Average + Median

#5

Prepared in
October 1947

ADVANCE ESTIMATES OF PUBLIC ELEMENTARY AND SECONDARY SCHOOLS FOR THE SCHOOL YEAR 1947-48

Frank W. Hubbard
Director, Research Division, National Education Association

THIS STATEMENT has been based largely upon information supplied in October 1947 by state departments of education and state education associations. It is the sixth in a series of national estimates (1942-43, 1943-44, 1944-45, 1945-46, 1946-47, and 1947-48).

The figures given are tentative and preliminary. All estimates are based upon previous years since many state departments do not have complete data on 1946-47 and official reports have not been collected from many local school systems for 1947-48. It is, therefore, inadvisable to submit these figures to the statistical manipulations ordinarily proper with official state reports.

VERY FEW PERSONS today are not aware of the crisis which public elementary and secondary schools have experienced in the past seven years. Magazine articles, newspapers, radio programs, and speakers have reported the facts even more effectively than was done for similar periods during and immediately after World War I and in the depression of the 1930's.

Briefly, the past seven years has been a time when the resignations of teachers and the shifting from school system to school system (called turnover) were twice as high as in a typical year just prior to World War II. In this process the profession lost several hundred thousand qualified teachers. Their places were filled by inexperienced graduates of teacher training (a supply that dwindled almost to zero in the war years) and by the annual employment of more than 100,000 emergency teachers (many of whom had less than the standard preparation required for regular certificates). The loss of qualified teachers was further absorbed by the elimination of an estimated total of 50,000 teaching positions, by the curtailment of the curriculums of many schools, and by increasing the loads of the teachers who remained in service.

The major causes of the loss of qualified teachers were the relatively unfavorable conditions under which many teachers were employed. Chief among these conditions was the salary level, notoriously inadequate in urban school systems and unbelievably low in rural areas. With the rise of wages in defense and war employment and the upward turn of salaries in business and the federal service, the salaries of teachers decreased relatively in rank and drastically in purchasing power. Often complicating local school salary situations was the public's indifference both with respect to the financial support of the schools and the teacher's status in community life. These two factors often made for difficulties within school systems which, in turn, made teaching less attractive than many types of nonschool employment. While in many school systems employment conditions were attractive, the general impact upon most school systems was such as to produce unprecedented losses in qualified personnel.

Beginning in the middle of the war period a number of local school systems attempted, thru improved salary schedules, to hold their qualified teachers and to attract a share of the available new supply. In general, these efforts were "too little, too late." At this point, public relations programs became active in carrying to the people an appreciation of what was happening to the schools. As a result, public opinion began to affect the state legislatures in 1945 and by gathering increased momentum produced even more significant state legislation in 1947. State

schools in small towns and rural areas. As a result of this increased pressure from the cities and the decline in graduates of teachers colleges, the rural schools experienced an exceptionally acute teacher shortage. A number of rural schools were closed and thousands of children transported to other school districts. Rural schools and small towns had to employ thousands of teachers with emergency certificates (see column 8, Table 2).

In the cities, particularly in the large metropolitan centers, two types of shortage developed during the war years. In numbers, the shortage was most acute with respect to such fields as vocational education, science, mathematics, music, industrial arts, and physical education. In time, because of the loss of competent teachers in cities of all population groups, the large centers began to have a quality shortage of unusual proportions. Thru their high salaries they were able to obtain almost all of the teachers they needed to fill vacancies, but the supply of highly trained teachers was not large enough to meet the demand.

The quality demand still remains unmet in 1946-47. The quantity demand also continues in a number of states altho the total national situation appears to be less critical than it was two or three years ago. Stated in general terms (see Table 6) the quantity demand that has not been met is as follows:

Type of position	Number of states in which the shortage is		
	Very small	Considerable	Very large
Rural elementary.....	6 states	24 states	18 states
Rural - regular secondary.....	17	30	1
- special secondary.....	4	24	20
Urban elementary.....	41 states	7 states	0 states
Urban - regular secondary.....	43	5	0
- special secondary.....	15	30	3

From the foregoing it is clear that the shortage of teachers continues to be most serious in the rural schools, especially in the elementary schools and in the special fields (defined here as science, music, vocational education, etc.). A number of the states indicate "considerable" shortage in the special fields at the secondary level even in city-school systems.

