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**TEACHER DEMAND AND SUPPLY**

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*President*, FLORENCE HALE

*Secretary*, J. W. CRABTREE

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## FOREWORD

FOR seventy-four years the *Proceedings* of the National Educational Association have reflected the changing conceptions in American education. Problems of teaching technic, school finance, supervision, curriculum construction, and teacher personnel have swung between prominence and obscurity.

Problems in the general field of teacher demand and supply have received periodic attention. In 1877 the Committee of Twelve on Rural Schools had a sub-committee on the supply of teachers. At intervals during the years there have been committees of our Association on salaries, tenure, and retirement allowances.

In 1927 the Association appointed a committee to study the economic status of the teacher. As one of its first problems, this committee decided to investigate the status of teacher demand and supply. It was expected that an investigation of demand and supply would be not only timely from the viewpoint of teachers generally, but that it would focus the attention of state departments, teachers' colleges, and others upon this major problem.

After the Association had launched its survey the United States Office of Education formulated plans for an extensive study of teacher training. In the interest of cooperation and mutual aid representatives of the National Education Association conferred with Dr. William John Cooper and Dr. E. S. Evenden. These directors of the Office of Education's survey not only welcomed the Association's efforts, but extended to us important aid and advice.

The content of this bulletin should be of *particular* interest to state departments of education, teacher training institutions, superintendents of schools, and school principals. In the hands of these individuals lies the primary responsibility for the recruitment, selection, education, certification, and placement of teachers. Such responsibilities call for exact records, careful research, administrative adjustments, and most of all—vision.

It is the wish of the Association that this bulletin will form the basis for conferences in state and local education associations. Out of the crucible of group thinking should come new plans and new principles to aid in the solution of our present teacher supply and demand problems.

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

## Introduction

At the sixty-fifth annual meeting at Seattle in 1927 the proposal was made to appoint a committee on the economic status of the teacher to replace the existing committee on salaries. Miss Cornelia Adair, President of the National Education Association, appointed the following persons: B. R. Buckingham, Chairman; Florence Barnard, W. W. Coxe, Susan M. Dorsey, E. C. Hartwell, J. R. McGaughy, and Frederick L. Whitney.

A problem chosen by the committee for investigation was that of teacher supply and demand. The Research Division of the National Education Association was asked to assist the committee with the investigation and the preparation of the final report.<sup>1</sup>

### Specific Purposes of the Study

A nationwide study of the problems in teacher supply and demand is a gigantic task. It was necessary to decide as to which of the following sources should be depended upon for the major portion of the data: (1) state departments of education, (2) local superintendents of schools, or (3) individual teachers.

The second and third sources would have required resources beyond those available for this investigation. Furthermore, the details obtained from these sources would have taken the study into fields beyond its general purposes: (1) to reveal some of the major teacher supply and demand problems, (2) to point out the significance of these problems to the welfare of the profession, and (3) to arouse the interest of state departments of education and other agencies in making careful investigations.

Some of the specific questions to be considered were: (1) Do state departments of education know whether or not there is an oversupply of teachers? (2) Do state departments know how many new teachers are required annually by the public elementary and secondary schools of the states? (3) Do state departments know how many new teachers are being prepared each year by the teacher-training agencies? (4) What agencies in each state are studying teacher supply and demand problems? (5) What are the nature and significance of investigations

which have been made to date? (6) How are state departments and other agencies attempting to influence teacher supply and demand? (7) What further steps or investigations are desirable?

It is not the purpose of this report to answer the above questions completely or with finality. The study aims to present evidence which will stimulate an aggressive and continuous study of teacher supply and demand problems.

### Sources of Information and Methods of Investigation

Through state departments of education, state educational associations, universities, and libraries a number of previous investigations were located. These studies were analyzed to discover the basic technics, the facts, and the significant conclusions which would be of value in future surveys.

A questionnaire was sent to the departments of education of the 48 states and the District of Columbia. This inquiry called for the number of teaching positions, the number of new teachers employed each year, the number of persons prepared annually for teaching, and similar questions.

A member of the Research Division of the National Education Association visited 37 state departments of education. On each visit he interviewed the state superintendent of public instruction or other officials of the state office. A standard interview form was used in obtaining facts which would supplement the other sources of data.

Annual reports and pamphlets issued by various state departments of education were drawn upon for pertinent information. Numerous bulletins of the United States Office of Education furnished valuable statistics. Textbooks on economics and education supplied viewpoints which have been woven into the interpretations of the report.

Finally, the members of the Committee on the Economic Status of the Teacher and various individuals on the Headquarters Staff of the National Education Association contributed from their experience as students of problems of teacher personnel.

<sup>1</sup> Shortly after the present study began the United States Office of Education undertook a comprehensive survey of teacher training under Dr. William John Cooper and Dr. E. S. Evenden. To avoid unnecessary duplication, and to provide the maximum of cooperation, conferences were arranged between representatives of the Research Division and officials of the Office of Education. The outcome of these meetings was official recognition and important assistance from the United States Office of Education.

## CHAPTER I

### The Profession and Problems in Demand and Supply

Each year finds some new phase of American education submitted to scrutiny. Investigations are made, data are published, and the educational machinery is called upon for new adjustments. Yet, in spite of the many studies, and sometimes because of them, the great mass of teachers quite properly challenge with these questions: How does that affect the education of children? How does that concern my welfare? What can we do about it?

The purpose of this chapter is to discuss certain questions which give background to the report. Little attempt is made to support every point with objective evidence, although such substantiation may be found in subsequent chapters. Rather, the section summarizes expert opinion and reviews some of the problems which are pertinent to a study of teacher demand and supply.

#### What Is Meant by the Laws of Demand and Supply?

The phrase, "demand and supply," is commonly used in economics to describe market conditions. The so-called "law of supply and demand" is a statement of the relation between value and the quantity of the things valued. A simplified statement of the law is as follows:

Supply and demand in the market tend always to equality, any tendency to become unequal being immediately made up by an upward or a downward movement in price.<sup>1</sup>

Supply does not mean the "total amount" of a commodity existing in the world. Rather, the term is applied to the quantity of things offered for sale. The amount actually taken is called "realized" supply. The untaken surplus is "potential" supply as long as it is on the market.

Demand is a term applied to the amount of a thing that will be taken at a price. A superintendent of schools may *want* to buy ten pieces of playground apparatus, but the funds at his disposal may limit the *demand* made of manufacturers to five articles. This illustration brings out that when the demander goes into the mar-

ket he must have not only the desire, but the wherewithal to satisfy his demand.

*The determination of price*—The statement of the law of supply and demand given above points out that the two "tend always to equality." That is to say, in the interaction between buyers and sellers, the price tends to come to the place where the largest number of persons will be satisfied.

For purposes of illustration, we may assume the conditions shown in Table 1. Here we have five sellers (A, B, C, D, and E) who are willing to dispose of the number of commodities in column 2 for the prices in column 3. The buyers (V, W, X, Y, and Z) are willing to purchase the number of commodities in column 4 for the prices in column 3.

TABLE 1.—AN ILLUSTRATION OF SUPPLY AND DEMAND

| Sellers | Quantity Offered | Price | Quantity Demanded | Buyers |
|---------|------------------|-------|-------------------|--------|
| 1       | 2                | 3     | 4                 | 5      |
| A       | 5                | 2.50  | 1                 | V      |
| B       | 4                | 2.00  | 2                 | W      |
| C       | 3                | 1.50  | 3                 | X      |
| D       | 2                | 1.00  | 4                 | Y      |
| E       | 1                | .50   | 5                 | Z      |

In the competition between the buyers and sellers of Table 1 the price of \$1.50 is the point at which the demand and supply come into equilibrium. At this price the maximum number of sales would be consummated. For example sellers C, D, and E would be willing to sell six articles, and buyers, V, W, and X would be prepared to purchase six articles.

This simplified and theoretical illustration is shown graphically in Chart I.

Chart I is simply a "snapshot" of the theoretical conditions set forth in Table 1. Under *actual* market conditions a number of factors might enter in so as to force the price up or down. New sellers might enter the market with offers to sell at \$1.00 or less, a cheaper substitute for the commodity might be found, or new demanders might appear who were willing to pay

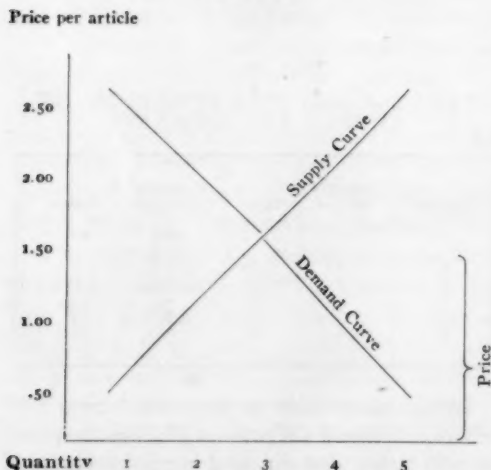
<sup>1</sup> Faubel, Arthur L. *Principles of Economics*. New York: Harcourt, Brace and Company, 1923. p. 71.

\$2.00 or more. It is beyond the purpose of this discussion to go into the intricate problems of demand and supply under market conditions.<sup>1</sup>

**Elasticity and inelasticity**—Both demand and supply react to changes in price. A commodity such as salt is said to have an “inelastic demand” because variations in price do not affect materially the amount used. The demand for costly jewelry may be “elastic” because reductions or increases in the price produce gross changes in the demand.

Supply is said to be “inelastic” if the variations in prices do not seriously affect the quantity offered for sale. If the quantity on the market varied widely with changes in price the term “elastic supply” is often applied.

**CHART I.—THE SUPPLY AND DEMAND CURVES**



### How Does the Law of Demand and Supply Apply to Wages?

Writers on economic problems generally agree that the law of supply and demand influences wages much as it does prices. A typical statement is as follows:

Labor receives payment for services just as the seller of any commodity receives a price for the things he offers to buyers. In some instances the service is purchased directly by the consumer, and the wages in that case are determined according to the principles of value. When the supply of domestic servants is very large their wages fall, the demand for them remaining the same; if the demand increases, their wages rise. The same statement applies to all professions. The principle of demand and supply controls the earnings.<sup>2</sup>

In dealing with labor personnel the demander is the employer. The workman offers his services for sale, i.e. he is the “supply” which is to satisfy the employer’s needs. The payment or exchange agreed upon by the employer and the employee is the “wage.” This transaction can be represented by graphs similar to Chart I.

When Employer A offers a high wage and demands a large amount of help, the supply of available workers tends to increase rapidly. If the demand for helpers stops or slows down, and the supply keeps piling up then an “over-supply” develops. The unemployed persons, who constitute the oversupply, can get an income in two ways: (1) by engaging in other occupations, or (2) by underbidding and displacing some of Employer A’s present employees. If Employer A is anxious to reduce production costs he may encourage the unemployed to underbid, or he may force his employees to accept a cut in wages.

All that has been said above regarding demand, supply, and wages applies with equal force to the teaching profession. Since we are considering in this report the public elementary and secondary schools, the demanders are the school boards.<sup>3</sup> The unemployed teachers<sup>4</sup> with the required certificates constitute the supply. The annual demand would equal the total of the replacements, the new teaching positions, and the vacancies or unfilled positions.<sup>5</sup>

*Demand for teachers tends to be fixed*—The demand for teachers each year includes the replacements, the new positions, and the unfilled

<sup>1</sup> Interested readers should consult some of the standard textbooks on economics. Among the less technical books are the following: *Principles of National Economy* by T. N. Carver, Ginn and Company, Boston, 1921, p. 343-53; and *Economics, Principles, and Interpretations* by Roy E. Curtis, A. W. Shaw and Company, Chicago, 1928, p. 191-277. For technical discussions see such references as: *Statistical Laws of Demand and Supply* by Henry Schultz, University of Chicago Press, 1928, 228 p., and *Synthetic Economics* by H. L. Moore, Macmillan Company, New York, 1929, 186 p.

<sup>2</sup> Garver, F. B., and Hansen, A. H. *Principles of Economics*. Boston: Ginn and Company, 1928. p. 407.

<sup>3</sup> Of course, boards of school trustees act for the citizens. In most school systems, the apparent demander is the superintendent who is acting for the board of education.

<sup>4</sup> The bulk of the unemployed teachers in normal times are the annual graduates of teacher-training institutions. When training schools turn out teachers too rapidly the supply includes not only the recent graduates, but all previous graduates who have failed to obtain positions. In times of financial depression many former teachers return to the profession and thereby add further to the supply.

<sup>5</sup> Replacements are necessary when teachers resign or are discharged. New positions are those created by the building of new schools or other increases in teaching positions. Vacancies are places which the demander hopes to fill with a person of a certain training, failing in this no one is employed or a substitute temporarily fills the gap.



vacancies. In 1922-23 state superintendents estimated that about 110,000 teachers drop out of the profession each year and must be replaced.<sup>1</sup> Table 2 gives some indication of the number of new teaching positions created every two years in public elementary and secondary schools. No data are available as to the total number of unfilled positions.

**TABLE 2.—THE NUMBER AND BIENNIAL INCREASE OF TEACHING POSITIONS IN ELEMENTARY AND SECONDARY SCHOOLS**

| Period    | Total Number of Teaching Positions | Biennial Increase in Number of Positions |
|-----------|------------------------------------|------------------------------------------|
| 1         | 2                                  | 3                                        |
| 1916-1918 | 633,585                            | 23,830                                   |
| 1918-1920 | 657,415                            | 48,084                                   |
| 1920-1922 | 705,499                            | 42,810                                   |
| 1922-1924 | 748,309                            | 47,436                                   |
| 1924-1926 | 795,745                            | 26,008                                   |
| 1926-1928 | 821,753                            |                                          |

Read column 3 as follows: Between 1918 and 1920 the number of teaching positions increased 23,830.  
Data from volumes of the *Biennial Survey* of the United States Office of Education.

A conservative estimate is that the annual demand in the United States is for 110,000 to 120,000 new teachers. This demand is fairly constant from year to year regardless of the status of salaries or supply. For example: If Superintendent A finds at the end of the year that his schools need 20 new teachers, his demand tends to be fixed. He may increase the size of classes and employ only 15 teachers. Or he may create several new positions and demand 25 new teachers. The fact remains, however, that the existence of a number of children makes it necessary for him to demand approximately 20 new teachers.

In terms, then, of approximately 800,000 teaching positions, the demand for replacements and new positions would not vary widely from year to year. While factors which tend to increase tenure, such as retirement plans, salary schedules, and tenure laws, act over a period of years to reduce the total demand, the change in terms of a state or the nation is probably not very large. In general, the conclusion seems to

be sound, that the demand for new teachers from year to year tends to be fixed.

*Supply of teachers tends to vary*—In contrast with the fixed tendency of the demand, the supply of teachers is rather elastic. Supply is subject to rapid and large change for the following reasons:

1. In the collegiate departments of universities and colleges in 1928 there were 695,219 students.<sup>2</sup> Under many of the present state certification laws a number of these students are potential teachers.<sup>3</sup> Of the 83,000 students obtaining the baccalaureate degree in 1928 how many attempted to get positions in teaching? How many of the 695,219 students may be attracted to teaching after one or two years of collegiate work?

2. In 1928 there were 274,348 teacher-training students in all teachers colleges and normal schools. These schools are training one teacher for every four elementary school positions and one teacher for every two high school positions.<sup>4</sup> How many of these persons may decide to accept a teaching position after one year of training?

3. In 1928 there were 46,565 students in teacher-training courses in high schools.<sup>5</sup> Under existing conditions in many states these persons may put their services on the market and become a part of the supply with very little training.

4. Another factor making for a flexible supply of teachers is the lack of centralization of certification. In some states local superintendents may grant emergency licenses which are good for one year. Under such conditions the demander may increase the supply at will and license persons who will accept the demander's wage offer.

5. The supply of teachers tends to be elastic because of the persons with regular licenses to teach, who go into non-teaching occupations. Some of these individuals marry, others accept temporary employment, and others are merely unemployed. Each year a number of these persons join the supply of teachers, particularly when an economic depression makes for unemployment in non-teaching occupations. In some states the so-called "life" or "permanent" certificate has tended to create a "potential supply" which may be brought back into the profession at any time regardless of training or ability.

