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The Scheduling of Teachers' Salaries

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Recent Issues of the Research Bulletin

Keeping Pace with the Advancing Curriculum. Vol. III, Nos. 4 and 5, September and November, 1925. 96 pp. Price per copy, 50 cents.

Presents in concise and readable form the outcome of recent research and practice bearing upon the problems of curriculum reconstruction. Has been widely used as a handbook by course of study committees and by college classes in the field of the curriculum. Includes selected bibliographies on general and special curricular problems, charts, illustrations, and index for Volume III of Research Bulletin.

The Ability of the States to Support Education. Vol. IV, Nos. 1 and 2, January and March, 1926. 96 pp. Price per copy, 50 cents.

Presents the most comprehensive data yet made available as to the comparative ability of the various states to pay for their schools. Also compares the states as to effort being made to support the schools. Widely quoted in educational periodicals and in recent surveys of state school finance. Much of data presented in graphic form; selected and annotated bibliography.

Efficient Teaching and Retirement Legislation. Vol. IV, No. 3, May, 1926. 72 pp. Price per copy, 25 cents.

Includes the 1926 Report of the Committee of One Hundred on Retirement Allowances of the National Education Association, E. Ruth Pyrtle, Chairman, and other material arranged in convenient form for those studying the problem of the retirement and pensioning of teachers. Selected and annotated bibliography.

A Handbook of Major Educational Issues. Vol. IV, No. 4, September, 1926. 72 pp. Price per copy, 25 cents.

Presents material for the use of lay and professional groups in studying problems affecting the conduct of public schools. Selected references on many major school issues are listed for those desiring additional information.

Major Issues in School Finance—Part I. Vol. IV, No. 5, November, 1926. 32 pp. Price per copy, 25 cents.

Presents data bearing upon two questions: (1) Are school costs larger than the economic resources of the nation justify? and (2) Can present expenditures for education be justified under a policy of economy and efficiency in public expenditures? Much of data presented in graphic form. Contains index to Volume IV.

Major Issues in School Finance—Part II. Vol. V, No. 1, January, 1927. 64 pp. Price per copy, 25 cents.

Presents data bearing upon the economic ability of the various states to support education. Points out and suggests remedies for weak spots in present methods of financing the schools. Lists essentials of a sound plan of state and local taxation. Annotated bibliography of recent studies in state school finance.

Salaries in City School Systems, 1926-27. Vol. V, No. 2, March, 1927. 64 pp. Price per copy, 25 cents.

Presents data as to minimum, median, maximum, and distribution of salaries paid school employees of all types in cities of all population groups.

FOREWORD

Throughout its history the National Education Association has led the movement to lift teaching to a professional level. This movement has had two closely allied objectives. One has sought to create the tools of good teaching: Courses of study incorporating subjectmatter and activities suited to the needs of all children and teaching technics based upon pooled experience and scientific experimentation. The other objective has sought to secure social and economic recognition for teaching comparable to that of other professions requiring equivalent training, character, and responsibility.

It is with the latter problem that this issue of the *RESEARCH BULLETIN* deals. It surveys the economic status of the teaching profession and presents material needed in the drafting and revising of salary schedules.

This and the preceding issue of the *BULLETIN*, along with the Special Salary Tabulations, prepared for the convenience of superintendents, committees of citizens, and local teachers' organizations, offer material of a theoretical and statistical nature essential to those responsible for drafting scientific plans for the compensation of teachers.

The wide use of this material is recommended to all concerned with the problem of salary scheduling. Such use should do much to forward the movement looking toward "better salaries for better teachers."

J. W. CRABTREE, *Secretary,*
National Education Association.

The Nation's Ability to Lift Teacher Compensation to a Professional Level

The question of economic ability. The first and most difficult problem confronted by a community anxious to lift its schedule of teachers' salaries to a professional level has to do with its ability to meet the cost involved.

It is true that some local communities if dependent wholly upon their own resources will find it difficult to pay teachers salaries which justify training and service on a professional level. Such, however, is not the typical situation.

In most states, the adequate support of schools including the payment of acceptable salaries to teachers is less a matter of ability than of willingness. The value of tangible property in the United States is approximately 355 billion dollars. The yearly income is close to ninety billions. The nation's savings accounts now total twenty-five billions. For the purchase and upkeep of passenger automobiles we expend well over ten billions a year. New buildings and houses cost approximately seven billions a year. Theaters, soft drinks, ice cream, candy, chewing gum, tobacco, and similar luxuries annually consume six billion dollars. To say that a nation with such economic resources and able to afford such expenditures has reached the limit of its ability to pay when it expends two and a half billion dollars a year for the schooling of its children is to assign education a low place in the scale of human values.¹

Tables 1 and 2 present data pertinent to the consideration of the nation's ability to support its schools. Charts 1 and 2 graphically show the relationship of the nation's school expenditures and its economic resources.

The need for constructive economy recognized. The foregoing conclusion is not out of harmony with the fundamental principle that no service, public or private, which the nation chooses to support should be allowed any greater proportion of its income than is necessary to maintain that service on an efficient basis. The mere fact that the nation is economically able to spend two and a half billions

for schools, or even five billions, is no justification in itself for expending either amount. Only such a sum should be expended for schools as is essential to provide adequate facilities for the effective education of the nation's children. Only such a sum should be allotted for the economic compensation of the nation's teachers as is necessary to guarantee capable teachers for all classrooms.

This brings us to the question whether the schools are expending more than is necessary to accomplish these purposes. As a partial answer we have the following:

1. The provision for school support before the war was inadequate to maintain schools of desirable efficiency. This conclusion is supported by these facts: The 1920 census revealed five million "persons who had had no schooling whatever," the majority of whom were native born. The army draft of 1918 disclosed that approximately twenty-five percent of our young men possessed an inadequate grasp of reading and writing ability. Thousands of teachers were employed with no special training for their work, and often with little general education beyond the eighth-grade. Half the nation's teachers received less than five hundred dollars a year, an average for the full year of less than ten dollars a week. This was but a fraction of the amounts then paid those generally designated as unskilled or semiskilled workers.

2. The increase in school expenditures over the prewar figures has not been large, considering the inadequacy of school support before the war. These facts support the foregoing conclusion: The amount annually expended for the education of each child in school at present, measured in dollars of equal purchasing power, is approximately twenty-five percent more than before the war. The increase in school costs over prewar years is less than the increase in expenditures by the federal government which has established a reputation for economy. The increase in teachers' salaries since 1913 has been at a rate but slightly

¹ The figures given in this paragraph are based on reports of reliable statistical agencies. Address the Research Division for citation to the reports.

TABLE 1.—WEALTH, INCOME AND SCHOOL COSTS IN THE UNITED STATES, 1890 TO 1926

Year	Value of tangible wealth	Current income	Cost of public elementary and secondary schools	Cost of all schools both public and private	Percentage relationship of public elementary and secondary school costs and		Percentage relationship of all schools both public and private and		Amount of income available for all purposes other than school support	Index number of cost of living 1913=100	Amount of income available for all purposes other than school support in 1890—dollars
					Wealth	Income	Wealth	Income			
1	2	3	4	5	6	7	8	9	10	11	12
1890.....	\$65,037,091,000	\$12,082,000,000	\$140,506,715	\$189,684,065	.22	1.16	.29	1.57	\$11,892,315,935	75.9	\$11,892,315,935
1900.....	88,517,307,000	17,965,000,000	214,964,613	290,202,234	.24	1.20	.33	1.62	17,674,797,766	77.4	17,332,262,919
1912.....	186,299,664,000	30,600,000,000	482,886,793	651,897,171	.26	1.58	.35	2.13	29,948,102,829	97.1	23,409,485,112
1922.....	320,803,862,000	65,567,000,000	1,580,671,296	2,053,250,492	.49	2.41	.64	3.13	63,513,749,508	167.3	28,814,665,796
1926.....	355,300,000,000	89,682,000,000	2,070,000,000	2,711,798,000	.58	2.31	.76	3.03	86,974,202,000	175.2	37,678,892,305

Sources of data: Column 2 from 1890 to 1922 from U. S. Bureau of Census, 1926 from National Industrial Conference Board; Column 3, National Bureau of Economic Research; Columns 4 and 5 are based on data from U. S. Bureau of Education, data for 1926 independently estimated; Column 6 is obtained by dividing column 4 by column 2; Column 7 is obtained by dividing column 5 by column 3; Column 8 is obtained by dividing column 5 by column 2; Column 9 is obtained by dividing column 5 by column 3; Column 10 is obtained by subtracting column 5 from column 3; Column 11, U. S. Bureau of Labor; Column 12 is obtained by reducing the amounts of column 10 to dollars having the purchasing power of 1890, using index numbers of Column 11.

Sources of data: Column 2 from 1890 to 1922 from U. S. Bureau of Census, 1926 from National Industrial Conference Board; Column 3, National Bureau of Economic Research; Columns 4 and 5 are based on data from U. S. Bureau of Education, data for 1926 independently estimated; Column 6 is obtained by dividing column 4 by column 2; Column 7 is obtained by dividing column 4 by column 3; Column 8 is obtained by dividing column 5 by column 2; Column 9 is obtained by dividing column 5 by column 3; Column 10 is obtained by subtracting column 5 from column 3; Column 11, U. S. Bureau of Labor; Column 12 is obtained by reducing the amounts of column 10 to dollars having the purchasing power of 1890, using index numbers of Column 11.

greater than that of the average income and of wages in general.

3. Present school expenditures are not sufficient to provide acceptable facilities for all children. This statement is supported by these facts: Thousands of children are still attending schools in obsolete, unhygienic and dangerous buildings. Approximately half of the teachers possess less than the desirable minimum of training for their work. The typical salary paid teachers is still considerably below the average income of gainfully occupied persons and the average wage of many unskilled and semiskilled groups of workers.

The need for lifting teacher compensation to a professional level. Society each year places increasing burdens upon the schools. Each decade demands a higher type of training for successful living. Courses fitted to the needs of children of varying intellectual and social backgrounds are requisite if all are to be given an equal opportunity. Teachers must have a more thorough training for teaching the traditional subjects. They are also being called upon to equip themselves to supervise the out-of-class activities through which modern schools achieve some of their most valuable educational results. Each year the school calls for teachers with greater capacity and with better training.

Such teachers cannot be obtained at the rates paid unskilled labor. Training costs money and must be paid for. If the difference between the tangible rewards received by trained and capable people who teach and by those in other professions is too great, there will be an inadequate supply of properly qualified teachers, no matter how great are the intangible rewards of teaching. Teaching may never offer the large financial rewards realized by a certain percentage of those who enter business and the other professions, but if it is to be placed on a sound basis it must offer not less than an opportunity to lead a life of dignity and reasonable satisfaction as to the material needs of life.

Steps in placing teaching on a professional level. There is no reason why we should not look ahead to the time when teaching service will be rewarded on a professional level. The nation has sufficient economic resources so that the result may be accomplished without placing an undue burden upon society. What are

some of the steps necessary to lift the tangible rewards of teaching to a professional level?

First, the public must generally recognize that teaching is a service so important to the

nation's welfare that it should be attempted only by those with complete qualifications for the task. More specifically, no one should instruct in an elementary school who has not

TABLE 2.—TOTAL CURRENT INCOME AND AVERAGE INCOME PER PERSON GAINFULLY OCCUPIED, 1909 TO 1926

Year	Total current income of the people of the nation	Average income per person gainfully occupied	In 1913 dollars	
			Total current income	Average income
1	2	3	4	5
1909.....	\$27,100,000,000	\$791	\$28,200,000,000	\$823
1910.....	28,400,000,000	809	29,100,000,000	829
1911.....	29,000,000,000	812	29,300,000,000	821
1912.....	30,600,000,000	844	30,800,000,000	850
1913.....	32,000,000,000	864	32,000,000,000	864
1914.....	31,600,000,000	836	31,300,000,000	828
1915.....	32,700,000,000	861	32,000,000,000	843
1916.....	39,200,000,000	1014	35,500,000,000	919
1917.....	48,500,000,000	1232	37,300,000,000	947
1918.....	56,000,000,000	1386	35,500,000,000	879
1919.....	67,254,000,000	1669	37,600,000,000	934
1920.....	74,158,000,000	1851	36,300,000,000	907
1921.....	62,736,000,000	1537	36,200,000,000	887
1922*.....	65,567,000,000	1586	40,400,000,000	979
1923*.....	76,769,000,000	1821	46,900,000,000	1113
1924*.....	79,365,000,000	1840	48,400,000,000	1121
1925*.....	86,461,000,000	1971	51,100,000,000	1165
1926*.....	89,682,000,000	2010	52,900,000,000	1186

Figures of this table from News Bulletin, February 21, 1927, of National Bureau of Economic Research, New York City. *Preliminary estimates.

CHART I

WEALTH, INCOME AND ALL SCHOOL COSTS IN THE UNITED STATES IN 1926

Estimated Value of All
Tangible Property
\$ 355,300,000,000

Estimated Current
Income
\$ 89,682,000,000

Estimated Total Expen-
ditures for All Schools
\$. 2,717,798,000

*Research Division
National Education Assn.*

Sources of data: figures on value of tangible property, from National Industrial Conference Board; figures on current income from National Bureau of Economic Research; figures on total expenditures for all schools, independently estimated based on reports of U.S. Bureau of Education for earlier years

had at least two years' training for teaching beyond high school graduation, and no one should instruct in high school who has not had at least four years beyond high school, including specific training for teaching.

Second, the public must replace obsolete methods of obtaining school money, still existent in most states, by modern forms of taxation suited to present economic conditions. More specifically, the property tax as a principal source of school revenue should be supplemented by taxes suitable to modern economic organization such as those on personal and business income.

Third, the money already available for school support must be more effectively used.

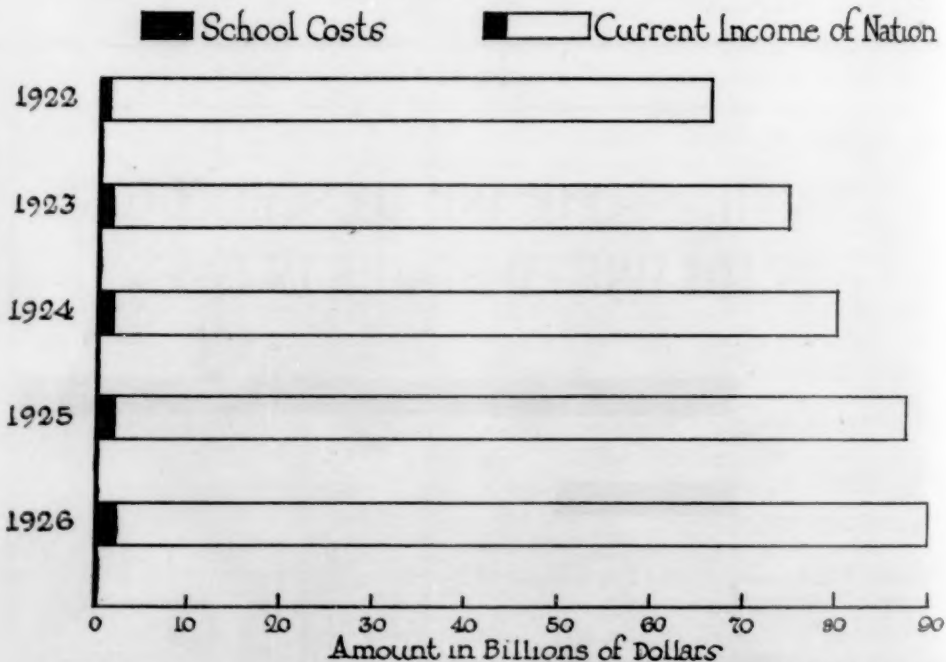
The people must abolish the inefficient and wasteful small units for school support and management, such as the district and township, and replace them by larger units such as the county. Methods of distributing state school funds must be revised so that they decrease rather than increase, as is frequently the case at present, the disparity between local communities in ability to provide acceptable school facilities.

Fourth, salary schedules must be so devised and so administered that the best possible teachers will be obtained for a given expenditure. It is with the latter question that this issue of the RESEARCH BULLETIN is concerned¹

¹ The following issues of the RESEARCH BULLETIN will be found suggestive in studying the other three problems mentioned in this paragraph: September and November, 1926, and January, 1927.

CHART II

PROPORTION OF TOTAL CURRENT INCOME EXPENDED FOR PUBLIC, ELEMENTARY & SECONDARY SCHOOLS 1922~1926



*Research Division
National Education Ass'n.*

Figures on income are preliminary estimates of National Bureau of Economic Research. Figures on cost of schools from U. S. Bureau of Education for 1922, 1924 and 1925, other years estimated.

The Economic Position of Public School Teachers

These questions arise early in establishing or revising the schedule of teachers' salaries in a community:

1. What salaries are paid teachers in comparable communities?
2. What incomes are received by other economic groups in this and other communities?
3. How does the economic position of teachers compare with that of other groups of gainfully occupied persons?

This section makes available some of the basic data needed by communities seeking answers to these questions. The information presented consists of:

1. Figures as to salaries received by public school teachers in general, and by certain groups of teachers.
2. Figures as to incomes received by gainfully occupied persons in general, and by certain groups of workers for which data are obtainable.
3. Comparisons of earnings of teachers in general with gainfully occupied persons in general, and of specific groups of teachers with specific groups of gainfully occupied persons.

In comparing teachers' salaries with the earnings in other occupations it is not implied that teaching and these occupations are necessarily comparable as to the training required or responsibilities involved. Nor does the comparison of the incomes of teachers with those of other groups imply that the latter are receiving larger returns for their services than is deserved. Some of the groups for which figures are given doubtless receive less than their service would justify in an ideal situation.

Salaries of Public School Teachers in the United States

Salaries of Teachers in General. Table 3 gives the distribution of salaries paid the 845,000 members of the teaching profession in public schools of the United States in the school year 1926-27. In this number are included the following groups: classroom teach-

ers, supervisors, principals, and superintendents and their professional staffs, in city and rural school systems and in state departments of education. Instructors employed in colleges and other tax-supported institutions of higher learning above the high school level are not included, nor are teachers included who are employed in any type of non-tax-supported institution, elementary, secondary, or collegiate.¹

From Table 3 one may ascertain the number of teachers employed in both rural and urban communities whose salaries fall in any particular class. Column 2 indicates that 35,320 rural school workers are receiving salaries between \$1000 and \$1099. This number, according to column 3, is 7.6 percent of the 464,700 teachers employed in rural communities. Column 4 indicates that a person employed in the rural schools has 393 chances in a 1000 of receiving a salary of \$1000 or more. This is the same as saying that 39.3 percent of rural school workers receive salaries of \$1000 or more, and 60.7 percent receive less than \$1000. A person employed in the country schools of the United States has considerably less than an even chance of receiving a yearly salary of \$1000.

From Table 3 one may similarly discover the number and percent of rural teachers receiving any given salary, and the number in a thousand receiving salaries equal to or above this salary. For example, 2990 rural teachers, or six-tenths of one percent, receive a salary in the \$2000 to \$2099 class. In rural communities 34 teachers out of a thousand or 3.4 percent yearly receive \$2000 or above. The remainder receive less than this.

The distribution of salaries paid the 380,300 teachers in urban communities is similarly revealed in columns 5 and 6 of Table 3. There are 25,708 urban public school workers receiving salaries in the \$1800 to \$1899 group, or 6.8 percent. In cities, 456 teachers in a thousand, 45.6 percent, or less than half yearly receive \$1800 or more. The other 54.4 percent receive less than \$1800. Using Table 3, similar figures may be obtained for any salary

¹ The Representative Assembly of the National Education Association has authorized a study of salaries in higher institutions to be initiated during 1927-28.

TABLE 3.—DISTRIBUTION OF SALARIES OF PUBLIC SCHOOL TEACHERS, PRINCIPALS, AND EXECUTIVES IN RURAL AND URBAN COMMUNITIES, 1926-27

Salary classes	Rural			Urban		
	Number	Percent	Number in each 1,000 receiving salary in or above class indicated	Number	Percent	Number in each 1,000 receiving salary in or above class indicated
1	2	3	4	5	6	7
\$6,000 and over.....	23	.005	.05	570	.15	1.5
5,500 to \$5,999.....	26	.005	.10	237	.06	2.1
5,000 to 5,499.....	55	.012	.22	719	.19	4.0
4,800 to 4,999.....	9	.002	.24	358	.10	5.0
4,600 to 4,799.....	15	.003	.27	465	.12	6.2
4,400 to 4,599.....	65	.014	.41	495	.13	7.5
4,200 to 4,399.....	70	.015	.56	619	.16	9.1
4,000 to 4,199.....	168	.036	.92	857	.2	11.
3,800 to 3,999.....	70	.02	1.1	2,203	.6	17.
3,700 to 3,799.....	29	.01	1.2	2,277	.6	23.
3,600 to 3,699.....	259	.05	1.7	2,331	.6	29.
3,500 to 3,599.....	183	.05	2.2	1,617	.4	33.
3,400 to 3,499.....	266	.06	2.8	841	.2	35.
3,300 to 3,399.....	314	.07	3.5	701	.2	37.
3,200 to 3,299.....	272	.06	4.1	5,488	1.5	52.
3,100 to 3,199.....	272	.06	4.7	4,660	1.2	64.
3,000 to 3,099.....	674	.15	6.2	2,986	.8	72.
2,900 to 2,999.....	233	.05	6.7	1,784	.5	77.
2,800 to 2,899.....	545	.12	7.9	12,768	3.4	111.
2,700 to 2,799.....	506	.11	9.0	4,480	1.2	123.
2,600 to 2,699.....	660	.1	10.	6,013	1.6	139.
2,500 to 2,599.....	1,315	.3	13.	11,017	2.9	168.
2,400 to 2,499.....	1,571	.3	16.	10,182	2.7	195.
2,300 to 2,399.....	1,266	.3	19.	8,496	2.2	217.
2,200 to 2,299.....	1,864	.4	23.	13,425	3.5	252.
2,100 to 2,199.....	2,051	.5	28.	13,260	3.5	287.
2,000 to 2,099.....	2,990	.6	34.	22,586	5.9	346.
1,900 to 1,999.....	1,949	.4	38.	15,979	4.2	388.
1,800 to 1,899.....	5,842	1.3	51.	25,708	6.8	456.
1,700 to 1,799.....	4,071	.9	60.	24,179	6.3	519.
1,600 to 1,699.....	7,551	1.6	76.	24,772	6.5	584.
1,500 to 1,599.....	12,558	2.7	103.	26,647	7.0	654.
1,400 to 1,499.....	14,316	3.1	134.	24,504	6.4	718.
1,300 to 1,399.....	23,797	5.1	185.	24,467	6.4	782.
1,200 to 1,299.....	31,241	6.7	252.	22,921	6.0	842.
1,100 to 1,199.....	30,482	6.5	317.	17,072	4.5	887.
1,000 to 1,099.....	35,320	7.6	393.	14,669	3.9	926.
900 to 999.....	54,935	11.8	511.	11,786	3.1	957.
800 to 899.....	59,327	12.8	639.	5,802	1.5	972.
700 to 799.....	42,708	9.2	731.	3,840	1.0	982.
600 to 699.....	44,610	9.6	827.	2,441	.7	989.
500 to 599.....	27,569	5.9	886.	2,782	.7	996.
0 to 499.....	53,061	11.4	1,000.	1,296	.4	1,000.
Total.....	464,700	100.00	.....	380,300	100.00	.....

Read table thus: 23 (column 2) or .005 of one percent (column 3) of the 464,700 members of the teaching profession employed in public schools of rural communities receive yearly salaries of \$6,000 or more. One has .05 (column 4) of a chance in a thousand, or one chance in twenty thousand of receiving a salary of \$6,000 or more in public school work in rural communities. Similarly read other figures for rural and urban communities.

Sources of data: The figures given in this table are approximate estimates based on the best available data. Figures as to the distribution of urban teachers salaries as given in column 5 are believed to be in close agreement with the current situation, since they are based upon the 1926-27 salary study of the Research Division of the National Education Association. This study collected data as to salaries paid 266,172 teachers of the 380,300 teachers in city school systems in 2,880 incorporated cities 2,500 in population and over in the United States. The estimate as to the total number of teachers in city school systems, 380,300, is based upon United States Bureau of Education reports, giving number of teachers in such systems for earlier years.

In the distribution given in column 5 is included all teachers, principals, supervisors, and school administrators, and executives employed by city boards of education. In this column are also included state superintendents and their professional office staff. A number of groups of school employees not usually included under the heading "teachers," such as school nurses, janitors, clerical workers, etc., are not included in column 5.

The estimates for rural teachers are based largely upon U. S. Bureau of Education, Rural School Leaflet No. 39, January, 1926, "Salaries of Rural Teachers and Length of School Term in 1924."

In the distribution of rural teachers as given in column 2, the deviation from the current situation, if it were known, would probably be somewhat greater than in the distribution of city teachers, since no data for the current year are available for rural teachers. Included in the figures of column 2 are the following:

- Teachers in one-teacher schools.
- Teachers in two-teacher schools.
- Teachers in country schools of three or more teachers.
- Teachers in consolidated schools.
- Teachers in country village schools of three or more teachers.
- Teachers in a number of unincorporated towns, a few of which are above 2,500 in population.
- Principals in rural schools.
- County superintendents and their professional assistants.

Dr. Frank M. Phillips, Chief of the Division of Statistics, U. S. Bureau of Education, furnished some data and many valuable suggestions in the course of making these estimates. However, neither Dr. Phillips nor the U. S. Bureau of Education should be held responsible for the accuracy of the figures of this table.

class. Chart III based on Table 3 gives the facts in graphic form.

Among the 845,000 public school workers are a number of groups, the distribution of whose salaries differ radically from that given for all teachers in Table 3. Space does not permit giving in this Bulletin the distributions for these various groups. Such salary distribu-

tions for teachers, supervisors and executives employed in city schools will be found in the tables of the March, 1927, RESEARCH BULLETIN.

