1,050	1,045	950	1,320 (2)	
18.....	1,000 (3)	1,212	1,092	1,000 (2)	1,332	
19.....	1,212	1,250	1,200 (4)	1,200 (7)	1,617	
20.....		1,680 (2)	1,332 (4)	1,320	1,680	
21.....			1,380	1,332 (2)		
22.....				1,500 (2)		
23.....				1,680		
24.....	630	500 (2)	780	950	950	1,000
25.....	650 (2)	760	855 (4)	997	1,000	1,250
26.....	720 (5)	800 (5)	900 (4)	1,000 (4)	1,145	1,200 (2)
27.....	800 (12)	810 (2)	950 (5)	1,045 (2)	1,200	
28.....	807	825	1,000 (11)	1,100 (4)	1,210	
29.....	810 (2)	850 (11)	1,050 (2)	1,200 (3)	1,320	
30.....	850 (5)	900 (7)	1,100 (2)	1,210	1,332	
31.....	900 (21)	925	1,150	1,250	1,500	
32.....	912 (3)	950 (9)	1,210 (10)	1,300 (2)		
33.....	950 (6)	975	1,250			
34.....	1,000 (21)	1,000 (21)	1,285			
35.....	1,100	1,050 (2)	1,300			
36.....	1,200	1,100 (3)	1,332			
37.....		1,150	1,380 (2)			
38.....		1,200 (4)				
39.....		1,210				
40.....	750	462	807	945 (2)	1,000 (2)	1,000
41.....	765	800	900 (5)	1,080	1,045	1,250
42.....	800 (3)	810	912	1,092		
43.....	850 (2)	850 (3)	1,000 (5)	1,208		
44.....	900	900 (5)	1,045	1,210 (2)		
45.....	950	1,000 (7)	1,100			
46.....	1,000 (3)	1,100 (3)	1,150			
47.....	1,050		1,300			
48.....			1,380			
49.....	850	905	950	950	1,100	1,100
50.....	950	950	1,150		1,680	
51.....	1,000	1,000 (3)	1,200	1,000		
52.....				1,045		
53.....				1,100		

\* There are also 21 individuals with doubtful amounts of education, of whom probably 6 had less than 5 years beyond the elementary school.

## LIST OF REFERENCES—ON TEACHERS' SALARIES.

[This list is designed to supplement the bibliography of teachers' salaries and pensions, by Charles A. Nelson, published in the Educational review, 33: 24-35, January 1907.]

Chancellor, William Estabrook. Salary, tenure, and certificate. *In his Our schools and their administration.* Boston, D. C. Heath & co., 1904. p. 341-69.

Cooley, Edwin Grant. The basis of grading teachers' salaries. *In National education association. Journal of proceedings and addresses, 1907.* [Chicago, Illinois, University of Chicago press] 1907. p. 94-101.

McAndrew, William. Where education breaks down. *Educational review*, 33: 11-23, January 1907.

*See, same*, p. 522-26 (Reply by Isabella M. Blake).

[North Dakota. Educational association. Committee on teachers' salaries] Report. *In its Proceedings, 1904.* Bismarck, N. D., Tribune, State printers and binders, 1905. p. 67-84.

Ricker, D. S. Unionizing the school-teachers. *World to-day*, 8: 394-402, April 1905.

History of growth of the movement.

Thwing, F. W. Salaries of teachers in high schools. *School bulletin*, 34: 145-46, April 1908.

United States. Bureau of education. City teachers' salaries. *In its Report of the commissioner for the year 1906.* Washington Government printing office, 1907. v. 1, p. 224-35.

Teachers' salaries. *In its Report of the commissioner for the year 1905.* Washington, Government printing office, 1907. v. 1, p. 217-28.

### SALARIES OF RURAL SCHOOL TEACHERS.

Maphis, Charles G. A plan for the grading of salaries of rural school teachers. *Virginia journal of education*, 1: 19-20, March 1908.

### MINIMUM SALARIES.

Blakesley, O. J. Teachers' salaries and qualifications. *Wyoming school journal*, 4: 158-61, April 1908.