*Summary*—When demand and supply are approximately in equilibrium, the chances are favorable that the demander and the supplier will both be fairly well satisfied. When the demand is large and the supply of teachers small, salaries tend to go up. This upward trend of working conditions is good for individual teach-

<sup>1</sup> See Table 3 in "The Problem of Teacher Tenure," *Research Bulletin*, National Education Association, November, 1924, p. 144.

<sup>2</sup> See the *Biennial Survey*, 1926-28, United States Office of Education, p. 698, Table 1.

<sup>3</sup> A study of 83,472 graduates of 199 liberal arts colleges for the years 1923 to 1927 showed that 45 percent went into teaching. See the *Seventh Yearbook*, Department of Superintendence, National Education Association, 1929, p. 451.

<sup>4</sup> See the *Biennial Survey*, 1926-28, United States Office of Education, p. 887.

<sup>5</sup> *Ibid.*, p. 891.

ers, but many communities in order to combat rising costs are forced to employ teachers with inferior training. When supply is greatly in excess of demand, salaries tend to go down, and many of the best prepared teachers turn to the more lucrative occupations.<sup>1</sup>

Furthermore, an oversupply of teachers is a waste, both for the individual who fails to obtain employment, and for the state by which the training is provided. In state school systems the demand for teachers tends to be rather fixed, while the supply of teachers tends to be flexible. Obviously, equilibrium between demand and supply calls for an examination of the nature of the demand, and the development of sane methods for controlling the supply.

### Oversupply and the Waste of Individual Energy

Recently the writer interviewed a senior student in a four year municipal normal school. It is a matter of general knowledge, according to the student, that practically none of the 600 graduates finishing the course each year actually obtain teaching positions. A few of the graduates go to the universities for advanced training. The bulk of the students go into temporary work for one or two years until a teaching position opens, because there is an oversupply of licensed teachers.<sup>2</sup>

How many of the graduates of this school could have spent their time to better advantage<sup>3</sup> by pursuing training which led to immediate employment? How many of these students entered the normal school under the impression that training in a public institution led automatically into a teaching position? Does experience in department stores give the graduate in teacher-training additional skill for instructing children?

It may be argued that the students who pass through the normal school will make better citizens even though they never become teachers. Certainly, it is true that teacher-training may be

thought of as a type of liberal arts training. However, if the state or city is financially able to provide for liberal arts training for its young citizens, it should do so without charging the costs to teacher-training.

The purpose of the above section has not been to offer objective proof that teacher-training is always a waste for the individual who fails to obtain employment as a teacher. The question is merely raised at this time for careful consideration. Surely, no one would attempt for long to defend the thesis: "Even though it didn't do him any good, it couldn't do him any harm." An argument of this kind cannot be permitted to handicap or to forestall searching and scientific inquiry.

### What Is Waste in Teacher Training?

In 1877 Principal C. C. Rounds defended the normal schools against a concerted attack by state legislatures.<sup>4</sup> A major charge at that time was that few normal school graduates actually went into teaching. Mr. Rounds' reply may be summarized as follows:

Since the average length of service of teachers was three years, the schools required 83,000 persons annually to supply the turnover. The normal schools of the United States were graduating 2206 teachers. Obviously, the number of normal school graduates would seem small. The solution was immediately to multiply the normal school nearly forty times.

The question today has taken somewhat different form: If a person is prepared for teaching, by the state, and cannot obtain a position, has the state wasted its money in teacher-training? It certainly is possible to show that the state actually paid out several hundred dollars to prepare the graduate.<sup>5</sup> It may also be argued that teacher-training is a specialized education which should prepare specialists for the state's service.

Furthermore, the state which contributes too generously to the number of trained teachers may be doing indirect damage to its own educa-

<sup>1</sup> Buckingham, B. R. *Supply and Demand in Teacher Training*. Ohio State University Studies, Vol. 2, No. 15, 1926, p. 1-6.

<sup>2</sup> The reader should clearly distinguish between persons with licenses to teach and teachers with a high type of training. Many teachers among the available supply in the United States have less than the commonly accepted standard of two years of college work.

<sup>3</sup> A challenging viewpoint of the dangers in an unplanned program of higher education is presented by Dr. Harold F. Clark in "Economic Effects of Education," *Journal of Higher Education*, March, 1930, p. 141-48.

<sup>4</sup> Principal C. C. Rounds, Normal School, Farmington, Maine prepared a paper on "Attacks on Normal Schools" which was printed in the *Proceedings*, National Education Association, 1877, p. 159-67.

<sup>5</sup> See "Present Distribution of Expenditures for Education" in the Ninth Yearbook, Department of Superintendence, 1931, p. 315-39; F. H. Hamilton, *Fiscal Support of State Teachers Colleges*. Contributions to Education, No. 165. New York: Teachers College, Columbia University, 1924, p. 12-22; and the *Biennial Survey of Education, 1926-28*, U. S. Office of Education, p. 890.



tional machinery. For example: an oversupply of teachers tends to reduce salaries, makes tenure insecure, and forces many superior teachers into non-teaching occupations. Can the state afford to drive out experienced and trained leaders from among its own employees?

*What are the commonly discussed evidences of a surplus of teachers?*—Among some of the indications of oversupply of teachers commonly cited are the following:

(a) Graduate students at teacher-training institutions often find some difficulty in obtaining positions. Before assuming that there is an oversupply on this basis, due consideration must be given to (1) the unwillingness of many students to accept the available positions, and (2) the specialization of students far in advance of the typical public school demand.

(b) Oversupply is assumed from the number of applications for positions which pile up in offices of city superintendents. Teachers who are seeking better salaries and employment conditions, often place applications in several advanced communities. The extent of these applications is not safe evidence of unemployment or oversupply.

(c) Another phase of demand and supply in need of careful study and cautious interpretation, is that of the number of applications in public and private teacher placement bureaus. The large number of applications in these offices undoubtedly includes many duplications and represents persons who are merely seeking to improve over their present positions. Gross figures from placement bureaus need exacting analysis before they can accurately represent the status of teacher supply.

(d) A fourth bit of evidence sometimes cited to show the status of teacher supply is the number of certificates issued in a state. Again the need for caution is evident, when we realize that many licenses are renewals of previous certificates. Credentials are issued to teachers in other states and to college graduates who "may teach someday." Therefore, the total number of certificates is likely to be larger than the actual supply of teachers.

(e) A fifth caution in the gauging of teacher supply is to distinguish between persons with licenses to teach and teachers with adequate training. Many teachers are now in teaching, or are entering it each year, who do not have even a minimum of professional preparation.<sup>1</sup> If these persons were excluded or replaced, the demand for well-trained teachers would be increased. In many instances the "oversupply" of teachers in a state really means a surplus of persons with teaching licenses.

*Summary*—The purpose of this section has been to raise the question: If the state prepares

more persons for teaching than can possibly find positions, have not public funds been misplaced? The answer hangs upon the reason why the potential teachers have not been placed. If an individual simply refuses to teach, or gets married, or moves to another state, the state has been the victim of circumstances. If the individual, the training school, and the state placement officers discover evidence that a genuine oversupply exists, then the question may be raised whether the state's energies have not been misplaced. Before anyone can be sure of the genuineness of the oversupply, there must be an extensive and intensive collection of facts.

### What Agency Should Collect and Disseminate Facts as to the Demand and Supply of Teachers?

The working unit for studying teacher supply and demand is the state. Education is a state function. Every state has a state department of public instruction which is the fact-gathering and fact-reporting agency on matters of public education. The state usually assumes the major responsibility for teacher training. Local school units look to the state office for help and guidance in carrying out educational policies. The state is and should be interested in the teachers who contribute so much to its welfare and progress.<sup>2</sup>

State departments of public instruction have a challenging problem. It requires much patience, skill, and determination to assemble and to interpret facts regarding teacher supply and demand. Yet several states have made excellent surveys and report a vast store of helpful data. Elsewhere in this report are descriptions of procedures which state offices have found useful.

### Are There National Aspects to Teacher Supply and Demand?

The preceding section suggests the state as the working unit for fact-gathering and record-keeping in teacher personnel. The state departments are strategically placed to gather evidence on the demand and the supply of teachers. The state education offices are also ideally situated for making the facts available to interested parties. There are, however, certain national

<sup>1</sup> The problem of a long period of professional training has been questioned by educators as to its economic implications. For example: Are there many districts where they cannot raise the money to pay an adequate salary to teachers with more than two years of professional training?

<sup>2</sup> Discussed fully in "The Training of Teachers for Service," Chapter XXII, *State School Administration*, E. P. Cubberley, Houghton Mifflin Company, Boston, 1927. p. 585-620.

aspects of the question which deserve much thought and attention. Among these national problems are the following:

*Standardization of terminology in teacher personnel work.* If studies of demand and supply in teacher training are to be comparable between the states, the various categories, terms, and meanings must be generally understood. Among the terms requiring standardization of meaning and use are: demand, supply, new teacher, length of service, and vacancy.

*More general standardization of teacher training values and practises.* Here we find such questions as: How long should the period of training be? What topics should the student teacher study? What types of certificates should be issued? How can the reciprocity on certificates be standardized between the states? When is a person adequately trained for teaching?

*A continuous nation-wide survey of teacher demand and supply.* Eventually such a survey should be made at least every two years through the cooperation of the Office of Education and the National Education Association.<sup>1</sup>

The need for a national survey is apparent, when one considers how vitally interested the nation, as a whole, is in the welfare of each state. Americans, in general, and teachers, in particular, move freely from state to state. Reciprocity in teachers certificates is commonly prac-

tised between states. Teacher-training schools are often located near state lines, and the students obtain positions in nearby states. Low certification standards in one state tend to attract the poorly trained teacher from other states. When one state raises its certification or employment standards to a high level, the inferior teachers often crowd into another state.

Also, if a state offers high-grade training and surrounding states do not, the former loses many of its well-trained teachers. The latter become predatory states in respect to teachers. In years gone by—perhaps even yet—graduates amounting to the equivalent of the output of an average sized normal school in Wisconsin at once took positions in other states.

These and similar problems clearly indicate that the problem of teacher supply and demand does not stop with state boundaries. It is important to have a national agency give publicity to the teacher demand and supply data which have been collected by each state. This widespread publicity will make for uniform research technics, mutual encouragement of state departments of education, and a general lifting of teacher-training standards to the level of the best practices.

<sup>1</sup> There will be many problems in making a national survey based upon state figures. For example: an experienced teacher entering a state is counted as unit in the supply for that state. On the national basis, however, this person is not a "new" teacher. A summing of state totals should make allowances for this migration of teachers.

UNDER these circumstances (an oversupply of teachers) persons who have been trained to teach but who find no opportunity so to do must of necessity take up other lines of work. They are likely to go out of teaching permanently; thus the money and time spent on their training become, in large part, a loss to them as well as to the state. Or, what is more disturbing, they may take teaching positions for which they are not well qualified. On the other hand, if the demand for teachers of a given type greatly exceeds the supply, there is a tendency for salaries to increase and for working conditions to be easy. If this were all, the result would not necessarily be alarming. In the effort, however, to resist the rising cost of education, a community faced with an overdemand for teaching talent frequently employs, under emergency provisions, teachers possessed of less than the legal qualifications. Thus the service is debauched and the children—in all these matters the "ultimate consumers"—are the losers.—*Buckingham, B. R., Supply and Demand in Teacher Training. p. 1.*

## CHAPTER II

### Previous Studies of Teacher Demand and Supply

As early as 1876, Alexander Hogg, speaking on the educational needs of the South, used the phrase: "The demand for well-qualified colored teachers is much greater than the supply."<sup>1</sup> Superintendent Aaron Gove of Denver addressed the National Education Association in 1894 on the sources of supply of city school teachers.<sup>2</sup> In 1897 the Committee of Twelve on Rural Schools submitted a sub-committee report on the supply of teachers.<sup>3</sup> These and other references in the *Proceedings* indicate that teacher demand and supply have received the attention of the National Education Association at intervals since 1857.

Yet a close examination of the early speeches and reports does not show a realization that teacher demand and supply are closely associated with the *economic* welfare of teachers. The early discussions were primarily concerned with three problems: (1) How to get enough teachers with adequate training, (2) How to make the normal schools more effective as training agencies, and (3) How to keep up the professional skill and enthusiasm of teachers in service.<sup>4</sup>

Buckingham's pioneer study<sup>5</sup> of Ohio in 1923-24 brought forcibly to the attention of the profession that teacher demand and supply had far-reaching economic consequences. Since 1926 other important studies have been made in Vermont, Ohio, Louisiana, California, New York, North Carolina, Colorado, North Dakota, and other states.

This chapter summarizes nine outstanding investigations<sup>6</sup> under the headings: (1) Statement of the problem, (2) Importance of the problem, (3) Basic definitions and assumptions, (4) Scope and methods of study, (5) Findings of study, and (6) Recommendations or conclusions. At the end of the chapter certain general implications of the nine studies have been brought together for the sake of emphasis.

#### Study I. Ohio

Buckingham's investigation in 1923-24 in Ohio has served as a model for several subsequent studies.<sup>7</sup>

*Statement of problem*—A study of the relationship between the need for trained teachers in Ohio and the number available for meeting this need. Information bearing upon this relationship in different types of teaching and different types of schools is presented. The adequacy of the state teacher-training program is considered.

*Importance of problem*—The writer maintains that the subject of this study is a matter of utmost importance to the educational welfare of the state. The teacher is essentially the school, and any study which deals with the teacher strikes at the heart of the school system.

Conditions in the schools are most favorable when the supply of and the demand for teachers are about equal. If the supply exceeds the demand, salaries are likely to go down, tenure becomes insecure, and working conditions more exacting. Persons trained for a particular type of teaching are forced to leave the profession or to take positions for which they are not fully qualified. On the other hand, if the demand is greatly in excess of the supply, salaries will tend to increase and working conditions will improve, but many communities, in order to combat rising school costs, will be forced to employ inferior teachers. In either case the children will be the ultimate losers.

Furthermore, a lack of adjustment in the supply of teachers to the need for them will result in an increased costliness of the teacher-training process. When a shortage of teachers exists, the teacher-training institutions will operate with classes but half full. When there is an over-supply, they will be training teachers for a service which the state does not need.

<sup>1</sup> Hogg, Alexander, "The Lack and Needs of the South Educationally," *Proceedings*, National Education Association, 1876, p. 83.

<sup>2</sup> Gove, Aaron, "Sources of Supply of Teachers in City Schools," *Proceedings*, National Education Association, 1894, p. 374.

<sup>3</sup> Sabin, Henry (C. C. Rounds and Others), "Report of the Committee of Twelve on Rural Schools," *Proceedings*, National Education Association, 1897, p. 385-583.

<sup>4</sup> Most readers will recognize that this third function is at the present time considered to be an important phase of supervision.

<sup>5</sup> Dr. Buckingham made an investigation of teacher demand and supply in Wisconsin in 1917. The term "pioneer" is applied to the Ohio study because the Wisconsin report was never published.

<sup>6</sup> A number of excellent studies have not been included in this chapter because of space limitations. Students of teacher personnel problems are referred to the annotated bibliography at the end of this report.

<sup>7</sup> Buckingham, B. R. *Supply and Demand in Teacher Training*. Ohio State University Studies, Vol. 2, No. 15, Bureau of Educational Research Monographs, No. 4, Columbus, Ohio: Ohio State University, March 15, 1926, 182 p.

Facts concerning school and teacher-training conditions are needed as a basis for the balancing of teacher supply and teacher demand, yet in most states a knowledge of these facts is lacking. Investigations similar to this one should be instituted in all of the states.

*Basic definitions and assumptions*—The study sets up the following basic definitions and assumptions:

1. *Demand* means the number of new teachers needed in a given year as measured by the number newly appointed plus the number of unfilled positions in that year. p. 7, 11, 48.

2. *Teacher* means public school teacher and covers every type of professional service including not only classroom instruction, but also supervising officials and all other professional school people. p. 8.

3. *New teacher* means any teacher who at the time of appointment had had no teaching experience; experienced teachers whose entire teaching has been done outside of Ohio; and teachers, experienced in Ohio, but not teaching for six months prior to appointment. It is clear that there are other types of newness than the three mentioned. None of them, however, has a bearing upon the general question of the teaching requirements of the state. p. 7-8.