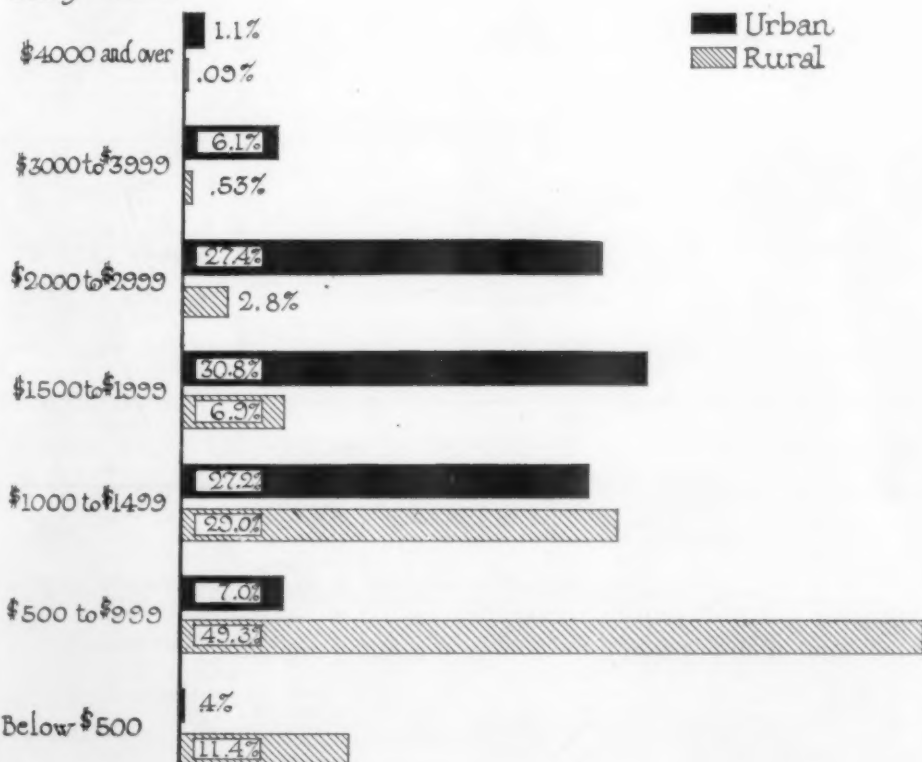
Median Salaries of Certain Groups of Teachers. It is possible to give the median salaries for a number of the groups included in the distributions of Table 3.¹

¹ Those not familiar with the term *median* may look upon it as having, for ordinary purposes, the same significance as the familiar *average*. More specifically, the best paid 50 percent of a group of teachers receive salaries equal to or greater than the median salary and the poorest paid 50 percent receive salaries equal to or less than the median.

CHART III

PERCENT OF URBAN & RURAL SCHOOL TEACHERS RECEIVING VARIOUS SALARIES

Salary Classes



Research Division
National Education Association

Read chart thus: 1.1% of all urban teachers and .09% of one percent of rural teachers receive salaries of \$4000 or over. Similarly read figures for other salary classes. Salaries of principals, superintendents, etc. are included.

TABLE 4.—ESTIMATED MEDIAN SALARIES PAID TEACHERS IN RURAL COMMUNITIES, VILLAGES, AND TOWNS OF LESS THAN 2,500 IN POPULATION

Type of school	Country schools with:			Consolidated schools	Villages and small towns			
	One teacher	Two teachers	Three or more teachers		Teachers	Principals of—		
						Elementary schools	Combined elementary and high schools	High schools
1	2	3	4	5	6	7	8	9
Median salary.....	\$755	\$763	\$874	\$1,066	\$1,194	\$1,591	\$2,008	\$2,205
Approximate number in group.....	170,167	35,449	17,551	60,444	110,099	1,997	8,755	2,621

Read table thus: The median salary paid 170,167 teachers in one-teacher rural schools is \$755. Similarly read figures for other groups of rural teachers. The term "median" is explained in footnote on page 141.

Sources of data: Medians of this table are estimates, based largely upon U. S. Bureau of Education, Rural School Leaflet, No. 29, January, 1926.

TABLE 5.—MEDIAN SALARIES PAID CLASSROOM TEACHERS IN CITIES IN 1926-27

Population of city	Elementary school teachers		Junior high school teachers		Senior high school teachers	
	Median salary	Estimated number	Median salary	Estimated number	Median salary	Estimated number
1	2	3	4	5	6	7
2,500 to 5,000.....	\$1,176	27,048	\$1,346	3,703	\$1,550	13,025
5,000 to 10,000.....	1,281	22,930	1,440	3,476	1,671	11,148
10,000 to 30,000.....	1,381	32,895	1,575	5,732	1,806	12,643
30,000 to 100,000.....	1,565	32,871	1,804	8,654	2,060	10,452
Over 100,000.....	2,008	86,524	2,213	11,691	2,583	27,021
Approximate number in group.....		202,268		33,256		74,289

Read table thus: The median salary paid 27,048 elementary school teachers in cities 2,500 to 5,000 in population is \$1,176. Similarly read figures for other groups of teachers and other sized cities. The term "median" is explained in footnote on page 141.

Sources of data: Medians based on data given in the Research Bulletin of the National Education Association, Vol. V, No. 2, March, 1927.

TABLE 6.—MEDIAN SALARIES PAID PRINCIPALS IN CITIES IN 1926-1927

Population of city	Teaching elementary principals		Supervising elementary principals		Junior high school principals		Senior high school principals	
	Median salary	Estimated number	Median salary	Estimated number	Median salary	Estimated number	Median salary	Estimated number
1	2	3	4	5	6	7	8	9
2,500 to 5,000.....	\$1,485	1,390	\$2,319	268	\$1,779	268	\$2,333	903
5,000 to 10,000.....	1,517	1,573	2,229	412	2,068	207	2,821	607
10,000 to 30,000.....	1,722	1,938	2,250	1,094	2,609	227	3,424	497
30,000 to 100,000.....	2,300	880	3,017	1,476	3,580	271	4,438	233
Over 100,000.....	2,700	620	3,650	3,877	4,238	247	5,010	403
Approximate number in group.....		6,401		7,127		1,220		2,643

Read table thus: The median salary paid 1,390 teaching elementary school principals in cities 2,500 to 5,000 in population is \$1,485. Similarly read figures for other groups of principals and other sized cities. The term median is explained in footnote on page 141.

Sources of data: Medians based on data given in the Research Bulletin of the National Education Association, Vol. 5, No. 2, March, 1927.

MEDIAN SALARIES PAID VARIOUS GROUPS OF CLASSROOM TEACHERS

1926 - 1927

COUNTRY SCHOOLS

One Teacher Schools

\$ 755

Two Teacher Schools

\$ 763

Three or More
Teacher Schools

\$ 874

Consolidated Schools

\$1066

VILLAGE SCHOOLSVillage and Small
Town Schools

\$ 1194

CITIES 2500 to 5000

Elementary Schools

\$ 1176

High Schools

\$ 1550

CITIES 5,000 to 10,000

Elementary Schools

\$ 1281

High Schools

\$ 1671

CITIES 10,000 to 30,000

Elementary Schools

\$ 1381

High Schools

\$ 1806

CITIES 30,000 to 100,000

Elementary Schools

\$ 1565

High Schools

\$ 2060

CITIES 100,000 and over

Elementary Schools

\$ 2008

High Schools

\$ 2583

*Research Division
National Education Ass'n*

Table 4 gives the median salaries of eight groups of rural school workers. Referring to this table, half of the 35,449 teachers in two teacher schools receive yearly salaries of \$763 or less; half of the 2621 high school principals in villages and small towns receive \$2205 or less. Similar figures are given for other groups.

Table 5 gives the median salaries of various groups of classroom teachers in cities of different populations. A median salary of \$1176 is received by the 27,048, elementary, classroom teachers employed in cities of 2500 to 5000 in population, while \$2583 or more than twice as high a median is paid the 27,021 high school teachers in cities over 100,000 in population.

CHART V

MEDIAN SALARIES PAID VARIOUS GROUPS OF PRINCIPALS

1926-1927

VILLAGES & SMALL TOWNS

Elementary Schools

\$1519

High Schools

\$2205

CITIES 2,500 to 5,000

Elementary Schools

\$2319

High Schools

\$2333

CITIES 5,000 to 10,000

Elementary Schools

\$2229

High Schools

\$2821

CITIES 10,000 to 30,000

Elementary Schools

\$2250

High Schools

\$3424

CITIES 30,000 to 100,000

Elementary Schools

\$3017

High Schools

\$4438

CITIES 100,000 & OVER

Elementary Schools

\$3650

High Schools

\$5010

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National Education Ass'n.

Figures are given for other groups of classroom teachers in Table 5.

Table 6 gives median salaries of school principals in cities. A median of \$1,485 is paid the 1390 teaching elementary school principals in cities of 2500 to 5000 in population, while a median of \$5010 is paid the 403 high school principals in cities over 100,000 in population.

Table 7 gives median salaries of certain administrative officers in city schools. The highest median is \$10,087 received by superintendents in cities over 100,000 in population.

Charts IV to VI based upon tables described in the preceding paragraphs, graphically present some of the figures.

Incomes of Gainfully Occupied Persons in the United States

Incomes of Gainfully Occupied Persons in General. The first four columns of Table 8 present an approximation of the distribution of the incomes of the 44,600,000 gainfully occupied persons in the United States in 1926.¹ "Gainfully occupied persons" includes all people ten years of age or over engaged in activities yielding direct money incomes whether employer, salary or wage earner, or working on his own account, that is, it includes everybody from the lowest paid juvenile worker to the captain of industry enjoying the highest income. It does not include housewives or children working about homes.

From Table 8 one may ascertain the num-

ber of persons whose incomes fall in any class. Column 2 indicates that 2,302,500 persons have incomes falling in the \$1800 to \$1899 class. According to column 3, 5.2 percent of all gainfully occupied persons have such an income. Column 4 indicates that 441 of every 1000 gainfully occupied persons in the United States have incomes of \$1800 or more, that is, 44 percent have incomes of \$1800 or more and 56 percent incomes of less than \$1800. Figures may be read from Table 8 for any income class.

Chart VII, based on Table 8, graphically presents figures concerning the distribution of incomes of gainfully employed persons in the United States.

In the distribution of Table 8 are the incomes of groups of widely varying economic status: unskilled laborers, street car conductors, lawyers and bankers. Figures are not available so that it is possible to break up the general distribution into a series of smaller distributions showing the range of incomes received by each of the various occupational groups. Some facts are available, however, as to the average or median incomes of a number of these groups.

Incomes of Certain Groups of Gainfully Occupied. In 1926 the average income of all gainfully occupied persons was \$2010. This figure is obtained by dividing the estimated current income of the nation in 1926, \$89,682,000,000, by the estimated number of

¹ The approximate character of these figures, as indicated in the footnotes of Table 8, should be held definitely in mind as they are studied.

TABLE 7.—MEDIAN SALARIES PAID CHIEF ADMINISTRATIVE OFFICIALS IN CITY SCHOOL SYSTEMS

Population of city	Assistant superintendents		Superintendents of schools	
	Median salary	Number	Median salary	Number
1	2	3	4	5
2,500 to 5,000.....			\$3,380	1,383
5,000 to 10,000.....			4,026	738
10,000 to 30,000.....			4,765	511
30,000 to 100,000.....	\$4,045	70	6,428	181
100,000 and over.....	5,813	230	10,087	67
Approximate number in group.....				2,880

Read table thus: The median salary paid the 70 assistant superintendents in cities 30,000 to 100,000 in population is \$4,045. Similarly read figures for superintendents of schools and other sized cities.
 No data is given as to salaries paid assistant superintendents for cities of less than 30,000 in population, since in these cities this position is the exception.
 Sources of data: Medians based on data give in the Research Bulletin of the National Education Association, Vol. V, No. 2, March, 1927.

TABLE 8.—DISTRIBUTION OF INCOMES OF ALL GAINFULLY OCCUPIED PERSONS AND PUBLIC SCHOOL TEACHERS, PRINCIPALS, AND EXECUTIVES IN THE UNITED STATES IN 1927

Income and salary classes	All gainfully occupied in the United States			Public school teachers, principals and executives			Ratio of percent of gainfully occupied persons and of teachers reaching salary in or above class indicated
	Number	Percent	Number in each 1,000 receiving income in or above class indicated	Number	Percent	Number in each 1,000 receiving salaries in or above class indicated	
1	2	3	4	5	6	7	8
\$1,000,000 and over.....	207	.0005	.005				
750,000 to \$999,999.....	138	.0003	.008				
500,000 to 749,999.....	340	.0008	.016				
400,000 to 499,999.....	330	.0007	.023				
300,000 to 399,999.....	562	.0013	.036				
250,000 to 299,999.....	537	.0012	.048				
200,000 to 249,999.....	928	.0022	.07				
150,000 to 199,999.....	1,757	.004	.11				
100,000 to 149,999.....	4,759	.011	.22				
90,000 to 99,999.....	1,868	.004	.26				
80,000 to 89,999.....	2,481	.006	.32				
70,000 to 79,999.....	3,550	.008	.40				
60,000 to 69,999.....	5,057	.012	.52				
50,000 to 59,999.....	7,781	.018	.7				
40,000 to 49,999.....	13,000	.03	1.0				
30,000 to 39,999.....	24,450	.05	1.5				
25,000 to 29,999.....	21,650	.04	1.9	1	.0001	.001	1900
20,000 to 24,999.....	33,230	.07	2.6	1	.0001	.002	1300
15,000 to 19,999.....	61,100	.13	3.9	2	.0002	.004	975
14,000 to 14,999.....	19,178	.04	4.3				
13,000 to 13,999.....	22,250	.05	5.8				
12,000 to 12,999.....	33,375	.07	5.5	11	.0013	.017	324
11,000 to 11,999.....	44,475	.10	6.5	6	.0007	.024	271
10,000 to 10,999.....	53,400	.12	7.7	36	.0043	.067	115
9,000 to 9,999.....	66,750	.15	9.2	18	.0021	.088	105
8,000 to 8,999.....	89,000	.2	11.	43	.0052	.14	79
7,000 to 7,999.....	133,500	.3	14.	121	.014	.28	50
6,000 to 6,999.....	178,000	.4	18.	354	.042	.70	26
5,000 to 5,999.....	333,750	.7	25.	1,037	.12	1.9	13
4,000 to 4,999.....	667,500	1.5	40.	2,121	.37	5.6	7
3,900 to 3,999.....	109,000	.3	43.	670	.08	6.4	7
3,800 to 3,799.....	131,250	.3	46.	1,603	.19	8.3	6
3,700 to 3,699.....	145,700	.3	49.	2,306	.27	11.	4.5
3,600 to 3,599.....	154,600	.4	53.	2,590	.3	14.	3.8
3,500 to 3,499.....	163,500	.4	57.	1,800	.2	16.	3.6
3,400 to 3,399.....	182,400	.4	61.	1,107	.1	17.	3.6
3,300 to 3,299.....	195,750	.4	65.	1,015	.1	18.	3.6
3,200 to 3,199.....	248,000	.6	71.	5,760	.7	25.	2.9
3,100 to 3,099.....	286,900	.6	77.	4,932	.6	31.	2.5
3,000 to 3,099.....	309,250	.7	84.	3,660	.4	35.	2.4
2,900 to 2,899.....	413,750	.9	93.	2,017	.2	37.	2.5
2,800 to 2,799.....	545,000	1.2	105.	13,313	1.6	53.	2.0
2,700 to 2,699.....	756,250	1.7	122.	4,986	.6	59.	2.1
2,600 to 2,599.....	867,500	2.0	142.	6,673	.8	67.	2.1
2,500 to 2,499.....	1,068,497	2.4	166.	12,332	1.5	82.	2.0
2,400 to 2,399.....	1,301,250	2.9	195.	11,753	1.4	96.	2.0
2,300 to 2,299.....	1,412,500	3.2	227.	9,762	1.2	108.	2.1
2,200 to 2,199.....	1,623,750	3.6	263.	15,289	1.8	126.	2.1
2,100 to 2,099.....	1,857,500	4.2	305.	15,311	1.8	144.	2.1
2,000 to 2,099.....	1,968,000	4.4	349.	25,576	3.0	174.	2.0
1,900 to 1,899.....	1,780,000	4.0	389.	17,928	2.1	195.	2.0
1,800 to 1,799.....	2,302,500	5.2	441.	31,550	3.7	232.	1.9
1,700 to 1,699.....	2,425,000	5.4	495.	28,250	3.3	265.	1.9
1,600 to 1,599.....	2,525,500	5.7	552.	32,323	3.8	303.	1.8
1,500 to 1,499.....	2,458,750	5.5	607.	39,205	4.6	349.	1.7
1,400 to 1,399.....	2,167,650	4.9	656.	38,820	4.6	395.	1.7
1,300 to 1,299.....	2,136,000	4.8	704.	48,264	5.7	452.	1.6
1,200 to 1,199.....	2,325,000	5.2	756.	54,162	6.5	517.	1.5
1,100 to 1,099.....	2,158,000	4.8	804.	47,554	5.6	573.	1.4
1,000 to 1,099.....	1,602,500	3.6	840.	49,989	5.9	632.	1.3
900 to 899.....	1,542,250	3.4	874.	66,721	7.9	711.	1.2
800 to 799.....	1,513,500	3.4	908.	65,129	7.7	788.	1.2
700 to 699.....	1,391,250	3.1	939.	46,548	5.5	843.	1.1
600 to 599.....	912,500	2.1	960.	47,051	5.6	899.	1.1
500 to 499.....	778,750	1.7	977.	29,943	3.6	935.	1.1
0 to 499.....	1,014,850	2.3	1000.	54,357	6.5	1000.	
Total.....	44,600,000	100.0		845,000	100.0		

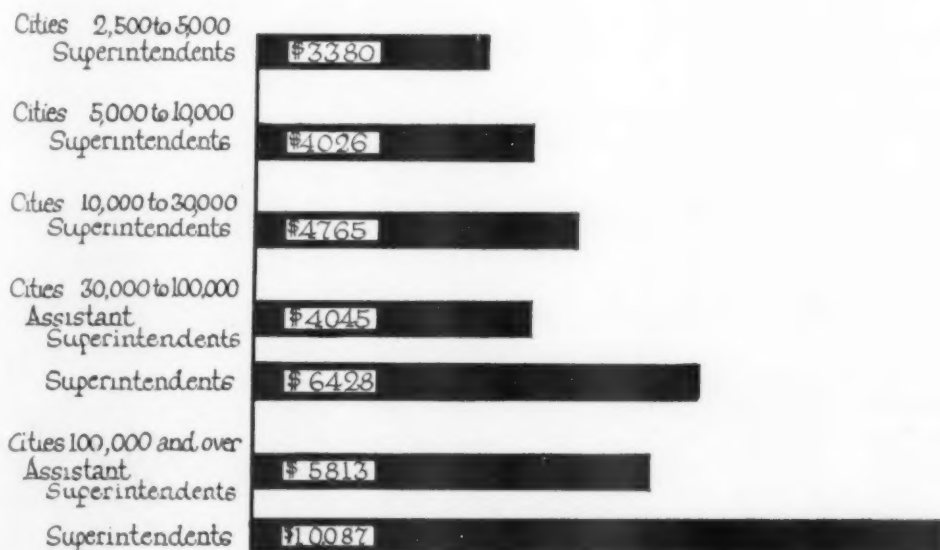
Read table as follows: 207 (column 2) or .0005 of one percent (column 3) of the 44,600,000 gainfully occupied persons in the United States receive yearly incomes of \$1,000,000 or more. Each gainfully occupied person has .005 of a chance in a thousand, or one chance in 200,000, of receiving an income of \$1,000,000 or more. Similarly read other figures for income of gainfully occupied persons and salaries of public school teachers.

(See bottom of page 147 for other footnotes of this table.)

CHART VI

MEDIAN SALARIES PAID CHIEF ADMINISTRATIVE OFFICIALS IN CITY SCHOOL SYSTEMS

1926 - 1927



Research Division
National Education Assn.

(FOOTNOTES OF TABLE 8, PAGE 146)

Sources of data: The figures as to income of gainfully occupied persons should be looked upon as rough estimates based upon the best data immediately available. The estimated number in some income groups would probably vary substantially from the actual number if it were obtainable. The general form of distribution is probably in approximate agreement with actual conditions. The following publications were used in arriving at the estimates given for gainfully occupied persons: *Statistics of Income* (Preliminary Report) from Returns of Net Income for 1925, U. S. Internal Revenue, Treasury Department. *New Bulletin of the National Bureau of Economic Research, Inc.*, No. 23, February 21, 1927. *Income of the United States. Its Amount and Distribution 1909-1919*, National Bureau of Economic Research. None of the agencies whose data were used in estimating the distribution of income should be held responsible for the accuracy of the figures in this table.

The figures as to teachers' salaries are the sums of columns 2 and 5 of table 3, page 140.

In comparing the incomes of gainfully occupied persons and salaries paid teachers one should have in mind that the income referred to is "current income," which includes not only income from salaries, but from all net cash receipts as well as certain forms of income, such as commodities produced and consumed, but not realized in the form of money. (See *New Bulletin of the National Bureau of Economic Research, Inc.*, No. 23, February 21, 1927, page 2, for definition of "current income"). The salaries paid teachers refer only to salaries received in return for teaching service. They do not include any income which teachers may receive from investments nor from any source other than that received as remuneration for teaching services. It would be necessary, therefore, to revise the distribution of column 5 indicative of salaries paid teachers so as to include income received by teachers from investments and other items included in "current income" in order to make the distribution of column 5 strictly comparable with that of column 2.

gainfully occupied persons in the same year, 44,600,000.¹

This figure has the weakness of all averages. It is influenced both by the large number of low paid workers and by the smaller number of very high incomes. In 1925, incomes of a million dollars or more, were reported by 207 persons—seven reported incomes of over \$5,000,000.

The higher incomes tend to increase the general average, so that the latter is too high to be representative of the incomes of the

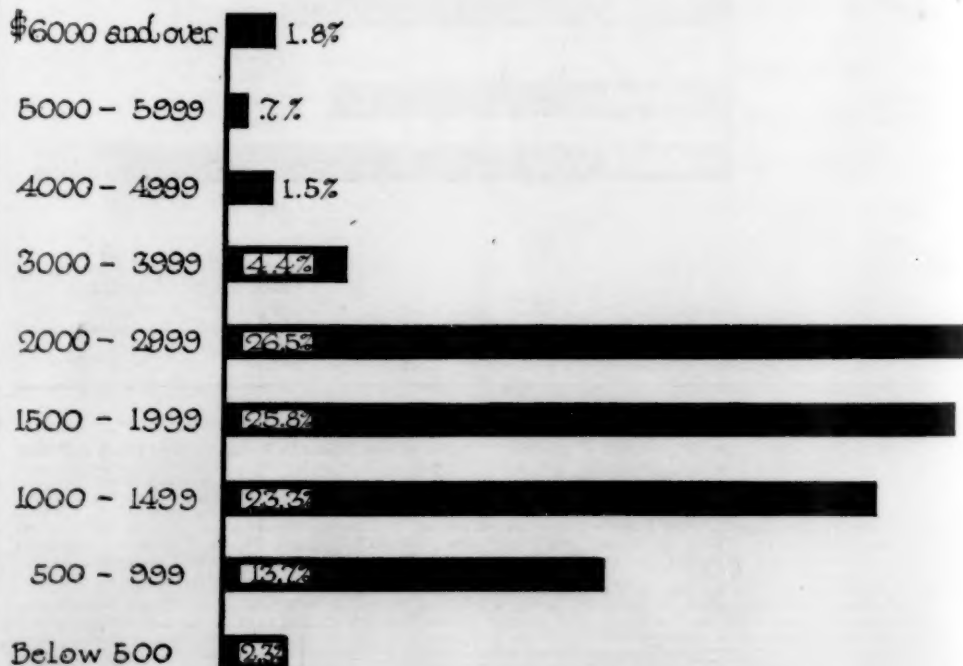
mass of gainfully occupied. The influence of these higher incomes in this direction can only be estimated. A total of 2,098,743 persons reported incomes of \$3000 or more to the U. S. Bureau of Internal Revenue in 1925.² This number reported a total net income of \$17,636,180,637. If the number of persons and the amount of income reported by this group is subtracted respectively from the total number of gainfully occupied persons in 1926 and the full amount of income of that year, one obtains \$1693 as the average income in

¹ These figures from preliminary estimates of the National Bureau of Economic Research, 474 W. 24th Street, New York City, N. Y., published in this organization's *News-Bulletin*, February 21, 1927. "Income" includes money received as wages and salaries, dividends on business investments, as well as income from certain other items.

² Statistics of Income, 1926 (Preliminary Report) U. S. Treasury Department, Government Printing Office, Washington, D. C.

CHART VII

PERCENT OF GAINFULLY EMPLOYED PERSONS IN THE UNITED STATES RECEIVING VARIOUS INCOMES



Research Division
National Education Ass'n

1926 of the 42,501,257 gainfully occupied persons receiving incomes of less than \$3000.¹

On the other hand, the incomes of juvenile workers and other persons receiving low wages tend to decrease the general average so that it is too low to be representative of the incomes of the great mass of gainfully occupied. Just what the influence of these lower incomes is on the general average can only be roughly estimated. It may be that they largely offset the effect of the very high incomes, so that the average of all incomes, \$2010, is the most representative single figure as to the income of the mass of the nation's gainfully occupied.

It seems probable that \$2010 is too high to be accepted as the figure most typical of the yearly income of the great mass of the nation's gainfully employed. The statement is supported by a study of the distribution of Table 8, column 2. The median income of all gainfully employed workers figured on this distribution is \$1693. A figure somewhere around \$1700 is probably more representative.

Wages in Manufacturing Industries. The average weekly wage of workers in twenty-five manufacturing industries scattered throughout the United States in 1926 was \$27.27.² The workers included in this group are male, common and unskilled laborers, male semiskilled and skilled laborers, and women workers, irrespective of union affiliations. The following are not included: executives, office and sales forces, foremen and assistants, and clerical workers. Data are not available to indicate the number of weeks per year this group of workers is actually employed. It is arbitrarily assumed they are employed 48 weeks in a year. On this basis their annual earnings would average \$1309.

Earnings of Union Workers. In 1926 the average hourly rate of 824,313 members of 78 trades in 66 important industrial cities was \$1.15 and the average number of hours in the

full time week in all trades combined was 45.4.³ If we use these figures and arbitrarily assume union workers are employed 48 weeks in a year, their average yearly wage is \$2502.