Answers from cities, to questionnaire. Substitutes' salaries, p. 160.

Bond, Beverley W. The relations of civil service reform to the appointment of teachers in the public schools. Boston, Published for the women's auxiliary of the Massachusetts civil service reform association, 1904. 21 p. (Document no. 11)

Cotton, Fassett A. Teachers' salaries and how affected by the operation of the minimum-salary law. *In National education association. Journal of proceedings and addresses, 1907.* [Chicago, Illinois, University of Chicago press] 1907. p. 132-41.

Besides statement of the Indiana law and its workings, similar laws in Pennsylvania and West Virginia are discussed.

Dougherty, W. F. Minimum salaries for city superintendents in various sized towns in Texas. *Texas school magazine*, 10: 5-8, January 1908.

Howell, H. Budd. Report of special committee [New Jersey state teachers' association] on teachers' salaries and tenure of office. *In New Jersey. State teachers' association. Annual report and proceedings, 1903.* p. 264-81.

States having minimum salary law, p. 269-86; statistics, p. 275-81.

Illinois. Educational commission. Tentative recommendations in regard to minimum salaries for teachers. Springfield, Illinois, Illinois State journal co., State printers, 1909. 37 p. 8°. (*Its Bulletin no. 7*)

Bibliography, p. 37.

Mardis, S. K. The minimum salary law and state aid for weak school districts. Ohio teacher, 28: 533-34, July 1908.

The Duval law of 1908 given in full.

[Pennsylvania] Minimum salaries of teachers. Pennsylvania school journal, 56: 44, July 1907.

Saunders, Joseph H. A minimum salary law for teachers. Virginia journal of education, 1: 17-18, 20, January 1908.

Sies, R. W. Comparative study of minimum salary legislation. Educational review, 35: 285-90, March 1908.

— Legal regulation of minimum salaries for teachers. Educational review, 35: 10-21, January 1908.

#### SALARIES OF TEACHERS IN THE UNITED STATES.

Barr, James A. Schedules of salaries in 210 cities. Stockton, California, 1894.

Schinz, Albert. La lutte entre instituteurs et institutrices en Amérique. La revue, 74: 466-67, 15 Février, 1908.

#### Arkansas.

Arnold, W. H. The teachers' salary. In Arkansas. Teachers' association. Proceedings, 1903. Little Rock, Central printing company, 1904. p. 66-70.

Fletcher, W. P. Need of increased school revenue. In Arkansas. Teachers' association. Proceedings, 1904. Little Rock, W. J. McIlwain, 1905. p. 57-61.

#### District of Columbia.

United States. Congress. Senate. Salaries of teachers . . . District of Columbia; report (59th congress, 1st session. Senate Report 3974) 1906. 93 p. 8°. To accompany H. R. 15442.

Washington, D. C. Increased salary for teachers: memorial to Congress from the Washington teachers, showing the necessity for increased salaries in the District of Columbia (U. S. 58th congress, 3d. sess. Senate. Document 88) 1905. 14 p. 8°.

#### Indiana.

Indiana's salary grading. Journal of education, 68: 306-307, September 24, 1908.

#### Jersey City.

Chancellor, William Estabrook. Schedule of salaries—Public schools of Jersey City. In *Our city schools* . . . Boston, D. C. Heath & co., 1908. p. 318.

#### Maine.

[Maine. Teachers' association] Committee on teachers' salaries, Report, 1905. 48 p. 8°. (Maine. Educational department)

#### Massachusetts.

Present salaries of grade teachers in Massachusetts cities. Journal of education, 67: 77, January 16, 1906.

[Middlesex county, Massachusetts] Report of committee to investigate the conditions with respect to salaries of teachers in Middlesex County, Mass. Journal of education, 64: 680-83, December 20, 1906.

*Minnesota.*

Minnesota. Educational association. Committee on teachers' salaries and living expenses . . . Report, 1906. [Winona, Minnesota, Jones & Kroeger co., printers, 1907?] 45 p. 8°.