4. *Trained teacher*. "The state provides for a certain acceptable degree of competence on the part of its teachers. Whether that degree of competence is sufficient it is not the primary purpose of this study to examine. We take our point of departure from existing conditions in this respect. . . . We shall regard a teacher as 'trained' who has been graduated from a specified course in an institution supported or approved by the state for teacher-training purposes. . . . In other words he may obtain a certificate without examination. It is this class of persons—those whose training the state does not question—whom we shall regard for the purpose of this report as trained for the service." p. 4-5.

5. *Supply* means the number of graduates trained in the accredited institutions of Ohio to teach in the public schools increased by the trained teachers who come into the state, and decreased by those who go out of it. p. 26, 48.

6. *Graduate*. Some institutions have other types of graduates than those trained to teach. . . . We are not concerned with these others. . . . We shall, for the sake of brevity, refer to graduates trained to teach merely as graduates. p. 13.

*Scope and methods of study*—The data reported in this study represent conditions in Ohio, exclusively. In order to obtain the demand data, superintendents were asked to report the names of all teachers who were new to their school systems in 1923-24. These teachers were then questioned as to teaching experience in Ohio and elsewhere, present position, last position, training, and present teaching program. Returns received were from

90 to 95 percent complete. Superintendents were also asked to furnish information as to the number of vacancies in 1923-24. Returns on this question were so incomplete that another attempt was made to gather these data in 1924-25, when replies were received from all but four counties, one exempted village, and eight small cities. It was assumed that the same number of vacancies existed in 1923-24 as were reported for the year 1924-25.

Data on supply were obtained from schools and colleges included in the state department of education's list of accredited teacher-training institutions and from their graduates. Information was requested concerning the year of graduation, record of teaching service since graduation in Ohio and elsewhere, course taken, length of course, major and minor subjects, and number of credit hours of professional work of each person who graduated during the five-year period from January 1, 1919 to December 31, 1923. Returns were received from 86 percent of the graduates of all types of institutions.

*Findings of study*—Analysis of the data collected showed 5593 teachers who were newly appointed to the public schools of Ohio in 1923-24. Vacancies to the number of 775 were reported in 1924-25. Assuming that the same number of vacancies existed in 1923-24 as in 1924-25, and adding this figure to the number of new teachers appointed, a demand for 6368 new teachers in 1923-24 was arrived at. Allowing for inaccuracies and incompleteness in the data the annual demand for teachers in Ohio was placed at about 6500.

Data collected concerning the supply of graduates of teacher-training institutions in Ohio showed an increase in the number of such graduates, between 1919 and 1923, of from 1507 to 3613. From an examination of the detailed information concerning these graduates, it was determined that 2987 of those who graduated in 1923 actually taught in Ohio. Of the teachers reported as newly appointed in 1923-24, 772 received normal school, college, or university training, outside of Ohio. In the same year there were estimated to have been about 1100 of the following classes of persons: (1) one year card students, entitled to teach after completing one year of a longer professional course and passing an examination; and (2) persons who obtained certificates to teach on the basis of county examina-



tions and 30 weeks of professional training. These 1100, while they did not constitute a part of the supply of trained teachers as defined in this study, did, nevertheless, represent a portion of the total available teacher supply in that year. Bringing together the data on teacher supply from the various sources, a total supply of 4859 teachers was discovered.

When this figure was compared with the estimated annual demand of 6500, or the demand actually shown for 1923-24 of 6368 teachers, a shortage of 1641, or at least 1509, teachers was revealed. A tabular statement of annual supply and demand is given in Table 3.

That the teacher shortage was being gradually diminished, however, and that Ohio was, year by year, meeting its responsibilities for the training of teachers more adequately, was indicated by an increase in the supply of graduates of 139.7 percent, during the five-year period studied, as compared with an increase in public school enrolments of 16.5 percent and an increase in number of teachers employed of only 11 percent.

Data were studied to determine the part played in the teacher-training program by institutions of various types. Seventy-six and a half percent of the teaching force of the state was supplied by publicly supported, and 23.5 percent by privately supported institutions. Of the state-supported institutions, the one-year county normal schools made a greater contribution than the state colleges and universities. It was felt that too great a reliance was being placed upon privately endowed colleges and universities, which alone contributed 16.5 percent of the state's teachers, and that this reliance had tended to retard the development of an adequate state system of teacher-training.

TABLE 3.—BUCKINGHAM'S STATEMENT OF SUPPLY AND DEMAND IN OHIO

|                                                | Number | Total |
|------------------------------------------------|--------|-------|
| <b>Demand:</b>                                 |        |       |
| Total number new teachers appointed.....       | 5,593  |       |
| Estimated number of vacancies.....             | 775    |       |
| <b>Total.....</b>                              |        | 6,368 |
| <b>Supply:</b>                                 |        |       |
| Graduates (1923) who taught in Ohio.....       | 2,987  |       |
| New teachers trained in other states.....      | 772    |       |
| Non-graduates having one year of training..... | 1,100  |       |
| <b>Total.....</b>                              |        | 4,859 |
| Excess of demand over supply.....              |        | 1,509 |

With regard to supply and demand in the various types of schools and the various types of teaching, it was found that:

1. A shortage of trained teachers existed for positions in one-room rural, graded, elementary, junior high, and senior high schools.

2. Over one-half of the new appointees in the junior high school and approximately one-fifth of the new high-school appointees in 1923-24 were drawn from other parts of the school system. The question is raised as to whether these schools should be allowed to fill their needs at the expense of other branches of the service.

3. The supply of kindergarten teachers who were graduates of private institutions was sufficient to supply the entire needs of the state.

4. Among subject teachers the supply of those who majored in chemistry, English, French, German, sociology, and Spanish greatly exceeded the demand. The opposite was true with respect to commercial subjects, drawing, manual training, physical training, and especially general science, geography, and physiology.

5. Little was being done in the way of educational guidance for students in training, and information which would make possible the right type of guidance was lacking.

The percents of teachers still in service four or five, three, and two years after graduation were found to be as follows:

|                                     |            |
|-------------------------------------|------------|
| 4 or 5 years after graduation ..... | 50 percent |
| 3 years after graduation .....      | 62 percent |
| 2 years after graduation .....      | 69 percent |
| 1 year after graduation .....       | 77 percent |

Survival in service was discovered to be greater among graduates of publicly supported institutions, and to increase with length of training.

The proportion of graduates with one year of training increased during the five-year period studied, while the proportion of those with four years of training decreased. The relative number of those with two years of training remained about stationary throughout the period.

**Recommendations**—On the basis of the above findings the study offers as general recommendations: the establishment of standards for different types of teaching based upon a careful analysis of conditions; provision of incentives to enter and remain in the teaching service; and better selection of personnel based upon job analysis and a study of the individual aptitudes of candidates.



Among the more specific recommendations offered are the following:

1. The organization of the teacher-training institutions of the state into a unified system.
2. Provision of free tuition and a liberal system of scholarships and in return the requirement of a pledge on the part of students to teach in the state.
3. The abandonment of the one-year county training schools.
4. The establishment by the state of two, and ultimately of four, new teacher-training institutions.
5. Legislation requiring the provision of practice-teaching facilities.
6. The limitation to three, of the number of subjects which one teacher may teach.
7. Better recruiting facilities. Measures which will insure the delivery of the output of the teacher-training institutions to the schools of the state and cause teachers to remain longer in service.
8. The establishment of a teacher placement bureau in the state department of education.

Above all, a continuous study on the part of the state, of the problems which are basic to the training, placing, and holding in service of a sufficient corps of teachers, is recommended. Legal authority to put into effect measures based on the results of such a study should be granted.

## Study II. Vermont

Steele studied teacher demand and supply in Vermont in 1924-25.<sup>1</sup>

*Statement of problem*—A study of the number of teachers needed in the rural, high and elementary schools of the state, the present status of the training of teachers with reference to a defined desirable minimum standard, and the adequacy of present state teacher training facilities.

*Basic definitions*—Preliminary to the study the following definitions were set up:

1. *High school teacher.* A teacher employed in any of the high schools or junior high schools recognized by the state board of education.
2. *Graded school teacher.* A teacher employed in an elementary school having two or more rooms.
3. *Rural school teacher.* A teacher employed in a school having not more than two teachers and offering instruction prescribed for the rural school course.
4. *Teacher-training course.* A teacher-training school or class, rather than a division of instruction within the teacher-training curriculum.

*Scope and methods of study*—The study confines itself to the administrative phases of the problem. Where consideration is given to

instructional or curricular phases, it is only incidental to their bearing upon the main problem of administration. The scope of the study is also limited to the training of teachers for general, rural, graded, and high school positions. No attention is given to the training of teachers of special subjects.

Records on file in the office of the state commissioner of education, reports of superintendents of supervisory districts of the state, and applications of teachers for certificates were sources used in obtaining data on the present status of the teaching force at that time. Records of every third high school teacher, every fourth elementary teacher, and every sixth rural teacher were examined. This plan involved handling the records of 200 teachers in 79 high schools, 200 teachers in the graded schools of 79 cities, and 275 teachers in rural schools of 196 towns and rural districts.

Personal visits were made to the one-year and two-year teacher-training classes. Statements were obtained from students and instructors at these institutions. Superintendents, principals, and others conversant with conditions were interviewed with reference to the teacher-training situation in the state.

Information of a historical nature was taken from reports of the state board of education and other documents on file in the state commissioner's office. Recent state surveys and other studies, including unpublished material, were made use of as sources of information relating to conditions in other states.

*Findings of study*—On the basis of reports of superintendents of supervisory districts, it was discovered that Vermont employed 508 high school teachers in 1919-20, and 588 in 1924-25. During the same period the number of graded school positions increased from 684 to 816. The number of rural school teachers decreased from 1548 in 1919-20 to 1345 in 1924-25.

Data on turnover of teachers revealed an annual need in Vermont of 150 new high school teachers, 45 graded school teachers and 325 rural teachers.

The typical high school teacher of the period studied was found to be between 26 and 27 years old, a college graduate, with or without professional training, who had taught an aver-

<sup>1</sup> Steele, Robert McCurdy. *A Study of Teacher Training in Vermont*. Teachers College, Contributions to Education, No. 243. New York: Bureau of Publications, Teachers College, Columbia University, 1926. 111 p.

age of 2.5 years in Vermont, but only 1.6 years in the same position. She received a salary of \$1400.

The typical graded school teacher was about 28 or 29 years old and had a high school education, one year of professional training, and four weeks of summer school. Her teaching experience was eight years and she had remained in each position  $2\frac{7}{8}$  years. Her annual salary was \$1000 and she held the same grade of certificate as that held by the typical high school teacher.

The typical rural teacher was 23 years old and a graduate of a one-year county training course. She had an average teaching experience of 3.15 years and had served in one community on an average of one year. She had the same grade of certificate as was held by the typical high school and graded school teachers.

Nearly one-third of the high-school teachers in Vermont came from other states. While nearly all of the teachers in rural and graded schools were natives of the state, the graded schools, by paying higher salaries, drew the best trained of these away from the rural schools. The chief problem in teacher-training, with which Vermont was confronted was, therefore, to provide training for her high school and rural school teachers.

Measured by the generally accepted standards of four years of training of collegiate grade for high-school teachers, and two years of training in a standard teacher-training institution, for elementary school teachers, 31.6 percent of high school teachers, 83 percent of graded school teachers, and 91 percent of rural school teachers were found to have less than standard training. Also, 41 percent of the graded school teachers had had less than one year of professional training.

By means of a weekly rebate schedule, i. e. a system by which the state reimburses the town for a certain part of the teacher's salary, the state sought to induce better trained teachers to accept positions in the rural school. The amount of the payments made by the state over and above a certain specified minimum salary which the town was required to pay in such cases, varied in proportion to the certificate held by the teacher and the number of years' training which she possessed. The amounts paid by the state, however, were not sufficiently large to repay the teacher for the

outlay involved in taking an additional year of training.

A study of the certification system revealed that no distinction was made in the certificates issued for elementary and high-school teaching; no distinction was made between the certificate granted a graduate of a one-year training course in a high school and that given a university graduate with or without professional training (although to obtain a qualification certificate the former was expected to attend summer school for four weeks); no distinction was made between professional training and mere attendance at an institution of higher learning.

Four two-year training courses and eleven one-year training courses were maintained by the state. A prerequisite to admission to any of these courses was graduation from a four-year high school.

An analysis of figures on enrolment in teacher-training courses in Vermont during the five-year period between 1921 and 1926, indicated that the one-year classes in high schools and academies were losing their appeal. A decline in enrolment in these classes was accompanied by a corresponding increase in the number enrolled as first year students in the two-year training courses.

A great weakness of all the teacher-training courses, except that offered at the University of Vermont, was a lack of practice-teaching facilities. Practice work afforded in schools in the neighborhood of the one-year training classes was without adequate supervision.

*Recommendations*—On the basis of the facts discovered, the following recommendations are offered:

1. The setting up by the state board of education of definite standards for the training of teachers. The completion of a four-year course of collegiate grade including not less than twelve semester hours of professional work in the secondary education field, four semester hours of which shall be observation and practice teaching, is suggested as the requirement for high school teachers. For elementary, graded, and rural teachers, two years of professional training in a well-equipped teacher-training institution are suggested as a reasonable minimum standard.

2. The formulation and adoption of a system of certification in accordance with these standards. Certificates should be issued only by the state board of education and on the basis of training, only. Provisions should be made whereby teachers of less than standard training may increase their training in summer sessions until they are qualified to hold standard certificates.

3. A new schedule of rebates which will recognize more adequately the teacher's investment in a year's training. Eighty-five dollars per month should be established as the minimum salary permissible for the holder of a standard certificate.

4. The setting of a date after which all teachers entering the system shall have met the requirements for standard training and for the holding of a standard certificate.

5. Abandonment of teacher-training classes in high schools and academies.

6. A central teachers' college under direct state control, located at, and affiliated with, the University of Vermont.

7. The extension of the present four weeks summer session for teachers, to six weeks.

### Study III. Louisiana

Smith examined the high school teacher situation in Louisiana in 1925-26 and made predictions as to the future needs.<sup>1</sup>

*Statement of the problem*—The purpose of this study is to demonstrate the need of an adequate state program for the training of high school teachers in Louisiana and to determine the essentials of such a program.

*Scope and methods of study*—In order to accomplish the purpose stated, the high-school situation in 1925-26 was studied, predictions were made as to the need for new high school teachers during the decade 1925-26 to 1935-36, and the facilities of the state for supplying these needs were considered.

Data for 1925-26 were collected as to number of schools, enrolments, number of teachers employed, and training, certification, tenure, salaries and teaching programs of teachers. Educational opinion and practice as to standards of training high school teachers were surveyed.

For the prediction of annual needs of Louisiana high schools for new teachers, figures showing the percent of the high school teaching force employed as new teachers in each year since 1915, were first obtained. It was recognized that the need for new teachers is dependent upon two factors; namely, the number of teachers needed to fill new positions created in the schools each year as a result of increased enrolments, and the number needed to replace those leaving the service. The number of teachers needed annually to fill new positions, in the years 1915 to 1925, was obtained by ascertaining the increase from year to year in the total

number of high school teachers employed. The number of teachers required for replacements, during the same period, was obtained by subtracting the number of teachers required to fill new positions from the total number of new high school teachers shown by the records for each year. By determining the rate of growth in high school enrolments during the past ten years, and modifying this figure in the light of experience of other states where high school systems are more fully developed than in Louisiana, estimates of public high school enrolments and the probable size of the high school teaching force in the years 1925-26 to 1935-36 were arrived at. On the basis of these estimates and the percent of the high school teaching force needed for new positions in the ten-year period since 1915, predictions were made as to the need for high school teachers to fill new positions, in each year up to 1936. Predictions as to the number of teachers needed for replacements were made on the basis of the percent of new teachers required for this purpose since 1915, considered in the light of tendencies in salaries and certification requirements calculated to result in a longer period of teaching service. By adding together estimates of the need for teachers to fill new positions and of the need for teachers for replacement purposes, the total need for new high school teachers, in each year of the decade 1925-26 to 1935-36, was predicted.

Agencies for training high-school teachers in Louisiana were divided into two classes: the private colleges and universities; and the state-supported institutions. The proportion of the total high school teaching force which each type of institution was contributing and the number of teachers coming from other states, were taken into account. The capacity of the state-supported institutions for supplying the predicted needs for new high school teachers was determined, as indicated by the number of high school students available for practice-teaching purposes.