Routine Clerical Work Performed Under Supervision. The average weekly salary of six classes of workers performing routine clerical service under supervision was approximately \$25 in 1926.⁴ This figure is based upon a survey of the salaries paid approximately 7000 workers in this type of service in 18 cities. Of this group 39 percent received less than \$20, and 24 percent received more than \$30 a week. Arbitrarily assuming these workers are employed 48 out of the 52 weeks in each year, their average yearly income would be \$1200. The yearly income of the best paid 24 percent of this group would be \$1440 or more.

High Grade Clerical Work. The average weekly salary of chief clerks and senior clerks, that is, experienced clerical workers who frequently exercise some administrative responsibility in supervision of office forces, was \$39.75 in 1926.⁵ Arbitrarily assuming these workers are paid 48 weeks in each year, their yearly income would be \$1908.

Salaries of Employees of U. S. Government

The average yearly salary of 46,983 government employees in the District of Columbia in 1926 was \$1809.⁶ Those employed in the government service are classified into a number of classes, each of which has a beginning and a maximum salary. The training and experience required, and responsibilities involved differ with each class. Space does not permit the description of the fourteen or more government classes and a presentation of figures as to the salaries paid each. The following paragraphs give an approximate indication of the duties and qualifications required in dif-

¹ The \$1,693 given should be looked upon as a rough estimate. A number of factors, the influence of which cannot be measured because of lack of data, prevent an exact estimate of the effect of the higher incomes. For example, "current income" as defined by the National Bureau of Economic Research differs from the "net income" reported for income tax purposes. Also it is assumed in this calculation that the same number of people enjoyed incomes of over \$3000 and the same amount of income in 1925 as in 1926.

² This figure is reported for the first quarter of 1926 by the National Industrial Conference Board, 247 Park Avenue, New York City, in *Wages in the United States*. It closely agrees with the average wage in manufacturing industries in 1925.

³ These figures reported by U. S. Department of Labor in Bulletin No. 431 of U. S. Bureau of Labor Statistics, February, 1927. Government Printing Office, Washington, D. C.

⁴ This figure reported by National Industrial Conference Board in *Clerical Salaries in the United States in 1926*.

⁵ This figure reported by National Industrial Conference Board, 247 Park Avenue, New York City, in *Clerical Salaries in the United States in 1926*.

⁶ Reported in *Message of President of United States Transmitting the Budget for 1928*. Government Printing Office, Washington, D. C.

ferent grades of the government service and of the compensation received on each level.¹

Second Class Sub-Professional Government Employees. The type of service performed by this group is subordinate work of a professional and technical character, usually under immediate supervision, and requiring in some cases the exercise of a limited degree of independent judgment. The training and experience required is distinctly less than that represented by graduation from a college or university of recognized standing.² The average yearly salary of this class of workers in 1926 was \$1484. The maximum salary paid for this type of government work is \$1860.

First Class Sub-Professional Government Employees. The type of service performed by this group is the performance, under immediate or general supervision, of subordinate but difficult work of a professional or technical character, requiring a thorough knowledge in at least a limited field of the profession, or science involved, the exercise of independent judgment, and the ability to supervise the work of a small number of employees. The training involved is inferior to that represented by graduation from a college or university of recognized standing.³ The average yearly salary of this class of workers in 1926 was \$2094. The maximum salary paid for this type of government work is \$3000.

Third Class Professional Government Employees. The type of service involved is the performance, under immediate or general supervision of work of a professional, scientific or technical character, requiring in some cases the exercise, to a limited extent, of independent judgment, and ability to supervise a small number of subordinates. The training required is that represented by graduation from a college or university of recognized standing and in some cases additional practical experience.⁴ The average yearly salary of this

group of workers in 1926 was \$2334. The maximum salary paid by the government for this type of work is \$3000.

Second Class Professional Government Employees. The type of service involved is the performance, individually or with a small number of trained assistants, under general supervision of work requiring the exercise of considerable independent judgment and in some cases the assumption of responsibility for results or for the administration of a small scientific or technical organization. Extended professional or technical training equivalent to graduate study of several years and considerable practical experience is required.⁵ The average yearly salary of this group of workers in 1926 was \$3,910. The maximum salary paid by the government for this type of work is \$5,000, unless a higher rate is specifically authorized by law.

First Class Professional Government Employees. The type of service involved is the performance of work requiring a high degree of professional or technical training and first rate administrative ability. It involves the organization of original research or development work in a professional or scientific field, and in some cases the administration of a major professional or scientific bureau. Extended practical experience and training equivalent to several years of graduate work in the field concerned is required.⁶ The average yearly salary of this group of workers in 1926 was \$5675. The maximum salary paid by the government for this type of work is \$7500, unless a higher rate is specifically authorized by law.

Above the preceding class are a small number of professional and technical government workers, not classified under the civil service, who frequently receive salaries above those indicated in the preceding paragraph.

¹ The figures given for the five groups of government workers subsequently described are based on salaries paid as reported in *The Budget for the Year 1927*, Government Printing Office, Washington, D. C., 1925. The descriptions of the five groups are based upon a study of *Class Specifications for Positions in the Departmental Service* as prescribed by the Personnel Classification Board in accordance with Section 3 of the Classification Act of 1923, Government Printing Office, Washington, D. C., 1924. The grades described represent a combining of from two to three classes which are separated according to the government classification scheme.

² The grades upon which this paragraph is based are according to government classification terminology: Junior sub-professional and Assistant sub-professional.

³ The grades concerned in this paragraph are according to government classification terminology: Senior sub-professional, Principal sub-professional, and Chief sub-professional.

⁴ The grades involved in this class are according to government classification terminology: Junior Professional and Assistant Professional.

⁵ The grades in this class are according to the terminology of Government classification: Associate Professional and Full Professional.

⁶ The grades in this class are according to the terminology of the Government classification: Senior Professional, Chief Professional and Special Professional.

Comparison of Economic Position of Teachers and Other Groups of Gainfully Occupied Persons

The figures of the preceding sections make possible a comparison of the economic compensation received by public school teachers and certain groups of gainfully occupied persons.

In comparing the earnings of teachers and those of other groups it is not meant to imply that teaching is either a more or less worthy service than other occupations. The person who conscientiously performs the work of any occupation contributing to the general welfare is above reproach.

Nor is it meant to minimize the great importance to a democracy of the service of teaching. No service, if performed by people of the proper ability, training and character, can be more significant to the advance of the general welfare.

General Comparison of Teachers' Salaries and of Incomes of All Gainfully Occupied Persons

The average yearly income of the 44,600,000 gainfully occupied persons in the United States is approximately \$2000. If we scale this figure down somewhat to remove the influence of the very high incomes, it is probably safe to say that the incomes of the great mass of the nation's gainfully occupied persons cluster around the figure \$1700.¹

The average salary of the 845,000 members of the teaching profession now employed in public schools is approximately \$1300. If we scale down this figure to remove the influence of the few higher salaries, it may be said that the salaries of the nation's public school teachers cluster around the figure \$1200.²

The facts are shown more in detail in Table 8. Chart VIII, based on this table, graphically compares the distributions of incomes of teachers and of gainfully occupied persons in general.³

Teaching is compensated on a lower level than are other forms of service in general for which direct money incomes are received. The most typical income of gainfully employed persons in the United States is approximately

\$1700. Columns 4 and 7 of Table 8 show that workers in general have 495 chances in 1000 of reaching such an income, whereas teachers have but 265 chances in 1000 of reaching this income. If we divide this 495 by the 265 it may be said, as column 8 indicates, that occupations in general offer 1.9 times the chance of reaching an income of \$1700 that teaching offers.

Comparable figures for all income classes will be found in Table 8. Columns 4 and 7 show that workers in general and teachers have 977 and 935 chances, respectively, of reaching the modest income of \$500 a year. Even at this low figure teaching is at a disadvantage, since one has, according to column 8, 1.1 times the chance to reach this income if he be numbered among the gainfully employed in general than if he is a member of the teaching profession. Workers in general have 349 chances in 1000 of reaching \$2000 or more, and teachers 174 chances—the disadvantage of teaching at this level being in the ratio of two to one. Workers in general have 25 chances in 1000 of reaching \$5000 or above, teachers 1.9 chances in 1000, the ratio being thirteen to one at this level.

Charts IX and X, based on the figures of Table 8, graphically show the economic disadvantage of teachers as compared with the mass of the nation's gainfully employed.

Table 9 indicates incomes which occur with an equal percent of cases among the nation's 44,600,000 gainfully occupied and among the 845,000 members of the teaching profession employed in public schools. Referring to Table 9, statements such as the following are justified: A person who goes into the open market of gainful employment and whose earning power turns out to be very much below the average may expect an income of \$700; if he enters teaching and is equally unsuccessful in this field, he may expect an income of \$475. A person who sells his services in the open market and whose earning power is slightly below the average may expect to earn \$1500 a year. One who enters teaching and earns a salary slightly below the average in this field may expect \$1040 a year. One who earns the typical income of \$1700

¹ See Table 8, columns 2 and 3.

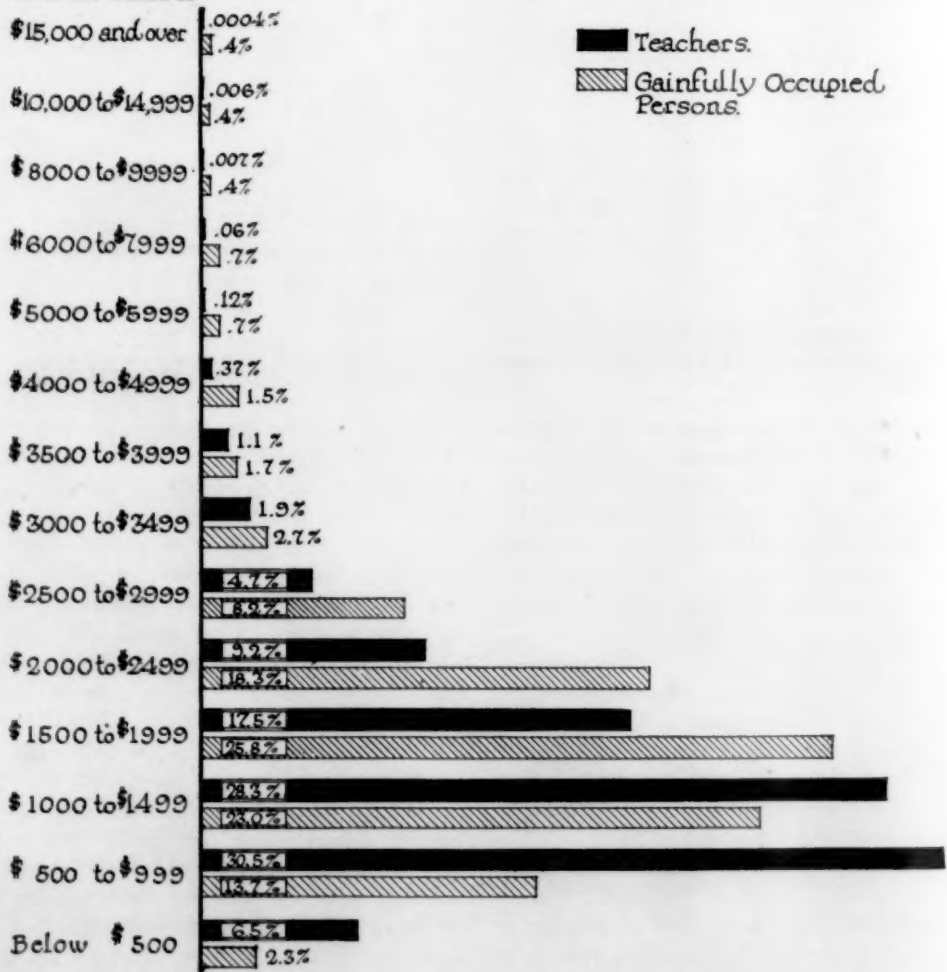
² See Table 8, columns 5 and 6.

³ In comparing incomes of gainfully employed persons and the salaries of teachers, it should be kept in mind that total "current income" is being compared with income from salaries only—see last paragraph of Table 8. It is unlikely that this factor if properly evaluated would make necessary the revision of the conclusions in this section.

CHART VIII

PERCENT OF TEACHERS AND OF ALL GAINFULLY OCCUPIED PERSONS RECEIVING VARIOUS YEARLY INCOMES

Income Classes



*Research Division
National Education Association*

Read chart thus: 6.5% of those employed in public schools (teachers, supervisors and administrators), and 2.3% of all gainfully occupied persons, receive salaries or incomes of less than \$500. Similarly read figures for other income classes.

in the open market will, if equally successful among teachers, earn \$1250. One who has above average success in the open market may expect to earn \$3000. Above average success in teaching means a salary of \$2490. A person sufficiently successful in the open market to earn \$10,000 may expect to earn \$3875 if he is equally successful among teachers.

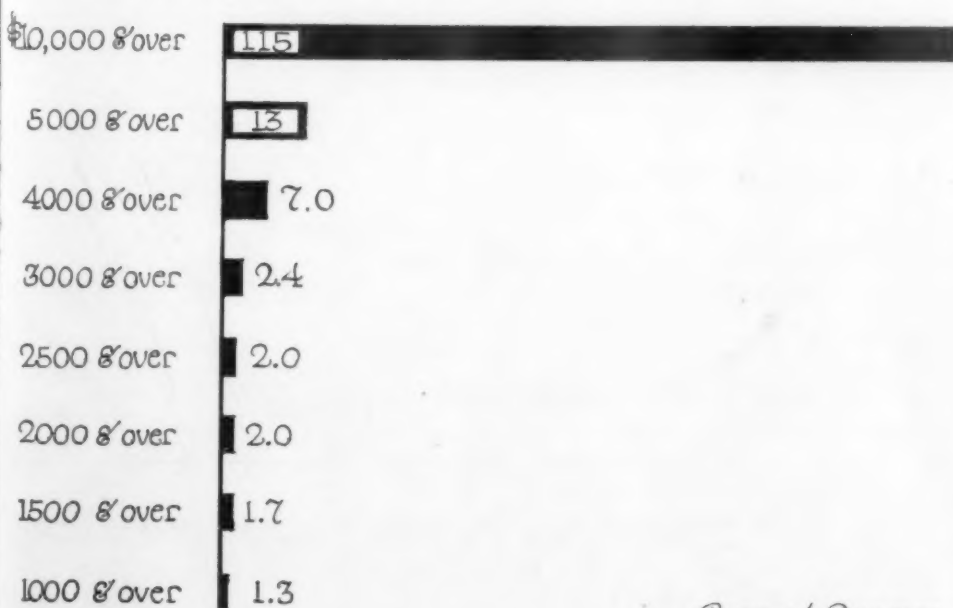
Comparison of Compensation of Teacher Groups and of Certain Groups Among Other Gainfully Occupied

The preceding paragraphs have spoken in general terms. The 44,600,000 gainfully

employed persons have been compared with 845,000 teachers, each considered as a single group. Both of these groups are made up of a number of smaller groups, differing widely as to incomes received. The distribution of incomes of day laborers as a class differs enormously from that of bankers. In teaching there are such widely different groups as those employed in rural schools of two rooms with a median yearly income of \$763 and superintendents in cities over 100,000 in population with a median income of more than \$10,000. Attention will be given in this section to ho-

CHART IX

HOW MUCH BETTER CHANCE HAVE GAINFULLY OCCUPIED PERSONS IN GENERAL OF REACHING VARIOUS INCOMES THAN HAVE TEACHERS ?



*Research Division
National Education Ass'n*

Read chart thus: Gainfully occupied persons in general have 115 times the chance that teachers have of reaching a yearly income of \$10,000 or over. This figure is obtained by dividing the percent of gainfully employed persons with an income of \$10,000 or more (7.7%) by the percentage of teachers receiving such a salary (.067%). Similarly read figures for other salary groups.

mogeneous sub-groups within the two groups being compared.

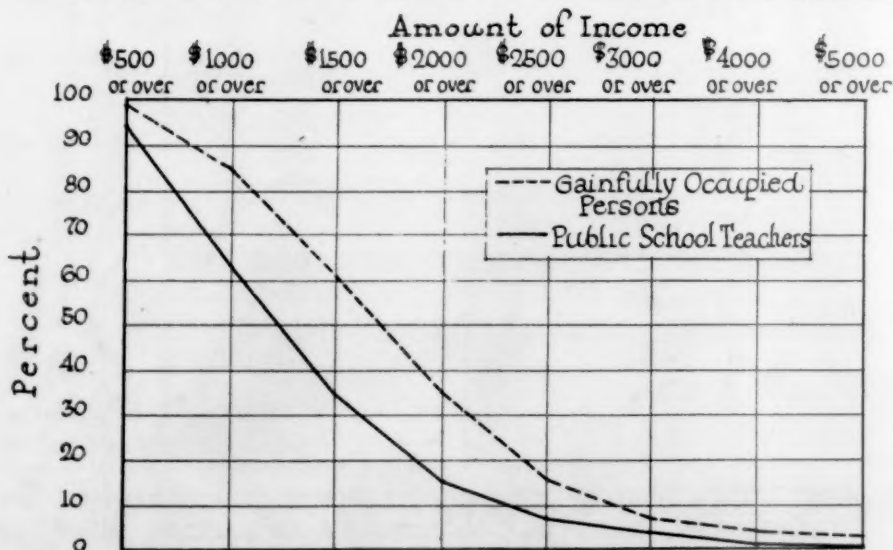
Chart XI graphically compares the earnings of teachers with other gainfully occupied groups. The income of each of the non-teaching groups except routine clerical workers is higher than that of teachers. According to Table 4 there is no teaching group employed in rural public schools receiving as much as the average income of the nation's gainfully employed, with the exception of high school principals. The median salary of high school principals in rural communities, the highest paid group of rural teachers, is \$2205, as compared with an average income of \$2010 among the nation's gainfully employed. Only three of the fifteen groups of classroom teachers of Table 5 receive a median salary equal to the latter figure.

No group of teachers or principals in rural communities, and but one group of classroom teachers in cities, according to Tables 4 and 5, receive a median salary as high as the average earnings of regularly employed union workers. These two tables list teaching groups totaling 716,896 out of 845,000 teachers in all public schools.

When we come to Table 6, showing median salaries paid principals in city school systems, constituting a small fraction of all teachers, we find salaries above the average income of workers in general. Sixteen of the 20 groups in Table 6 receive salaries greater than \$2010—the average income of gainfully employed persons. Ten of the groups of city school principals receive yearly salaries less than the average earnings of regularly employed union workers. Some groups in Table

CHART X

PERCENT OF GAINFULLY OCCUPIED PERSONS AND OF PUBLIC SCHOOL TEACHERS RECEIVING VARIOUS YEARLY INCOMES



Research Division, National Education Ass'n.

Read chart thus: 98 percent of all gainfully occupied persons have incomes of \$500 or over, and 94 percent of public school teachers: etc

6 receive median salaries lower than the average paid high grade clerical workers.

It is only in Table 7, listing median salaries for assistant superintendents and superintendents of schools, that the salaries distinctly outrank the non-teaching groups of Chart XI. Table 7 is based on the salaries of a total of 3180 persons—a minor fraction of the 845,000 teachers employed in the public schools of the country.

A comparison of the salaries paid various groups of teachers with those paid sub-professional and professional governmental workers, as given on pages 149 and following, places teaching at a still greater disadvantage. The following figures compare certain groups of

teachers with government workers performing the higher types of service:

Groups of Government Employees	Average or Median Salary
2nd class sub-professional.....	\$1,484
1st class sub-professional.....	2,094
3rd class professional.....	2,334
2nd class professional.....	3,910
1st class professional.....	5,675

Groups of Teachers

Classroom teachers:

One room rural schools.....	\$ 755
Villages and towns	1,194
Elementary in cities 30,000 to 100,000....	1,565

School administrators:

Principals, village high schools.....	\$2,205
Supervising elementary school principals	
Cities 30,000 to 100,000.....	3,017
Superintendents, cities 30,000 to 100,000..	6,428

The preceding figures are even more significant when it is realized that there is some evidence that government workers of the type listed are receiving lower salaries than their training and the type of work performed generally command in the open market.

Some Considerations and Conclusions

The preceding figures indicate that compensation for teaching is lower than that received for types of service such as the following:

1. All types of gainful occupation, considered as a whole and averaged.
2. Work in unionized industries.
3. Unskilled and skilled labor in manufacturing industries.
4. High grade clerical work.
5. Government service considered as a whole—both clerical and professional.

Routine clerical workers, performing work under supervision, is the only economic group receiving less than teachers, and the difference here is \$100 a year.

It is difficult to justify the disadvantageous economic position teaching occupies. Teaching does not suffer from comparison with these groups as to the value of the service it renders to society. Teachers have more general schooling and more specific training for the service they perform than most of these groups. It is improbable that

TABLE 9.—INCOMES AND SALARIES REACHED BY EQUAL PERCENTS OF GAINFULLY OCCUPIED PERSONS AND OF PERSONS IN PUBLIC SCHOOL WORK IN THE UNITED STATES

Incomes of gainfully occupied persons	Salaries of public school teachers	Percent of gainfully occupied persons and of teachers reaching salaries indicated	Percent col. 2 is of col. 1
1	2	3	4
\$500,000	\$12,500	.0016	2.50
253,000	10,700	.0048	4.28
100,000	7,400	.022	7.40
50,000	6,000	.07	12.00
25,000	5,000	.19	20.00
10,000	3,875	.77	38.75
9,000	3,825	.92	42.50
8,000	3,700	1.1	46.25
7,000	3,610	1.4	51.87
6,000	3,410	1.8	56.83
5,000	3,195	2.5	63.90
4,000	2,890	4.0	72.25
3,500	2,750	5.7	78.57
3,000	2,490	8.4	83.00
2,800	2,325	10.5	83.04
2,600	2,115	14.2	81.35
2,400	1,900	19.5	79.17
2,200	1,705	26.3	77.50
2,000	1,500	34.9	75.25
1,900	1,450	38.9	76.32
1,800	1,375	44.1	76.39
1,700	1,250	49.5	73.53
1,600	1,130	55.2	70.63
1,500	1,040	60.7	69.33
1,400	980	65.6	70.00
1,300	910	70.4	70.00
1,200	850	75.6	70.83
1,100	790	80.4	71.82
1,000	710	84.0	71.00
900	650	87.4	72.22
800	575	90.8	71.88
700	475	93.9	67.86

Read table thus: An income of \$500,000 and of \$12,500 is reached by the same percent (.0016%) of each of the following groups: All gainfully occupied persons in the United States, and all persons in public school work in the United States. An income of \$2,000 and \$1,500 is reached by the same percent (34.9%) of each of these groups. Similarly compare other figures of columns 1 and 2.

the native ability of teachers is less than that of the other economic groups.

The wide differences between the compensation of teachers and that received by other groups performing service requiring thorough training and bearing responsibility has been defended on various grounds. It has been contended that teachers should not expect adequate economic compensation because of the heavy spiritual rewards they receive. Capable teachers do receive great intangible returns for their service. It will be a sorry day for the nation if the time is ever reached when teachers do not gain satisfaction from their work.

The acceptance of this viewpoint, however, does not lead to the conclusion that the nation's classrooms can be supplied with the right kind of teachers without establishing teaching upon a solid economic basis. There is a limit beyond which a community cannot safely go in substituting the "joy of service" for the ability to command a reasonable share of the material needs of life. Teaching need not offer the large financial returns which come to those who achieve large success in business or professional service. It should offer an even chance to earn the modest incomes enjoyed by the moderately successful among the nation's gainfully employed. This it does not do today. Teaching not only offers no opportunity to earn the large incomes usually associated with first rate success in other fields, it fails to offer an equal chance to earn the typical wage of the rank and file of the nation's workers. Less than one teaching position in three in the United States paid as much as \$1600 in 1926. More than half of the nation's gainfully employed yearly earn more than this amount. Less than one teaching position in five pays as much as \$2000 a year, which is the average income of the nation's gainfully occupied persons.

Can it be expected that a sufficient number of young people of capacity will be willing to undergo a long period of training for a line of work which not only offers practically no chance to reach great fortune, but in addition offers relatively little chance to reach average fortune?

Thousands of classrooms today are presided over by untrained and inexperienced teachers. Many of these teachers are receiving all their training and experience justifies. Classrooms will continue in charge of similarly unprepared teachers, so long as the salaries which go with them are lower than those commonly commanded by unskilled labor. Joy of service or no other intangible reward can expect to move trained and competent teachers to accept an economic return for their service too low to enable the holders to live a life of dignity and to give modest satisfaction to material wants.

The figures presented reveal differentials between teaching service and gainful occupation in general which are too great, especially, when one realizes that public statutes decree that a teacher's training must be distinctly above that demanded of most workers, and that teaching requires a degree of responsibility distinctly above that required of workers in general.

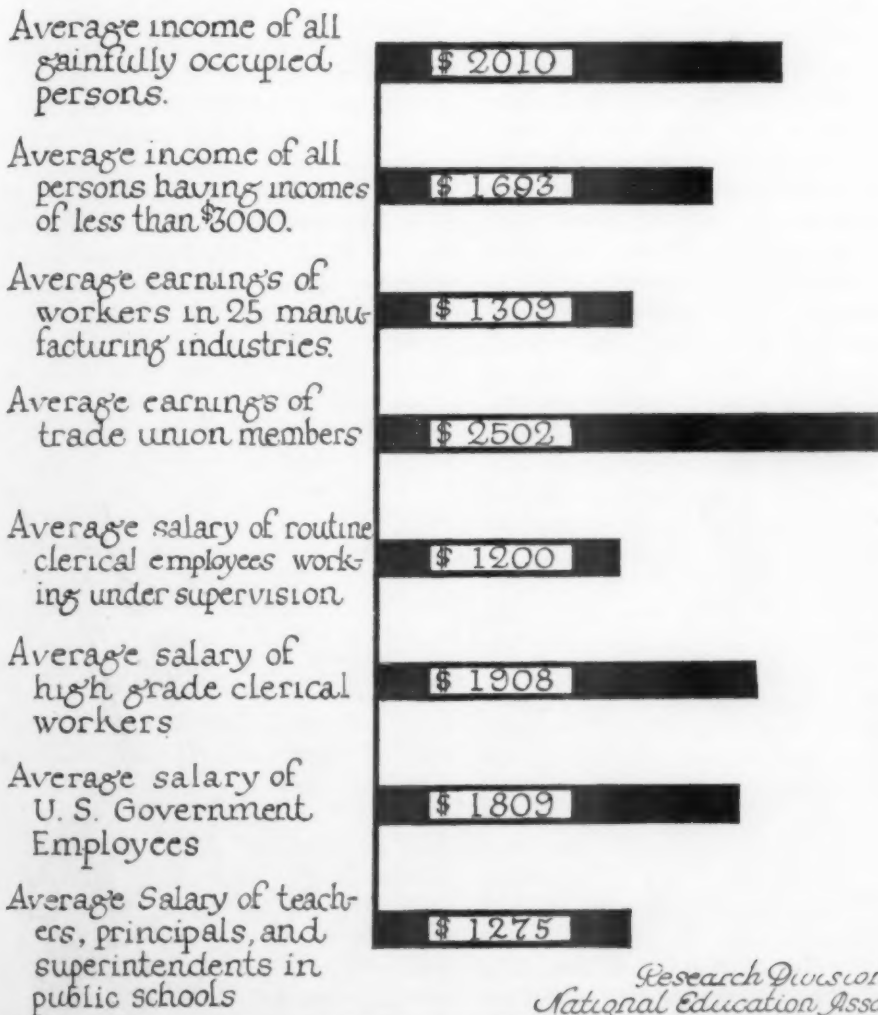
There appears to be but one conclusion: Teaching service is at present distinctly underpaid. Teachers' salaries are completely out-classed by the returns for other forms of professional service calling for equivalent training and the exercise of duties of a high type, and are lower than the wages received in many occupations calling for little training and the performance of service of no greater significance to the general welfare.