Needed replacements - For the first time in this series of surveys the inquiry this year asked for estimates of the "number of teachers needed to replace the untrained emergency teachers and to reduce the teacher load to prewar levels." Officials in several of the states reported that many of those now employed on emergency certificates were now qualified, except for minor requirements, to hold regular certificates. For this reason their estimates of needed replacements did not include all of those employed on emergency certificates. Some of the state estimates include a number of those now employed on regular certificates, who in the opinion of state officials should be replaced by persons with better preparation.

Table 3 shows that the estimated "needed replacements" for the nation as a whole totals 78,810. For the reasons stated in the foregoing paragraph, this figure does not mean the total number of teachers needed in addition to those now employed (Table 1).

The estimates of the present report (Table 1) show that the total increased in 1946-47 to 875,701 and in 1947-48 will be about 882,733.

In 1946-47 the gain was about 15,000 over 1945-46; this year the gain will be about 22,000 over 1945-46. These gains in the total number of teachers must be kept in mind with respect to the total number of emergency certificates. Thus, in spite of an increase in the number of teaching positions, there has been a substantial decline in the total number of emergency certificates. This fact is further evidence of a substantial improvement in the supply of qualified teachers.

Teacher preparation - Improvement in the supply of teachers in the past year or so has come about by the return to the profession of a number of those who resigned during the war years. Veterans, who had been teachers, returned in substantial numbers to those communities where salaries were high, according to a sampling study made by the NEA Research Division in 1946-47. Many college students, diverted by the war, have returned to college and completed their teacher preparation. Some of the qualified teachers who entered nonteaching employment during the war, have reentered the profession. Some of those, originally employed on emergency certificates in the early 1940's, have qualified for regular certificates. These gains have been offset each year in part by the older teachers who have reached the age of retirement (estimated at 6,500 annually in the prewar years).

There still remain major adjustments to be made not only with respect to the quantity supply but also with regard to the quality of those who offer themselves for employment. Much needs to be done to reduce teacher load and to extend and improve school programs so as to overcome the defects revealed by the Selective Service. Toward meeting these problems the organized profession is directing its efforts both thru elective recruitment and thru teacher education.

Prior to World War II the teachers colleges and the liberal arts colleges supplied the profession with an estimated total of 50,000 to 60,000 new teachers each year. According to the U. S. Office of Education, teachers colleges in 1939-40 enrolled 144,945 students and in 1947-48 they enrolled 169,356 students. Today, even more than before the war, the teachers colleges include many who are seeking a liberal arts course but have no intention of entering teaching. Total enrolments in teachers colleges are, at best, only a rough estimate of the potential supply of trained teachers.

In the present survey, state leaders were asked to give their opinions on how enrolments in "teacher preparation" in their states compared with similar enrolments in 1940-41. The details (column 8, Table 6) may be summarized briefly as follows:

Number of states reporting on 1947-48 teacher enrolments compared with 1940-41

Much smaller	About the same	Much larger
18	9	21

No comparable opinions on this question were obtained in 1945-46 and 1946-47. In the middle of the war period, however, the enrolments in teacher education programs in teachers colleges declined about 50 percent for the nation as a whole. Some institutions reported decreases of 70 and 80 percent.

A sample study, made in 1945-46 by the NEA Research Division, indicated that enrolments in "teacher education" in the teachers colleges were about two-thirds of what they had been before the war. On this basis it would be reasonable to estimate

It is not clear from Table 7 just what special problems face the territories and the Virgin Islands. Apparently the teacher shortage is not large except possibly in Hawaii. Average salaries, not taking into account cost of living, compare favorably with the most fortunate states on the mainland. In the Virgin Islands salaries appear to be lower than they should be even with some consideration of the lower cost of living which may prevail there. Beyond these few points the inquiry did not reveal the unique problems of these outlying areas.