A majority of the data employed by this study were taken from annual reports of the Louisiana department of education and the division of high school inspection, and from reports of high school principals on file in the office of the state department of education,

<sup>1</sup> Smith, James Monroe. *The Training of High School Teachers in Louisiana*. Teachers College, Contributions to Education, No. 247. New York: Bureau of Publications, Teachers College, Columbia University, 1926, 101 p.

covering a period of ten years. Information as to opinion and practice concerning standards of teacher training was based upon studies and articles dealing with the subject and related subjects, written expert opinion, reports of survey commissions, and committee reports of the National Education Association, the National Society for the Study of Education, and the American Association of Teachers Colleges.

*Definitions*—The study sets up the following definition as basic to a proper understanding of the data presented:

*New teacher.* For the purpose of this study a teacher is considered new to the state if he is appointed either to a new position, or to fill a vacancy without having had continuous experience in the high schools of the state prior to his appointment. This leads to four possible types of new teachers. First, the teacher who has had no experience whatever is obviously a new teacher; (2) the teacher whose experience prior to appointment has been gained in schools outside the state is a new teacher; (3) the teacher whose experience prior to appointment has been gained in the schools of the state, other than approved high schools is a new teacher; and (4) the teacher who has had experience in approved high schools of the state, but has ceased to teach long enough for his successor to be appointed and installed, is likewise a new teacher. p. 67-8.

*Findings of the study*—According to the data collected, the public high school system of Louisiana in 1925, comprised 341 approved four-year standard high schools, with an enrollment of approximately 42,000 students, teaching personnel of 1726 instructors, and a valuation of physical plants in excess of 16 million dollars.

The minimum standard of training required of high school teachers had been raised since 1916 to full college graduation, with 1416 teachers, or 82.2 percent of the total of the high school teaching force in 1925, meeting or exceeding this standard. Almost one-half of the high school teachers of the state had had less than five years of teaching experience, more than one-fourth had had less than two years of experience, and more than one-eighth were teaching in their first positions. Thirty-five percent of all Louisiana high school teachers were teaching for the first time in their present positions. The median length of tenure in one position was 2.06 years.

The average salary of high school teachers was found to be \$1275 per year. A direct relationship between low salaries and lack of pro-

fessional training, on the one hand, and a short period of tenure, on the other, was indicated by the data.

Two types of certificates were issued high school teachers; one a life certificate, and the other, a limited certificate, valid for five years. Although issued by the state, upon credentials, both of these were blanket certificates entitling the holder to teach any subject in any high school of the state, regardless of his training.

Five prescribed curricula were offered in Louisiana high schools; namely, general, agriculture, home economics, manual training, and commerce. Approximately 75 percent of all high school students were enrolled in the first of these. English, mathematics, science, and social science, constituting 75 percent of the total curriculum content, were common to all five curricula. A study of the teaching program of high school teachers showed 35 percent teaching one subject, only, 80 percent teaching one or two subjects, only, and 20 percent, required to teach three or more subjects. Subject combinations found in teachers' programs revealed a considerable diversity, but the following combinations were the dominant ones: (1) English and social science; (2) science and mathematics; (3) home economics and social science; (4) Latin and English.

The number of new teachers employed in Louisiana high schools in the year 1925-26 was 420. Of these, 390 were needed for replacements and 30 were required to fill new positions.

In the year 1924-25, there were 530 graduates of state-approved private institutions of higher learning in Louisiana, only 47 of whom were appointed to teaching positions in the high schools. Graduates of public institutions of higher learning numbered 422, but only 195 were graduates of the four-year professional curricula for teachers, and not all of these entered the service of the high schools. Approximately 30 percent of the total high school teaching force employed in 1924-25 received their training in other states.

If all the 1924-25 graduates of all four-year and five-year curricula (professional and non-professional) in state-supported institutions of higher learning had been certificated to teach in Louisiana high schools in 1925-26, and if no teachers had been drawn from other sources,



only 2 graduates would have failed to receive appointments.

During the decade 1915-25, the number of teachers required each year to fill new positions was 8.8 percent, and the number required for replacement, 21.8 percent of the total number of teachers employed, making a total of 30.6 percent of the entire teaching staff new to the high schools of the state each year.

It was estimated that by the year 1936 the total number of educables would be approximately 450,000; the total school enrolment, 340,000; and the total high school enrolment, 85,000, or approximately 25 percent of the total enrolment.

For the decade 1925-26 to 1935-36, it was predicted that the number of teachers needed each year to fill new positions would be 8 percent of the total high school teaching force; that the number of teachers needed for replacement would be 17 percent of the total high school teaching force in the first year of the ten-year period; and that the percent required for replacement would be reduced by one percent each year for seven years. Therefore, the total number of new teachers needed each year would be 25 percent in the first year; 24 percent, the second year; 23 percent, the third, and so on, reducing one percent in each year thereafter, until 18 percent was reached, at which rate it would remain to the end of the period.

Of the total teaching force of 1925-26, the state institutions of the state had trained only 39.1 percent, and the private institutions only 13.9 percent. However, the total number of graduates with the bachelor's degree from state institutions increased 225 percent, between 1920 and 1925, and the number of graduates of professional courses for teachers, 167 percent, between 1922 and 1925.

The maximum capacity for training teachers of the state-supported institutions, based upon the number of high school students available for practice-teaching purposes, was found to be approximately equal to the number of new teachers needed annually by the high schools of the state.

It was predicted that in the near future, if practice-teaching facilities were provided, public and private institutions in Louisiana would

be able to supply the state's needs for trained high school teachers.

**Recommendations** — The following are among the recommendations included in the proposed program for training high school teachers in Louisiana:

1. The state board of education should set up standards for the training of high school teachers.
2. The minimum standard for the training of high-school teachers should be fixed at graduation from a four-year professional curriculum.
3. The curricula for the training of high-school teachers should be definitely prescribed.
4. All institutions seeking approval for the training of high-school teachers should be required to provide adequate practice-teaching facilities as defined by this study.
5. The plan of certification of all high-school teachers upon the presentation of credentials as now provided by the state board of education should be continued, but the general or blanket certificate should be abolished and teachers should be certified by subjects only. Two classes of certificates should be issued to high school teachers:
  - a. Professional certificates, valid for five years.
  - b. Life certificates, granted to teachers whose professional certificates have expired, at the end of five years of successful teaching experience.
6. Consolidation of small high schools should be effected wherever possible, and higher standards should be adopted by the state department of education for the approval of high schools.
7. A sound minimum salary schedule should be established.

#### Study IV. Ohio

Myers studied the 1925-26 output of teacher-training institutions in relation to the 1926-27 demand and proposed a state program of teacher training.<sup>1</sup>

**Statement of problem**—On the basis of an investigation of the need for new teachers and an evaluation of teacher-training facilities in Ohio, the formulation of an improved state program for the training of teachers is attempted. The state teacher-training system is viewed, not only with regard to its present status, but in the light of its historical background, as well.

**Basic definitions**—The following definition is considered essential to a clear understanding of the facts presented by this study:

**Newness** has been defined for purposes of this study as the condition of a teacher who is doing her first teaching in Ohio. This includes inexperienced teachers and teachers who have been transferred to the state from another state. It seems obvious that if a number of teachers who formerly taught in Ohio

<sup>1</sup> Myers, Alonzo Franklin. *A Teacher-training Program for Ohio*. Teachers College, Contributions to Education, No. 266. New York: Bureau of Publications, Teachers College, Columbia University, 1927. 144 p.



are to return each year to teaching in Ohio, there is no need to include them in determining the number of new teachers which Ohio needs to train and deliver into public school teaching positions in the state each year. . . . Newness, then, in this study, refers to those teachers who are teaching for the first time in Ohio. p. 67-8.

*Scope and methods of study*—Annual reports of state commissioners of education, the files of the *Ohio Journal of Education* and the *Ohio Educational Monthly*, and studies of educational legislation in Ohio were sources of the information presented concerning the historical development of the state teacher-training system.

For the purpose of making a study of the teacher supply, teacher-training institutions were classified in eight groups, as follows: State institutions; municipal universities; city normal schools; denominational and endowed colleges (exclusive of Catholic colleges and normal schools); Catholic colleges and normal schools; private kindergarten schools; private commercial colleges; and private special schools. Each institution was asked to report the number of 1925-26 graduates trained for teaching who were known to be teaching in Ohio public schools in 1926-27. In cases where reports of graduates known to be teaching seemed to be especially inadequate, an estimate of the probable number teaching was arrived at by applying the percentage of trained graduates, found to be actually teaching in 1923-24 by Buckingham, to the total number of graduates reported by the institution in 1926-27. Data included two-year, three-year, four-year, and five-year graduates. Graduates of one-year courses, in whatever type of institution, were not considered.

Data on the annual need for new teachers were obtained by two methods: (1) all superintendents in the state were asked to submit the names of all new teachers, with newness defined as indicated above, and these teachers were then asked for information as to the type of teaching service entered; (2) the records of the state teachers' retirement board were consulted for the purpose of obtaining the names of all new teacher members.

*Findings of the study*—The number of new teachers appointed to teaching positions in the public schools of Ohio in the school year 1926-27 was 5446. The total number of teachers graduating from Ohio teacher-training in-

stitutions in 1925-26 was 2464. Ohio teacher-training agencies therefore failed to supply the needs of the schools in 1926-27, to the extent of 2982 teachers. After adding the number of trained teachers coming from other states in that year (about 750), and subtracting the number of graduates in 1925-26 who were previously experienced in Ohio, a total supply for that year amounting to 2734 trained teachers, and a shortage of 2712 trained teachers, were revealed.

The output of the various types of teacher-training institutions was found to be as shown in Table 4.

In comparing Buckingham's 1923 figures with those of this study for 1925-26, it was discovered that between 1923 and 1925-26, there was an increase in the number of graduates of state supported institutions who accepted teaching positions in Ohio, of 12.5 percent, as against an increase of 97.4 percent in the number of graduates trained in denominational and endowed colleges who entered teaching in the state.

In 1923, 44 percent of those trained in Ohio, with two years or more of training, who accepted teaching positions in the public schools of the state, were trained in the state institutions, and 26 percent were trained in denominational and endowed colleges. In 1926, 39.5 percent were trained in denominational and endowed colleges.

The discrepancy between the supply of trained teachers and the demand for them was discovered to be greatest in the elementary school field. A total of 3656 new elementary school teachers were appointed to positions in

TABLE 4.—TEACHERS TRAINED IN OHIO BY EACH TYPE OF TEACHER-TRAINING AGENCY 1925-1926

| Type of Teacher-Training Agency              | Number Trained | Number Known to Be Teaching in Ohio Public Schools | Probable Number Teaching in Ohio Public Schools |
|----------------------------------------------|----------------|----------------------------------------------------|-------------------------------------------------|
| State Institutions . . . .                   | 1,309          | 792                                                | 1,026                                           |
| Municipal Universities . .                   | 172            | 153                                                | 153                                             |
| City Normal Schools . . .                    | 207            | 136                                                | 136                                             |
| Denominational and Endowed Colleges . . .    | 1,697          | 878                                                | 973                                             |
| Catholic Colleges and Normal Schools . . . . | 182            | 3                                                  | 3                                               |
| Private Kindergarten Schools . . . . .       | 143            | 84                                                 | 84                                              |
| Private Commercial Colleges . . . . .        | 104            | 53                                                 | 62                                              |
| Private Special Schools . .                  | 57             | 27                                                 | 27                                              |
| Total . . . . .                              | 3,871          | 2,126                                              | 2,464                                           |

1926-27. In 1925-26, Ohio teacher-training institutions graduated 1022 trained elementary school teachers, thus failing, by 2634 teachers, to supply the needs of the elementary schools of the state. Even after allowing for the trained elementary teachers coming from other states (about 320) and 200 teachers trained in Ohio institutions, who were already experienced in the state, the data showed that at least 2500 of the new elementary teachers appointed to positions in 1926-27 had had only one year of training beyond the high school. The greater discrepancy revealed in the elementary school teaching field, as compared with other branches of the teaching service, was believed to be due to several causes; namely, the provision for certificating elementary school teachers on the basis of only one year of training, the fact that many teachers leave elementary school teaching and enter teaching in the junior or senior high-school fields each year, and the fact that agencies for training high school teachers in the state are more nearly adequate than those for training elementary teachers.

There were in 1926-27, 119 agencies accredited for the training of teachers in Ohio, a larger number than in any other state. On the other hand, omitting Wilberforce University for colored students, which made almost no contribution to the teaching force of the state, Ohio had fewer state teacher-training institutions per million of population than any of the 48 states.

Viewed in the light of the standards set up by the state department of education for the training of teachers, to become effective by the opening of the school year 1927-28, it was found that in 1926-27:

1. The state institutions, the municipal universities, and two of the three city normal schools fully met the new requirements or were prepared to do so by the opening of another school year.

2. Two of the twenty-seven denominational and endowed colleges already met the new requirements, and a number of others were prepared to do so before the opening of another school year. Eleven engaged in the training of elementary school teachers and not one of these had an adequate organization for carrying on this work. Eight of the twenty-seven institutions were not accredited by any of the principal accrediting agencies for colleges and universities.

3. Only two of the Catholic institutions were accredited by any of the principal accrediting agencies.

4. The county normal schools were being reduced in numbers as rapidly as possible. The number of

these schools decreased from 51 in 1925-26 to 30 in 1926-27, and still further reductions were expected during the coming year.

5. None of the private commercial colleges met the standards set up by the state department of education and it seemed unlikely that any of them would be able to do so before these standards went into effect.

6. A few of the private kindergarten training schools were in the process of affiliating with other institutions. Few, if any, of the others were able to meet the new requirements and it seemed improbable that they would be able to do so. The same situation existed with regard to private special schools.

7. The facts discovered seemed to indicate that fully one-half of the institutions engaged in the training of teachers in Ohio would be eliminated as teacher-training agencies before the opening of the school year 1927-28.

8. Teacher-training standards in the state were far below those recognized as desirable. Standards generally considered to be the minimum desirable were maximum standards in Ohio.

9. Besides the state department of education which alone was authorized to grant state-wide certificates, there were 93 city, 88 county, and 15 exempted village boards of examiners engaged in the certification of teachers.

10. A lack of coordination among the state institutions operated as one of the greatest handicaps in the development of an adequate state teacher-training program. There was overlapping in the work of the various institutions. Each institution had a separate board of trustees.

*Recommendations*—On the basis of the facts revealed by the study, a state teacher-training program involving the following steps was proposed:

1. All teacher-training institutions operated solely for profit should be eliminated with the exception of any that were found to measure up in every respect to those agencies operated by the state or by endowment.

2. The training of elementary school teachers by denominational and endowed colleges should be discontinued.

3. County normal schools should be abandoned as rapidly as state institutions can be provided to take their place.

4. Teacher-training requirements in Ohio should be raised.

5. Better salaries and better working conditions for rural school teachers should be provided.

6. The state department of education should be reorganized and strengthened and given sole authority over the certification of teachers.

7. The state should be committed to the policy of no state support for denominational and private colleges.

8. A single board of trustees consisting of nine lay members should be established for all of the state universities. A research secretary and the necessary

staff to enable the board to secure reliable data on which to base institutional policies should be employed.

9. Four additional state teacher-training institutions for the training of elementary school teachers should be established. These colleges should develop strong departments for the training of rural teachers.

### Study V. New York

Coxe investigated teacher demand in New York for the year 1926-27 and made predictions as to future demand.<sup>1</sup>

*Statement of problem*—This study seeks to determine the demand for teachers in the public schools of New York State for the school year 1926-27 and on this basis to forecast the demand for the years 1927-28 to 1933-34, inclusive. Data for the year 1926-27 are carefully analyzed with respect to the need for different types of teachers in different types of schools and in different size communities.

*Importance of problem*—Since the function of training teachers is generally accepted as a state responsibility, and since teacher-training facilities are provided primarily to supply the needs of the schools for trained teachers, rather than to give training to all who wish to enter teaching, an accurate statement of teacher demand is essential to an intelligent planning of a state teacher-training program. The needs of the state, rather than the needs of the individual, are of first importance, but in serving the needs of the state, the individual will probably also be benefited, since it is folly for one to train for a service for which there is an insufficient demand.

*Basic definitions*—The following definitions are set up by the study:

1. *Teacher*. The term includes not only classroom teachers but also special teachers, supervisors, principals, and superintendents. Medical inspectors, clerks, teachers of evening, vocation, and Americanization classes, and attendance officers are not included. p. 1.