There should be no question of the nation's economic ability to provide additional support for schools. As far as economic ability is concerned, there is no reason why teacher compensation should not be lifted to a level justified by the importance of the service. It is doubtless true that certain local communities, markedly below average in economic power, will find it difficult to increase teachers' salaries to a proper level. Such conditions call for the provision of state distributable funds similar to those already in effect in progressive states whereby even the poorest communities are provided sufficient financial support to allow their schools to be conducted with acceptable efficiency.¹ Modernization

¹ See page 30 and following: State Advance Toward Sound School Finance Programs, *Research Bulletin*, January, 1927.

CHART XI

COMPARISON of TEACHERS SALARIES WITH EARNINGS AND INCOMES OF VARIOUS GROUPS OF GAINFULLY OCCUPIED PERSONS IN 1926



*Research Division
National Education Association*

Read table thus: The average income of the 44,600,000 gainfully occupied persons in the United States in 1926 was \$2010. Similarly read figures for other groups of workers.
Sources of data: These figures based upon a number of income and wage investigations cited in the May, 1927 Research Bulletin of the National Education Association.

of the systems of taxation in some states will be necessary.¹

Obstacles Delaying Adequate Compensation for Teachers

The greatest obstacles to placing teaching service on an appropriate economic foundation are the obsolete ideas still held by some in regard to teaching. At one time, teaching was looked upon as a transient occupation, appropriately engaged in by an untrained personnel composed of indigent old women, indentured servants, and strolling ne'er-dowells. The type of service expected of teachers today can be performed only by people who enter the profession as a permanent career so long as they engage in gainful work, who possess sound training, and whose ability and character are above reproach. The need of such qualifications for teachers is everywhere recognized by citizens of vision. Teachers' salaries in many communities, however, are still fixed with the earlier conception of the teacher partly in mind. As the necessity of the teacher with high qualifications is more generally accepted, appropriate salaries will be paid. Teachers of the kind demanded by the problems placed upon the modern school will then be found in all classrooms.

Another serious obstacle to lifting the compensation of teachers to a proper level, is the fact that the product of teaching is deferred. A man employed in the manufacture of automobiles creates a product which can immediately be sold and upon which a money return can immediately be realized. Society sees the direct connection between his labor and the resulting product. The automobile cannot be bought unless the price is paid. The wage received by the worker is in close agreement with the value society places upon the product of his labor.

In teaching the situation is different. The product of teaching service is not realized for

many years. The product of teaching is a valuable one, not only on the spiritual side, but on the economic as well, but it is not realized immediately. It is apt to come more in the form of the general social and economic welfare than in the material form of an object to satisfy some immediate personal need of the individual consumer.

As a result of these facts, the great worth to society of the service which first rate teachers perform is underestimated by some. In some cases this is the result of selfishness, an "after us the deluge" attitude—gratification of one's appetite to the limit, with little thought of the obligation to maintain and improve the social and economic organization upon which civilization depends. In other cases ordinary lack of vision results in an under-estimation of the value of teaching service. It is assumed that people will learn to read or write whether school keeps or not. The fact that American workers are sufficiently intelligent to be able to cooperate readily in the complicated types of industrial organization which makes them from two to thirteen times as effective economically as the workmen of other countries, is taken as a matter of course. All of the fundamental contributions of the school, without which civilization would have been powerless in erecting the present complicated social structure, are looked upon, like air and sunshine, as gifts of a kind Providence.

Nothing could be farther from the truth. The education of the race, for which the school lays the foundation, does not just happen. Trained minds in great numbers do not evolve naturally. They must be bought and paid for. Salaries paid teachers is one form in which the payment is made. The product received will accord with the price paid. If the price is low, the product will be mediocre. In the long run, only a first rate price will command a first rate product, it matters not what is being purchased.

¹ See page 42 and following: The Essentials of a Sound Plan of State and Local Taxation, *Research Bulletin*, January, 1927.

Guides to Salary Scheduling

By a salary schedule is meant a plan for the payment of school employees formally adopted by the Board of Education or School Committee, which to a large degree automatically determines the beginning salary, the amount and number of yearly increases, and the maximum salary received by various groups of teachers, principals and other employees with specified qualifications.

It is coming to be generally recognized both in theory and in practise that the adoption of a salary schedule by a school system is a step in the direction of increased school efficiency. Practically all large cities and approximately seventy percent of all cities over 2,500 in population have adopted salary schedules. A salary schedule as a basis for teacher compensation has many advantages.¹

Certain evils may arise from the adoption of salary schedules particularly if they are made too automatic. Salary schedules which place every employee of a school board under a machine-like scheme of compensation from which there can be no deviation in dealing with exceptional individuals or in meeting special situations which arise are to be avoided. The welfare of the schools demands that all salary schedules have a reasonable degree of flexibility.

A salary schedule should be the reflection of the school board's policy with reference to the economic compensation of those responsible for the schooling of the children of the community. Its provisions should be an outgrowth of a careful balancing of matured experience, the indications of the best available statistical data, and an intelligent attitude toward the welfare of the community as it is bound up in the lives of its children.

That there are dangers which may grow out of the salary schedule plan of compensating teachers should be frankly admitted. If the schedule is too inflexible, if it does not include provisions which put a premium upon training and the effort to keep abreast of advancing education, stagnation is likely to be the result. Whether it has a salary schedule

or not, every school system should put into operation a broadly developed plan designed to keep its teachers young in spirit and constantly striving to improve the knowledge and teaching skill they bring to the classroom. Where such a plan is functioning, the adoption of a salary schedule will not have a stultifying effect and it will protect the teachers and children from influences which, in the absence of a schedule, are likely to seriously undermine school efficiency.

The drafting of a salary schedule is not a simple task. It involves a balancing of a number of factors if the best results are to be obtained. The subsequent paragraphs will deal with a number of the more important problems encountered in drafting schedules and will present data and suggest methods useful in intelligently meeting them.

Classification of School Employees for Salary Scheduling Purposes

In a salary schedule school employees are generally divided into a number of groups for each of which the schedule fixes the minimum and maximum salary and the amount and number of yearly increments. The groups most frequently recognized are:

1. *Elementary school classroom teachers.* In this group are usually included teachers from the kindergarten through the grades to the beginning of the secondary school. Once it was common practice to differentiate between teachers of the kindergarten and the various grades. A first grade teacher would be on a different schedule than a sixth grade teacher. The practice of having all teachers begin in the lower grades at relatively low salaries, later to be promoted to the upper elementary grades at better salaries is now recognized as a wasteful procedure. When all grades are on the same schedule, a teacher can work in the grade in which his service is the most satisfying and effective.

2. *Junior high school classroom teachers.* This group includes the teachers of the junior high school in the cities having this adminis-

¹ See the following reference for a statement of the advantages of salary schedules: Lewis, F. E. *Personnel Problems of the Teaching Staff*, pages 279 and following.

trative unit, which usually includes grades seven and eight or seven, eight and nine. There is some tendency to include both junior and senior high school teachers in one group working under a common schedule. Actual distributions of salaries paid, however, show a distinct difference between the salaries paid junior and senior high school teachers in practically all cities¹

3. *Senior high school classroom teachers.* This group usually includes teachers of grades nine to twelve, or in cities with junior high schools, grades ten to twelve.

4. *Principals of elementary schools.* This group usually includes the principals of schools housing kindergartens and grades of the elementary school. Many cities differentiate this group into several classes, first, as to whether they are teaching or supervising principals and second, as to either the number of teachers, or the number of pupils in the school. Such differentiation is frequently necessary. Ideally, however, the schools of a community should be so organized that all building units are sufficiently large to make it financially practical to pay a first rate salary to a supervising principal. If this is accomplished then there is less need of differentiating principal's schedules on the basis of size of school. One schedule for elementary school principals makes it unnecessary to shift a principal to a large school for promotion purposes and makes it possible for each principal to be placed in the locality where he may best serve. The adoption of one schedule for elementary school principals does not preclude making adjustments to meet special and exceptional conditions which will be encountered in all school systems.

5. *Principals of junior high schools.* This group usually includes the principals of schools housing the seventh and eighth or more often the seventh, eighth and ninth grades.

6. *Principals of senior high schools.* This group usually includes the principals of senior high schools; grades nine or ten to twelve.

Some school systems, particularly the smaller ones, recognize fewer groups than those listed above. Some, most often the larger ones, recognize many other groups. The recent schedule proposed by the New York Citizens

Committee suggested separate schedules for each of these groups:

1. Senior High School Teachers
2. Elementary School Teachers
3. Junior High School Teachers and Teachers of Grades 7 to 9
4. Teachers of Atypical Children
5. Training School Teachers
6. Senior High School First Assistants.
7. Elementary School Principals
8. Senior High School Principals
9. Junior High School Principals
10. Assistants to Elementary Principals
11. Assistants to Junior High School Principals
12. Teacher clerks
13. Clerical or Laboratory Assistants
14. Library Assistants
15. Positions in Special Schools
16. Attendance officers
17. District Superintendents
18. Examiners
19. Associate Superintendents
20. Superintendent of Schools

No one answer can be given to the question: How many and what groups should be treated separately in fixing the various minima, maxima and similar features of the schedule? Salary schedules should be simple, which argues for keeping the number of separately treated groups as small as is practical. When the group is small in numbers it may be treated as a special case or arbitrarily given the classification of some other group recognized in the schedule. When the group is larger, and when its duties and qualifications but slightly differ from one of the recognized groups, it may be placed on the schedule of this group at a slight increase over that provided in the schedule. For example, many cities instead of adopting a separate schedule for senior high school department heads provide that this group shall be on the classroom schedule plus two hundred dollars or some appropriate amount.

There is always justification for recognizing any group which has a special identity either because of training possessed or type of service performed and which includes a reasonable number of persons.

The Single Salary Schedule

A considerable number of cities have adopted single salary schedules in recent

¹ See tables of: *Salaries in City School Systems*, Research Bulletin, March, 1927.

years.¹ By a single salary schedule is meant a schedule which pays the same salary to teachers with equal training and experience regardless of whether they teach in elementary, junior or senior high school. Such a schedule introduces one new basis for classifying teachers—the amount of training possessed. It does away with classifying teachers for the scheduling of salaries on the basis of the grade or school in which they teach. Those who wish to give further study to the single salary schedule principle will find a selected bibliography on this subject in this bulletin.

The single salary schedule has been advocated as a measure that will make it economically practical for elementary school teachers to secure adequate training. Too often in the past only the high school schedule paid salaries justifying sound training for teaching. Such a situation is unfortunate.

Some have contended that the single salary schedule has a leveling effect on teachers' salaries—the result being a reduction for high school teachers. In studying this question 52 cities were selected, 26 with single and 26 with regular salary schedules. These cities were matched as to population and geographic location. The distributions of salaries paid elementary and high school teachers in each group of 26 cities were compared. There was found to be no significant difference between the medians paid elementary and high school teachers in the two groups of cities. There was approximately the same difference between elementary and high school medians in cities with single schedules as in those with the older type of schedule. Whether such a situation would continue after the full effect of adopting single salary schedules has been felt cannot be predicted.

Definitions of the Classes Recognized in the Salary Schedule

When the basic groups recognized in the schedule have been named then they should be carefully described as to training and other qualifications. The fact that this important

step has often been neglected in drafting salary schedules has led to much hazy thinking.²

School systems have been the victims of a vicious circle: First, they fix a schedule too low to attract the type of teachers needed to render effective service; second, they criticize the inferior teachers which the schedule attracts, because they do not produce better educational results; third, they decide that the schedule in effect pays the teachers it attracts "all they are worth"; fourth, they refuse to lift their schedule to a level which will attract teachers who can render the type of teaching service desired; and fifth, they begin the second lap of the vicious circle by continuing the old schedule in effect.

The law of supply and demand determines that in the long run one gets about what he pays for. If a person or a community in purchasing commodities or human services insists on a low price his purchase will generally be of comparable quality. The wise purchaser fixes his offer at an amount which will obtain goods or services of the quality he desires insofar as his means allow. The same policy is a wise one for a community when purchasing teaching service. It should fix its salary schedule in terms of the quality of teacher desired.

The statement is sometimes made in local school systems that: "The teachers are paid all they are worth." The statement is merely a recognition of the economic law that the price paid regulates the quality of the purchase. It is equally true that: "What teachers are paid largely determines their worth." Here is the basis for the contention that each group recognized in a salary schedule should be clearly described as to its qualifications and characteristics. Unless one knows what he wants he is in a poor position to state the price he is willing to pay for it.

In fixing the salary schedule for each group of teachers, a community should definitely state the qualifications and specifications the group is to possess. The method of defining a particular group may be illustrated using elementary school teachers as an example.

¹ For a partial list of cities with single salary schedules see: *Research Bulletin*, Vol. III, Nos. 1 and 2, January and March, 1925, pages 59 and 60.

² The specifications of the various classes in the Federal Service given in *Class Specifications for Positions in the Departmental Service*, Government Printing Office, Washington, D. C., 1924, will be suggestive to those dealing with this problem.

The qualification of this group should be defined under such heads as:

1. *Training.* Some communities still accept the idea that anybody can teach young children and are willing to accept any teacher able to qualify for the lowest grade teaching certificate. Others recognize the well demonstrated fact that sound, professional training for teaching enhances a person's teaching effectiveness no matter how great his natural aptitude for this work may be. Such communities accept no teachers with less than two years of work in a teacher training institution above high school graduation. Some states and cities have raised this minimum to three years, and many cities now select their elementary school teachers from those with four years of specific training for teaching.

2. *Native ability and personality.* These qualities are difficult to measure. Yet the possession of ability, average or above, and of a well-founded personality are generally agreed upon as prime essentials in the make-up of a first rate teacher. Teachers with these qualities are always in great demand. The city with a low salary schedule recruits and holds few of them. They migrate to cities offering an economic return which more nearly approaches their worth.

Each community should face these facts. It should definitely specify whether its elementary classroom teachers are to possess below average, average, or more than average ability and personality. The personal interview by one or more experienced school administrators, and a standard intelligence test have been used effectively as means of judging personality and ability of teacher applicants.

3. *Teaching Experience.* The value of experience to a teacher is universally recognized. It is generally accepted that teachers seldom reach high efficiency in the classroom until they have taught for a period of between four and seven years. Hence teachers of successful experience are in great demand as compared with beginners. Does a community wish its classrooms to be the proving grounds for inexperienced teachers who move to other school systems as soon as they have demonstrated their worth, or does it wish to be in a

position to attract and hold its fair share of teachers with maturity and experience? Every community should accept a fair percent of inexperienced teachers each year so as to bear its share of the burden of giving experience to new recruits to replace those retired by old age and other causes. The acceptance of this responsibility, however, should be clearly differentiated from the policy of regularly recruiting a majority of the teaching staff from the ranks of beginners, who move on as soon as they have served their apprenticeships.

Residence and family responsibilities. In some communities it is the policy to employ "home girls" only, who usually live with their families. This policy is sometimes insisted upon by politically ambitious men to whom the employing of teachers is a matter of offering favorites the opportunity to feed at the public crib, rather than of seeking teachers best qualified to instruct children. When the policy of employing "home girls" is carried to the extreme, as it is in many communities, inbreeding and stagnation is the inevitable result. No community can live to itself, least of all in its schools. The school system is indeed unfortunate whose teachers are never exposed to the vivifying influence which comes from employing outside teachers with fresh community and educational viewpoints to fill a fair percentage of the vacancies occurring each year. This does not mean that "home girls" should be barred. It merely means that the schedule should not be so low that only "home girls" can afford to teach. When this is the case, teaching is a parasitic occupation, the members of which receive part of their support from their occupation and the rest from their parents. A salary schedule should be such that a school board can expect to attract a fair percentage of teachers who maintain their own homes.

Bound up with this issue is the question of dependents. Many cities assume that none of their teachers are to have dependents. The recent New York investigation showed that more than two out of every three women, elementary school teachers, have one or more dependents, while more than one out of every three have two or more dependents.¹ The Minneapolis study showed that women teach-

¹ See Table XII, p. 238 of: James R. McGaughy. *Teachers' Salaries In New York City.* Final Report of Citizens Committee on Teachers' Salaries. Bureau of Publications, Teachers College, Columbia University, New York City, 1927.

ers of that city average 1.58 dependents.¹ Unless, therefore, a community wishes to restrict its field for the recruiting of elementary teachers to those who either do not have dependents or who have dodged their responsibilities in this regard, it will fix a salary schedule for a person with some responsibility for dependents.

This does not mean that schedules should pay varying amounts to individual teachers who are alike except as to the number of dependents. Such a plan is believed to be impractical. Even if one could solve the difficulty of finding some practical means of determining the number of dependents, it would have the opposite than the hoped for effect in times of financial stress. Even in normal periods school boards would tend to favor the unencumbered teacher, while teachers with dependents would find it more difficult to obtain or retain positions. What should be done is to recognize that elementary school teachers do as a class have some responsibility for supporting dependents and to fix a salary schedule in the light of this fact.²

Attitude toward work. Some communities set up specifications which recruit teachers of this description: Untrained, immature, young people who look upon teaching as a convenient means of earning spending money for a year or two until preparation can be com-

pleted either for marriage or some permanent occupation which stands on its own feet. Teaching in such communities comes to be looked upon as a seasonable job; during the off season the teacher either "lives off" his parents or gets a summer job of some kind. There is no particular advantage in increasing his teaching efficiency beyond the meager minimum that is essential to qualify for a job for two or three seasons.

Other communities set up specifications calling for teachers of a different type: Professionally minded people who look upon teaching as requiring years of careful training before skill is attained and as offering a future which justifies its being regarded as a permanent life interest. Teaching in such communities is a full time job which gives sufficient return so that vacation time can be used for summer school attendance, travel, recreation, or other activities directly contributing to increased teaching efficiency.

One may contrast the specifications set up for elementary school classroom teachers as is illustrated below.

Specifications for other groups. The preceding paragraphs deal with the specifications for elementary school teachers. A community should similarly set down in definite form, under the heads listed and others when it seems desirable, the qualifications which it expects

¹ See Table 1, p. 10 of: Meeker, Royal. *A Study of Costs and Standards of Living of Minneapolis Teachers in Relation to Their Salaries.* Central Committee of Teachers Association, Minneapolis, Minn., 1926.

² The procedure of the New York study will be of interest to those studying this problem. See: McGaughy, J. R. *Teachers' Salaries in New York City.*

ILLUSTRATING THE POSSIBLE RANGE IN SPECIFICATIONS FOR TEACHERS IN ELEMENTARY SCHOOLS

Qualification	City No. I	City No. II
Training	Elementary School graduation, and an intensive coaching course of a few weeks preceding an examination for the lowest grade teaching certificate.	High school graduation, and from two to four years work in a first-rate teacher training institution. "Training in service" continued throughout teaching career.
Native ability and personality	Average and below in general ability. Weak and colorless personalities who cannot long hold the respect of any group—either adults or children.	Average and above, including a considerable percentage of people with first-rate ability. Dynamic personalities—which inspire confidence and suggest emulation to adults and children.
Teaching experience	The least promising beginners with no teaching experience along with a sprinkling of those whose teaching experience has been mainly "Unsuccessful."	Teachers of experience, who have clearly demonstrated that they are successful teachers, and a small percentage of the most promising beginning teachers.
Residence and family responsibilities	Immature "home girls" only, with the narrow educational outlook resulting from residence in but one community, partly supported by their parents, with no responsibility for the support of dependents.	A wise mixture of "home girls" and experienced teachers from other communities, possessing a broad educational outlook capable of supporting themselves and of meeting, without undue sacrifice, responsibility for such support of dependents as may fall upon them.
Attitude toward teaching	A transient, seasonal occupation, requiring little skill and offering no future, to be escaped from at the first opportunity.	A full-time, permanent occupation, calling for extended professional preparation and offering an avenue for a satisfying career.

each group recognized in the schedule to possess. When a community has defined for each group of teachers, principals and other employees provided for in the schedule what it expects in the way of training, native ability and personality, teaching experience, residence and family responsibilities, attitude toward work, and such other specifications which it cares to include, then it is in a position to begin fixing minima, maxima, and the other features of its schedule.

Bases for Fixing the Rates of Salary Schedules

In determining the minima, maxima, amount and number of salary increments for a particular group, various criteria may be accepted as a guide.

The Criterion of common practice. Acceptance of this criterion would result in fixing the minima, maxima and other rates of a schedule to agree with the averages or medians generally paid in communities of comparable population. This criterion has the advantage that it brings mass judgment to bear upon the problem. It is definite and easily understood. It undoubtedly should be given some weight, but it would be a mistake to give it too much weight, for a number of reasons.

First, there is no guarantee that mass judgment is the wisest judgment. Progress is made by trying something different from ordinary practice. Too strict conformity to the average results in the judgment of mediocrity and in stagnation.

Second, communities comparable in size are often not comparable as to other characteristics. A small community located near a large city will have to compete with the large city rather than with cities of its size for its teachers. Cities similar in population vary as to specifications set up for teachers of any particular class. Standards of living differ in communities otherwise comparable.

Table 10 gives the minimum or beginning salaries now being paid teachers in cities over 100,000 in population.¹ There really is no common practice as to the minimum salary for elementary teachers in large cities. Column 3 lists five cities with minima of between \$1500 and \$1599 for elementary school teachers

while three pay less than \$1000 minima. The median minimum falls in the \$1200 to \$1299 group, but considerably less than half of the 58 cities listed report minima for elementary school teachers in this group. What is common practice? Which cities approach nearest to the ideal, the ten paying beginning salaries to elementary school teachers of more than \$1400 or the fifteen paying minima below \$1100.

Tables such as number 10 should not be allowed to exercise too much influence in fixing salary schedules. When they give data assembled from cities comparable on points having an important bearing upon the rates which should be fixed in a schedule, they deserve careful study, but frequently it will be desirable to give more weight to other factors.

Practice can also be accepted as one guide in determining the differentials between various classes of school workers. This is frequently a difficult problem and when poorly handled results in lowered morale.

TABLE 10.—MINIMUM SALARIES PAID TEACHERS IN CITIES OVER 100,000 IN POPULATION IN 1926-1927

Amount of minimum salary	Number of cities reporting minimum indicated for			
	Kindergarten teachers	Elementary teachers	Junior high school teachers	High school teachers
1	2	3	4	5
\$2,200 to \$2,299...				2
2,100 to 2,199...			1	
2,000 to 2,099...				2
1,900 to 1,899...			2	1
1,800 to 1,799...			2	5
1,700 to 1,699...			2	4
1,600 to 1,599...			5	8
1,500 to 1,499...	5	5	4	11
1,400 to 1,399...	5	5	6	11
1,300 to 1,299...	3	3	5	6
1,200 to 1,199...	20	24	5	4
1,100 to 1,099...	5	6	3	4
1,000 to 1,099...	11	12	3	
Below \$1,000...	4	3		
Total.....	53	58	38	58
Median.....	\$1,233	\$1,233	\$1,450	\$1,436

Read table as follows: 5 cities over 100,000 in population reported a minimum salary of between \$1,500 and \$1,599 for kindergarten teachers, 5 cities reported a minimum of between \$1,400 and \$1,499, etc. The median for kindergarten teachers reported by 53 cities of this size is \$1,233. Similarly read the other columns of this table.

The medians given in this table are figured according to the method described in footnote 1 on page 141.

¹ Table 10 and similar tables for other groups of school employees, giving distributions of minima, maxima and actual salaries paid will be found in the *Research Bulletin*, March, 1927.

Tables such as 11 are useful in deciding upon the differences in the schedules of various groups of teachers. This table is based upon the medians given in Tables 5 and following. It gives the ratios between the medians paid different groups in various population classes. The salary of elementary school teachers, the largest group, is taken as a reference point and is given the value 100.

Column 4 of Table 11 indicates that in cities of 10,000 to 30,000 in population, junior high school teachers generally receive 114 dollars and senior high school teachers 131 dollars for every 100 dollars received by elementary teachers; that is, in cities of this population the median salaries of junior and senior high school teachers are 14 and 31 percent higher, respectively, than the median salary of elementary school teachers. Column 7 of Table 11 indicates that salaries paid the groups listed below are higher than those paid elementary teachers to the percents indicated:

Junior high school teachers.....	13%
Senior high school teachers.....	31%
Teaching elementary school principals.....	30%
Supervising elementary school principals...	82%
Junior high school principals.....	88%
Senior high school principals.....	140%

The advantage of data such as those in Table 11 is their objectivity. They probably offer a better basis for scheduling than the more or less biased opinions of members of the teaching groups concerned.

The danger of Table 11 is that it will result in a blind following of common practice

in situations where deviation is desirable. Special situations in some communities might make it desirable to establish a schedule which translated into index figures would radically differ from Table 11 as to the ratio of the salaries paid various groups of teachers. There is also the danger that the data of Table 11, if accepted with too little discrimination, will lead to stagnation. School efficiency would be increased in some communities by raising the qualifications of classroom teachers. In other places, school efficiency would be increased by bidding for a higher type of leadership to fill the principalships. In the first instance, it would be desirable to make the salaries of classroom teachers relatively higher than those suggested in the table. In the second case, it would be desirable to make the salaries of principals relatively higher. Present common practice may not represent ideal practice. Wise policy may dictate the desirability of differentials radically different from those of Table 11.