1947-48: A Year of Promise

This report for 1947-48 clearly shows that public-school conditions have taken a turn for the better. The American people have demonstrated again that given the facts they will demand and get action on any social problem. Yet it must be noted that the fundamental difficulties of public education have been eased rather than permanently solved. Much of the effort and funds made available have been used to stop further deterioration and to repair the damage of the war years and not to provide for basic reconstructions and improvements. Great inequalities among the states and within each state continue to exist. We have gone far but we have a long distance still ahead.

1. Total appropriations have been increased, making it possible to raise teachers' salaries by substantial amounts.....	BUT, the average salary of teachers today - less federal income taxes - has a purchasing power no higher than the average teacher's salary of 1939-40.
2. The supply of qualified teachers has steadily increased.....	BUT, it still is necessary to employ 100,000 teachers who hold emergency certificates.
3. The number of teaching positions has moved toward prewar totals.....	BUT, teaching loads today are heavier than before the war.
4. Enrolments in public schools have risen rapidly.....	BUT, a continued shortage of teachers imposes substandard educational opportunities upon at least two million children and youth; many others are penalized by shortages in buildings and equipment.
5. Total enrolments in teachers colleges have exceeded prewar enrolments and the number in teacher training has equalled the prewar total.....	BUT, part of the enrolment in teachers colleges is an overflow from crowded universities; high enrolments are often in the states least in need of a new and larger supply; those in training will not be available in numbers for several years; often too few of those in teacher training are preparing for elementary-school service.

There are two bright factors in the picture whose significance will become increasingly apparent in the next few years. First, the citizens who did so much between 1945 and 1947 to overcome the school crisis; they will continue to work for better schools. Second, the teachers themselves who remained in service during the crisis; they have taken new courage from the laymen who came to the aid of the schools. Thru their professional organizations they will lift their own professional standards and join with all laymen in guaranteeing every child a fair start in life thru better education.