2. *New teacher*. Teachers included in the following groups are considered to be new teachers:

I-B Teachers who began to teach in the fall of 1926, but had not taught during the school year 1925-26.

I-M Teachers who began to teach in the middle of 1926-27, but who did not teach the first half of 1926-27 nor any of 1925-26.

II-B Teachers who began their teaching in the fall of 1926, who had not taught the previous year, but who had taught the first half of 1925-26.

II-M Teachers who began teaching in the middle of 1926-27, had not taught the first half of that year, but had taught all or a part of 1925-26.

III-B Teachers who came from private schools to public schools in the fall of 1926.

III-M This group is the same as III-B except that the teachers began teaching in the middle of 1926-27.

IV-B Teachers who came from outside of New York State and who first taught in New York State, and who first taught in the state in the fall of 1926.

IV-M This group is the same as IV-B except that the teachers began teaching in the middle of 1926.

V-B Teachers who are not new to the state, but are new only with respect to the kind of position which they held beginning in the fall of 1926. For example, if a classroom teacher became a supervisor or a supervisor became a principal, she would be included in this group. A change in the type of school, as well as in kind of position may be involved.

V-M This group is the same as V-B, except that the teachers were new to the position in the middle of 1926-27.

VI-B Teachers who were new with respect to the type of school, but not with respect to the kind of position, in the fall of 1926. The group would include a teacher who was transferred from an elementary school to a junior high school, or a principal who changed from a junior high school to a senior high school.

VI-M This group was the same as VI-B except that a change in type of school took place in the middle of 1926-27. p. 1-2.

All inexperienced teachers are included in groups I-B and I-M above, although these groups also contain some experienced teachers. All members of other groups have had previous teaching experience.

*Scope and method of study*—Data presented are for New York State, exclusive of New York City. They were obtained from reports received from the following types of communities:

|                         |                       |
|-------------------------|-----------------------|
| Cities of the 1st class | Villages              |
| Cities of the 2nd class | Supervisory districts |
| Cities of the 3rd class |                       |

Due to the difficulty of obtaining accurate information, one phase of teacher demand (i. e., the number of unfilled teaching positions) was omitted from consideration.

Data received were 98 percent complete. In spite of this fact a separate correction factor was applied for each type of community.

In predicting the future need for new teachers in New York State two assumptions were necessary:

<sup>1</sup> Coxe, W. W. *Teacher Demand in New York State*. Albany, New York: Bureau of Educational Measurements, State Education Department, 1928. 23 p. Mimeographed.

1. That the increase in the number of teachers employed during the years 1928-34 would follow the general trend of the increase since 1918.

2. That the proportion of new teachers to the total number of teachers in 1926-27 would remain constant.

Predictions as to the total size of the teaching force in each of the years 1928 to 1934 inclusive were made by extending to 1934 the curve showing the trend in the number of teachers employed in the years 1918-28. To the figures thus obtained was then applied the percent of teachers who were new (as defined in Groups IB and IM) in the school year 1926-27. The results indicated the probable need for new teachers in each of the school years between 1928 and 1934. Predictions were obtained by this method for elementary school teachers and for high school teachers, separately.

*Findings of study*—Examination of the data collected revealed 7921 new teachers in 1926-27. This figure was thought to be fairly representative of the annual need for new teachers in New York State (exclusive of New York City).

The number of new teachers in the various groups set up by the study is shown in Table 5.

Groups I-B and I-M, comprised largely of inexperienced teachers, constituted 69 percent of all new teachers reported were employed in groups were experienced, these two groups should perhaps be considered most important in indicating the need for teacher-training facilities in the state.

Of the total number of teachers employed in the state in 1926-27, 12.9 percent of elementary teachers and 12.7 percent of secondary teachers were new as defined by Groups I-B and I-M.

**TABLE 5.—NUMBER OF NEW TEACHERS IN NEW YORK STATE IN 1926-1927<sup>1</sup>**

| Groups               | Number | Percent |
|----------------------|--------|---------|
| I-B and I-M.....     | 5,409  | 69      |
| II-B and II-M.....   | 341    | 4       |
| III-B and III-M..... | 108    | 1       |
| IV-B and IV-M.....   | 535    | 7       |
| V-B and V-M.....     | 481    | 6       |
| VI-B and VI-M.....   | 1,047  | 13      |
| Total.....           | 7,921  | 100     |

<sup>1</sup> Not including New York City.

From Table 6 it will be seen that 64 percent of all new teachers reported were employed in supervisory districts (rural or semi-rural). Twenty-nine percent of the teaching force in supervisory districts was new in 1926-27. This percent decreased as the size of the community increased. In first-class cities only 10 percent of the teaching force was new.

With regard to the separate subjects taught in the high school, English and mathematics were the subjects most in demand. Subjects most frequently taught in combinations with other subjects were English, French, history, Latin, mathematics, and biology.

With respect to different types of teaching positions the data indicated an annual need of 138 supervisors, 231 principals, including supervising principals, and 28 superintendents.

The predicted need for new elementary and high school teachers is shown in Table 7.

### Study VI. California

Eakin investigated demand and supply in California for 1926-27.<sup>1</sup>

*Statement of the problem*—The purpose of this study is to discover the relation between the supply of teachers available for placement in California for the first time in the academic year, 1926-27, and the demand for them.

<sup>1</sup> Eakin, Ruth M. *Supply and Demand of Teachers in California, 1926-27*. Bulletin No. H-3. Sacramento, Calif.: Division of Teacher Training and Certification, California State Department of Education, 1928. 23 p.

**TABLE 6.—TYPES OF COMMUNITIES IN WHICH NEW TEACHERS WERE EMPLOYED**

| Type of Community            | Total Number of Teachers | Number of New Teachers | Percent of New Teachers | Percent of Total Teachers Who Are New |
|------------------------------|--------------------------|------------------------|-------------------------|---------------------------------------|
| Cities of the 1st class..... | 5,262                    | 571                    | 7                       | 10.1                                  |
| Cities of the 2nd class..... | 4,495                    | 482                    | 6                       | 10.8                                  |
| Cities of the 3rd class..... | 6,559                    | 1,035                  | 13                      | 15.8                                  |
| Villages.....                | 4,489                    | 779                    | 10                      | 17.5                                  |
| Supervisory districts.....   | 18,070                   | 5,054                  | 64                      | 28.8                                  |
| Total.....                   | 38,875                   | 7,921                  | 100                     | 19.9                                  |



**Importance of problem**—That teachers' salaries, although somewhat slow in responding to economic changes, will eventually be fixed by the law of supply and demand is pointed out. If the demand is greater than the supply, communities may be forced to pay high salaries for inferior service. An oversupply of teachers will tend to lower salaries. The best conditions prevail when supply and demand are approximately equal.

During recent years, reports from teacher placement agencies have indicated that the supply of teachers is in excess of the demand. If this is true, certain questions arise. Is the oversupply general, or does it exist only in certain branches of the profession? Is the state training too many teachers? Can the situation be improved by a better selection of candidates for training, or by the establishment of higher certification standards? These, and many other questions, can be answered only on the basis of data of the kind supplied by this study.

**Definitions**—The study sets up the following definitions:

**Demand** is indicated by the number of positions filled by teachers not employed in the state during the previous year. p. 5.

**New teachers** include teachers: (1) without experience; (2) with experience outside the state; and (3) with experience in California but with an interval of at least one year of unemployment in California. p. 5.

**Supply** is indicated by the number of (1) credentials granted to graduates of California teacher-training institutions; (2) credentials granted to candidates who apply directly to the state board of education (3) certificates issued on county examinations; (4) certificates issued by county board of education on diplomas or degrees from other states; (5) certificates issued to graduates of private training schools for kindergarten teachers. p. 5.

TABLE 7.—PREDICTED NEED FOR ELEMENTARY AND SECONDARY TEACHERS IN NEW YORK<sup>1</sup>

| Year         | Elementary-School Teachers | High-School Teachers |
|--------------|----------------------------|----------------------|
| 1926-27..... | 3,889                      | 932                  |
| 1927-28..... | 3,980                      | 980                  |
| 1928-29..... | 4,080                      | 1,030                |
| 1929-30..... | 4,170                      | 1,080                |
| 1930-31..... | 4,260                      | 1,130                |
| 1931-32..... | 4,360                      | 1,190                |
| 1932-33..... | 4,470                      | 1,240                |
| 1933-34..... | 4,580                      | 1,300                |

<sup>1</sup> Not including New York City.

**Scope and methods of study**—The study is limited to a consideration of the supply of and demand for elementary, junior high, and senior high school teachers. No attention is given to data on substitute teachers and teachers employed in evening schools and junior colleges. Data presented are for the school year 1926-27.

Supply data were procured from the following sources: data with regard to credentials issued by the state board of education and the state teachers colleges, from the statistical records of the teacher-training and certification division of the state department of education; data with regard to graduates of private training schools for kindergarten teachers, from the records of those schools; data concerning certificates issued on the basis of county examinations, and on the basis of degrees and diplomas from institutions outside the state, from the county superintendents.

Demand data were obtained by checking the names included in the list of new teachers filed with the state board of education in November, 1926, for purposes of the state teacher retirement system, against information, contained in city and county school directories, as to grade of school in which employed. When names were found in the retirement list which did not appear in the directories, further information was procured through correspondence with the local superintendent or personal visits to the school systems.

**Findings of study**—Analysis of the data collected revealed a total demand for 3935 new teachers in California in the year 1926-27, a total supply of 7320 new teachers, and an excess of supply over demand of 3385 new teachers. Of the excess, 2671 teachers, or 78 percent, were certificated to teach in the high schools, and 533, or 15 percent, in the junior high schools.

Only 181 more teachers, five percent of the excess, were certified to teach in elementary schools and kindergartens, than were actually needed. How many of the 2818 elementary school positions available were filled by teachers certificated to teach in secondary schools, is not known. If secondary teachers, holding elementary school positions could be eliminated, it is possible that an actual shortage of persons trained to fill elementary school positions might be found to exist.

## Study VII. North Carolina

Noble analyzed the North Carolina situation in 1924-25 relative to teacher demand and supply.<sup>1</sup>

*Statement of problem*—An analysis of the teacher-training situation in North Carolina, in certain of its quantitative and qualitative aspects, is presented in this report. Part I, in the light of data on supply of trained teachers in 1925-26, and estimates as to the number of beginner teachers needed annually, 1900-50, seeks to predict the relationship that will obtain, in the years 1925-50, between teacher supply and teacher demand. Part II considers the quality of training of the North Carolina teaching force, as indicated by improvement in the type of certificates held, and by requirements for certificates.

*Scope and methods of study*—Part I. Figures showing the annual need for beginner teachers, at five-year intervals between 1900-25, are from records of the state department of public instruction. Forecasts for the years 1925-50, also at five-year intervals, were taken from the 1927 report of the state educational commission. By deducting from the figures forecast by the state educational commission, amounts suggested by the actual numerical increase in number of teachers employed in 1900-25, modified estimates of demand for the years 1925-50 were also obtained. Data on supply of trained teachers, collected in 1926, were made use of. The estimates of teacher demand, in the years 1925-50, made by the state educational commission, and the modified estimates computed were then compared with a hypothetical supply of trained teachers based on one of two assumptions: (1) that the 1925-26 supply is maintained only during the period between 1925 and 1950; and (2) that the supply of 1925-26 is increased 100 percent during this period.

Part II. Analysis of certificates for teaching in the elementary schools was limited to Primary Class A and Grammar Grade Class A certificates; and in the secondary schools to Class A certificates held by teachers of English, history, and French. Only teachers who received all their training in in-state institutions of higher learning were included in the

groups whose certificates were subjected to analysis.

*Findings of the study*—Part I. As a result of the study the following facts were revealed, concerning the relationship between estimated teacher demand in the years 1925-50 and the supply of trained teachers, as indicated by data for the year 1925-26.

In the year 1925-26, 1237 teachers represented the total supply of new or beginner-teachers (teachers who actually taught in North Carolina) from in-state institutions of higher learning. Of these, 685 were certificated to teach in elementary schools, and 552 in high schools. In the same year, 418 white teachers were received from out-of-state institutions, of whom 167 were elementary school teachers, and 251 were high school teachers, thus making a total supply of white beginner-teachers for the public schools of North Carolina, of 1655.

North Carolina needed approximately 4000 white beginner teachers in 1925-26. Therefore, in that year, there was an actual shortage of 2345 trained teachers.

According to estimates of the state educational commission as to the number of beginner-teachers needed, it was found that if the supply of white teachers from in-state institutions were barely maintained, the supply of elementary teachers would, in 1930, equal only 25 percent of the demand; in 1950, only 21 percent of the demand. The supply of high school teachers, in 1930, would equal only 88 percent of the demand, and, in 1950, only 47 percent of the demand. If the supply of white beginner teachers from in-state institutions in 1925-26 were increased 100 percent by 1950, a 57 percent shortage would still exist.

With regard to negro teachers, if the 1925-26 supply from in-state institutions were merely maintained, it would amount to only 10 percent of estimated demand for negro elementary teachers in 1930, and only 8 percent in 1950. The supply of negro high school teachers in 1925-26 would equal only 24 percent of the demand in 1950.

When the modifications were applied to the original estimates of the demand for beginner teachers, it was found that if the total 1925-26 supply of 1655 white beginner teachers were

<sup>1</sup> Noble, M. C. S., Jr. *Teacher Training in North Carolina*. Educational Publications, No. 135. Division of Information and Statistics, No. 1. Raleigh, N. C.: State Superintendent of Public Instruction, 1929. 70 p.

merely maintained, it would, in 1950, equal only 40 percent of the demand for 4149 new teachers, estimated on this basis. If the 1925-26 supply were increased 100 percent, it would still, in 1950, be equal to only 80 percent of the estimated demand.

While all teachers represented in the data on teacher supply in 1925-26 were from in-state or out-of-state institutions of higher learning, and therefore considered as a part of the state's supply of trained teachers, it should not be understood that all of them were "well-trained." The amount of training possessed by these teachers varied from one year to four or more years of training beyond high school graduation. More than one-half of the white teachers and more than three-fourths of the negro teachers, had had not more than two years of training beyond high-school graduation.

Although during the period 1900-26 there was in every year a sufficiently large number of persons desiring teaching positions, there was never, in any year, an adequate supply of trained teachers. This study indicates that even if the teacher supply of 1925-26 should increase 100 percent by 1950, there will still be a marked shortage of well-trained teachers.

Part II. On the basis of an analysis of certificates held by elementary and high school teachers of North Carolina, it was discovered that:

1. Elementary and high school teachers, both white and negro, were making rapid progress in the type of certificates which they held.

2. Minimum standards of professional training in North Carolina were still far below the generally accepted standards. In 1926-27, 55.6 percent of the white elementary teachers, and 88.2 percent of negro elementary teachers had had less than two years of training beyond high-school graduation; 31.4 percent of white high school teachers and 59.7 percent of negro high school teachers had had less than four years of training beyond high school graduation.

3. Candidates for the highest types of elementary and secondary certificates, while in attendance at institutions of higher learning, were apt to study subjects which had little relation to their professional needs. Guidance, as a rule, seemed to end with the completion by the candidate of certain compulsory freshman courses.

4. Transcripts presented in application for the highest type of elementary and secondary certificates, showed little specific preparation for the type of teaching for which the certificates were issued.

5. Many high school teachers were teaching subjects for which they had had no preparation, whatsoever, at an institution of higher learning.

*Recommendations*—The following recommendations are offered:

1. There are three ways in which North Carolina may provide an adequate supply of teachers for its public schools, namely, (1) by the enlargement of existing teacher-training institutions, (2) by the establishment of additional teacher-training institutions, (3) by a combination of these two methods.

2. North Carolina should establish higher standards for the training of her teaching personnel.

## Study VIII. Colorado

Whitney presents evidence on teacher supply and demand in Colorado in 1926-27 as compared with previous studies.<sup>1</sup>

*Statement of problem*—The study seeks to ascertain the facts concerning the teacher-training situation in Colorado, particularly with reference to sources of trained teachers, the number of teachers supplied from these sources, the number needed to take care of the annual turnover, and questions dealing with length of service, training, teaching programs, and salaries of teachers.