Table 12 reveals the differences in the salaries of various classes of teachers in cities of different populations. For every \$100 received by elementary teachers in cities 2500 to 5000 in population, \$109 is received by elementary teachers in cities 5000 to 10,000; that is, salaries of elementary teachers are nine percent higher in the larger than the smaller cities.

One should be cautious about applying figures such as those of Table 12. The last column of this table indicates that salaries

TABLE 11.—RATIO OF MEDIAN SALARIES OF VARIOUS GROUPS OF SCHOOL EMPLOYEES IN CITIES OF COMPARABLE POPULATION

Teaching groups	Cities with population of					Average all groups
	2,500 to 5,000	5,000 to 10,000	10,000 to 30,000	30,000 to 100,000	Over 100,000	
1	2	3	4	5	6	7
Elementary teachers.....	100	100	100	100	100	100
Junior high school teachers.....	114	112	114	115	112	113
High school teachers.....	131	130	131	132	129	131
Teaching elementary principals.....	126	118	125	147	134	130
Supervising elementary principals.....	197	174	163	193	182	182
Junior high school principals.....	151	161	189	229	211	188
High school principals.....	198	220	248	284	250	240

Read table thus: In cities 2,500 to 5,000 in population the median yearly salary of elementary teachers is \$1,176 (see Table 5). If this salary is given the value 100, then the median salary of junior high school teachers, which is \$1,346 (see Table 5), has a value of 114, or is 14 percent higher than that of elementary teachers, and the median salary of senior high school teachers, which is \$1,550, has the value 131, or is 31 percent above the elementary median. Similarly read figures for other population groups. The ratios or index numbers of this table are based on the medians given in Table 5 and following.

paid in cities of the populations listed below are higher than those paid in cities of 2500 to 5000 in population, to the percents indicated:

5,000 to 10,000.....	8%
10,000 to 30,000.....	23%
30,000 to 100,000.....	54%
100,000 and over.....	85%

Table 12 indicates common practice as to salary differentials on the basis of population. In this case common practice is probably poor practice. Do children in small and large cities receive equal opportunity when the salaries available to employ teachers are twice as high in large as in small cities? Can we expect elementary school teachers of similar ability in large and small cities when the median salary in one case is \$1176 and in the other \$2008?

Some have defended wide differences in salaries paid in cities of varying populations, on the basis of differences in cost of living. Although few data are available to support or disprove the statement, it is probably true that living costs increase with size of city. Other factors, however, which weigh heavily with teachers work in the opposite direction. The opportunities for cultural growth and professional advancement are generally greater in large than in small cities. Most teachers would prefer to teach in large than in small cities even if the salaries paid were equivalent.

Children in small communities generally are offered school opportunities inferior to those in large cities—at least insofar as the type of teacher employed is concerned. This

fact is an inevitable outcome of the situation revealed in Table 12. The following quotation from an article in the magazine of Wall Street indicates the public's recognition of the situation:

One disadvantage of living in a small town I will confess: the schools are usually only fair. The principal trouble is the continual changing of teachers. The town can only afford small salaries, so that the good teachers come to us young, and after wearing off their rough edges on us, pass on to better positions elsewhere. *Magazine of Wall Street*, July 30, 1927, Vol. 40, No. 7, page 610.

Even if one accepts as desirable the policy of paying smaller salaries in smaller cities, he should not accept Table 12 too blindly. There are small cities located close to large ones which must pay salaries at least equal to those in the larger cities if they are to hold their teachers. The cost of living in such small cities is often as high as in the large one near at hand. In such special instances it would be folly to accept Table 12 as a guide to salary scheduling.

The criterion of the economic demand on teachers. The acceptance of this criterion means that the cost of living of a group will exercise considerable influence in determining the rates of the salary schedule for that group.

What is meant by cost of living? The term is frequently hazily defined. Those who wish to make use of the cost of living as a criterion in drafting salary schedules should consult some of the available publications dealing with the subject.¹

¹ See for example: *The Cost of Living in the United States, 1914-1926*. National Industrial Conference Board, New York, 1926. 223 p.

TABLE 12.—RATIO OF MEDIAN SALARIES OF VARIOUS GROUPS OF SCHOOL EMPLOYEES IN CITIES IN DIFFERENT POPULATION CLASSES

Population groups	Elementary teachers	Junior high school teachers	High school teachers	Teaching elementary principals	Supervising elementary principals	Junior high school principals	High school principals	Average of columns 2 to 8
1	2	3	4	5	6	7	8	9
2,500 to 5,000.....	100	100	100	100	100	100	100	100
5,000 to 10,000.....	109	107	108	102	96	116	121	108
10,000 to 30,000.....	117	117	117	116	97	147	147	123
30,000 to 100,000.....	133	134	133	155	130	201	190	154
100,000 and over.....	171	165	167	182	157	238	215	185

Read table thus: The median yearly salary of elementary school teachers in cities 2,500 to 5,000 in population is \$1,176 (see Table 5). If this salary is given the value 100, then the median salary of elementary teachers in cities 5,000 to 10,000 in population, which is \$1,281 (see Table 5), has the value of 109, or is 9 percent higher than that of elementary teachers in cities 2,500 to 5,000 in population. Similarly interpret other figures of column 2, and similarly compare salaries of other teaching groups in various sized cities. The ratios or index numbers of this table are based on the medians of Table 5 and following.

By cost of living is not meant the amount necessary to bare existence. It is the amount necessary to meet a specified and acceptable standard of living for a particular group.

Between 1917 and 1920 thousands of teachers left the teaching profession for other lines of work. They did not change their occupations because it was actually impossible to exist on the depreciated purchasing power of their salaries. Rather, they left teaching because their salaries would no longer buy the things essential to the standard of living demanded. Other occupations did, so they left teaching. After 1920, society corrected the situation. Salaries were increased and the dollar appreciated somewhat in purchasing power. Teachers could again purchase those things essential to an acceptable standard of living. The classrooms were soon filled by former teachers and new recruits.

To have definiteness, the term cost of living should be related to a homogeneous group. As has been pointed out:

... estimates of the actual cost of living are likely to be the most exact which are related to a specified standard of living, for a given group . . . in a definite locality in a specified period of time. Those are most misleading which generalize about heterogeneous groups in a wide area, or which assume that standards or costs prevailing at one time and place are equally applicable at another time and place. There is no such thing as the cost of living or the minimum cost of living for any but the most homogeneous groups, in a limited area, within a specified period.¹

Speaking exactly, there is no such thing as the cost of living, that is, an acceptable standard of living for teachers in general. The term has definite significance only for a group possessing common characteristics.

No definite meaning could be attached to a figure giving the cost of living for a group including individuals in such diverse situations as the young, single woman just graduated from a two-year normal school and living at home, and the mature man, holding a master's degree from a standard college, with a wife and two minor children. The first step in determining cost of living, therefore, is the selection of a group the individuals of

which are sufficiently comparable so that the final result will have some meaning.

After the group has been defined, different procedures may be used in arriving at an estimate of the cost of living. Facts may be collected as to actual amount being spent by representative members of the group for all items entering into their living costs. The cost of living may be derived directly from these figures, or they may be reviewed by experts and certain items revised either upward or downward as the science of budgeting may suggest.

The cost of living has been used as one point of reference in a number of salary investigations. The recent New York study estimated the cost of living of teachers in that city by collecting facts from 11,000 teachers as to the annual expenditure for the two items, food and rent.² These important items were accepted as reliable indices of the total cost of living. Studies have revealed that the typical teacher spends between 40 and 50 percent of income for food and rent.³ The New York study, since rents are relatively high in that city, accepted 55 percent as the proportion of total expenditures of teachers credited to food and rent. Fifty percent or less would be a more defensible figure in many communities. The figure doubtless varies with different groups. The proportion expended for food and shelter decreases as the salary increases.⁴

The Minneapolis study estimated the principal items of the budget of various groups of teachers using this method:

The facts upon which the suggested budgets for teachers have been based were obtained in part from the schedules returned by teachers, in part from the quantity budgets already worked out, especially the budgets established by the United States Bureau of Labor Statistics, and the budget for a professional or business woman published by the *Ladies Home Journal*. This wealth of information based upon the study of a large number of individual and family budgets, was discussed at length with teachers, social workers and others in Minneapolis and the kinds, qualities and amounts of commodities and services indispensable or desirable for teachers finally agreed upon. Prices of articles were obtained from the shops of

¹ *Cost of Living in the United States, 1914-1926*. National Industrial Conference Board, New York City, 1926, pages 26 and 27.

² See page 47 of *Teachers Salaries in New York City*.

³ See the studies cited in the succeeding paragraphs.

⁴ See Table 2D, page 26, *Income in the United States*, Vol. II, National Bureau of Economic Research.

Minneapolis by personal interview and in case of standard articles, by telephone.¹

The Cincinnati study collected data on living costs for all important items for several groups of teachers as a basis for the total living costs of these groups and the percentage distribution of the various items of their budgets.²

In Chicago a citizens' committee obtained a number of intelligent estimates of a living wage for a professional man in Chicago. Four experts in economics also prepared budgets. Guided by these figures the committee submitted estimates of a living wage for a professional worker in that city. These results are given in Table 13.³

The criterion of wages paid unskilled labor. Moehlman has suggested the wages paid unskilled labor in a community as the base upon which schedules should be built.⁴ He argues that wages of unskilled labor come nearest to approximating the cost of existence and are therefore most sensitive to fluctuations in price levels. Some evidence is offered that in recent decades wages of labor and teachers' salaries have shown similar fluctuations.

It is suggested that teachers of two years' professional preparation should begin at salaries 1.5 times, and proceed by annual increments to a rate of 2.2 times, that of unskilled labor. Teachers with four years' professional

preparation, the equivalent of college graduates, would begin at a salary 1.75 times, and proceed to a maximum 3.0 times that of unskilled labor. Upon this basic schedule for teachers, resting upon preparation and experience, certain additional increments are suggested.

Moehlman's suggestion deserves careful consideration. In communities where reliable data for unskilled labor are readily available this criterion may prove a valuable one. The relative weights given to unskilled labor and teaching service, insofar as they are based upon past conditions, might be questioned, unless one accepts that teaching service has been as highly rewarded in the past, when related to unskilled labor, as it deserves. This objection, however, does not invalidate the method. Wages of unskilled labor could be taken as the base and different weights, higher or lower than those suggested, could be used.

The criterion of the real wage. The acceptance of this criterion involves the adjustment of salary schedule rates so that they do not lose in purchasing power due to fluctuations in the value of the dollar.

Table 14 shows that the purchasing power of the dollar is much less at present than in 1890. The index of wholesale prices in column one indicates that if we assume that

¹ Meeker, Royal. *A Study of Costs and Standards of Living of Minneapolis Teachers In Relation to Their Salaries*, p. 23.

² Report of the Committee on the Study of Salaries in the Cincinnati Public Schools, 1926, p. 35.

³ Research Bulletin, Vol. 4, September, 1926. *A Handbook of Major Educational Issues*, p. 186.

⁴ Moehlman, Arthur B. *Public School Finance*. Rand McNally and Company, 1927, p. 140ff.

TABLE 13.—YEARLY LIVING WAGE FOR PROFESSIONAL MAN AND FAMILY—CHICAGO, ILL.

	Average of 26 budgets	Average of four budgets made by experts in economics	Committee's recommen- dation
Rent and heat.....	\$1,079	\$1,110	\$1,000
Electricity, gas, telephone.....	103	115	125
Food, ice, milk.....	905	742	900
Replacement of furniture and equipment.....	120	90	100
Laundry and domestic help (occasional).....	182	275	200
Clothing and its care.....	577	871	600
Newspapers, books, periodicals.....	45	45	50
Church, charity, public spirit.....	101	134	240
Clubs, organizations, social expense.....	71	86	75
Amusements, theater, opera.....	69	84	75
Transportation.....	90	86	90
Vacation.....	183	235	200
Health, doctor, dentist, medicines, sports.....	101	82	75
Insurance premiums: Life, fire, liability.....	206	261	170
Conventions, subscriptions.....	47	44	50
Saving for investment, home owning.....	457	457	450
Provisions for higher education for children.....	123	197	270
Other items.....	272	48	150
Total annual income.....	\$4,827	\$4,995	\$4,730

100 cents was necessary in 1913 to purchase a given quantity of goods at wholesale, then but 80.5 cents purchased the same quantity of goods in 1890, while 144 cents are necessary in 1927. At present a given amount of money buys a smaller quantity of wholesale goods than in former decades. It requires more money now than in former decades to purchase a given quantity of wholesale goods.

A similar loss in the purchasing power of the dollar in buying food at retail is indicated by column 3 of Table 14. Columns 4 to 6 give indices of the value of the dollar when purchasing the various items in the cost of living of typical families.

Practically all indices agree that following 1890 the purchasing power of the dollar, disregarding minor fluctuations, steadily depreciated. In 1920 it reached the lowest value in history. After 1920 the dollar regained a fraction of its purchasing power, but since 1921 has, except for minor fluctuations, remained on a level.

Table 15 indicates that 75.9 cents in 1890, 100 cents in 1913 and 173.4 in 1927 had the same ability to purchase the various items which make up the cost of living. The dollar on a 1913 base had in 1890 purchasing power represented by 132 cents and in 1927 by 57 cents. Chart XII graphically illustrates the

TABLE 14.—VARIOUS INDEX NUMBERS OF PURCHASING POWER OF DOLLAR AND COST OF LIVING

Year	Index of wholesale prices	Index of retail cost of food	Indexes of cost of living of:		
			U. S. Bureau of Labor Statistics	National Industrial Conference Board	Paul H. Douglas in American Economic Review
1	2	3	4	5	6
1890.....	80.5	69.6	.....	.....	75.9
1891.....	80.0	70.6	.....	.....	73.7
1892.....	74.8	69.3	.....	.....	74.5
1893.....	76.6	71.0	.....	.....	73.0
1894.....	68.7	67.8	.....	.....	70.8
1895.....	70.0	66.5	.....	.....	70.8
1896.....	66.7	64.9	.....	.....	72.3
1897.....	66.8	65.4	.....	.....	73.0
1898.....	69.6	67.1	.....	.....	73.0
1899.....	74.9	67.7	.....	.....	74.5
1900.....	80.5	68.7	.....	.....	77.4
1901.....	79.3	71.5	.....	.....	78.8
1902.....	84.4	75.4	.....	.....	81.0
1903.....	85.5	75.0	.....	.....	84.7
1904.....	85.6	76.0	.....	.....	83.9
1905.....	86.2	76.4	.....	.....	83.9
1906.....	88.6	78.7	.....	.....	86.9
1907.....	93.5	82.0	.....	.....	92.0
1908.....	90.1	84.3	.....	.....	88.3
1909.....	96.9	88.7	.....	.....	88.3
1910.....	100.9	93.0	.....	.....	93.4
1911.....	93.0	92.0	.....	.....	96.4
1912.....	99.1	97.6	.....	.....	97.1
1913.....	100.0	100.0	100.0	.....	100.0
1914.....	98.1	102.4	103.0	100.0	101.5
1915.....	100.8	101.3	105.1	100.5	99.4
1916.....	126.8	113.7	118.3	108.7	108.6
1917.....	177.2	146.4	142.4	131.3	130.9
1918.....	194.3	168.3	174.4	158.6	159.3
1919.....	206.4	185.9	188.3	171.6	181.6
1920.....	226.2	203.4	208.5	197.5	208.0
1921.....	146.9	153.3	177.3	164.9	178.6
1922.....	148.8	141.6	167.3	156.2	168.4
1923.....	153.7	146.2	171.0	162.1	171.5
1924.....	149.7	145.9	170.7	163.3	171.5
1925.....	158.7	157.4	175.7	169.3	.....
1926.....	151.0	160.6	175.2	167.9	.....
1927.....	143.7	158.5	173.4	.....	.....

Sources of data: Figures of columns 2, 3 and 4 from *Monthly Labor Review*, U. S. Department of Labor, Bureau of Labor Statistics, February, 1927, pages 167, 125, and 168, respectively. Those of column 5 are from *Cost of Living in the United States, 1914-1926*, Supplement for 1926, National Industrial Conference Board, page 33. Those of column 6 are from "The Movement of Real Wages and Its Economic Significance," Paul H. Douglas in the *American Economic Review*, March, 1926, pages 22-23.

effect of the depreciation of the dollar. It shows the amount required in various years to purchase what \$1.00 bought in 1890.

Table 16 shows the influence of the change in the purchasing power of the dollar on various 1900 salaries. If a person received a salary of \$2000 in 1900 and continued to receive this salary until 1927, the purchasing power of his salary would be but \$893 in 1927. Due to the fact that his salary had not been adjusted to offset the loss in value of the dollar, he would have received over this period of years \$17,139 less than if this adjustment had been made annually. This sum will purchase for a person at age 60 an annuity guaranteeing an income for life of \$1500 a year.

Table 17 is similar to 16 except that 1913 is the base. A salary of \$5000 in 1913 depreciated to a purchasing power of \$2884 by 1927. A person on this salary throughout the 15-year span from 1913 to 1927 received \$24,485 less than he would have, had his salary been adjusted to meet the depreciation of the dollar.

Tables 18 and 19 show the increases in various salaries of 1900 and 1913 necessary to offset the depreciation of the dollar. A salary of \$1500 in 1900 had the same purchasing power as \$3360 has today. Table 19 shows that a salary of \$1000 in 1913 would buy as much as \$1734 buys in 1927. Suppose that a man was receiving \$1600 a year in 1913. If his salary continued at this figure for 15 years until 1927 he would have received a total of \$15,000. During these years this man would have received \$8506 less than if his salary had annually been adjusted to preserve its 1913 purchasing power. Unless he received \$15,000 plus \$8506, or a total of \$23,506 during this 15-year period, he was worse off than he would have been had there been no depreciation of the dollar, and had he received but \$15,000 during this period.

The data presented show the fundamental importance of salary adjustments to meet depreciations in the purchasing power of the dollar. As one basis for determining the rates of its salary schedule, a community may well study the trend of the teachers "real wage," that is, the purchasing power of the teacher's salary. By so doing it may discover whether the rates fixed have less or greater ability to attract the type of teachers they desire.

One should use this criterion with discrimination in determining present-day salary schedules. To give present-day salaries the same purchasing power as they had in 1900, for example, assumes that an ideal schedule existed at that time. The schedule of salaries existing in a particular city may have been far from ideal at that time.

In comparing the purchasing power of a 1927 schedule with that of a former schedule, one tends to accept conditions existing in the past which may have been far from ideal. For example, if one were to select 1920 as his base year, he would be dealing with a year when teachers were leaving the profession by the thousands because salaries were too low

TABLE 15.—INDEXES OF COST OF LIVING AND PURCHASING POWER OF DOLLAR

Year	Index of cost of living	Purchasing Power of dollar
1890.....	75.9	\$1.32
1891.....	73.7	1.36
1892.....	74.5	1.34
1893.....	73.0	1.37
1894.....	70.8	1.41
1895.....	70.8	1.41
1896.....	72.3	1.38
1897.....	73.0	1.37
1898.....	73.0	1.37
1899.....	74.5	1.34
1900.....	77.4	1.29
1901.....	78.8	1.27
1902.....	81.0	1.23
1903.....	84.7	1.18
1904.....	83.9	1.19
1905.....	83.9	1.19
1906.....	86.9	1.15
1907.....	92.0	1.09
1908.....	88.3	1.13
1909.....	88.3	1.13
1910.....	93.4	1.07
1911.....	96.4	1.04
1912.....	97.1	1.03
1913.....	100.0	1.00
1914.....	103.0	.97
1915.....	105.1	.95
1916.....	118.3	.85
1917.....	142.4	.70
1918.....	174.4	.57
1919.....	188.3	.53
1920.....	208.5	.48
1921.....	177.3	.56
1922.....	167.3	.60
1923.....	171.0	.58
1924.....	170.7	.59
1925.....	175.7	.57
1926.....	175.2	.57
1927.....	173.4	.57

Read table thus: The index of the cost of living, with 1913 as the base year, indicates it required 75.9 cents in 1890 and 173.4 cents in 1927 to purchase what 100 cents bought in 1913. The purchasing power of the dollar, with 1913 as the base year, was 100 cents in 1913, 132 cents in 1890 and 57 cents in 1927. Similarly read figures for other years.

The figures of columns 2 and 3 are reciprocals.

Sources of data: The figures of column 2 from 1913 to 1927 are those of column 4, page 169, Table 14. Those from 1890 to 1913 are those of column 6 of the same table. The figures of column 3 are based on those of column 2.

in purchasing power to allow them to maintain an acceptable standard of living.

The salaries paid teachers in the past have generally been inadequate. Teaching service has struggled up from the time when it was a transient occupation of incompetents, through the period when it was an opportunity for the daughter of the district school trustee to earn pin money for a few months during the winter or for his son to pick up a few dollars to finance a period of study for some "permanent" life work, to the place where, at least in some communities, it is standing on its own feet and commanding a return some-

what in accord with its significance to the nation.

The fixing of schedules at rates which merely guarantee teachers salaries the same purchasing power they possessed in the past, would be to place a stamp of approval on conditions untenable today. The average salary of the nation's public school teachers in 1913, even when those received by principals, superintendents, and other administrative officers are included, was but \$512. Half those engaged in public school work received less than this sum during this year.

The purchasing power of prewar salaries

CHART XII

AMOUNT REQUIRED IN VARIOUS YEARS TO PURCHASE WHAT \$1.00 BOUGHT IN 1890



*Research Division
National Education Ass'n.*

Read chart thus: \$2.31 purchased the same amount in 1926 as \$1.00 bought in 1890, etc.

Sources of data: Chart based on index numbers of U.S. Department of Labor.

TABLE 16.—PURCHASING POWER IN SUBSEQUENT YEARS OF VARIOUS 1900 SALARIES

Year	Index of cost of living 1913=100	Amount of salary in 1900															
		\$500	\$1,000	\$1,500	\$2,000	\$2,500	\$3,000	\$3,500	\$4,000	\$4,500	\$5,000	\$6,000	\$7,000	\$8,000	\$9,000	\$10,000	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	
1900	77.4	\$500	\$1,000	\$1,500	\$2,000	\$2,500	\$3,000	\$3,500	\$4,000	\$4,500	\$5,000	\$6,000	\$7,000	\$8,000	\$9,000	\$10,000	
1901	78.8	491	982	1,473	1,964	2,456	2,947	3,438	3,929	4,420	4,911	5,402	5,893	6,384	6,875	7,366	
1902	80.0	478	956	1,434	1,912	2,390	2,868	3,346	3,824	4,302	4,780	5,258	5,736	6,214	6,692	7,170	
1903	81.7	461	923	1,371	1,848	2,325	2,799	3,273	3,747	4,220	4,694	5,167	5,640	6,113	6,586	7,059	
1904	83.9	461	923	1,384	1,845	2,306	2,768	3,229	3,690	4,151	4,613	5,074	5,535	5,996	6,457	6,918	
1905	86.9	446	891	1,384	1,845	2,306	2,768	3,229	3,690	4,151	4,613	5,074	5,535	5,996	6,457	6,918	
1906	86.9	446	891	1,384	1,845	2,306	2,768	3,229	3,690	4,151	4,613	5,074	5,535	5,996	6,457	6,918	
1907	86.9	446	891	1,384	1,845	2,306	2,768	3,229	3,690	4,151	4,613	5,074	5,535	5,996	6,457	6,918	
1908	88.3	438	877	1,315	1,683	2,103	2,524	2,945	3,365	3,786	4,207	4,628	5,048	5,469	5,889	6,310	
1909	88.3	438	877	1,315	1,683	2,103	2,524	2,945	3,365	3,786	4,207	4,628	5,048	5,469	5,889	6,310	
1910	92.4	415	829	1,244	1,753	2,191	2,630	3,068	3,506	3,945	4,383	4,821	5,259	5,697	6,135	6,573	
1911	92.4	415	829	1,244	1,753	2,191	2,630	3,068	3,506	3,945	4,383	4,821	5,259	5,697	6,135	6,573	
1912	96.4	401	803	1,204	1,658	2,071	2,487	2,902	3,316	3,731	4,145	4,560	4,974	5,389	5,803	6,217	
1913	97.1	399	797	1,196	1,594	1,993	2,391	2,790	3,188	3,587	3,985	4,383	4,781	5,179	5,577	5,975	
1914	100.0	387	774	1,161	1,548	1,945	2,342	2,739	3,136	3,533	3,930	4,327	4,724	5,121	5,518	5,915	
1915	103.0	376	751	1,127	1,507	1,898	2,292	2,689	3,084	3,479	3,874	4,269	4,664	5,059	5,454	5,849	
1916	105.1	359	736	1,105	1,473	1,841	2,213	2,578	2,946	3,314	3,682	4,050	4,418	4,786	5,154	5,522	
1917	118.3	277	654	981	1,308	1,635	1,962	2,289	2,616	2,943	3,270	3,597	3,924	4,251	4,578	4,905	
1918	142.4	222	544	815	1,087	1,359	1,631	1,902	2,174	2,446	2,718	2,990	3,262	3,534	3,806	4,078	
1919	174.4	206	444	666	888	1,110	1,332	1,554	1,776	2,000	2,222	2,444	2,666	2,888	3,110	3,332	
1920	188.3	206	444	666	888	1,110	1,332	1,554	1,776	2,000	2,222	2,444	2,666	2,888	3,110	3,332	
1921	188.3	206	444	666	888	1,110	1,332	1,554	1,776	2,000	2,222	2,444	2,666	2,888	3,110	3,332	
1922	177.3	218	437	655	873	1,091	1,310	1,528	1,746	1,964	2,183	2,401	2,619	2,837	3,055	3,273	
1923	167.0	226	453	695	926	1,158	1,389	1,620	1,851	2,082	2,313	2,544	2,775	3,006	3,237	3,468	
1924	170.7	227	453	680	905	1,132	1,358	1,584	1,810	2,037	2,263	2,489	2,715	2,941	3,167	3,393	
1925	175.7	220	441	661	881	1,101	1,322	1,542	1,762	1,982	2,203	2,423	2,643	2,863	3,083	3,303	
1926	175.2	221	442	663	884	1,105	1,326	1,547	1,768	1,989	2,210	2,431	2,652	2,873	3,094	3,315	
1927	173.4	223	446	670	893	1,116	1,339	1,562	1,785	2,009	2,232	2,455	2,678	2,901	3,124	3,347	
Accumulated loss for 27 years		\$4,283	\$8,567	\$12,849	\$17,139	\$21,421	\$25,706	\$29,989	\$34,279	\$38,559	\$42,845	\$51,419	\$59,964	\$68,558	\$77,125	\$85,697	

Read table thus: A salary of \$500 in terms of 1900 is

Read table thus: A salary of \$500 in terms of 1900 dollars had a purchasing power of \$500 in 1900, \$478 in 1902, \$461 in 1904, etc. Similarly read other columns. The accumulated purchasing power of a salary of \$500 was reduced \$4283 between 1900 and 1927 due to the depreciation of the dollar.
 Sources of data: Calculations of columns 3 to 17 based upon index numbers of column 2, which indicate that 71.4 cents in 1900 had the same purchasing power as 78.8 cents in 1901, hence \$500 depreciated in purchasing power to \$491 in 1901. The index numbers of column 2 are from Table 14, page 169, the figures from 1913 to 1927 are from column 4 of this table, those from 1900 to 1913 are from column 6 of this table.

in most communities constitutes an inadequate basis for fixing present salaries. Few communities can afford to place their salaries today upon as low a basis as existed before the war. Most communities should have granted increases in recent decades not only to preserve, but also to enhance the purchasing power of the teacher's income. This brings us to the next point.