TABLE 2. - ESTIMATED EMERGENCY (OR SUBSTANDARD) CERTIFICATES, 1946-47 AND 1947-48

State	1946-47			1947-48			% of col. 7 in rural schools
	Elementary	Secondary	Total	Elementary	Secondary	Total	
1	2	3	4	5	6	7	8
Alabama.....	8,126	1,509	9,635	8,126	1,509	9,635	*85
Arizona.....	600	75	675	370	30	400	90
Arkansas.....	1,445	974	2,419	1,000	600	1,600	85
California.....	8,602	2,968	11,570	5,000	1,200	6,200	*70
Colorado.....	?	?	*2,500	?	?	2,000	*80
Connecticut.....	300	76	376	267	46	313	32
Delaware.....	102	28	130	82	13	95	*90
Dist. of Columbia	239	201	440[a]	225	185	410[a]	0
Florida.....	?	?	3,000	?	?	1,100	75
Georgia.....	?	?	4,970	?	?	4,500	90
Idaho.....	840	360	1,200	840	360	1,200	75
Illinois.....	?	?	4,800	?	?	4,000	80
Indiana.....	?	?	2,773	?	?	1,000	75
Iowa.....	?	?	4,000	?	?	3,500	90
Kansas.....	2,866	567	3,433	2,290	460	2,750	80
Kentucky.....	4,877	300	5,177	4,700	300	5,000	90
Louisiana.....	?	?	2,009	?	?	1,500	90
Maine.....	475	200	675	400	150	550	60
Maryland.....	1,036	537	1,573	1,028	452	1,480	35
Massachusetts..	?	?	*500[a]	?	?	*400[a]	*50
Michigan.....	?	?	5,500	?	?	5,500	60
Minnesota.....	2,371	426	2,797	2,000	350	2,350	70
Mississippi.....	?	?	1,600	?	?	250	90
Missouri.....	1,868	500	2,368	1,800	500	2,300	67
Montana.....	*1,000	*0	1,000	700	0	700	85
Nebraska.....	2,450	706	3,156	1,800	450	2,250	90
Nevada.....	50	0	50	40	0	40	90
New Hampshire...	246	251	497	128	58	186	75
New Jersey.....	?	?	1,512	?	?	*1,500	*50
New Mexico.....	350	20	370	10	106	116	90
New York.....	1,353	1,200	2,553	1,407	1,250	2,657	25
North Carolina..	2,500	500	3,000	2,250	450	2,700	95
North Dakota....	768	2	770	?	?	*700	*90
Ohio.....	4,000	2,500	6,500	4,000	1,500	5,500	70
Oklahoma.....	?	?	700	0	0	*400	*80
Oregon.....	1,734	625	2,359	1,600	400	2,000	60
Pennsylvania....	2,108	1,200	3,308	?	?	3,000	70
Rhode Island....	?	?	50	?	?	40	50
South Carolina..	1,284	228	1,512	1,275	225	1,500	90
South Dakota....	1,020	255	1,275	1,000	250	1,250	90
Tennessee.....	4,500	800	5,300	3,300	500	3,800	95
Texas.....	*925	*425	1,350	*850	*350	1,200	90
Utah.....	1,149	475	1,624	823	273	1,096	70
Vermont.....	596	119	715	600	100	700	65
Virginia.....	2,785	483	3,268	1,183	164	1,347	97
Washington.....	?	?	5,754	?	?	5,399	60
West Virginia...	1,968	516	2,484	1,264	294	1,558	95
Wisconsin.....	3,000	500	3,500	3,200	500	3,700	90
Wyoming.....	231	58	289	200	40	240	85
Total.....			127,016			101,612	

* Estimated by NEA Research Division.

a/ No certificates in District and Massachusetts; estimate made of teachers with substandard preparation.