Minnesota. Educational association. Committee on teachers' salaries. Supplemental report. *In its Journal of proceedings and addresses*, 1908. [St. Paul, Minn., Syndicate printing company] p. 45-48.

*Missouri.*

Storms, J. W. Teachers' salaries—Their gradation in smaller cities. *In Missouri State teachers' association. Official proceedings and addresses*, 1907. Doniphan, Prospect-News printing company printers, 1908. p. 96-102. Statistics.

*New York (State).*

Draper, Andrew Sloan. The teaching in the high schools. *In [New York] Associated academic principals. Proceedings*, 1906. Albany, New York state education department, 1907. p. 42-51.

Statistics, re-classification of teachers by qualifications, and salaries. Reprinted.

McAndrew, William. Educational efficiencies, salaries, and cost of living. *In New York State teachers' association. Proceedings*, 1908. p. 12-21. Statistical.

*New York (City).*

Palmer, A. Emerson. Salary schedules. *In his The New York public school*. New York, Macmillan company, 1905. p. 403-18 (Appendix v).  
Section 64 of the By-laws of the Board of education.

*Ohio.*

Ohio. Teachers' association. Commission on salaries and cost of living: Report (1908?)

*Philadelphia.*

[Philadelphia] Conference on teachers' salaries. Report of the proceedings, 1903. [Philadelphia] Philadelphia teachers' association, 1903. 64 p. 8°.

*Seattle.*

Seattle salary schedule. *Journal of education*, 67: 643-44, May 14, 1908.

*Texas.*

Green, Charles C. Some things that Texas teachers must do to receive higher salaries. *Texas school journal*, 25: 15-19, February 1908.

*Vermont.*

Vermont. Superintendent of education. Teachers' salaries. *In his Vermont school report*, 1908. St. Albans, Vt., St. Albans Messenger company print, 1908. p. 45-47.

Statistics.

## SALARIES OF WOMEN TEACHERS.

Association of men teachers and principals for the city of New York. The grounds of opposition to the White bill. 48 p.

Senate bill 1218, 1907. Vetoed by Governor Hughes. See *Educational review*, September 1907, p. 211-13. Bill for salary increase for women-teachers, re-introduced, 1908, again fails of passage.

Connecticut. State teachers' association. Women teachers' salaries. *Journal of education*, 68: 588-87, November 28, 1908.

How a school mistress may live upon seventy pounds a year. London, 1887. 19 p. 8°.

Salary of the college woman. Independent, 65: 88-92, June 9, 1908.

Statistics of salaries paid to assistant mistresses in high schools. London, 1891. 16 p. 8°.

Tanner, Amy Eliza. The salaries of women teachers in institutions of collegiate rank. Association of collegiate alumnae. Special bulletin. Series 3, no. 15, p. 20-24, November 1907.

#### SALARIES OF TEACHERS IN COLLEGES AND UNIVERSITIES.

Carnegie foundation for the advancement of teaching. Organization and classification of colleges and universities in the United States and Canada. In its Bulletin no. 2, May 1908. New York city. p. 1-47.

Tables of statistics.

Carpenter, William Henry. Financial status of the professor in America and Germany. Educational review, 36: 325-41, November 1908.

Foulk, C. W., and Earhart, R. F. State university salaries. Popular science monthly, 67: 423-34, September 1905.

Hutchins, H. B. Should men bearing the same title in any institution receive the same pay. In Association of American universities. Journal of proceedings and addresses, 1906. [Chicago, University of Chicago press] 1907. p. 92-99.

National association of State universities. Committee report upon the application of the Association of State universities for recognition by the Carnegie Foundation for the advancement of teaching. In its Transactions and proceedings, 1907. Bangor, Maine, Bangor co-operative printing co. p. 214-43. (Special session, January 22-23, 1908)

Stillman, John Maxson. Relations of salary to title in American universities. In Association of American universities. Journal of proceedings and addresses, 1906. [Chicago, Ill., University of Chicago press] 1907. p. 72-91.

"A minimum and maximum salary should be established for each title, a man being advanced, now within his title, now from one title to another, as he shall merit."