The criterion of the standard of living. The use of this criterion implies that the rates of a salary schedule should be adjusted as changes in the standard of living take place. The standard of living in the United States has tended to increase throughout our history. In recent years this increase has been rapid. As Herbert Hoover states in his last report:

"... the country was able to maintain the highest standard of living in its history, a standard far above that in most other countries of the world at this or any other time."—Report of Secretary of Commerce, Year ended June 30, 1926, Washington, D. C., page 42.

This statement is supported by various wage indexes. Carl Snyder's recent composite index of wages may be cited.¹ This index is arrived at by weighting and combining in a single index figures as to income received in years since 1913 by a number of economic groups. The salaries and incomes of these groups were used and weighted as indicated:

Groups	Weight
Agricultural wages	5
Railroad wages	5
Teachers' salaries	5
Factory wages	40
Building wages	15
Clerical wages	15
Unskilled labor wages.....	10

The resulting composite index of wages in the United States is given in the first two columns of Table 20.

Wages throughout the nation between 1913 and 1926 increased at a rate more rapid than the cost of living. While the wage index rose from 100 to 219, or 119 percent, the cost of living index rose from 100 to 175, or 75 percent. The index of the real wage, that

¹ Snyder, Carl. "An addition to the New Composite Index of Wages in the United States." *Journal of the American Statistical Association*, June, 1927, page 229.

TABLE 17.—PURCHASING POWER IN SUBSEQUENT YEARS OF VARIOUS 1913 SALARIES

Year	Index of cost of living	Amount of salary															
		\$500	3	4	5	6	7	8	9	10	11	\$5,000	\$6,000	\$7,000	\$8,000	\$9,000	\$10,000
1913.....	100.0	\$500	\$1,000	\$1,500	\$2,000	\$2,500	\$3,000	\$3,500	\$4,000	\$4,500	\$5,000	\$6,000	\$7,000	\$8,000	\$9,000	\$10,000	
1914.....	103.0	485	970	1,455	1,940	2,425	2,910	3,395	3,880	4,365	4,850	5,700	6,550	7,400	8,250	9,100	9,950
1915.....	105.1	476	951	1,427	1,899	2,371	2,843	3,315	3,787	4,259	4,731	5,524	6,317	7,110	7,903	8,696	9,489
1916.....	108.1	463	926	1,392	1,856	2,320	2,784	3,248	3,712	4,176	4,640	5,376	6,112	6,848	7,584	8,320	9,056
1917.....	118.3	423	845	1,268	1,691	2,113	2,536	2,959	3,382	3,805	4,228	4,751	5,274	5,797	6,320	6,843	7,366
1918.....	142.4	351	702	1,053	1,405	1,756	2,107	2,458	2,809	3,160	3,511	3,862	4,213	4,564	4,915	5,266	5,617
1919.....	174.4	287	573	860	1,147	1,434	1,720	2,007	2,294	2,580	2,867	3,154	3,441	3,728	4,015	4,302	4,589
1920.....	188.3	266	531	797	1,062	1,328	1,593	1,859	2,124	2,390	2,655	2,920	3,185	3,450	3,715	3,980	4,245
1921.....	208.5	240	480	719	959	1,199	1,439	1,679	1,919	2,158	2,398	2,638	2,878	3,118	3,357	3,597	3,837
1922.....	228.2	217	434	651	868	1,085	1,302	1,519	1,736	1,953	2,170	2,387	2,604	2,821	3,038	3,255	3,472
1923.....	177.3	282	564	846	1,128	1,410	1,692	1,974	2,256	2,538	2,820	3,102	3,384	3,666	3,948	4,230	4,512
1924.....	167.3	299	598	897	1,196	1,494	1,793	2,092	2,391	2,690	2,989	3,288	3,587	3,886	4,185	4,484	4,783
1925.....	171.0	292	584	877	1,170	1,462	1,754	2,047	2,339	2,632	2,924	3,217	3,509	3,801	4,094	4,387	4,679
1926.....	170.7	293	586	879	1,172	1,465	1,758	2,050	2,343	2,636	2,929	3,222	3,515	3,808	4,101	4,394	4,687
1927.....	285	285	570	855	1,138	1,423	1,708	1,992	2,277	2,561	2,846	3,130	3,415	3,699	3,984	4,268	4,553
1928.....	175.2	285	571	856	1,142	1,427	1,712	1,998	2,283	2,569	2,854	3,140	3,425	3,710	3,996	4,281	4,566
1929.....	171.4	288	577	865	1,153	1,442	1,730	2,018	2,307	2,595	2,884	3,172	3,460	3,748	4,037	4,325	4,614
Accumulated loss for 14 years.....		\$2,448	\$4,897	\$7,346	\$9,792	\$12,241	\$14,690	\$17,139	\$19,587	\$22,036	\$24,485	\$29,381	\$34,278	\$39,175	\$44,072	\$48,969	

Read table thus: A salary of \$500 in terms of 1913 dollars had a purchasing power of \$500 in 1913, \$485 in 1914, \$476 in 1915, etc. The accumulated purchasing power of a salary of \$500 was reduced \$2,448 between 1913 and 1927, due to the depreciation in the value of the dollar. Sources of data: Calculations of columns 3 to 17 are based upon index numbers of column 2, which indicate that \$1.00 in 1913 had the same purchasing power as \$1.03 in 1914, hence \$500 depreciated in purchasing power to \$485 in 1914. The index numbers of column 2 are from Table 14, page 169.

TABLE 18.—AMOUNTS WHICH IN SUBSEQUENT YEARS HAD THE SAME PURCHASING POWER AS VARIOUS SALARIES HAD IN 1900

Year	Index of cost of living	Amount of salary														
		\$500	\$1,000	\$1,500	\$2,000	\$2,500	\$3,000	\$3,500	\$4,000	\$4,500	\$5,000	\$6,000	\$7,000	\$8,000	\$9,000	\$10,000
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1900.	77.4	\$500	\$1,000	\$1,500	\$2,000	\$2,500	\$3,000	\$3,500	\$4,000	\$4,500	\$5,000	\$6,000	\$7,000	\$8,000	\$9,000	\$10,000
1901.	78.8	509	1,018	1,527	2,036	2,545	3,054	3,563	4,072	4,581	5,090	6,109	7,127	8,145	9,163	10,181
1902.	81.0	523	1,046	1,570	2,093	2,616	3,139	3,663	4,186	4,709	5,232	6,256	7,279	8,302	9,325	10,348
1903.	84.7	547	1,094	1,641	2,189	2,736	3,283	3,830	4,377	4,924	5,472	6,504	7,536	8,568	9,600	10,632
1904.	83.9	542	1,084	1,626	2,168	2,710	3,252	3,794	4,336	4,878	5,420	6,450	7,482	8,514	9,546	10,578
1905.	83.0	542	1,084	1,626	2,168	2,710	3,252	3,794	4,336	4,878	5,420	6,450	7,482	8,514	9,546	10,578
1906.	86.9	561	1,123	1,684	2,245	2,807	3,368	3,930	4,491	5,052	5,614	6,646	7,678	8,710	9,742	10,774
1907.	92.0	594	1,189	1,783	2,377	2,972	3,566	4,160	4,755	5,349	5,943	7,135	8,327	9,519	10,711	11,903
1908.	88.3	570	1,141	1,711	2,282	2,852	3,422	3,993	4,563	5,134	5,704	6,845	7,986	9,127	10,267	11,408
1909.	88.3	570	1,141	1,711	2,282	2,852	3,422	3,993	4,563	5,134	5,704	6,845	7,986	9,127	10,267	11,408
1910.	93.4	603	1,207	1,810	2,413	3,017	3,620	4,223	4,827	5,430	6,034	7,240	8,447	9,654	10,861	12,068
1911.	96.4	623	1,245	1,868	2,491	3,114	3,736	4,359	4,982	5,605	6,228	7,473	8,718	9,964	11,209	12,455
1912.	97.1	627	1,254	1,882	2,509	3,136	3,763	4,391	5,018	5,645	6,273	7,572	8,872	10,172	11,472	12,772
1913.	100.0	646	1,292	1,938	2,584	3,230	3,876	4,522	5,168	5,814	6,460	7,752	9,044	10,336	11,628	12,920
1914.	103.0	665	1,331	1,996	2,661	3,327	3,992	4,658	5,323	5,988	6,654	7,984	9,315	10,646	11,977	13,307
1915.	105.1	679	1,358	2,037	2,716	3,395	4,074	4,753	5,432	6,110	6,789	8,147	9,505	10,863	12,221	13,579
1916.	118.3	764	1,528	2,293	3,057	3,821	4,585	5,349	6,114	6,878	7,642	9,170	10,699	12,227	13,756	15,284
1917.	142.4	920	1,840	2,760	3,680	4,599	5,519	6,439	7,359	8,279	9,199	11,039	12,879	14,718	16,558	18,398
1918.	174.4	1,216	2,432	3,648	4,864	6,080	7,296	8,512	9,728	10,944	12,160	13,519	14,735	15,951	17,167	18,383
1919.	188.3	1,426	2,852	4,278	5,704	7,129	8,555	9,981	11,407	12,832	14,258	15,683	17,108	18,533	19,958	21,383
1920.	197.3	1,547	3,094	4,641	6,187	7,734	9,281	10,828	12,375	13,922	15,469	17,016	18,563	20,110	21,657	23,204
1921.	208.3	1,685	3,370	5,055	6,740	8,425	10,110	11,795	13,480	15,165	16,850	18,535	20,220	21,905	23,590	25,275
1922.	216.3	1,741	3,481	5,216	6,951	8,686	10,421	12,156	13,891	15,626	17,361	19,096	20,831	22,566	24,301	26,036
1923.	167.0	1,081	2,161	3,241	4,321	5,401	6,481	7,561	8,641	9,721	10,801	12,969	15,137	17,305	19,473	21,641
1924.	170.7	1,103	2,209	3,314	4,419	5,523	6,628	7,733	8,837	9,942	11,047	13,256	15,465	17,674	19,884	22,093
1925.	175.7	1,135	2,270	3,405	4,540	5,675	6,810	7,945	9,080	10,215	11,350	13,560	15,770	17,980	20,190	22,400
1926.	175.2	1,132	2,263	3,395	4,527	5,659	6,791	7,922	9,054	10,186	11,318	13,520	15,730	17,940	20,150	22,360
1927.	173.4	1,120	2,240	3,360	4,481	5,601	6,721	7,841	8,961	10,081	11,202	13,442	15,682	17,922	20,163	22,403
Accumulated increase necessary to maintain purchasing power during 27 years.	.....	\$8,496	\$16,994	\$25,493	\$33,792	\$42,490	\$50,984	\$59,485	\$67,984	\$76,480	\$84,981	\$101,975	\$118,974	\$135,970	\$152,965	\$169,958

Read table 18: A salary of \$500 in 1901, \$523 in 1902, \$547 in 1903, etc., had the same purchasing power as a salary of \$500 in 1900. During the period of 27 years between 1900 and 1927, an accumulated increase of \$8,496 was necessary in order to maintain the purchasing power of a 1900 salary of \$500. Similarly read other columns.
Sources of data: Calculations of columns 3 to 17 are based upon the index numbers of column 2, which indicate that it took 78.8 cents in 1901 to purchase what 77.4 cents bought in 1900. The index numbers in column 2 are from Table 14, page 169, column 4 for 1913 to 1927 and column 6 for 1900 to 1913.

TABLE 19.—AMOUNTS WHICH IN SUBSEQUENT YEARS HAD THE SAME PURCHASING POWER AS VARIOUS SALARIES HAD IN 1913

Amount of salary in 1913

Index of

TABLE 19.—AMOUNTS WHICH IN SUBSEQUENT YEARS HAD THE SAME PURCHASING POWER AS VARIOUS SALARIES HAD IN 1913

Year	Index of cost of living	Amount of salary in 1913															
		\$500	\$1,000	\$1,500	\$2,000	\$2,500	\$3,000	\$3,500	\$4,000	\$4,500	\$5,000	\$6,000	\$7,000	\$8,000	\$9,000	\$10,000	
1913.....	100.0	\$500	\$1,000	\$1,500	\$2,000	\$2,500	\$3,000	\$3,500	\$4,000	\$4,500	\$5,000	\$6,000	\$7,000	\$8,000	\$9,000	\$10,000	
1914.....	103.0	515	1,030	1,545	2,060	2,575	3,090	3,605	4,120	4,635	5,150	6,180	7,210	8,240	9,270	10,300	
1915.....	105.1	526	1,051	1,577	2,102	2,628	3,153	3,679	4,204	4,730	5,255	6,306	7,357	8,408	9,459	10,510	
1916.....	108.3	592	1,183	1,775	2,366	2,958	3,549	4,141	4,732	5,324	5,915	7,098	8,281	9,464	10,647	11,830	
1917.....	112.4	712	1,424	2,136	2,848	3,560	4,272	4,984	5,696	6,408	7,120	8,544	9,968	11,392	12,816	14,240	
1918.....	118.3	872	1,744	2,616	3,488	4,360	5,232	6,104	6,976	7,848	8,720	10,464	12,208	13,952	15,696	17,440	
1919.....	124.4	1,042	2,083	3,125	4,166	5,208	6,250	7,292	8,334	9,376	10,418	12,510	14,602	16,694	18,786	20,878	
1920.....	130.2	1,043	2,085	3,128	4,170	5,213	6,255	7,298	8,340	9,383	10,425	12,517	14,609	16,701	18,830	20,950	
1921.....	137.3	887	1,773	2,660	3,546	4,433	5,319	6,206	7,092	7,979	8,865	10,638	12,411	14,184	15,957	17,730	
1922.....	145.2	837	1,673	2,510	3,346	4,183	5,019	5,856	6,692	7,529	8,365	10,368	11,711	13,384	15,057	16,730	
1923.....	151.0	855	1,710	2,565	3,420	4,275	5,130	5,985	6,840	7,695	8,550	10,260	11,970	13,683	15,394	17,106	
1924.....	157.7	854	1,707	2,561	3,414	4,268	5,121	5,975	6,828	7,682	8,535	10,242	11,949	13,656	15,363	17,070	
1925.....	175.2	879	1,757	2,636	3,514	4,393	5,271	6,150	7,028	7,907	8,785	10,512	12,299	14,086	15,873	17,570	
1926.....	175.2	876	1,752	2,628	3,504	4,380	5,256	6,132	7,008	7,884	8,760	10,512	12,298	14,016	15,708	17,520	
1927.....	173.4	867	1,734	2,601	3,468	4,335	5,202	6,069	6,936	7,803	8,670	10,404	12,138	13,872	15,606	17,340	
Accumulated increase necessary to maintain purchasing power during 14 years.....		\$4,257	\$8,506	\$12,763	\$17,012	\$21,169	\$25,518	\$29,775	\$34,024	\$38,281	\$42,530	\$51,036	\$59,542	\$68,048	\$76,554	\$85,060	

Read table thus: A salary of \$515 in 1914, \$526 in 1915, \$592 in 1916, etc., had the same purchasing power as a salary of \$500 in 1913. During the period of 14 years between 1913 and 1927 an accumulated increase of \$4,257 was necessary in order to maintain the purchasing power of a 1913 salary of \$500. Similarly read other columns.

Sources of data: Calculations of columns 3 to 17 are based upon the index numbers of column 2, which indicate that it took \$1.03 in 1914 to purchase what \$1.00 bought in 1913, etc. The index numbers in column 2 are from Table 14, page 169.

Read table thus: A salary of \$515 in 1914, \$526 in 1915, \$592 in 1916, etc., had the same purchasing power as a salary of \$500 in 1913. During the period of 14 years between 1913 and 1927 an accumulated increase of \$4,257 was necessary in order to maintain the purchasing power of a 1913 salary of \$500. Similarly read other columns.

Sources of data: Calculations of columns 3 to 17 are based upon the index numbers of column 2, which indicate that it took \$1.03 in 1914 to purchase what \$1.00 bought in 1913, etc. The index numbers in column 2 are from Table 14, page 169.

is, what the wages would purchase, rose from 100 to 125. This indicates that wages received in 1926 purchased 25 percent more in 1926 than the wages received in 1913. According to these figures any group whose typical wage did not increase 119 percent between 1913 and 1926 was in a position relatively lower on the economic scale in 1926 than in 1913.

Table 21 gives the average salaries or wages of a number of groups between 1913 and 1926. The actual amounts received are given in columns 2 to 7, and the purchasing power of the amounts received after corrections for change in cost of living is given in columns 8 to 13.

Table 22, by converting the figures of Table 21 into index numbers, makes it possible readily to study the percent increase of the amounts received by the various groups, and the percent increase of the purchasing power of these amounts. For example, Table 21 indicates that the average yearly income of gainfully employed persons between 1913 and 1926 increased from \$864 to \$2,010. In Table 22 these figures are converted to index numbers on the 1913 base, so that the percent increase may be seen. Column 2 of this table shows that the index of the average income of gainfully employed persons rose

TABLE 20.—COMPOSITE WAGE INDEX, COST OF LIVING AND REAL WAGE, 1913 TO 1926

Year	Wage index	Index of cost of living	Index of real wage
1	2	3	4
1913	100	100	100
1919	174	188	93
1920	207	208	100
1921	194	177	110
1922	189	167	113
1923	205	171	120
1924	210	171	123
1925	214	176	122
1926	219	175	125

Read table as follows: The composite index of wages rose from 100 to 219 between 1913 and 1926, that is, wages in general increased 119 percent. The cost of living rose from 100 to 175 in the same period, that is, the cost of living increased 75 percent. The index of the real wage (purchasing power of wages received) rose from 100 to 125, that is, the typical wage received in 1926 would buy 25 percent more than the typical wage received in 1913 would purchase.

Source of data: Column 2 from *Journal of American Statistical Association*, June, 1927, page 229. Column 3 from Table 15 of this Bulletin. Column 4 is obtained by dividing the index of column 2 by that of column 3 and multiplying the quotients by 100.

from 100 to 233 between 1913 and 1926, or an increase of 133 percent. Column 8 of Table 21 corrects for depreciation of the dollar and shows that the average income of gain-

TABLE 21.—SALARIES AND PURCHASING POWER OF SALARIES PAID VARIOUS GROUPS FROM 1890 TO 1926

Year	Actual amounts received						Purchasing power in 1913 dollars of amounts received					
	Average income per person gainfully employed	Average annual wage in manufacturing industries	Average annual salary of clerical and low-salaried workers in manufacturing and transportation industries	Average annual salary of ministers	Average annual salary of government employees in Washington, D. C.	Average annual salary of teachers	Average income per person gainfully employed	Average annual wage in manufacturing industries	Average annual salary of clerical and low-salaried workers in manufacturing and transportation industries	Average annual salary of ministers	Average annual salary of government employees in Washington, D. C.	Average annual salary of teachers
1	2	3	4	5	6	7	8	9	10	11	12	13
1890		\$439	\$880	\$794	.....	\$252	.....	\$578	\$1,159	\$1,046	.....	\$332
1891		442	888	786	.....	260	.....	600	1,205	1,067	.....	353
1892		446	906	793	.....	265	.....	599	1,216	1,065	.....	356
1893		420	939	809	.....	274	.....	575	1,286	1,108	.....	375
1894		386	955	824	.....	1,110	.....	545	1,349	1,164	.....	397
1895		416	980	787	.....	1,104	.....	588	1,384	1,112	.....	404
1896		406	998	764	.....	1,084	.....	562	1,380	1,057	.....	401
1897		408	1,015	750	.....	1,087	.....	559	1,391	1,027	.....	410
1898		412	1,026	739	.....	1,025	.....	564	1,406	1,012	.....	421
1899		426	1,026	722	.....	1,017	.....	572	1,377	969	.....	421
1900		435	1,029	731	.....	1,033	.....	562	1,330	944	.....	420
1901		456	1,036	730	.....	1,047	.....	579	1,315	926	.....	428
1902		473	1,050	737	.....	1,061	.....	584	1,296	910	.....	431
1903		486	1,060	761	.....	1,067	.....	574	1,252	898	.....	426
1904		477	1,074	759	.....	1,066	.....	569	1,280	905	.....	445
1905		494	1,112	759	.....	1,072	.....	589	1,325	905	.....	460
1906		506	1,129	773	.....	1,084	.....	582	1,299	890	.....	463
1907		522	1,150	831	.....	1,094	.....	567	1,250	903	.....	460
1908		475	1,150	833	.....	1,102	.....	538	1,302	943	.....	503
1909		791	518	1,151	.....	831	.....	587	1,304	941	.....	522
1910		809	558	1,189	.....	802	.....	597	1,273	859	.....	519
1911		812	537	1,229	.....	856	.....	557	1,275	888	.....	509
1912		844	550	1,249	.....	878	.....	566	1,286	904	.....	515
1913		864	578	1,278	.....	899	.....	578	1,278	899	.....	512
1914		836	580	1,289	.....	938	.....	563	1,252	911	.....	510
1915		861	568	1,291	.....	984	.....	540	1,228	936	.....	517
1916		1,014	651	1,360	.....	1,019	.....	550	1,150	861	.....	487
1917		1,232	774	1,435	.....	1,069	.....	544	1,008	751	.....	426
1918		1,386	980	1,746	.....	1,186	.....	562	1,001	680	.....	364
1919		1,669	1,158	1,905	.....	1,238	.....	615	1,012	657	.....	392
1920		1,859	1,358	2,159	.....	1,468	.....	651	1,036	704	.....	418
1921		1,537	1,180	2,128	.....	1,556	.....	666	1,200	878	.....	620
1922		1,586	1,149	2,093	.....	1,622	.....	687	1,251	970	.....	697
1923		1,821	1,254	2,104	.....	1,620	.....	733	1,231	947	.....	701
1924		1,840	1,256	2,141	.....	1,678	.....	736	1,254	983	.....	719
1925		1,971	1,293	2,141 ¹	.....	1,712 ²	.....	736	1,219	974	.....	713
1926		2,010	1,309	2,141 ¹	.....	1,744 ³	.....	747	1,222	995	.....	728

¹ Estimated at same rate as in 1924.

² Estimated, assuming rate of increase after 1924 was same as that for teachers.

³ Estimated from figures for 1920 and 1923.

⁴ Estimated.

Read table thus: The average income per person gainfully employed was \$791 in 1909, \$809 in 1910, etc. (column 2). These incomes had a purchasing power in 1913 dollars of \$896 and \$866, respectively (column 8). Similarly read salaries and purchasing power for other groups.

Sources of data: Column 2 from the *News Bulletin of the National Bureau of Economic Research*, No. 23, February 21, 1927. Columns 3, 4, 5, and 6 from Paul H. Douglas, "The Movement of Real Wages and Its Economic Significance," *American Economic Review*, Vol. XVI, No. 1, Supplement, March, 1926. Figures of column 4 for the years 1925 and 1926 are estimated based on the average weekly wages for those years as computed on basis of quarterly averages of National Industrial Conference Board, *Wages in the United States*, 1926, Table 3, p. 36, and the arbitrary assumption that the average worker in manufacturing industries works 48 weeks in the year. Figures of column 6 for 1923 and 1924 furnished by U. S. Bureau of Efficiency; those for 1925 and 1926 are from Message of the President of the United States Transmitting the Budget, 1927, p. A82 and *Ibid*, 1928, p. A103, respectively. Figures of column 7 for the years 1890, 1895, 1900, 1905, 1910, 1913, 1914, 1915, 1916, 1918, 1920, 1922, 1924, and 1925 are from U. S. Bureau of Education; figures for intervening years are independently estimated. The index numbers used in calculating the purchasing power of amounts received as given in columns 8 to 13 are those given on page 169 of this bulletin.

fully employed persons, stated in 1913 dollars, was \$864 in 1913 and \$1,147 in 1926. These figures are converted to index numbers in column 8 of Table 22, which shows that the index of average income for this group, stated in 1913 dollars, rose from 100 to 133 between 1913 and 1926, or increased 33 percent.