TABLE 4. - ESTIMATED AVERAGE SALARIES IN 1946-47 AND 1947-48

State	All instructional staff[a]		Classroom teachers only[b]					
			1946-47			1947-48		
	1946-47	1947-48	Elementary	Secondary	All	Elementary	Secondary	All
1947	(17)		(19)	(19)	(20)			
1	2	3	4	5	6	7	8	9
Alabama	$1,500	$1,800	$1,290	$1,800	$1,400	$1,600	$2,000	$1,750
Arizona	2,505	3,000	2,390	2,884	2,460	2,800	3,200	2,940
Arkansas	1,450	*1,500	1,050	1,600	1,350	*1,100	1,600	*1,400
California	3,000	3,600	2,528	3,159	2,800	3,000	3,600	3,300
Colorado	*1,900	*2,100	*1,510	*2,210	*1,700	*1,730	*2,535	*1,950
Connecticut	*2,750	*3,300	*2,400	*2,970	*2,600	*3,059	*3,330	*3,160
Delaware	2,155	2,605	2,003	2,372	2,118	2,458	2,822	2,568
Florida	1,939	2,715	1,760	2,062	1,883	2,451	2,873	2,636
Georgia	1,800	1,800	*1,420	*1,950	1,650	*1,420	*1,950	1,650
Idaho	1,839	2,215	1,628	2,057	1,780	1,950	2,260	2,047
Illinois	*2,350	*2,600	*1,750	*2,340	*1,950	*2,002	*2,420	*2,200
Indiana	*2,150	*2,950	*1,760	*2,360	*2,145	*2,460	*3,110	*2,830
Iowa	*1,800	*2,000	*1,480	*1,980	*1,650	*1,680	*2,030	*1,850
Kansas	1,866	2,100	1,496	2,245	1,780	1,690	2,500	1,980
Kentucky	1,524	1,600	1,270	1,780	1,470	1,350	1,825	1,540
Louisiana	*2,300	*2,600	*1,620	*2,250	1,882	*1,920	*2,570	2,182
Maine	1,745	2,000	1,500	2,100	1,700	1,750	2,300	1,920
Maryland	2,486	3,300	2,286	2,546	2,397	3,100	3,350	3,200
Massachusetts	2,600	2,750	2,300	2,500	2,400	2,500	2,600	2,550
Michigan	2,500	*3,050	*1,920	*2,570	2,340	*2,420	*3,070	2,877
Minnesota	2,150	2,300	1,750	2,340	1,950	1,910	2,460	2,100
Mississippi	950	1,350	730	1,020	850	1,130	1,420	1,250
Missouri	1,800	*2,050	1,535	2,300	1,770	1,650	2,400	2,000
Montana	1,900	2,700	1,650	2,160	1,800	2,450	3,050	2,650
Nebraska	1,660	1,800	1,440	2,100	1,610	1,575	2,300	1,770
Nevada	2,100	*3,100	*1,900	*2,200	*2,000	2,700	3,250	3,000
New Hampshire	1,842	2,250	1,548	2,090	1,770	1,950	2,300	2,200
New Jersey	*2,600	*2,800	*2,350	*2,450	*2,400	*2,550	*2,650	*2,600
New Mexico	*2,300	*2,700	*2,120	*2,420	2,235	*2,520	*2,850	2,650
New York	*3,300	*3,500	*3,040	*3,160	*3,100	*3,230	*3,370	*3,300
North Carolina	1,711	2,015	1,560	1,810	1,646	1,850	2,140	1,948
North Dakota	1,500	1,600	1,250	1,820	1,400	1,330	1,950	1,500
Ohio	*2,540	*3,000	*2,000	*2,600	2,187	*2,500	*3,100	2,700
Oklahoma	*1,700	1,890	1,389	1,887	1,600	1,689	2,187	1,800
Oregon	2,500	3,000	2,184	2,559	2,305	2,600	2,950	2,700
Pennsylvania	2,260	2,527	1,800	2,400	2,200	2,100	2,600	2,400
Rhode Island	2,400	2,700	2,020	2,290	*2,200	*2,450	*2,550	2,500
South Carolina	1,260	*1,450	*950	*1,320	1,200	1,187	1,650	1,375
South Dakota	1,700	1,800	1,500	2,000	1,600	1,520	2,200	1,700
Tennessee	1,460	1,785	*1,200	*1,680	*1,400	*1,500	*1,980	*1,700
Texas	1,950	2,700	*1,700	*2,050	1,750	2,400	2,600	*2,500
Utah	2,248	2,900	2,190	2,190	2,190	2,813	2,813	2,813
Vermont	*1,850	*2,250	1,346	2,024	1,600	*2,060	*2,140	*2,100
Virginia	1,901	2,050	1,657	1,983	1,753	1,850	2,150	1,950
Washington	2,659	3,250	2,409	2,797	2,613	*3,070	*3,520	3,200
West Virginia	1,672	2,340	1,485	1,750	1,540	2,000	2,610	2,200
Wisconsin	2,100	2,225	1,800	2,400	2,000	1,925	2,425	2,125
Wyoming	1,882	2,300	*1,600	*2,100	*1,800	*2,030	*2,425	*2,225
#District of Columbia	*3,500	*3,800	2,941	3,298	3,120	3,216	3,580	3,398

* Estimated by NEA Research Division.

a/ Including principals and supervisors.

b/ Many of the figures in column 4 thru 9 are medians rather than arithmetical means; columns 2 and 3 are approximations of the arithmetical means.