#### SALARIES OF TEACHERS IN FOREIGN COUNTRIES.

Friedel, V. H. Traitements des instituteur et des institutrices à l'étranger. Paris, 1903. 224 p. 12°.

##### France.

Fortemps, J., and LeVelleur. Législation financière de l'instruction primaire publique: traitements et indemnités du personnel . . . Paris, A. Colin, 1906. 160 p. 8°. [Bibliothèque des maîtres]

London. Board of education [Salaries of teachers] In its The education and training of the French primary school teacher. London, Wyman and sons, 1907. p. 133-41. (Special reports on educational subjects. v. 18)

##### Germany.

Salaries of teachers in German schools. American educational review, 30: 19-20, October 1908.

After 29 years' service the German man teacher receives, maximum salary, \$985. The German woman teacher, \$737.80.

##### Great Britain.

Great Britain. Board of education The elementary school teachers (Superannuation) Oct. 1898 . . . London, Wyman & sons, 1908. 32 p. 8°.

##### Hungary.

Hungary. Royal Hungarian ministry of religion and public instruction. Employment of teachers in secondary schools and their salaries. In its Education in Hungary. Budapest, Victor Hornyánsky, 1908. p. 159-60.

*Italy.*

Cifarelli, Tommaso. Come lo Stato italiano paga i suoi funzionari (la media degli stipendi degli insegnanti delle scuole . . .) Bologna, Società coop. tip. Azzoguidi, 1903. 34 p. 8°.

Legge portanti disposizioni sugli stipendi e sulla carriera del personale delle scuole medie governative, 8 aprile 1906, n. 142. Napoli, E. Pietrocola . . . 1907. 40 p. 12°. (Biblioteca legale, n. 677)

*New Zealand.*

New Zealand. Education department. Colonial scale of staff and salaries [Wellington, J. Mackay, government printer, 1900] 6 p. F°.

*Spain.*

Calleja y Fernandez, Saturnino. [Lista de varios profesores á quienes se les adeudan cantidades por el desempeño de su ministerio . . .] [Madrid, 1890] 63 p. 8°.

## INDEX.

### A.

Amount of education reported, errors in, 10.

### B.

Blank, special inquiry, Bureau of Education, 8; alternative form, 9.  
Boston, relation of length of experience to salary, men teachers in public high schools, 27; women teachers, 28.  
Brown, Elmer Ellsworth, letter of transmittal, 5.  
Bureau of Education, letter and form used, 11, 12; alternative form, 9; special-inquiry blank, 8.

### C.

California, relation of salary to length of experience and of education, men public-school teachers, 51; women public-school teachers, 52.  
Cleveland, relation of length of experience to salary, men teachers in public high schools, 28; women teachers, 29.

### D.

Data, nature of, and sources of error, 7.

### E.

Education, errors in the amount reported, 10; of teachers in private secondary schools, extent beyond the elementary school, 19, 23; of teachers in public secondary schools, 14, 23, relation to amount of salary, 39, 42.  
Error, in amount of education reported, 10; in length of experience reported, 12; sources of, and nature of data, 7.  
Experience, relation of length of, to amount of salary, 25, 29, 32, 33, 34, 35, 36, 37, 38, 39; errors in reports as to length of, 12.

### F.

Form, with letter, used by Bureau of Education, 11, 12.

### G.

Georgia, relation of salary to length of experience and of education, men public high-school teachers, 49; women public high-school teachers, 49.

### I.

Illinois, relation of salary to length of experience in teaching and extent of education, men teachers, 43; men teachers in public high schools, 44, 45, 46; women teachers, 44; women teachers in public high schools, 46, 47, 48.  
Indiana, relation of experience to amount of salary in certain community groups, public high-school men teachers, 38; central tendency of relationship of amount of salary to length of experience, public high-school women teachers, 39.  
Influence of length of experience, on efficiency in teaching, 25; on salary of private school teachers, 26; on salary of men teachers in public high schools in New York City, Boston, St. Louis, and Cleveland, 27, 28; on salary of women teachers in public high schools in Boston, St. Louis, and Cleveland, 29.  
Introduction, 7.