*Importance of the problem*—Attention is called to increased enrolments in teacher-training institutions and the fact that placement bureaus are reporting difficulty in finding positions for graduates, a situation which seems to indicate a supply of trained teachers in excess of the need for them. An oversupply of teachers, while it may make possible better methods of teacher selection, is apt to result in a lowering of salaries to a level inconsistent with amount of preparation and experience. A knowledge of the true facts of the situation is essential. Concerning the importance to the educational welfare of the state of information of the type set forth in this study, the writer has the following to say:

The prime need with regard to teacher training in any state is a constant study similar to that reported in this book and carried on continuously year by year. This should be conducted by the state as an annual inventory check-up of business done in the preparation and use of public school teachers. It should be centered in the office of the department of public instruction which must then be furnished with professional leadership on a high level and with an adequate research organization

<sup>1</sup> Whitney, Frederick Lamson. *Teacher Demand and Supply in the Public Schools*. Greeley, Colo.: Colorado State Teachers College, 1930. 139 p.

capable of handling a continuity investigation such as is suggested.

In this way, as in manufacturing efforts, accurate information of actual conditions both in plant and in market will always be at hand. Likewise, standards for production and for use of product will eventually appear, and this will guide all efforts to maintain a balance between demand and supply of public school teachers. These will contribute, not only to knowledge about gross numbers, but to information about types of jobs involved in public school teaching, maximum and minimum amounts of training allowable, compensation necessary to buy needed levels of teaching ability, probable amount of annual defection of trained graduates from teaching, and like vital questions. Furthermore, if research workers are competent, they will study pertinent personnel problems among teachers in training and teachers on the job, as well as curriculums needed for prospective teachers and for public school pupils.

As a result, the public school system of the state ought to begin to emerge slowly from the curse of methods of administration based on guess objectives and traditional practices. Then, education will begin to become more of a profession in that there will be a skillfully chosen personnel, paid while at work on a single salary basis (not in terms of sex, experience, age of pupils, and size of community only) and supported after retirement by an organized state plan, managed in accord with well known principles of business administration.

**Definitions**—In order to clarify the information presented in this study, the following definitions are set up:

**Teachers.** This includes all public school officers of whatever rank and duty . . . who were rendering any sort of professional service to the state. p. 128.

**New teachers.** The following are considered as new teachers to the school system:

1. Teachers with no previous experience.
2. Teachers with previous experience outside Colorado.
3. Teachers with previous experience in Colorado, but with an interval of six months or more between the teaching positions.
4. Teachers coming from a teaching position in another community.
5. Teachers who have changed rank in the same system; for example, from being a classroom teacher to acting as principal.
6. Teachers who have changed to some other type of school in the same system; for example, from being an elementary school teacher, to acting as high school teacher.

. . . However . . . it will be seen that items 4, 5, and 6, do not deal directly with actual teacher needs (of the state). They give information about movements of teachers into different communities and to different types of work within the state. p. 4-5.

**Demand.** Demand is given in terms of teachers newly appointed in the state . . . Vacancies re-

maining unfilled by regular teachers . . . clearly represented additional "demands" and must be taken account of. p. 7-9.

**Graduates.** A graduate in this investigation is a student who has been "trained" by attending an institution of higher learning with the result that he may receive a state certificate to teach without undergoing an examination. p. 16-17.

**Trained teacher.** A public school employee was taken to be trained if he had graduated from a two or a four year college course and had been admitted to state certification without examination. p. 128.

**Supply.** Supply is reported (1) by the totals of graduates of Colorado institutions who taught in the state, and (2) by the number of new teachers appointed in Colorado who came from other states. p. 7-8.

**Scope and methods of study**—In November, 1926, the five state-supported and two private teacher-training institutions of the state were asked to furnish detailed data concerning their graduates for the years 1923-24, 1924-25, and 1925-26. Facts were sought for each graduate on twenty items, including name, year of graduation, details of teaching service since graduation (as to length, type of school, rank, and teaching service) and facts about preparation (as to length of course and type of specialization). For all three years studied, an average return of 71.7 percent on these questions was received, but returns for the year 1925-26 were 86 percent complete, and, in computing the relation between demand and supply, figures reported for this year were used as typical of the period under investigation.

In order to obtain data on annual demand, cards were sent to each of the 36 superintendents in first class districts, 79 superintendents in second class districts, and 63 county superintendents who were in closest touch with third class schools located in rural districts. Each superintendent was asked to have one card filled out by each teacher new to his school system and to return these cards to the Department of Research, Colorado State Teachers College. The cards called for twenty-four items of information covering detailed personnel data, as to experience, training, salary, present position, and present teaching program. A 100 percent return was received in first class districts, 80 percent in second class districts; of county superintendents, 76 percent replied.

The number of vacant positions left unfilled was estimated on the basis of the percent of available positions left unfilled in Ohio, as dis-



covered by Buckingham in his 1923-24 study. Corrections for incomplete returns were applied both to figures on supply and to figures on demand.

In order to supplement and partially to check on data obtained by the above methods a report on certificates issued in 1925-26 to all public school teachers in the state was obtained.

Figures reported as a result of similar investigations made in Ohio, Vermont, Wisconsin, and Kentucky were used for comparative purposes.

*Findings of the study*—Reports were received from a total of 1,825 new teachers appointed to public school positions in the school year 1926-27, but 839 of these were new only to the school system, 25 were new to the rank of position held, and 9 were new to the type of position held, leaving 952 teachers who were actually new to the state. Of these 952 teachers who were new to the state, 238 received appointments in first class districts, 168 in second class districts, and 546 in third class districts; 643 had had no previous experience; 260 were from other states; and 49 had returned to teaching after an interval of six months or more of non-service.

Adding to the number of teachers new to the state an estimated probable number of vacancies of 98, a total demand in that year for at least 1,050 new teachers was arrived at. It was thought that if returns concerning new teachers appointed were complete, a true demand for about 1,200 new teachers would be revealed.

With regard to the supply of trained teachers, data collected showed 1,129 graduates of Colorado's seven institutions of higher learning in the year 1925-26. Individual reports were received concerning 971 of these. After making corrections for incomplete returns, it was estimated that 960 graduates actually entered teaching and that 775 of these were appointed to teaching positions in Colorado. Reports were received from 307 teachers trained in institutions in other states. Adding this number to the 775 graduates of teacher-training institutions in the state estimated to be teaching in the public schools of the state, a total supply of 1,082 teachers was indicated.

While it was believed that the true demand was approximately 1,200, it was also con-

sidered probable that the supply from other states amounted to considerably more than 307 teachers. Reports from the state department of education showed that there were 960 such teachers certificated in the year 1925-26. If only half of those certificated actually became teachers in Colorado, the supply would be approximately equal to the estimated teacher demand of 1,200. It therefore seemed probable that the total supply of trained teachers, available for the public schools of Colorado in 1926-27, was somewhat, but only slightly, in excess of the actual needs.

In addition to the trained teacher supply, however, the report on certificates issued, received from the state department of education, revealed a total of 1,318 teachers certificated on the basis of examinations and ten weeks of professional training. This group did not constitute a part of the supply of trained teachers as defined in the study, but it did form a part of the state's total available teacher supply, thus causing a considerable oversupply when both trained and untrained teachers available for positions were considered.

The state law requires that in 1931 and thereafter all teachers certificated in Colorado must have had a minimum of two years of professional training beyond the secondary school. It was anticipated that this law, by eliminating the large body of untrained applicants for teaching positions, would go far to restore a proper balance between teacher demand and the total teacher supply.

### Study IX. North Dakota

Peik made a survey of teacher demand and supply in North Dakota in 1929-30.<sup>1</sup>

*Statement of problem*—A study of the teacher-training program of North Dakota to determine whether it fills the need of the schools, with respect to the number and quality of teachers, as economically and efficiently as possible.

*Scope and methods of study*—A survey was made of the number of teaching positions, the number of teachers new to the state and to the local school systems, and the number of twelve-week, one-year, two-year, and four-year graduates of teacher-training institutions in the state. Curricular offerings, class-size, and enrolments of these institutions were also studied.

<sup>1</sup> Peik, W. E. *The Training of Teachers in North Dakota*. Reprint from the Biennial Report of the Superintendent of Public Instruction of North Dakota, 1930. 71 p.

Data on the number of new teachers were reported on the basis of a check made in November of the school year, 1929-30, and included all new appointments up to December of that year.

Data presented on the graduates of teacher-training institutions were for the year September 1, 1928 to August 31, 1929.

Future demands for new high school teachers were predicted by estimating the average annual need for new high school teachers and then raising this estimate, by adding for every year after 1929-30, an amount representing the estimated average annual increase in the need for new high school teachers. In the absence of statistics covering a period of years prior to 1929, the estimate of average annual need for new high school teachers was made by using the figure for the number of new high school teachers appointed in the year 1929-30 up to December, increased slightly to allow for possible appointments after December, and then again increased slightly (since it was desired that the estimate should err on the side of liberality, if at all) to the point where it bore a ratio of 1 to 5 to the total number of high-school teachers employed. Findings of recent studies made in neighboring states indicated that this ratio was ample for North Dakota. The estimated average annual increase in the number of new high school teachers needed was arrived at by applying this ratio to the total number of high school teaching positions in each of the years 1925 to 1929, averaging the year to year increases or decreases shown by the resulting estimates of the annual need for new high school teachers during this period, and increasing the average thus obtained to take account of the more rapid trend of growth during the last two years of the period, 1927 to 1929.

Information concerning North Dakota's wealth, income, expenditures, and population characteristics and trends was taken from published reports of the Federal Government and from the *Research Bulletin* of the National Education Association.

*Findings of the study*—In 1928, North Dakota ranked second among the states, with respect to percent of its population living in the open country, ninth, with respect to per capita wealth, and forty-eighth, with respect to the percentage relationship of income to wealth.

This means that, in spite of the unfavorable ratio of income to wealth, North Dakota is faced with the responsibility, to a greater extent than almost any other state, of providing an adequate system of rural education and a well-developed program for the training of teachers for rural school positions.

Neither the population of the state nor the total number of teachers employed has been growing rapidly. Data collected indicated that North Dakota needs to train fewer teachers for positions within the state, than do from two-thirds to three-fourths of the states of the Union.

The total number of teaching positions in the state in November, 1929, was found to be 8,534 of which 4,361 or 51.1 percent were in one-room rural schools. The total number of positions in schools of more than one room was 4,173, of which 1,570 were in high schools and high school departments offering less than four years of high school work, and 2,603 were in elementary graded town and rural schools of more than one room. Over four-fifths of all teachers were elementary school teachers, and of these about 63 percent were in one-room rural schools.

Of the total teaching force of 8,534 teachers, 1,585, or 18.6 percent, were teaching for the first time in North Dakota. Of these, 978 were employed in one-room schools, 334 in elementary rural, village and city schools of more than one room, and 273 in high schools and high school departments.

In the year from September 1, 1928, to August 31, 1929, a total of 2,297 persons completed teacher-training courses in North Dakota.

Since only 1,585 new teachers were needed in 1929-30, 712, or 45 percent more than enough teachers, were trained to meet the demand.

There was a demand in the year 1929-30, up to December, for 273 new teachers in the high schools, and the supply of teachers available who had earned degrees through the completion of four-year professional courses was 285. There were also 51 teachers with degrees from other curriculums, and 43 graduates of Jamestown College, making a total of 379 teachers holding degrees available for high school teaching positions, or 106 more than were needed.

To make allowance for possible new appointments in the high schools, after December 1, the demand figure indicated by the data for the year 1929-30 was raised to 279 and a liberal estimate of the average annual demand for new high school teachers was placed at 315.

An estimate of an average yearly increase of 15 in the number of new high school teachers needed, was believed to be sufficiently liberal. On the basis of these figures it was predicted that 330 new high school teachers would be needed in North Dakota in the year 1931-32, and that this demand would be increased by about 15 teachers each year for several years thereafter. A decline in this annual increase after a number of years would indicate that high school enrolments were approaching the saturation point.

Facilities for the training of high school teachers were judged to be ample. Figures collected indicated that present overproduction would take care of any increased temporary demand for training which might result from the recent ruling of the state board of education requiring all new high school teachers to hold degrees.

Only 334 new teachers were needed in 1929-30 for elementary positions in graded schools. To supply this need, 734 graduates from standard two-year and one-year curriculums were provided by the five teachers colleges and normal schools, or more than twice as many as were needed. A surplus of 400 was available to meet the need for teachers of one-room rural and village schools.

In 1929-30, there was a need for 978 new teachers to fill positions in one-room schools. In the previous year, the teacher-training institutions turned out 760 graduates of the twelve-week curriculum, and, in addition, 403 graduates of the one-year curriculum who could not be placed in elementary schools of more than one room, or a total surplus of 1,563 teachers. Although there were included among these some who already held positions and were merely up-grading their certificates, and others who, in all probability, did not enter teaching, it was, nevertheless, apparent that a large oversupply of teachers existed. There were not enough one-year and two-year graduates to fill the need for teachers in elementary graded and one-room rural schools, but when the

supply of twelve-week graduates was added, there were many more than enough.

According to the state certification law, four-year high-school graduates were permitted to become teachers in elementary and rural schools, with only 12 weeks of additional training. Since summer sessions at state teacher-training institutions were twelve weeks in length, it was possible to qualify for a certificate to teach in a single summer session. A majority of the rural teachers in the state obtained their training in this way.

Of graded and high school teachers in the towns, 92 percent were discovered to have attained the minimum standard, accepted as desirable, of two years of training beyond high school graduation, but only 12 percent of rural teachers had met or exceeded this standard and only 19.1 percent had completed one year of training beyond the high school.

Comparison with conditions in other states revealed that North Dakota had a relatively large number of teachers colleges and normal schools; that the number of colleges and universities in proportion to the population was above the average; and that the number of population behind each institution was relatively small.

With six institutions of higher learning engaged in the training of high-school teachers, no institution possessed a sufficient enrolment to enable it to provide economically a complete curricular offering. The number of majors offered per institution was large, and the number of graduates, by majors, widely scattered among the institutions. A large number of small classes was found; the median class size was 19.6 pupils.

In recent years the state university, the college of agriculture, and Jamestown College have practically met the need for high school teachers of standard qualifications.

All state institutions of higher learning were found to be under one governing body, the state board of administration. This system of concentrating under one board of control all of the state higher educational institutions makes possible the subordination of the ambitions of each local institution to a unified state-wide system of teacher training. Therefore, an opportunity possessed by few other states is open to North Dakota for developing a well coordinated state teacher-training program.

**Recommendations**—Among the recommendations based on the facts revealed by this study are the following:

1. Careful state financial administration of the public school system, including the teacher-training institutions, because the cost of providing adequate educational opportunities in North Dakota is relatively higher than in other less rural states.

2. An annual factual self-survey of all state teacher-training institutions to furnish facts upon which state and institutional policies may be based.

3. The development of a coordinated state program of teacher training, which shall meet the needs of the public schools as fully as possible without overproduction and unnecessary expense.

4. A more intensive program of professional training for rural teachers on the part of the normal schools and teachers colleges, to consist of a one-year specialized rural curriculum in each of these institutions, this curriculum to articulate with or be required as a part of the standard two-year and four-year curriculums for elementary teachers.

5. Reduction of the length of the summer session from 12 to 10, 9, or 6 weeks, so that young high school graduates may not be able to qualify for rural teaching during one summer session.

6. Raising as soon as possible the legal minimum requirements for the second grade elementary certificate, from twelve weeks to one year of professional training. Whether this is done immediately or not, teacher-training institutions should take advantage of the existing oversupply of teachers by preparing a larger proportion of rural school teachers in the one-year curriculum.

7. The abandonment of the "dual purpose" curriculum, the first two years of which prepare for elementary school teaching, while the third and fourth years prepare for high school teaching.

8. The issuance of separate first grade professional certificates for elementary and for secondary school teaching with certain additional specification as to content in education for those who are to supervise or administer schools.

9. Integrated two-year and four-year curriculums in elementary education in each teachers college for rural and urban elementary teachers, grade supervisors, junior high school teachers, and elementary school principals, with possible specialization in upper grade and junior high school work.

10. The designation of special centers for the training of teachers of special subjects.

11. The upgrading of professional training of instructors in teachers colleges.

12. The concentration of the function of training high school teachers in the state university and the state college of agriculture.