D. C. averages should not be ranked or compared directly with the states.

TABLE 6. - ESTIMATED TYPES OF TEACHER SHORTAGE AND STATUS OF TEACHER EDUCATION, 1947-48

State	Rural shortage			Urban shortage			1947-48 teacher training enrolment compared with 1940-41 enrolment
	Elementary	Secondary		Elementary	Secondary		
		Regular	Special		Regular	Special	
1	2	3	4	5	6	7	8
Alabama.....	Some[a]	Some[a]	Large[a]	Small[a]	Small[a]	Some[a]	Larger[b]
Arizona.....	Some	Some	Some	Small	Small	Some	Same
Arkansas.....	Large	Some	Large	Small	Small	Some	Same
California.....	Large	Some	Some	Some	Some	Some	Larger
Colorado.....	*Some	*Some	*Large	*Small	*Small	*Some	*Same
Connecticut....	Small	Small	Small	Small	Small	Small	Larger
Delaware.....	Some	Small	Small	Small	Small	Small	Larger
District.....	...	...	...	None	Some	Some	Larger
Florida.....	Some	Some	Some	Small	Small	Small	Larger
Georgia.....	Some	Some	Large	Small	Small	Some	Larger
Idaho.....	Large	Some	Large	Small	Small	Some	Smaller
Illinois.....	Some	Some	Large	Small	Small	Some	Larger
Indiana.....	Small	Small	Some	Small	Small	Some	Larger
Iowa.....	Some	Some	Some	Small	Small	Some	Larger
Kansas.....	Some	Some	Large	Small	Small	Some	Larger
Kentucky.....	Large	Small	Some	Small	Small	Some	Smaller[b]
Louisiana.....	Large	Some	Large	Small	Small	Some	Same
Maine.....	Some	Small	Some	Small	Small	Some	Smaller
Maryland.....	Some	Small	Some	Some	Small	Some	Larger
Massachusetts..	Small	Small	Some	Small	Small	Small	Larger
Michigan.....	Large	Small	Some	Small	*Small	Small	Larger
Minnesota.....	Large	Some	Some	Small	Small	Small	Smaller
Mississippi....	Some	Some	Large	Some	Some	Some	Smaller
Missouri.....	Some	Some	Large	Small	Small	Some	Same
Montana.....	Large	Some	Large	Small	Some	Large	Smaller
Nebraska.....	Some	Some	Some	Small	Small	Some	Same
Nevada.....	Some	Some	Large	Small	Some	Some	Smaller
New Hampshire..	Some	Small	Some	Small	Small	Small	Same
New Jersey.....	Some	Some	Some	Small	Small	Small	Larger
New Mexico.....	Large	Some	Some	Some	Small	Some	Larger
New York.....	Some	Some	Some	Some	Small	Some	Larger
North Carolina.	Large	Some	Large	Small	Small	Some	Smaller
North Dakota...	Large	Some	Large	Small	Small	Small	Smaller
Ohio.....	Some	Some	Some	Small	Small	Some	Larger
Oklahoma.....	Large	Some	Large	Small	Some	Large	Smaller
Oregon.....	Some	Small	Some	Some	Small	Some	Larger
Pennsylvania...	Large	Some	Some	Small	Small	Large	Larger
Rhode Island...	Small	Small	Small	Small	Small	Small	Same
South Carolina.	Large	Some	Large	Small	Small	Some	Smaller
South Dakota...	Large	Some	Large	Small	Small	Some	Smaller
Tennessee.....	Some	Small	Some	Small	Small	Small	Larger
Texas.....	Some	Some	Large	Small	Small	Small	Smaller
Utah.....	Small	Small	Some	Small	Small	Small	Larger
Vermont.....	Large	Large	Large	Small	Small	Some	Smaller
Virginia.....	Large	Some	Large	Small	Small	Some	Smaller
Washington.....	Small	Small	Some	Small	Small	Small	Same
West Virginia..	Some	Small	Some	Small	Small	Small	Smaller
Wisconsin.....	Large	Small	Some	Small	Small	Some	Smaller
Wyoming.....	Some	Small	Small	Some	Small	Some	Smaller

* Estimated by NEA Research Division.

a/ Terms used: "small" means "very small"; "some" means "considerable size"; "large" means "very large."

b/ "Larger" means "much larger" and "smaller" means "much smaller."