### L.

Letter and form of inquiry used by Bureau of Education, 11, 12.  
Letter of transmittal, Elmer Ellsworth Brown, 5.

### M.

Massachusetts (excluding Boston), relation of experience to amount of salary in certain special community groups, public high-school men teachers, 34; public high-school women teachers, 35.  
Men teachers and women teachers in public high schools compared, with respect to salaries, 21; with respect to amount of education, 21; with respect to length of experience, 22.

### N.

Nature of data and sources of error, 7.  
New York City, relation of length of experience to salary, men teachers in public high schools, 27; in certain special community groups in the suburbs, public high-school men teachers, 32; public high-school women teachers, 33.

### O.

Ohio, relation of salary to length of experience in teaching and extent of education, men teachers, 43; men teachers in public high schools, 44, 45, 46; women teachers, 44; women teachers in public high schools, 46, 47, 48.

### P.

Public and private secondary school-teachers, compared, 23; relative frequencies of different salaries in same localities, 24.

### R.

References on teachers' salaries, list of, 53.  
Relation of length of experience and education to amount of salary, in certain special community groups, 29; in Ohio, Illinois, Wisconsin, Georgia, Texas, California, 39.

### S.

St. Louis, relation of length of experience to salary, men teachers in public high schools, 27; women teachers, 28.  
Salaries of teachers, in private secondary schools, 18; in public secondary schools, 13; in public and private secondary schools compared, 23; list of references on, 53; of men and women compared, 20; relation to length of experience in teaching, 25, 29; relation to length of experience and length of education in Ohio, Illinois, Wisconsin, Georgia, Texas, and California, 39.  
Schools, teaching staff of private secondary, 18, 19, 20; teaching staff of public secondary, 13, 14, 15, 16, 17.  
Secondary school-teachers, public and private compared, 23, 24.  
Summary, tabular, 22, 23.

### T.

Tabular summary of relative frequencies, of different annual salaries of secondary school-teachers, 22; of different amounts of education of secondary school-teachers, 23; of different amounts of experience in teaching of secondary school-teachers, 23.  
Teachers, men, 14, 15, 16, 18, 19, 20, 21, 22, 23, 24, 27, 28, 32, 34, 36, 38, 43, 44, 45, 46, 49, 50, 51; women, 14, 15, 17, 18, 19, 20, 21, 22, 23, 24, 28, 29, 33, 35, 38, 39, 44, 46, 47, 48, 49, 50, 51, 52; men and women compared, 21, 22, 23, 24.

Teachers' salaries, in private secondary schools, 18; in public secondary schools, 17; in public and private secondary schools compared, 23; list of references on, 33; of men and women compared, 20; relation to length of experience in teaching, 25, 29; relation to length of experience and length of education in Ohio, Illinois, Wisconsin, Georgia, Texas, and California, 39.

Teaching, influence of length of experience on efficiency in, 25, 26, 27, 28, 29.

Teaching staff of private secondary schools, relative frequencies of different annual salaries of men teachers in, 18; relative frequencies of different annual salaries of women teachers in, 18; relative frequencies of different amounts of education of men teachers in, 19; relative frequencies of different amounts of education of women teachers in, 19; relative frequencies of different amounts of experience in teaching of men teachers in, 20; relative frequencies of different amounts of experience in teaching of women teachers in, 20.

Teaching staff of public secondary schools, relative frequencies of different annual salaries of men teachers in, 14; relative frequencies of different annual salaries of women teachers in, 14; relative frequencies of different amounts of education of men teachers in, 15; relative frequencies of different amounts of education of women teachers in, 15; relative frequencies of different amounts of experience in teaching of men teachers in, 16; relative frequencies of different amounts of experience in teaching of women teachers in, 17. Texas, relation of salary to length of experience and of education, men public high-school teachers, 49, 50; women public high-school teachers, 50, 51.

#### W.

Wisconsin, relation of salary to length of experience in teaching and extent of education, men teachers, 43; men teachers in public high-schools, 44, 45, 46; women teachers, 44; women teachers in public high-schools, 46, 47, 48.

#### O