Similar data are given for several other groups in Tables 21 and 22. For example, according to columns 3 and 9 of these tables, the average wage in manufacturing industries was \$578 in 1913 and \$1,309 in 1926. This represents an increase in index numbers of from 100 to 226, or 126 percent. If the in-

TABLE 22.—INDEX NUMBERS OF ACTUAL AMOUNTS RECEIVED AND OF PURCHASING POWER OF AMOUNTS RECEIVED BY VARIOUS GROUPS FROM 1890 TO 1926

Year	Indexes of actual amounts received 1913=100						Indexes of purchasing power of amounts received 1913=100					
	Average income per person gainfully employed	Average annual wage in manufacturing industries	Average annual salary of clerical and low-salaried workers in manufacturing and transportation industries	Average annual salary of ministers	Average annual salary of government workers in Washington, D. C.	Average annual salary of teachers	Average income per person gainfully employed	Average annual wage in manufacturing industries	Average annual salary of clerical and low-salaried workers in manufacturing and transportation industries	Average annual salary of ministers	Average annual salary of government workers in Washington, D. C.	Average annual salary of teachers
1	2	3	4	5	6	7	8	9	10	11	12	13
1890		76	69	88		49		100	91	116		65
1891		77	70	88		51		104	94	119		69
1892		77	71	88	97	52		104	95	118	129	70
1893		73	74	90	97	54		99	101	123	133	73
1894		67	75	92	98	55		94	106	129	138	78
1895		72	77	88	97	56		102	108	124	137	79
1896		70	78	85	96	57		97	108	118	132	78
1897		71	80	84	96	58		97	109	114	131	80
1898		71	80	82	90	60		98	110	113	124	82
1899		74	80	80	90	61		99	108	108	120	82
1900		75	81	81	91	64		97	104	105	118	82
1901		79	81	81	92	66		100	103	103	117	84
1902		82	82	82	93	68		101	101	101	115	84
1903		84	83	85	94	71		99	98	100	111	83
1904		83	84	85	94	73		98	100	101	112	87
1905		86	87	85	94	75		102	104	101	113	90
1906		88	88	86	96	79		101	102	99	110	91
1907		90	90	93	96	83		98	98	100	105	90
1908		82	90	93	97	87		93	102	105	110	98
1909	92	90	90	93	97	91	104	102	102	105	110	103
1910	94	97	93	89	98	95	100	103	100	96	104	101
1911	94	93	96	95	98	96	97	96	100	99	102	100
1912	98	95	98	98	99	98	101	98	101	104	102	101
1913	100	100	100	100	100	100	100	100	100	100	100	100
1914	97	100	101	104	100	103	94	98	98	101	98	100
1915	100	98	101	109	101	106	95	94	96	104	97	101
1916	117	113	106	113	103	113	99	95	90	96	87	95
1917	143	134	112	119	111	118	100	94	79	84	78	83
1918	160	170	137	132	122	124	92	97	78	76	70	71
1919	193	200	149	138	134	144	103	106	79	73	71	77
1920	215	235	169	163	145	170	103	113	81	78	70	82
1921	178	204	167	173	146	215	100	115	94	98	82	121
1922	184	199	164	180	147	228	110	119	98	108	88	136
1923	211	217	165	180	147	234	123	127	96	105	86	137
1924	213	217	168	187	153	240	125	127	98	109	90	140
1925	228	224	168	190	157	245	130	127	95	108	90	139
1926	233	226	168	194	159	249	133	129	96	111	91	142

Read table thus: The index of average income per person gainfully employed in 1913 was 100; in 1909, 92; in 1910, 94, etc. (column 2). The index of the purchasing power of income received was 100 in 1913; 104 in 1909, 100 in 1910, etc. (column 8). In other words, while the income per person gainfully employed in 1909 in actual amount received was but 92 per cent of, or 8 per cent less than that received in 1913, the purchasing power of the income received in 1909 was 4 per cent greater than that of 1913.

Sources of data: The figures of this table are obtained by dividing each figure in each column of table 21 by the 1913 figure of the particular column concerned.

come of this group is converted to 1913 dollars, it rose from \$578 to \$747 in this period, which represents an increase in index numbers of from 100 to 129, or 29 percent.

The figures of Tables 21 and 22 are in general agreement with the composite index of wages given in Table 20, which rises from 100 to 219 between 1913 and 1926. A composite index computed by weighting the wage increases of the groups represented in Tables 21 and 22 gives index figures for the same years of 100 and 217.¹

The figures of Tables 21 and 22 may be accepted as representative of what happened generally to incomes, salaries and wages throughout the nation.

Chart XIII reveals substantial increases in the average income of gainfully employed persons in the United States in recent years. Since the dollar changed but little in purchas-

ing power between 1922 and 1926, the increases in this chart may be accepted as real.

Chart XIV shows that the average salary of teachers recently, that is since 1922, has increased less rapidly than has the average income of gainfully occupied persons.

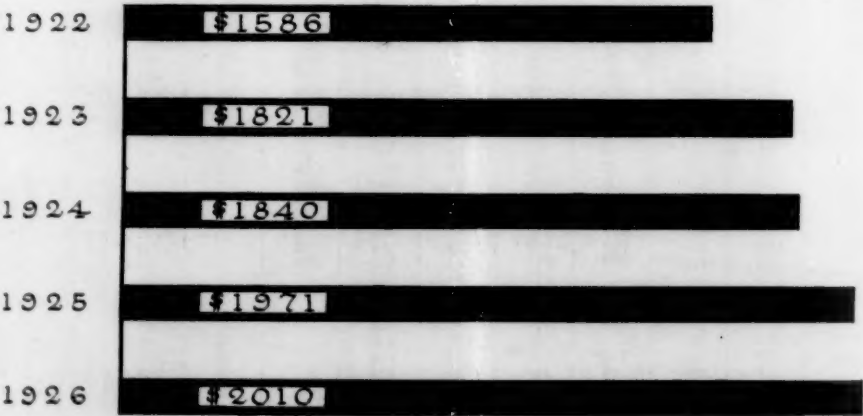
Tables 21 and 22 show that salaries and wages generally have not only increased in actual amount, but have increased in their ability to buy. The real wage of the nation's gainfully employed has substantially increased, that is, the standard of living has increased.

The importance of giving attention to the trend of the real wage or of the standard of living in scientific salary scheduling is apparent. In those communities where teachers' salaries have been adjusted in recent decades merely to keep pace with the increased cost of living, teachers have lost ground economic-

¹ The weights used for the groups in columns 2 to 7, Tables 21 and 22, were respectively: 45, 25, 15, 5, 5 and 5.

CHART XIII

INCREASE IN AVERAGE INCOME
OF GAINFULLY OCCUPIED PERSONS
IN THE UNITED STATES - 1922 to 1926



*Research Division
National Education Assn.*

Based on preliminary estimates of National Bureau of
Economic Research.

ally. Their standard of living has stood still while that of the nation's gainfully occupied in general has substantially increased.

A study of the data of Tables 21 and 22 suggests certain conclusions concerning the trend of the incomes of teachers and of other groups:

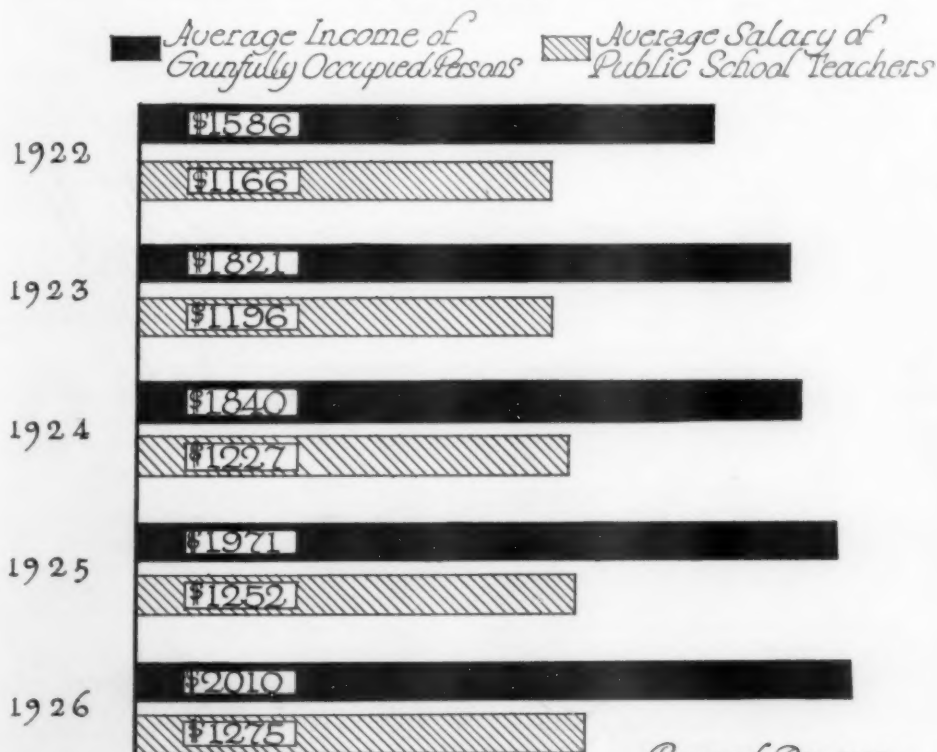
1. In the pre-war period teachers occupied a disadvantageous economic position. For example, in 1913 the average salary of all teachers, supervisors and administrators em-

ployed in the United States was \$512. None of the groups of Table 21 then received so low an income, even though the groups listed include several with relatively low incomes.

2. Salaries and wages of the population in general have substantially increased in recent decades. The amounts received are much greater than before the war. This increase is real as well as apparent, since it is great enough to more than offset the decreasing purchasing power of the dollar.

CHART XIV

INCREASE IN AVERAGE INCOME OF GAINFULLY OCCUPIED PERSONS AND AVERAGE SALARY OF PUBLIC SCHOOL TEACHERS IN THE UNITED STATES 1922-1926



Research Division,
National Education Assn.

Based on preliminary estimates of the National Bureau of Economic Research. Figures for teachers' salaries for 1923 and 1926 are estimated; others are from U. S. Bureau of Education.

3. *Teachers' salaries have been substantially increased in recent decades.* The rate of increase has been more rapid than that of wages and salaries in general and consequently the relative position of teachers in the economic scale has been improved.

4. *Teachers still occupy a relatively disadvantageous economic position.* The average salary of teachers in 1926 is still lower than that of any of the groups of Table 21, even though the groups listed include several with relatively low incomes. Teachers' salaries are much lower than those generally received for professional service.

5. *Further increases in teachers' salaries will be necessary to lift them to an appropriate place in the economic scale.* Although teachers' salaries have increased during the last decade somewhat more rapidly than wages in general, they are still lower than seems justifiable. It will be necessary to continue to increase teacher's salaries at a rate some-

what more rapidly than wages and salaries in general if they are to be brought to a level which will make it economically practical to provide all classrooms with teachers of acceptable ability and training.

Salary Scheduling a Scientific Process

The preceding paragraphs indicate some of the criteria which may well be considered by those responsible for drafting teachers' salary schedules. Recent years have seen much progress in the direction of basing salary schedules on sound principles and reliable statistical data. The procedure of a number of salary committees has represented a decided advance over the rough and ready procedures of the past.¹ The science of salary scheduling is still far from perfected. It has been sufficiently developed, however, that it should no longer be ignored by those conscientiously striving to create schedules which promote school efficiency.

¹See particularly reference No. 35 in the bibliography.

Selected, Annotated Bibliography on Teachers' Salaries

Publications of the National Education Association in the Field of Teachers' Salaries¹

1. BALLOU, FRANK W. *Salary Schedules, 1920-1921, Cities of the United States of 100,000 Population or Over*. Bulletin No. 19. National Education Association. January, 1922.

Summarizes rates provided for by schedules of 48 large cities. Compares minimum and maximum salaries paid by cities to teachers, supervisors, principals and other school employees in elementary, junior high, and senior high schools.

2. BOYKIN, JAMES C. AND KING, ROBERTA. *Tangible Rewards of Teaching*. Compiled for the committee on Teachers' Salaries and the Cost of Living of the National Education Association. U. S. Bureau of Education, Bulletin 1914, No. 16. Whole Number 589. Government Printing Office, Washington, D. C. 1914. 470 p.

Presents tabulations of actual salaries paid teachers, supervisors and administrators in city and rural schools and in universities and colleges and state normal schools. Also contains digest of state laws relating to teachers' salaries and bibliography. (Out of print.)

3. EVENDEN, E. S. *Teachers' Salaries and Salary Schedules in the United States, 1913-19*. Commission Series, No. 6. National Education Association, Washington, D. C. 169 p.

An analysis of the salary situation in the United States in 1918. Presents and interprets data based on reports of city and county superintendents, teachers, and state superintendents. Gives data on cost of living and wages paid in other occupations. Describes typical salary schedules in operation, discusses elements to be considered in making salary schedules and proposes schedule with suggestions for its administration.

4. *Facts on the Cost of Public Education and What They Mean*. Bulletin One. Research Department, National Education Association, Washington, D. C. June, 1922. pp. 14-53.

Contains distributions of salaries and minimum, and maximum salaries of elementary, junior high and high school principals in cities of three population groups and other salary data. Presents also data on cost of living and purchasing power of

teachers' salaries. Describes recent tendencies in salary schedules and gives partial list of cities in which some form of single salary schedule has been adopted.

5. "Handbook of Major Educational Issues." *Research Bulletin*, Vol. IV, No. 4, September, 1926. National Education Association, Washington, D. C. 72 p. See pp. 180-187.

Emphasizes need of higher salaries to attract competent people to teaching profession. Gives salary data by states for elementary teachers in cities of five population groups and for rural teachers. Briefly describes procedure followed in recent salary schedule construction in Chicago. Names characteristics of adequate salary schedules.

6. NORTON, JOHN K. "The Teachers' Standard of Living." *Journal of the National Education Association*, Vol. XV, No. 2. February, 1926. pp. 45-46.

A comparison of salaries paid teachers and school administrators, 1924-1925, with charts showing percentage increases in cost of living, wage rates and public school salaries, 1913 to 1925. Would have entire profession unite in urging increase of teachers' salaries at all levels.

7. *Report of the Committee on Salaries, Tenure and Pensions of Public School Teachers in the United States*. National Education Association, Washington, D. C. July, 1905. 466 p.

Includes figures for average yearly salaries of teachers and principals in cities of 8,000 population and over, minimum, maximum and average salaries of teachers in typical cities of less than 8,000 population and yearly salaries of teachers in typical, ungraded rural schools. Presents comparative data for weekly wages of skilled and unskilled labor.

8. *Report of the Committee on Teachers' Salaries and the Cost of Living*. National Education Association, Washington, D. C. January, 1913. 328 p.

Discusses increase in cost of living and economic, social and professional status of teachers in certain cities. Data presented on average salaries, percent of teachers' income derived from other sources and comparison of teachers' salaries with those of other workers. Includes an analysis of salary schedules in effect.

9. "Public School Salaries in 1924-25." *Research Bulletin*, Vol. III, Nos. 1 and 2. January

¹ Publications of the National Education Association dealing with the single salary schedule are not included here but are listed under the heading "References on the Single Salary Schedule."

and March, 1925. National Education Association, Washington, D. C. 72 p.

Contains extensive data on salaries paid all groups of school employees in 1924-25; gives information as to trend of teachers' salaries; sets forth five reasons for adequate salary schedules; and presents provisions and special features of salary schedules in 1924-25.

10. "Salaries in City School Systems, 1926-27." *Research Bulletin*, Vol. V, No. 2, March, 1927. National Education Association, Washington, D. C. 64 p.

Presents in summary form facts as to salaries paid 295,063 teachers, principals, administrative and supervisory officers and other school employees in 1435 city school systems.

11. SARGEANT, IDE G. Report of Committee on Salaries." *Bulletin of Department of Elementary School Principals*. Vol. V. No. 1, October, 1925, pp. 35-41.

Commends methods of Chicago Board of Education in formulation of recent salary schedule. Stresses importance of adequate salaries for principals.

12. SMITH, PAYSON. "What Progress Has Superintendence Made?" *Volume of Addresses and Proceedings of the National Education Association*, 1925. pp. 671-672.

Shows increases in average salary of superintendents of schools in eighteen representative cities of from \$2520 in 1869, to \$6736 in 1914 and \$8750 in 1923.

13. *Special Salary Tabulations*. Research Division, National Education Association, 1927.

Tabulations giving by individual cities distributions of salaries paid 295,063 city school employees. Two sets of tabulations for each of five population groups, one for teachers, principals and certain other school employees, and one for administrative and supervisory officers, are included. These tables have been prepared for the convenience of those wishing to make special salary studies and are available at \$5.00 per set to cover part of the cost of reproducing and mailing. The cost of collecting and tabulating the data given was paid for by the National Education Association.

14. *Teachers' Salaries and the Cost of Living*. Report of Committee on Teachers' Salaries, Tenure and Pensions. National Education Association, Washington, D. C. July, 1918. 73. p.

Discusses crisis in teaching profession produced by war and accompanying rise in prices. Estimates average salary in 1918, in order to permit maintenance by teacher of proper standard of living, should be \$1428. Appendix contains tables showing

maximum, minimum and median salaries in cities of 10,000 population and over, increases, by states, required to meet war conditions, etc.

15. "Teachers Salaries and Salary Trends in 1923." *Research Bulletin*, Vol. I, No. 3, May, 1923. National Education Association, Washington, D. C. 116 p.

Presents extensive data as to teachers' salaries and salary trends in 1922-1923; gives provisions of salary schedules in operation; lays down principles and standards involved in making and administration of teachers' salary schedules.

16. "A Vote of Confidence." *Journal of the National Education Association*, Vol. XVI, No. 2. February, 1927. pp. 53-54. (Reprinted from the *Official Bulletin of the Cincinnati Teachers' Association*, Vol. 6, No. 3, November, 1926. pp. 10-12.)

Brief discussion of program followed in securing revision of salary schedule, and increase in teachers' salaries in Cincinnati schools. Points out significance as influencing general educational morale in Cincinnati.

References to Recent Literature in the Field of Teachers' Salaries

17. ALMACK, J. C., AND LANG, A. R. *Problems of the Teaching Profession*. Houghton Mifflin Company, Cambridge, Massachusetts, 1925. 235 p. See Chapter XIII.

Recommends placing salary schedules on scientific basis, and presents method of working out a schedule according to principles of subsistence, training, experience, improvement, teaching load, and efficiency. Summarizes steps of a salary campaign.

18. BURGESS, W. RANDOLPH. *Trends in School Costs*. Russell Sage Foundation, 130 E. 22nd Street, New York City, New York. 1920. 142 p. See Chapters II, III, IV, pp. 46-87. Also Chapter VI, pp. 107-109.

Computes index numbers to show trends in teachers' salaries. Compares trends with cost of living changes and teachers' salaries with wages in other occupations. Finds closer relationship between wages paid different types of workers than between wages and cost of living.

19. CHANCELLOR, WILLIAM ESTABROOK. "Teachers' Wages from the Viewpoint of Economics." *American School Board Journal*, Vol. 71, Nos. 5 and 6, November, 1925, pp. 37-39, and December, 1925, pp. 38-41.

In two articles. Discusses teacher's salaries in relation to national wealth and income. Argues that wages of teaching are not controlled by law of supply and demand nor value of economic returns, but

are by ability of community to pay, tradition, purchasing power of dollar and professional opinion. Names signs in school system of adequate teacher compensation.

20. CONNELL, W. W. "The Winfield Salary Schedule." *American School Board Journal*, Vol. 74, No. 2, February, 1927. pp. 53, 136, 138.

Describes schedule for Winfield, Kansas, as applicable to needs of other places of similar size. Salaries determined by standards of preparation and experience with increases based on preparation and professional growth.

21. COOK, KATHERINE M. *Constructive Tendencies in Rural Education*. U. S. Bureau of Education, Bulletin 1925, No. 25. Government Printing Office, Washington, D. C. See "Salaries of Rural Teachers," pp. 13-16.

Emphasizes need of increased salaries in rural schools in order to attract teachers who will qualify on same basis as those of urban schools. Present table showing salary trends.

22. CORNELL, C. B. "Salaries or Wages?" *American School Board Journal*, Vol. 74, No. 3, March, 1927. pp. 45, 161.

Describes salary schedule as essential administrative device, compatible with best business practice in other fields. Names four criteria for classification of teacher in average salary schedule. Names means by which professionalizing of teaching may be accomplished.

23. COTTERMAN, H. R. "Salaries of the Rural High School Superintendents in Ohio." *Educational Research Bulletin*. Ohio State University, College of Education, Vol. V, No. 7, March 31, 1926. pp. 135-139.

Presents salary data for 788 rural high school superintendents in Ohio. Slight correlation found between salaries and experience, and salaries and training.

24. CROMWELL, LINCOLN AND OTHERS. *Report of the Committee on Teachers' Salaries*. March 14, 1927, New York City, New York. 21 p.

Submitted by Mayor's Committee of New York City. Concludes higher salaries are not justified on basis of living costs or comparison of New York teachers' salaries with those paid in other large cities and in other occupations. Recommends substantial increases to recruit better teachers and improve those in service.

25. CUBBERLEY, ELWOOD P. *State School Administration*. Houghton Mifflin Co. Riverside Press, Cambridge, Mass. 1927. 773 p. Chapter XXIV, pp. 651-658.

Discusses low level of pay for teachers and efforts of a few states to remedy situa-

tion by adopting state salary schedules. Outlines principles and problems of schedule construction. Describes various methods of basing salary increases on teaching efficiency.

26. DEFFENBAUGH, W. S. *Some Recent Movements in City School Systems*. U. S. Bureau of Education, Bulletin, 1925, No. 27. Government Printing Office, Washington, D. C. pp. 4-6.

Discusses salary trends, with particular attention to single salary schedule. Argues against salary discrimination according to sex. Presents schedules for the District of Columbia and Denver, Colorado.

27. "Educational Notes and News." *School and Society*, Vol. 25, No. 637, March 12, 1927. p. 316.

Reports revision of Rochester, New York, salary schedule for elementary school teachers. Additional increments after twenty years or more of service and for increased preparation provided for.

28. "How Much is a Teacher Worth?" *Sierra Educational News*, Vol. XXI, No. 10, December, 1925. p. 657.

Quotes data showing each of thirty-nine teachers retired at age of 70 in October, 1925, to be worth \$2,430,000 to San Francisco and communities touched by her pupils.

29. HUGHES, W. HARDIN. "Comparative Study of Salaries Paid Teachers and Other School Employees." *Educational Research Bulletin*, Vol. 4, No. 1, September, 1925, Pasadena City Schools. pp. 5-22.

Gives salary data for 1924-1925 in 12 California cities of 30,000 or more population. Charts show distributions for high school, elementary and kindergarten teachers. Presents revised Pasadena salary schedule for 1925.

30. HUPP, J. L. AND HECK, A. O. "Public School Salaries in Fourteen Ohio Cities." *Educational Research Bulletin*, Ohio State University, Vol. V, No. 10, May 12, 1926. pp. 197-204.

Reports detailed study of salaries paid in fourteen Ohio cities of from twenty thousand to forty thousand population. Makes recommendations for adoption of definite salary schedules recognizing outside service and training and increasing elementary school salaries.

31. "Increments." *The School Index*, Vol. XII, No. 5, Cincinnati, Ohio, October 2, 1925. p. 33.

Resume of report by E. S. Evenden to Elementary Principals' Club of Cincinnati. Recommends fewer but larger increments,

- based on additional training. Argues for single salary schedule.
32. KEELING, HENRY A. "Some Typical California High School Teachers' Salaries." *Sierra Educational News*, Vol. XXII, No. 6, June, 1926, San Francisco, California. p. 411.
Table giving range of salaries for high school teachers in twenty-seven districts, with data on increases, presence of salary schedules, and credit for outside experience.
 33. KIDD, DONALD M. AND CLEM, O. M. The Salaries of Superintendents of Schools and Mayors in Cities of 100,000 Population and Over." *The American School Board Journal*, Vol. LXXIII, No. 3, September, 1926. pp. 49-50.
Gives comparative data on average, median, minimum and maximum salaries for school superintendents and mayors. Median salaries for superintendents found to be \$8000, and for mayors \$6000.
 34. LEWIS, E. E. *Personnel Problems of the Teaching Staff*. The Century Company, New York, 1925. See Chapter XIV, pp. 275-303. 457 p.
A discussion of the advantages of scheduling teachers' salaries and basic principles of salary schedule construction. Gives attention to special educational problems involved in adopting a new schedule. Presents eight principles upon which a "unit" schedule should be based.
 35. MCGAUGHY, JAMES R. AND OTHERS. *Teachers' Salaries in New York City*. Final Report of Citizens Committee on Teachers' Salaries. Bureau of Publication, Teachers College, Columbia University, New York City, New York, 1927. 256 p.
Presents results of fact-finding investigation of teachers salary situation in New York. Analyzes professional and economic status of New York teacher as revealed by data on cost of living and purchasing power of present salaries, and comparison of salaries with those of teachers in other places and of other employed groups in New York. Names acceptable bases of fixing salaries and proposes interim schedule with recommendation for ultimate adoption of single salary principle.
 36. MARSH, ARTHUR L. "Teachers' Salaries in Washington in 1925-26." *Washington Education Journal*, Vol. 6, No. 7, March, 1927. pp. 205-6.
Compares salary increases with increases in cost of living. Finds increase in "real" salaries small in relation to increase in value returned as measured by improved preparation of teachers and greater teaching load. Shows salary situation by counties in 1925-26 as compared with 1924-25.
 37. MEEKER, ROYAL. *A Study of Costs and Standards of Living of Minneapolis Teachers in Relation to their Salaries*. Prepared for the Central Committee of Teachers Associations, Minneapolis, Minnesota, September, 1926. 39 p.
An analysis of the cost and standard of living of 649 Minneapolis teachers and school nurses based on data for average salaries, expenditures, training, number of dependents, and position held. Gives budgets prepared for single men and women teachers, and for standard family. Recommends higher maximum salaries.
 38. "The Minimum Salary Law." *The Ohio Teacher*, Vol. XLVI, No. 9, May, 1926. p. 397.
Considers flat rate for beginning teachers in Ohio inadequate for those with special teaching ability. Would withhold guaranteed minimum until teacher proves worth. Suggests increase of minimum upon proof of successful experience.
 39. MOEHLMAN, ARTHUR B. *Public School Finance*. Rand, McNally Company, 1927, 508 p. See Chapter IX, pp. 113-154.
Deals with importance of salaries as an item of school budget, trend of salaries as reported by Burgess, and problems and principles of schedule making. Describes types of schedules now in use setting forth advantages and disadvantages of each. Presents data to show more direct relationship exists between wages of labor and teachers' salaries than between wages, or salaries, and cost of living. Favors wages of unskilled labor and value placed by society on service of teachers, rather than cost of living, as criteria in fixing salary levels.
 40. MOEHLMAN, ARTHUR B. "Some Considerations in Building Salary Schedules." *Journal of Educational Research*, Vol. 14, No. 4, November, 1926. pp. 256-269.
Presents a part of material contained in Chapter Nine, of author's *Public School Finance*. See reference No. 39.
 41. "New Salary Schedule at St. Louis." *American Educational Digest*, Vol. 45, No. 4, December, 1925. p. 158.
Presents salary schedule for teachers and supervisors of St. Louis schools.
 42. "News of Chicago Schools." *Chicago Schools Journal*, Vol. VII, No. 10, June, 1925. pp. 389-391.
Reports resolutions adopted by the Finance Committee of the Board of Education, April 18, 1925, concerning proposed new salary schedule.
 43. PICKLES, C. E. "Salaries and Professional Growth of Teachers in North Dakota."