### General Implications and Conclusions

Since all of the nine studies given above were not equally complete, it is not possible to find

unanimous agreement upon all problems. However, there were conclusions and recommendations with certain common implications. While many of these points of tentative agreement will require further research and experimental adjustment, it is worthwhile to summarize them as follows:

1. *The salaries and welfare of teachers are closely associated with economic laws.* An oversupply of teachers tends to lower salaries, makes tenure insecure, and forces many excellent teachers to seek more lucrative occupations.

2. *There tends to be an oversupply of persons with licenses to teach, but a limited supply of persons with a high level of professional training.* The certification laws of a number of the states permit persons with little or no professional training to obtain temporary credentials. Such persons can often be employed at a smaller wage than the teacher with two years or more of college preparation.<sup>1</sup>

3. *In a period of an oversupply of teachers the certification and professional training requirements should be raised.* The theoretic purposes of raising the requirements are: (1) to keep out those who refuse to meet high standards, (2) to force those holding temporary certificates to obtain higher licenses, and (3) to diminish the number of new graduates until the profession can absorb the oversupply.

4. *The certification requirements need to be revised, and the certification power should be centralized in the state department of education.* The certification laws in a number of states are behind actual practices. This condition has come about where local authorities demand teachers with more training than the state laws require. Another common weakness is that the certification power is divided among such authorities as the local superintendents, the teacher-training colleges, and the state department of education. Under such conditions it is difficult to maintain a high, uniform standard throughout the state. When revisions in certification laws take place, the power to issue licenses should rest only with the state department of education.

5. *The high school normal training classes and similar inferior teacher-training agencies should be abolished as rapidly as possible.* The product of such training is so young and inex-

<sup>1</sup> An "adequate professional training" in these studies is usually defined as two or more years beyond high school. Obviously, this standard emphasizes an educational rather than an economic viewpoint. In an economic sense anyone who will accept the wages offered is a satisfactory supply.



perienced as to be able to give rural children little intellectual inspiration. The turnover among those with inferior training is so rapid as to be harmful to rural schools. As long as this inferior supply exists in many districts it will be impossible to raise salary and teaching conditions to an attractive level.

6. *Particular attention should be given to the need for better salaries and better trained teachers in rural areas.* If high school training classes are abolished, which institutions will provide rural teachers? Can rural schools ever get better trained teachers until salary and living conditions are improved? Will rural salaries ever be attractive without state aid and a state-wide minimum salary schedule? These and other problems will not be solved by the abolition of the low-grade credentials and the inferior teacher training school alone.

7. *There is need for guidance of the number of teachers preparing to teach specific subjects.* English, social studies, and similar academic subjects are more quickly oversupplied than the vocational and commercial subjects. Should teachers be certificated to teach in only one or two fields? If so, what effect will these limitations have on the small high school?

8. *Teacher-training activities need to be centered under state control.* Since the state is the largest demander for trained teachers it should

coordinate both the public and the private teacher-training activities. Some propose coordination through a state board of higher education, others advocate a director of teacher training in the state department of education, and others suggest a combination of the two plans.

9. *The migration of teachers between states seriously influences teacher supply and the state teacher-training program.* Even in states with well-developed teacher-training institutions the number of teachers employed from other states may be 10 percent of those appointed during a given year. In other states the out-of-state teachers constitute over 50 percent of the annual supply. These facts suggest the desirability of statistics gathered on a national basis.

10. *There is a need for continuous and extensive study of teacher demand and supply by state school officials.* The facts gathered by state departments at the present time require supplementing through questionnaires and other research technics. The extra effort forces states to irregular and periodic surveys which are often informing, but not conducive to constructive policies. There is need for continuous fact gathering and publicity by state departments of education. These facts should be made available to students, teachers, to local school authorities, and to teacher-training officials.

TEACHER training is the basic business of the state in an attempt to perpetuate itself through the agencies of public education, and this function must be raised in its management above the present level of expediency and guess which maintains in nearly every state unit. A careful and objective check of teacher demand and supply, made as a continuation study year by year in a well organized state department of education, will constitute the first minimum necessity. Common business principles demand it. The state must study its teacher-making institutions in terms of both quality and quantity of product. At the same time, it must know in detail how this product is disposed of in the teacher market of the area supplied. In this manner only, can a proper balance be maintained between professional needs and teacher output. Only then can it be made sure that state funds will not be misapplied and that the social and economic life of the state will not suffer from inefficiency and inadequacy in the state system of public education.

—Whitney, Frederick L., *Teacher Demand and Supply in the Public Schools*. p. vii.

## CHAPTER III

### The Status of Teacher Demand and Supply in the Elementary and Secondary Schools

For several years, even before the present economic depression, superintendents and other educationists have asked the question: Do we have a surplus of teachers? Opinion has given both negative and affirmative answers.

In planning this survey it seemed reasonable to assume that state departments of public instruction should be able to give exact data, or reliable estimates, as to teacher demand and supply in each state. These state offices issue teacher certificates, collect personnel statistics, approve teacher-training institutions, and otherwise come in contact with teacher personnel facts. Under this assumption interviews and questionnaires were used in obtaining from state departments of public instruction the data set forth in this chapter.<sup>1</sup>

#### The Demand for Teachers in the Public Day Elementary and Secondary Schools

Demand is defined in this study as the number of new teachers<sup>2</sup> appointed to replace resignations and to care for the increase of teaching positions.<sup>3</sup> The gross annual demand for new teachers in each state may be determined either (1) by estimating the annual loss of teachers in terms of the average teaching life, (2) by asking state departments how many newly appointed persons are added annually to the state teaching personnel, and (3) by totaling the number of newly appointed teachers in all of the school districts of the state. The resources available limited the committee to procedures (1) and (2) above.

*What is the annual loss of teachers in each state?*—If we know the average teaching life of teachers it is possible to compute the number who will have to be replaced each year. Obviously, a computation based upon an "average life" may not square with the exact facts. Also, an estimate of teacher turnover

does not include the number of new teachers appointed to care for the growth of the system. With these cautions in mind we may examine column 3 of Table 8.

Table 8 gives the demand for new teachers as determined on two bases. Column 3 shows the annual turnover as estimated on an average teaching life of six years. Six years<sup>4</sup> was the median of the replies of 33 states to the question: "On the average, how long do teachers remain in service in your state?" The total number of teaching positions (column 2) was used in computing turnover, because state departments seem surer of this figure than they do of the total number of teachers employed.

According to Table 8 the schools of the United States must replace about 145,291 persons each year.<sup>5</sup> No doubt column 3 is very inaccurate when applied to specific states. In California, New York, Massachusetts, and similar states the average teaching life is probably above six years. The average period of service in South Dakota, North Dakota, Wyoming, and Iowa is probably less than six years. Evidence that Table 8 must be accepted with caution is shown by Table 9.

Table 9 compares annual turnover (column 2) with two estimates of annual demand. Column 3 contains demand figures taken from the various research studies reported in Chapter II. These data are chiefly for the years between 1923-24 and 1926-27, and are not directly comparable to column 4. In column 4 we have the annual demand for 1928-29 as estimated by state departments of education. (Table 8, column 4.)

It is clear from Table 9 that to assume a six-year period of teaching as the "average teaching life" can only give approximations of the real demand. While the computations of

<sup>1</sup> In a few instances statistics of the United States Office of Education and other agencies have been used to supplement those collected for this study. Due credit has been given to all such secondary sources of information.

<sup>2</sup> The term "teacher" in this study includes superintendents, classroom teachers, principals, and supervisors. A "new teacher" is one who did not hold a teaching position in the state during the year prior to the study.

<sup>3</sup> Dr. Buckingham's pioneer study in 1923-24 used a definition which adds to the above statement "plus the number of unfilled positions in that year." That is, if a position is left vacant during the year or is filled by a temporary substitute, Dr. Buckingham considers that position as a part of the demand. In this study, vacancies have not been considered because state departments usually reported that there were no unfilled positions.

<sup>4</sup> The median was 5.77 years.

<sup>5</sup> An estimate by 46 state superintendents in 1922-23 gave 110,560 as the annual teacher turnover. See Table 3 of the *Research Bulletin*, National Education Association, November, 1924.

column 3, Table 8, should be helpful to interested officials, such approximations are poor substitutes for painstaking surveys.

*What do state departments report as the annual demand for 1929-30?*—It might have been possible to locate the number of new

teachers appointed in each state for 1929-30 by writing directly to the local school superintendents.<sup>1</sup> The fact that there are about 6,700<sup>2</sup> district, city, and county superintendents indicates the magnitude of such a task. The investigator was forced by circumstances<sup>3</sup>

<sup>1</sup> As a test, questionnaires were sent to local superintendents in Arizona, Connecticut, and Wyoming. After four "follow-up" letters about 80 percent of the superintendents returned the inquiry blanks. Difficulties encountered: (1) Much of data was based on estimates, (2) inexact replies called for endless correspondence, and (3) duplications of jurisdiction between county, city, and district superintendents were impossible to straighten out in a national survey. These problems emphasize the need for careful state studies.

<sup>2</sup> According to the *Educational Directory*, United States Office of Education, 1930.

<sup>3</sup> It is beyond the purposes of this report to present detailed statistics. See Introduction.

TABLE 8—THE ANNUAL DEMAND FOR NEW TEACHERS

| State                     | Number of Teaching Positions in 1929-30 | Annual Demand on Basis of a Six Year Teaching Life <sup>1</sup> | Annual Demand Records and Estimates of State Department <sup>2</sup> |
|---------------------------|-----------------------------------------|-----------------------------------------------------------------|----------------------------------------------------------------------|
| 1                         | 2                                       | 3                                                               | 4                                                                    |
| Alabama.....              | 16,306                                  | 2,718                                                           | 2,371                                                                |
| Arizona.....              | 3,194 <sup>3</sup>                      | 532                                                             | 1,048                                                                |
| Arkansas.....             | 12,763 <sup>4</sup>                     | 2,127                                                           | .....                                                                |
| California.....           | 43,000                                  | 7,167                                                           | 2,806                                                                |
| Colorado.....             | 9,812 <sup>4</sup>                      | 1,635                                                           | .....                                                                |
| Connecticut.....          | 10,817                                  | 1,803                                                           | 915                                                                  |
| Delaware.....             | 1,420                                   | 237                                                             | *150                                                                 |
| District of Columbia..... | 2,932                                   | 489                                                             | *210                                                                 |
| Florida.....              | 11,018 <sup>5</sup>                     | 1,836                                                           | *1,135                                                               |
| Georgia.....              | 19,047                                  | 3,175                                                           | .....                                                                |
| Idaho.....                | 4,658                                   | 776                                                             | *600                                                                 |
| Illinois.....             | 45,724 <sup>4</sup>                     | 7,621                                                           | .....                                                                |
| Indiana.....              | 23,853 <sup>4</sup>                     | 3,976                                                           | 1,764                                                                |
| Iowa.....                 | 25,842                                  | 4,307                                                           | 5,192                                                                |
| Kansas.....               | 19,695                                  | 3,283                                                           | *3,400                                                               |
| Kentucky.....             | 15,991                                  | 2,665                                                           | *3,500                                                               |
| Louisiana.....            | 11,959                                  | 1,993                                                           | 1,525                                                                |
| Maine.....                | 5,847                                   | 975                                                             | *975                                                                 |
| Maryland.....             | 8,306 <sup>4</sup>                      | 1,399                                                           | 844 <sup>6</sup>                                                     |
| Massachusetts.....        | 25,573                                  | 4,262                                                           | *1,800                                                               |
| Michigan.....             | 32,047 <sup>4</sup>                     | 5,341                                                           | .....                                                                |
| Minnesota.....            | 22,196                                  | 3,699                                                           | *3,329                                                               |
| Mississippi.....          | *16,500                                 | 2,750                                                           | *2,000                                                               |
| Missouri.....             | 24,936                                  | 4,156                                                           | 2,675                                                                |
| Montana.....              | 6,053 <sup>4</sup>                      | 1,009                                                           | .....                                                                |
| Nebraska.....             | 14,644 <sup>4</sup>                     | 2,441                                                           | .....                                                                |
| Nevada.....               | 875 <sup>4</sup>                        | 146                                                             | .....                                                                |
| New Hampshire.....        | 3,003                                   | 501                                                             | 457                                                                  |
| New Jersey.....           | *28,500                                 | 4,750                                                           | 2,317                                                                |
| New Mexico.....           | *3,530                                  | 588                                                             | .....                                                                |
| New York.....             | *75,150                                 | 12,525                                                          | *9,567                                                               |
| North Carolina.....       | 23,623                                  | 3,937                                                           | .....                                                                |
| North Dakota.....         | 8,534                                   | 1,422                                                           | 1,585                                                                |
| Ohio.....                 | 41,815 <sup>5</sup>                     | 6,969                                                           | 4,355                                                                |
| Oklahoma.....             | 19,565 <sup>5</sup>                     | 3,261                                                           | .....                                                                |
| Oregon.....               | 8,185 <sup>4</sup>                      | 1,364                                                           | .....                                                                |
| Pennsylvania.....         | *62,000                                 | 10,333                                                          | *4,500                                                               |
| Rhode Island.....         | *3,850                                  | 642                                                             | 255                                                                  |
| South Carolina.....       | 13,271                                  | 2,212                                                           | .....                                                                |
| South Dakota.....         | 9,044                                   | 1,507                                                           | .....                                                                |
| Tennessee.....            | *17,950                                 | 2,992                                                           | *2,500                                                               |
| Texas.....                | 43,276                                  | 7,213                                                           | .....                                                                |
| Utah.....                 | 4,552                                   | 759                                                             | .....                                                                |
| Vermont.....              | 2,864                                   | 477                                                             | *350                                                                 |
| Virginia.....             | *16,800                                 | 2,800                                                           | *1,600                                                               |
| Washington.....           | 12,128                                  | 2,021                                                           | 2,006                                                                |
| West Virginia.....        | 15,800                                  | 2,633                                                           | *1,750                                                               |
| Wisconsin.....            | 20,218                                  | 3,370                                                           | *1,200                                                               |
| Wyoming.....              | 2,981                                   | 497                                                             | *500                                                                 |
| Total.....                | 871,737                                 | 145,291                                                         | 69,181 <sup>7</sup>                                                  |

\* Estimated for 1929-30 by state departments.

<sup>1</sup> Replies of 33 states as to the average teaching life have a median of 5.77 years.

<sup>2</sup> Figures supplied by state departments either as exact records or estimates.

<sup>3</sup> Figures for 1927-28 supplied by state department.

<sup>4</sup> Figures for 1927-28 from bulletin of the U. S. Office of Education.

<sup>5</sup> Figures for 1928-29 supplied by state department.

<sup>6</sup> Does not include Baltimore.

<sup>7</sup> Total for 32 states and District of Columbia.

TABLE 9—COMPARISON OF SEVEN STATES  
IN REGARD TO TEACHER DEMAND AS DE-  
TERMINED BY VARIOUS BASES

| State               | Annual Demand on Basis of Number Replaced Each Year (Column 3, Table 8) | Annual Demand According to Research Studies of Chapter II | Annual Demand Reported by State Departments |
|---------------------|-------------------------------------------------------------------------|-----------------------------------------------------------|---------------------------------------------|
| 1                   | 2                                                                       | 3                                                         | 4                                           |
| California.....     | 7,167                                                                   | 3,395 <sup>1</sup>                                        | 2,806                                       |
| Colorado.....       | 1,635                                                                   | 1,200 <sup>2</sup>                                        |                                             |
| New York.....       | 12,525                                                                  | 10,596 <sup>3</sup>                                       | 9,567                                       |
| North Dakota.....   | 1,422                                                                   | 1,585 <sup>4</sup>                                        | 1,585                                       |
| North Carolina..... | 3,937                                                                   | 5,169 <sup>5</sup>                                        |                                             |
| Ohio.....           | 6,969                                                                   | 6,368 <sup>6</sup>                                        | 4,355                                       |
| Vermont.....        | 477                                                                     | 520 <sup>7</sup>                                          | * 350                                       |

<sup>1</sup> Reported by Ruth M. Eakin for 1926-27.  
<sup>2</sup> Reported by F. L. Whitney for 1926-27.  
<sup>3</sup> W. W. Coxé reported a demand of 7,921 for 1926-27 in New York, exclusive of New York City. The average number of new teachers appointed in New York City in 1927-28 and 1928-29 according to the city superintendent's report was 2,675. This number has been added to the demand reported in Coxé's study.  
<sup>4</sup> Reported by W. E. Peik for 1929-30.  
<sup>5</sup> Reported by M. C. S. Noble for 1925-26. Includes need for 1,169 negro teachers.  
<sup>6</sup> Reported by B. R. Buckingham for 1923-24.  
<sup>7</sup> The 1924-25 turnover of teachers reported by R. M. Steele.  
\* Estimated by state departments of education.

to ask state departments of education to supply the data.