The North Dakota Teacher, Vol. IV, No. 8, April, 1925. pp. 4-7.

A study of salaries and professional growth of North Dakota teachers from 1913 to 1924 with data on cost of living, salaries, purchasing power of salaries, and teacher certification.

44. "Proposed Salary Increase for Chicago Teachers." *School and Society*, Vol. 25, No. 630, January 22, 1927. p. 101.

Reports salary increases recommended by Superintendent of Schools according to plan similar to that recommended by him and approved by Board in April, 1925, but later reconsidered and abandoned.

45. "The Report of the New York Citizens' Committee on Teachers' Salaries." *School and Society*, Vol. XXIV, No. 614, October 2, 1926. pp. 419-420.

Describes rates proposed by Citizens' Committee involving raise in salary for every member of teaching and supervisory staff, and recognition of principle of single salary schedule.

46. "Report of Committee on Teachers' Salaries." *Journal of the Louisiana Teachers' Association*, Vol. 3, No. 5, January, 1926, Baton Rouge, Louisiana. pp. 20-22.

Outlines results of survey of salary situation in Louisiana and other southern states. Quotes report of salary committee of National Education Association. Recommends larger state revenues and adoption of salary schedule contingent on larger state aid.

47. ROE, WARREN A. "Report of Committee on Salaries." *Bulletin of the Department of Elementary School Principals*, Vol. 6, No. 1, October, 1926. pp. 55-57.

Urges adequate compensation for principals and superintendents in interest of educational leadership. Cites efforts of Chicago and New York to establish schedules competitively attractive in comparison with salaries in business. Presents data showing average salaries of superintendents in 1925 and suggests "reasonable" schedule for 1926-27.

48. ROGERS, DON C. "Chicago's Unique Salary Campaign." *American School Board Journal*, Vol. 71, No. 6, December, 1925. p. 90.

Describes campaign for adoption of salary schedule. Presents salary and school finance data.

49. ROGERS, DON C. *Trend of Teachers' Salaries*. University of Iowa Extension Bulletin, No. 88, April 1, 1923, Iowa City, Iowa. 29 p.

Presents data on teachers' salaries in Iowa in 1923. Compares salaries of World War and Civil War periods. Includes cost of living data.

50. *Report of Committee on the Study of Salaries*. Cincinnati Public Schools, May 24, 1926. 78 p.

Presents data for Cincinnati on basic factors of salary schedule construction such as preparation and experience of teachers and cost of living. Discusses provisions of proposed single salary schedule and estimates cost of putting into operation.

51. *Rural Teachers' Salaries*. Michigan State Teachers' Association, Bulletin No. 5, Part I, February, 1925. 35 p.

Presents data on rural teachers' salaries in Michigan during school year 1923-24.

52. "Salaries of Teachers in the Public Day Schools of Massachusetts, 1926." The Commonwealth of Massachusetts, *Bulletin of the Department of Education*, 1926, No. 5. 45 p.

Includes maxima for certain administrative and teaching positions, and average salaries for women teachers in elementary and junior high schools, and men and women teachers in high schools. Also data on training and experience of teachers, ratios of men to women teachers and changes in teacher personnel 1925.

53. "A Salary Increase in the Philadelphia Elementary Schools." *School and Society*, Vol. XXIII, No. 591, April 24, 1926. p. 515.

Reports salary increase affecting 2500 elementary teachers in public schools of Philadelphia.

54. "The Salary Question." *The Pasadena School Bulletin*, Vol. IV, No. 2, December, 1925, Pasadena, California. pp. 6-7.

Presents in brief work of the Chicago Board of Education in establishing salary schedule, with comment on conditions prevailing in Pasadena.

55. "Some New Proposals on the Teacher Salary Question." Editorial, *American School Board Journal*, Vol. 73, No. 3, September, 1926 pp. 68-69.

Advocates fixing of teachers' salaries on basis of value of professional work rather than on social needs or on operation of law of supply and demand.

56. *Bulletin of Information*, State Department of Education, Augusta, Maine, February, 1926. pp. 24-27.

Gives salary data, 1925-1926 for teachers in towns of 5000 or more population, with data for women teachers in towns of 500 or more population. Gives experience of high school teachers distributed by totals for all schools, and according to size of schools.

57. "State Salary Schedule." *Tennessee Educational Bulletin*, Vol. VII, No. 2, April-May-June, 1926, Nashville, Tennessee. pp. 3-4.

States school funds should be so distributed as to increase revenue of rural schools. Urges more pay for rural teachers to prevent shifting to better-paid urban positions and experience, or professional improvement, as foundation for salaries and salary increases.
58. "Statistical Studies on Teachers' Salaries—Oregon Schools, 1925-26." *Oregon State Teachers Association Quarterly*, Vol. VIII, No. 1, March, 1926, Salem, Oregon. pp. 55-62.

Gives salary data for town and rural elementary school teachers in Oregon, men and women high school teachers, superintendents and principals, with averages, rankings, and summarizing tables.
59. SUMMERS, ALEX. *Salaries of Country Teachers in 1923*. U. S. Bureau of Education, Rural School Leaflet, No. 24, April, 1924. Government Printing Office, Washington, D. C. 34 p.

Analysis and tabulation of data representing 1864 counties and covering salaries of 191,421 teachers and 12,500 principals in country schools.
60. "Teachers' Salaries." *School and Society*, Vol. 25, No. 639, March 26, 1927. pp. 375-6.

Quotes comment by *New York Times* on report of Mayor's Committee on Teachers' Salaries advocating substantial increases for the purpose of attracting more desirable applicants, holding them in service and stimulating professional growth. Good of child said to be basic consideration in committee's recommendations.
61. "Teachers' Salaries and the Cost of Living." *The Illinois Teacher*, Vol. 14, No. 9, May, 1926, Bloomington, Illinois. pp. 163-164.

Gives data on teachers' salaries in Illinois, wages and costs of living since 1913. Finds improvement in teacher preparation many times as rapid as increase in teachers' salaries as measured by their purchasing power.
62. "Teachers' Salaries in Seven Large Cities." *American School Board Journal*, Vol. LXXIII, No. 3, September, 1926. p. 56.

Table giving data collected by Citizens Committee on Teachers' Salaries of New York for salaries in Philadelphia, Cleveland, Detroit, St. Louis, Chicago, Kansas City and New York City.
63. U. S. BUREAU OF EDUCATION. *Biennial Survey of Education in the United States 1916-1918*. Vol. III, p. 164, 1918-20; "Statistics," p. 59; 1920-1922, Vol. II, p. 45.

Gives average annual salaries of teachers for years covered.
64. U. S. BUREAU OF EDUCATION. *Statistics of State School Systems, 1923-1924*. Bulletin, 1925, No. 42. Government Printing Office, Washington, D. C. 1926. 43 p.

Contains advance figures from Biennial Survey of Education, 1922-1924. Gives average annual salaries of teachers decennially, 1870 to 1890, and quinquennially, 1895 to 1920, and for 1924. Bulletin containing statistics for 1924-25, in press.
65. WARREN, JULE B. "Attack on the Salary Schedule." *The North Carolina Teacher*, Vol. 1, No. 10, June, 1925. p. 293.

Discusses need of salary schedule in stabilizing teachers' salaries. Declares that without it immediate reduction of rural salaries, and discarding of training and experience as basis of teacher payment, with consequent inequality of educational opportunity would occur.
66. WILEY, WILL E. "Teachers' Salaries vs. Teacher Surplus." *American School Board Journal*, Vol. 73, No. 4, October, 1926. pp. 47-48.

Suggests raising of professional requirements as simplest method of regulating teacher supply. Sees need for elimination of incompetent candidates. Believes reduction of salaries will not solve problem of teacher surplus. Presents schedule applicable to Washington or Oregon.
67. WINSLOW, ISAAC O. "The Salary Enigma." *The American School Board Journal*, Vol. LXXIII, No. 3, September, 1926. pp. 40, 167.

Raises objections to flat schedule, single salary schedule and general salary increase for all teachers in school system. Suggests that competent supervision may provide basis for payment and promotion; and a supermaximum serve to reward superior service.
68. WOODY, CLIFFORD, and others. *Report of Committee on Teachers' Salaries*. Michigan State Teachers Association, 1923. 67 p.

Part I contains data on salaries of elementary, intermediate and high school teachers, and living costs of teachers in elementary schools. Part II presents same data in condensed form and discusses general tendencies revealed.

References on the Single Salary Schedule

69. BALLOU, FRANK W. "Salary Differences, If Any, Based on the Rank or Class of the

Teacher." *Volume of Addresses and Proceedings of the National Education Association*, 1921. pp. 840-841.

Points out undesirability of placing all superior teachers in upper grades. Concludes that salary schedules should be based on amount, character, and quality of preparation, and teaching experience.

70. BICKNELL, THOS. W. President's Address. *Volume of Addresses and Proceedings of the National Education Association*, 1884. p. 49.

Expresses belief that in future best primary teachers and best high school teachers will receive equal salaries and that sliding scale of salaries will be adopted, based upon qualifications and experience.

71. "A Campaign for a Single Salary Schedule for Greater New York Elementary Teachers." *School and Society*, Vol. XXII, August 22, 1925. p. 237.

Presents recommendation of Greater New York Kindergarten for schedule providing increases for elementary teachers. Recommendation based on belief that conditions under which elementary school teachers work are severe because of range of subjects taught, strict supervision, and physical strain encountered.

72. CONVERSE, FRANK E. "Experience with a Single Salary Schedule." *Volume of Addresses and Proceedings of the National Education Association*, 1924. pp. 942-943.

Describes single salary schedule as one based on educational preparation, training, successful experience, and principle of equality of service in different levels of instruction. Considers single salary schedule practical and constructive, in its influence upon teaching staff.

73. *Denver Public School Monograph No. 5*, January, 1923. "Salary Schedules." Board of Education, Denver Public Schools.

Represents Denver salary schedule as attracting superior teachers by providing adequate remuneration, definite professional standards, and recognition for the elementary school teacher. Schedule also gives credit for teaching experience and improvement in service.

74. "The Denver Single Salary Schedule a Success in Operation." *American Educational Digest*, Vol. 42, No. 3, January, 1923. pp. 223-224.

Gives salary schedule for Denver teachers and elementary principals, with system used for evaluating experience. Reports schedule sufficiently flexible to allow for increase in maxima upon increase in training, and to give justice to old teachers. Notes influence in improved morale of teaching.

75. "The Des Moines Salary Schedule." *School and Society*, Vol. XV, No. 373, February 18, 1922. pp. 203-204.

Describes single salary schedule adopted for Des Moines teachers in 1921. Gives data showing effect of schedule upon improvement of teachers in service.

76. DOWNES, F. E. "Foundation Principles for Grading Salaries. A Pennsylvania Plan." *Volume of Addresses and Proceedings of the National Education Association*, 1921. pp. 823-824.

Describes principles of Harrisburg schedule with regard to: (1) Education and experience of teachers (2) improvement in service (3) tenure and promotion, and sex differentiation.

77. "Equal Pay for Equal Service." *American Educational Digest*, Vol. 45, No. 4, November, 1925. pp. 113-114.

Presents the arguments of Kansas City School Men's Club against "equal pay for equal service" slogan of women teachers. Opposes adoption of single salary schedule on grounds of increased cost, failure to attract capable men to the profession, etc.

78. HOSIC, JAMES. "The Single Salary Schedule in Practice." *Volume of Addresses and Proceedings of the National Education Association*, 1924. pp. 371-377. See also: *School and Society*, Vol. XX, August 2, 1924. pp. 135-139. See also: *Teachers College Record*, Volume XXVI, December, 1924.

Summary of replies to questionnaire concerning administration of the single salary schedule. Discusses minima, maxima, factors determining salaries, methods of evaluating merit, etc. Concludes general practice, places teacher on schedule in accordance with his preparation and experience and advance him on regular scale, with additional increments for additional preparation.

79. JACKSON, JULIA. "Another Phase of the Salary Question." *Journal of the National Education Association*, Vol. XIV, January, 1925. p. 27

A general discussion of the single salary schedule as a means of securing professional advancement, and a factor in securing justice for elementary school teachers.

80. *Journal of the National Education Association*, Vol. 12, No. 2, February, 1923. p. 48. (Extract from *American Education*.)

Considers salary discrimination in favor of high school teachers unjustifiable in consideration of teaching load and professional spirit of elementary school teachers.

81. KRUSEN, ALMA. "How the Single Salary Schedule Appeals to the Teacher." Depart-

ment of Superintendence, *Official Report*, February, 1926. pp. 222-226.

Defines single salary schedule as one based upon principle of equal pay for equal preparation and experience. Describes Denver schedule. Reports Denver teachers in favor of schedule adopted.

82. LEWIS, E. E. "The Single Salary Schedule." Department of Superintendence, *Official Report*, February, 1926. pp. 213-217.

A discussion of the single salary schedule as involving equal pay for equal work, merit, length of service and training. Summarizes arguments in its favor. Favors single salary schedule for classroom teachers as basis of schedules for other groups.

83. MACGAUGHEY, V. "The Single Salary Schedule." *School and Society*, Vol. XX, July 5, 1924. pp. 9-13.

Points out defects of former salary schedules. Believes that newer schedules attempt to secure increased teacher training, tenure, and improvement in service.

84. MORRISON, CORA B. "Single Salary Schedules." *Volume of Addresses and Proceedings of the National Education Association*, 1924. pp. 480-486. See also: *The Colorado School Journal*, Denver, Colorado, Vol. XL, October, 1924. pp. 5-12, Colorado Education Association. See also: "A National Report on the Single Salary Schedule Prepared by a Committee of Classroom Teachers of the N. E. A." *National League of Teachers' Associations, Yearbook*, 1924. pp. 26-32.

Gives results of inquiry concerning single salary schedule. Reports an increasing interest in plan. Presents arguments in favor of single salary schedules based upon importance of work of all teachers, irrespective of grade.

85. NEWLON, JESSE H. "Salary Differences, If Any, Based on the Rank or Class of the Teacher." *Volume of Addresses and Proceedings of the National Education Association*, 1921. pp. 841-843.

Advocates salary schedule that is the same for teachers of equivalent preparation and ability, in order to secure improvement of elementary schools. States that in future, some practical plan of grading salary according to merit must be worked out.

86. NEWLON, JESSE H. "The Single Salary Schedule." *Los Angeles School Journal* (published weekly by the Principals' Club), Vol. VII, No. 13, December 3, 1923. pp. 9-11.

General review of single salary principles involving recognition of importance of elementary school teaching, and establishment of minimum standard of professional training. Refers to schedule adopted in Denver.

87. "The Problem of the Single Salary Schedule." Communication of the School Men's Club of Kansas City, Missouri, to the Board of Education. *The American School Board Journal*, Vol. LXXI, November, 1925. p. 4.

Disputes "equal" argument for single salary schedule on grounds that men have heavier extra-curricular load than women and that preference is shown by patrons for men teachers. Concludes benefit to public would not be in proportion to cost were a single salary schedule adopted.

88. RICHARDSON, DIO. "Single Salary Schedules." *Journal of the National Education Association*, Vol. XI, June, 1922. pp. 225-226.

A study of the practical operation of single salary schedules as revealed in replies to a questionnaire sent to school superintendents in nine cities. Concludes that some provision of extra pay for extra preparation is desirable, and that influence of single salary schedules is far reaching in regard to teaching efficiency, preparation, morale of teaching staff, and the elimination of class distinctions.

89. SHARP, RUSSELL A. "Disadvantages and Fallacies in the Single Salary Schedule." Department of Superintendence. *Official Report*, February, 1926. pp. 217-221.

A criticism of established schedules on grounds of unattractive differentials provided and lack of financial stability. Grants that work of the elementary school teacher is as important as that of high school teacher, but questions desirability of attempting to equalize salaries.

90. SMITH, HARRY P. "The Salary Schedule of the Lawrence, Kansas Public Schools; Its Operation and Effect." *Educational Administration and Supervision*, Vol. X, November, 1924. pp. 524-532.

A description of the Lawrence Salary Schedule with data showing practical results of schedule and its effect upon the rating system. States principles on which schedule is based.

91. STAFFELBACH, ELMER H. "Some Economic Implications of the Single Salary Schedule." *American School Board Journal*, Vol. LXX, No. 2, February, 1925. pp. 41-42.

A study of cost and factors involved in the adoption of single salary schedule, with special reference to California. Grants that service given by elementary school teachers is on a par with that of high school teachers, but questions whether returns to society would justify increase in school expenditures. Concludes that more than three years' training beyond high school is unnecessary for elementary teachers, and, therefore, policy of requiring preparation equal to that of high school teachers is unsound.

92. STEELE, HAROLD. "Salary Determination in Saginaw Schools." *American School Board Journal*, Vol. LXX, February, 1925. p. 40.

Gives three Saginaw unit salary schedules based on the principle that salary should not vary according to teaching level, and that teacher's worth is based on preparation, experience, and personal traits.

93. "Teacher Rating and the Single Salary Schedule." National League of Teachers' Associations, *Bulletin of the President*, April, 1923. pp. 17-26.

Describes the economic and educational principles underlying the construction of a salary schedule for Berkeley, California. Believes ordinary salary schedule shows three fundamental errors in its failure to recognize importance of early stages in a child's development; to motivate improvement in service, and to recruit capable teachers. Presents plan for modification of proposed schedule.

94. THOMPSON, ANNA M. "Report of the Committee on the Single Salary Schedule." *Volume of Addresses and Proceedings of the National Education Association*, 1925. pp. 372-375. See also: *School and Society*, Vol. XXI, February 7, 1925. pp. 180-181.

Summarizes results of inquiry by Department of Classroom Teachers concerning status of single salary schedule in practice. Reveals favorable attitude as shown by replies. Cites objections raised, due to difficulties of administration. Points in favor based on recruiting of trained teachers, improvement in morale of teaching staff.

95. THOMPSON, ANNA M. "Report on Single Salary." *The First Yearbook, Department of Classroom Teachers*, July, 1926. pp. 42-44.

Briefly reports results of inquiry on single salary schedule in practice. Gives arguments for and against and copy of single salary questionnaire sent out in May, 1926.

96. WEBSTER, WM. F. "The Single Salary Schedule." Department of Superintendence, *Official Report*, February, 1926. pp. 226-228.

Gives salary schedule in operation in Minneapolis. Would have salary increases based on professional improvement secured through other means than academic courses.

97. "Webster on Principals' Salaries." *American School Board Journal*, Vol. LXXIII, No. 3. pp. 56, 167.

Records suggestion of single salary schedule for principals, with three elements considered necessary in establishing plan, namely: (1) Education of the public concerning work of elementary principals. (2) Study of elements in composition of efficient principal. (3) Establishment of definite,

equivalent educational qualifications for principalship.

References to Related Material in Other Fields

98. DOUGLAS, PAUL H. "The Movement of Real Wages and its Economic Significance." *American Economic Review*, Vol. XVI, No. 1, March, 1926, supplement. pp. 17-53.

Computes index numbers for changes in cost of living, 1890-1924, and on this basis shows movement of real earnings over same period. Tables give figures for probable average money earnings, and relative real earnings, 1890-1924, for wage earners and clerical and low-salaried workers in manufacturing and transportation industries, ministers, teachers, government employees, postal employees and all these workers combined.

99. NATIONAL BUREAU OF ECONOMIC RESEARCH. *Income in the United States. Its Amount and Distribution, 1909-1919*. Vol. I, Harcourt Brace and Company, New York City, New York, 1921. 152 p.

Estimates amount of national income by sources of production and by incomes received and submits final estimate based on combination of results obtained by both methods. Reduces final estimate to dollars of constant purchasing power. Contains chapter on distribution of income among individuals.

100. NATIONAL BUREAU OF ECONOMIC RESEARCH. *Income in the United States. Its Amount and Distribution, 1909-1919*. Vol. II, National Bureau of Economic Research, New York City, New York, 1922. 440 p.

Reports in detail procedure and sources of information used in arriving at estimates presented discussed in more summarized form in Volume One. See reference No. 99.

101. NATIONAL BUREAU OF ECONOMIC RESEARCH. *News Bulletin*, No. 23, February 21, 1927. 474 West 24th Street, New York City, New York. 4 p.

Gives estimates of income, total current and per capita, and per person gainfully occupied for years 1909 to 1921 and preliminary estimates for years 1922 to 1926, in current dollars and in 1913 dollars. Defines "current income" and "gainfully occupied person."

102. NATIONAL INDUSTRIAL CONFERENCE BOARD. *Clerical Salaries in the United States, 1926*. National Industrial Conference Board, 247 Park Avenue, New York City, New York, 1926. 59 p.

An analysis of salaries received by 27,376 office workers in 427 establishments in 18

cities. Tables give range of salaries and median salaries according to sex of worker and type of work performed.

103. NATIONAL INDUSTRIAL CONFERENCE BOARD. *Cost of Living in the United States, 1914-1926*, with Supplement for the year, 1926. National Industrial Conference Board, 247 Park Avenue, New York City, New York, 1927. 266 p.

Presents a summary and critical analysis of previously existing information on cost of living and cost of living changes in United States. Gives index numbers to show changes in cost of living, July, 1914, to December, 1926. Data for the year 1926 in supplement.

104. NATIONAL INDUSTRIAL CONFERENCE BOARD. *Wages in the United States*. National Industrial Conference Board, 247 Park Avenue, New York City, New York, 1926. 153 p.

A survey of the major trends in industry as revealed by the movement of "real" wages, hours and employment, since 1914. Covers twenty-five manufacturing industries, railroads, public utilities, anthracite mining, and the building trades.

105. Personnel Classification Board. *Class Specifications for Positions in the Departmental Service*. Government Printing Office, Washington, D. C., 1924. 156 p.

Gives minimum qualifications, duties and typical tasks and range of compensation for positions in departmental service as prescribed by Personnel Classification Board, in accordance with Section 3, of Classification Act of 1923. Includes copy of Act.

106. SNYDER, CARL. "A New Composite Index of Wages in the United States." *Journal of*

the American Statistical Association, Vol. XXI, new series, No. 156. pp. 466-470.

Describes index of wages computed by author, based on new information. Reports average wages for country, as shown by composite index to be one-third higher than at close of war in spite of lower prices and higher profits. For table giving index numbers 1919-1926, see "An Addition to the New Composite Index of Wages in the United States," *Journal of the American Statistical Association*, June, 1927, p. 229.

107. U. S. Bureau of Labor Statistics. "Changes in Cost of Living in the United States." *Monthly Labor Review*, Vol. 24, No. 2, February, 1927. pp. 168-181.

Gives index numbers for changes in cost of living, using average for 1913 as a base, from December, 1914, to December, 1926. Indices are for specified items and all items in specified cities and for all items in United States as a whole.

108. U. S. Bureau of Labor Statistics. *Union Scale of Wages and Hours of Labor*. Bulletin No. 431, May 15, 1926. Government Printing Office, Washington, D. C.

Reports hourly union wage scales as of May 15, 1926, for 824,313 members of organized trades in 66 cities. Gives average rates for several trades and groups of trades and average hours per week.

109. U. S. Internal Revenue. *Statistics of Income from Returns of Net Income for 1925*. Preliminary Report. Government Printing Office, Washington, D. C., 1927.

Based on returns for 1925, filed by individuals and corporations, up to September 1, 1926. Table 1, p. 5, gives distribution by income classes of net income of individuals, showing amount of net income, number of returns, etc.

Special Salary Tabulations

Additional Salary Data are Now Available Supplementing in Detail the Data Presented in this and the March, 1927 Issue of the Research Bulletin

The cost involved precluded the possibility of issuing a printed report giving salary data for individual cities. It was found possible, however, to reproduce photographically the typewritten tabulation sheets giving information for individual cities. These sheets have been arranged in sets entitled, *Special Salary Tabulations*. Two sets of tabulations are available for each of the five population groups as indicated below, one for teachers, principals and certain other school employees, and one for administrative and supervisory officers—ten sets of tabulations in all.

The price is \$5.00 for each set of tabulations. This charge covers only the cost of reproducing and mailing the material. The expense of collecting and tabulating the data given was paid for by the National Education Association.

Tabulations I-A. Salaries Paid Teachers, Principals and Certain Other School Employees—
Cities over 100,000 in Population.

Tabulations II-A. Salaries Paid Teachers, Principals and Certain Other School Employees—
Cities from 30,000 to 100,000 in Population.

Tabulations III-A. Salaries Paid Teachers, Principals and Certain Other School Employees—
Cities from 10,000 to 30,000 in Population.

Tabulations IV-A. Salaries Paid Teachers, Principals and Certain Other School Employees—
Cities from 5,000 to 10,000 in Population.

Tabulations V-A. Salaries Paid Teachers, Principals and Certain Other School Employees—
Cities from 2,500 to 5,000 in Population.

Tabulations I-B. Salaries Paid Administrative and Supervisory Officers—Cities over 100,000
in Population.

Tabulations II-B. Salaries Paid Administrative and Supervisory Officers—Cities from 30,000
to 100,000 in Population.

Tabulations III-B. Salaries Paid Administrative and Supervisory Officers—Cities from 10,000
to 30,000 in Population.

Tabulations IV-B. Salaries Paid Administrative and Supervisory Officers—Cities from 5,000
to 10,000 in Population.

Tabulations V-B. Salaries Paid Administrative and Supervisory Officers—Cities from 2,500
to 5,000 in Population.



THE AVERAGE PAY of teachers in 1914 was cruelly below the average of pay in other vocations calling for equal standards of education, character and personal outlay. The increase has not restored the parity.

The teacher's work is basic. Upon it rests the nation's future. As home and church decline in old-time authority, the school assumes new responsibility. It is not enough to rely for good teaching on bare pay patched out with intellectual and spiritual contacts.

The teacher's indispensable function must be lifted to the plane of economic as well as social justice.—*Editorial, Seattle Post-Intelligencer.*