Table 10 presents the statistics sent in by 33 state departments of education. Column 2 gives the total number of new teachers in 1929-30, while columns 3 and 4 distribute the total on the basis of experience. Columns 5 and 6 give the number and the percent of the new teachers from outside of the state.

Thirty-three states<sup>1</sup> reported the number of new teachers. Fifteen based their replies on exact records, and 18 gave estimates. Utah, Texas, South Dakota, South Carolina, New Mexico, North Carolina, Oklahoma, Michigan, and Georgia returned the questionnaire blank, but with no answer to this question. Arkansas, Colorado, Illinois, Montana, Nebraska, Nevada, and Oregon did not return the inquiry blank.<sup>2</sup> Recapitulation of the ability of state departments to supply data as to annual demand is given in Table 11.

According to Table 11 about one-third of the states are unable to supply even estimates as to the annual need for new teachers.<sup>3</sup> One-third of the states can estimate the annual demand for elementary and secondary school teachers. Only about one-third of the states are able to supply demand data based upon exact records.

*Is the demand for experienced or inexperienced teachers?*—The amount of experience demanded, as shown in Table 10, is of significance to several groups. First, the training schools may be sending out a larger number of inexperienced persons than the demand requires. For example: State A has an annual demand for 1,000 teachers. The number of experienced teachers employed from nearby states is 200. The number of experienced teachers returning to teaching from within the state amounts to 100 persons. Hence, the demand for *experienced* teachers is 300 out of the total demand of 1,000. This condition leaves a demand for 700 inexperienced persons but the teacher-training schools are graduating 1,200 inexperienced teachers. Theoretically, there would be an oversupply of 500 teachers.<sup>4</sup>

Table 12 is not conclusive evidence, but it illustrates the condition suggested by the example given as State A, above. The states which reported exact statistics on inexperienced teachers in Table 10 are included in Table 12. Columns 2, 3, and 4 of Table 12 are based upon 1927-28 reports from teacher-training institutions. Column 6 of Table 12 includes the 1929-30 demand for inexperienced new teachers, as reported by state departments to the investigator. Columns 2 and 3 are probably larger than they should be, because they include teachers who obtained degrees while holding regular positions.<sup>5</sup> Obviously, such persons are neither inexperienced nor new teachers. On the other hand, column 5 is probably smaller than it should be for some states because it does not include the inexperienced persons certificated on the basis of examination, nor does it contain the graduates of high school teacher-training classes.<sup>6</sup>

<sup>1</sup> Including the District of Columbia.

<sup>2</sup> The inquiry forms were mailed May, 1930 and followed up by three or more letters.

<sup>3</sup> A few states said that they did not finish tabulating their 1929-30 statistics until the Spring of 1931. This fact may account for several of the states where neither records nor estimates are available.

<sup>4</sup> Under actual conditions a few of the 500 would enter non-teaching occupations, marry, move to other states, or fail to get teacher's certificates. What are the facts? At present few states are able to say what is actually happening.

<sup>5</sup> Foster found that a significant percent of the degrees granted in summer sessions in Ohio were to teachers who were holding regular teaching positions. See annotated bibliography.

<sup>6</sup> Most of students enrolled in high school teacher-training classes are qualified for certificates in one year or less. In 1927-28 there were 50,286 students in such classes according to page 5 of *Statistics of Teachers Colleges and Normal Schools, 1927-28*, Bulletin, 1929, No. 14. U. S. Department of the Interior, Office of Education, Washington, D. C.



This section has included a discussion of the significance to teacher-training institutions of the demand for inexperienced teachers, as shown in column 3 of Table 10. Another interesting implication of this same table is that a large percent of the demand for experienced teachers in several states is supplied from out-of-state sources. This condition may be seen by comparing columns 4 and 5 of Table 10 for such states as Arizona, California, Connecticut, Delaware, Idaho, Massachusetts, New Jersey, Minnesota, Pennsylvania, and Wyoming.

What does it mean when the number of "outside" teachers is much smaller than the

demand for experienced teachers? Kentucky is an example of this, with 150 outsiders employed, and a demand for 3,200 experienced teachers. Does Kentucky have 3,000 former

TABLE 11—ABILITY OF STATE DEPARTMENTS OF EDUCATION TO REPORT ANNUAL TEACHER DEMAND

| Type of Report                         | Number | Percent |
|----------------------------------------|--------|---------|
| 1. Exact records.....                  | 15     | 30.6    |
| 2. Estimates.....                      | 18     | 36.7    |
| 3. No records or estimates possible... | 9      | 18.4    |
| 4. No answer to inquiry.....           | 7      | 14.3    |
| Total.....                             | 49     | 100.0   |

TABLE 10—THE NUMBER OF TEACHERS AND THE AMOUNT OF EXPERIENCE DEMANDED IN 1929-30

| State                     | Annual Demand in Terms of New Teachers 1929-30 | Column 2 Divided on Basis of Experience |             | New Teachers from Outside of State |                   |
|---------------------------|------------------------------------------------|-----------------------------------------|-------------|------------------------------------|-------------------|
|                           |                                                | Inexperienced                           | Experienced | Number                             | Percent of Col. 2 |
| 1                         | 2                                              | 3                                       | 4           | 5                                  | 6                 |
| Alabama.....              | 2,371                                          | *2,242                                  | *129        | *129                               | 5                 |
| Arizona.....              | 1,048 <sup>1</sup>                             | 350                                     | 698         | *626                               | 60                |
| Arkansas.....             | .....                                          | .....                                   | .....       | .....                              | .....             |
| California.....           | 2,806                                          | 2,156                                   | 650         | 650                                | 23                |
| Colorado.....             | .....                                          | .....                                   | .....       | .....                              | .....             |
| Connecticut.....          | 915                                            | 619                                     | 296         | 474                                | 52                |
| Delaware.....             | *150                                           | *60                                     | *90         | *75                                | 50                |
| District of Columbia..... | *210                                           | *77                                     | *133        | *25                                | 12                |
| Florida.....              | *1,135                                         | *567                                    | *568        | *284                               | 25                |
| Georgia.....              | .....                                          | .....                                   | .....       | .....                              | .....             |
| Idaho.....                | *600                                           | *350                                    | *250        | *300                               | 50                |
| Illinois.....             | .....                                          | .....                                   | .....       | .....                              | .....             |
| Indiana.....              | 1,764 <sup>2</sup>                             | *1,411                                  | *353        | .....                              | .....             |
| Iowa.....                 | 5,192                                          | *3,894                                  | *1,298      | 400                                | 8                 |
| Kansas.....               | *3,400                                         | *3,100                                  | *300        | *50                                | 1                 |
| Kentucky.....             | *3,500                                         | *300                                    | *3,200      | *150                               | 4                 |
| Louisiana.....            | 1,525                                          | 1,425                                   | 100         | .....                              | .....             |
| Maine.....                | *975                                           | *750                                    | *225        | .....                              | .....             |
| Maryland.....             | *444 <sup>3</sup>                              | 583                                     | 261         | 214                                | 25                |
| Massachusetts.....        | *1,800                                         | *1,300                                  | *500        | *550                               | 31                |
| Michigan.....             | .....                                          | .....                                   | .....       | .....                              | .....             |
| Minnesota.....            | *3,329                                         | *2,885                                  | *444        | *444                               | 13                |
| Mississippi.....          | *2,000                                         | *1,500                                  | *500        | *400                               | 20                |
| Missouri.....             | 2,675                                          | 2,460                                   | 215         | 185                                | 7                 |
| Montana.....              | .....                                          | .....                                   | .....       | .....                              | .....             |
| Nebraska.....             | .....                                          | .....                                   | .....       | .....                              | .....             |
| Nevada.....               | .....                                          | .....                                   | .....       | .....                              | .....             |
| New Hampshire.....        | 457                                            | 371                                     | 86          | *96                                | 21                |
| New Jersey.....           | 2,317                                          | 1,409                                   | 908         | 1,055                              | 46                |
| New Mexico.....           | .....                                          | .....                                   | .....       | .....                              | .....             |
| New York.....             | *9,567                                         | *8,657                                  | *910        | *744                               | 8                 |
| North Carolina.....       | .....                                          | .....                                   | .....       | 500 <sup>4</sup>                   | .....             |
| North Dakota.....         | 1,585                                          | *1,135                                  | *450        | 363                                | 23                |
| Ohio.....                 | 4,355                                          | *3,605                                  | *750        | *750                               | 17                |
| Oklahoma.....             | .....                                          | .....                                   | .....       | .....                              | .....             |
| Oregon.....               | .....                                          | .....                                   | .....       | .....                              | .....             |
| Pennsylvania.....         | *4,500                                         | *4,300                                  | *200        | *200                               | 4                 |
| Rhode Island.....         | *255                                           | *170                                    | *85         | *100                               | 39                |
| South Carolina.....       | .....                                          | .....                                   | .....       | .....                              | .....             |
| South Dakota.....         | .....                                          | .....                                   | .....       | *500                               | .....             |
| Tennessee.....            | *2,500                                         | *2,250                                  | *250        | *150                               | 6                 |
| Texas.....                | .....                                          | .....                                   | .....       | .....                              | .....             |
| Utah.....                 | .....                                          | .....                                   | .....       | .....                              | .....             |
| Vermont.....              | *350                                           | *300                                    | *50         | *125                               | 36                |
| Virginia.....             | *1,600                                         | *1,450                                  | *150        | *75                                | 5                 |
| Washington.....           | 2,006                                          | 1,087                                   | 919         | 322                                | 16                |
| West Virginia.....        | *1,750                                         | *1,700                                  | *50         | *87                                | 5                 |
| Wisconsin.....            | *1,200                                         | *600                                    | *600        | *400                               | 33                |
| Wyoming.....              | *500                                           | *300                                    | *200        | *250                               | 50                |
| Total.....                | 69,181                                         | 53,363                                  | 15,818      | 10,673                             | Average: 23.2     |

\*Estimated by state departments of education.

<sup>1</sup>Data supplied for 1927-28.

<sup>2</sup>Data supplied for 1928-29.

<sup>3</sup>Does not include Baltimore City.

<sup>4</sup>See page 12 of reference 28 in the bibliography at the end of this report.

teachers returning to the profession after a year or more in training institutions? Or are these former teachers persons who married or entered non-teaching occupations and are now returning to regular teaching?<sup>1</sup>

When the number of teachers entering from outside sources exceeds the demand for new experienced teachers, does it mean that inexperienced persons are entering from other states? For example, Connecticut received 474 teachers from the outside, and employed 296 experienced teachers. Does this mean that 178 new inexperienced teachers entered Connecticut from the training schools of nearby states? Columns 4 and 5 of Table 10 raise these same questions in regard to Idaho, Massachusetts, New Hampshire, Rhode Island, Vermont, West Virginia, and Wyoming.

*What part of the demand is met by teachers from other states?*—Each state department was asked to report the number of the newly appointed teachers for 1929-30 who came from out-of-state sources. These data are given in

columns 5 and 6 of Table 10. Column 6 shows the percent of the total demand formed by "outsiders." It is interesting to re-state these facts as shown in Table 13.

**TABLE 13.—GROUPING OF STATES ON THE BASIS OF THE PERCENT OF DEMAND SATISFIED BY OUT-OF-STATE SOURCES**

| Group I<br>Less than<br>10 percent                                                                                    | Group II<br>10 to 30<br>percent                                                                                                      | Group III<br>30 to 50<br>percent                                                         | Group IV<br>Over 50<br>percent |
|-----------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|--------------------------------|
| Alabama<br>Iowa<br>Kansas<br>Kentucky<br>Missouri<br>New York<br>Pennsylvania<br>Tennessee<br>Virginia<br>W. Virginia | California<br>Dist. of Col.<br>Florida<br>Maryland<br>Minnesota<br>Mississippi<br>N. Hampshire<br>North Dakota<br>Ohio<br>Washington | Delaware<br>Idaho<br>New Jersey<br>Mass.<br>R. Island<br>Vermont<br>Wisconsin<br>Wyoming | Arizona<br>Connecticut         |

Table 13 shows rather clearly that there are national aspects to the teacher demand and supply problem. The states in groups III and IV comprise one-third of the 30 states shown in Table 13.<sup>2</sup> These states get 30 percent or

<sup>1</sup> Although state departments were asked not to count new teachers with practice teaching, only, as "experienced," the Kentucky figures may be in error on this point.

<sup>2</sup> Although a majority of the states in groups III and IV of Table 13 are among the smaller states in population and area they contain 104,075 or 12 percent of the total number of teaching positions in the United States.

**TABLE 12.—THE 1929-30 DEMAND IN NINE STATES FOR INEXPERIENCED TEACHERS COMPARED WITH THE SUPPLY OF INEXPERIENCED TEACHERS AS ESTIMATED FROM 1927-28 DATA**

| State <sup>1</sup> | Estimated Supply of Inexperienced Teachers<br>from Various Sources |                                                             |                                  |                    | 1929-30<br>Demand<br>for<br>Inexperi-<br>enced<br>Teachers | Status of the Demand<br>and Supply for Inex-<br>perienced Teachers |         |
|--------------------|--------------------------------------------------------------------|-------------------------------------------------------------|----------------------------------|--------------------|------------------------------------------------------------|--------------------------------------------------------------------|---------|
|                    | Normal<br>Schools<br>and<br>Teachers<br>Colleges <sup>2</sup>      | First Degree Gradu-<br>ates of Colleges and<br>Universities |                                  | Total <sup>3</sup> |                                                            | Shortage                                                           | Surplus |
|                    |                                                                    | Education <sup>4</sup>                                      | Art and<br>Sciences <sup>4</sup> |                    |                                                            |                                                                    |         |
| 1                  | 2                                                                  | 3                                                           | 4                                | 5                  | 6                                                          | 7                                                                  | 8       |
| Arizona.....       | 395                                                                | 92                                                          | 26                               | 513                | 350                                                        |                                                                    | 163     |
| California.....    | 1,360                                                              | 462                                                         | 1,318                            | 3,140              | 2,156                                                      |                                                                    | 984     |
| Connecticut.....   | 633                                                                | 12                                                          | 441                              | 1,085              | 619                                                        |                                                                    | 467     |
| Louisiana.....     | 492                                                                | 139                                                         | 244                              | 875                | 1,425                                                      | 550                                                                |         |
| Missouri.....      | 2,597                                                              | 217                                                         | 438                              | 3,252              | 2,460                                                      |                                                                    | 792     |
| New Hampshire..... | 343                                                                | 0                                                           | 270                              | 613                | 371                                                        |                                                                    | 242     |
| New Jersey.....    | 1,560                                                              | 3                                                           | 403                              | 1,966              | 1,409                                                      |                                                                    | 557     |
| Rhode Island.....  | 40                                                                 | 6                                                           | 203                              | 249                | *170                                                       |                                                                    | 79      |
| Washington.....    | 1,574                                                              | 278                                                         | 347                              | 2,199              | 1,087                                                      |                                                                    | 1,112   |
| Total.....         | 8,994                                                              | 1,209                                                       | 3,690                            | 13,893             | 10,047                                                     | 550                                                                | 4,396   |

<sup>1</sup> Nine states reporting exact records in column 3 of Table 10. Maryland omitted above because statistics reported to the investigator did not include Baltimore.

<sup>2</sup> Total number granted credentials for one to four years of training plus all degrees conferred in both public and private colleges. From Tables 4, 9, 13, and 17 in *Statistics of Teachers Colleges and Normal Schools, 1927-28*, Bulletin, 1929, No. 14. U. S. Department of the Interior, Office of Education, Washington, D. C.

<sup>3</sup> Number granted baccalaureate degrees in education in both public and private institutions. From Tables 9 and 11 in *Statistics of Universities and Colleges, 1927-28*, Bulletin, 1929, No. 38. U. S. Department of the Interior, Office of Education, Washington, D. C.

<sup>4</sup> Column 4 contains 45 percent of the baccalaureate degrees in arts and sciences granted by public and private institutions of higher education. This percent has been assumed on the basis of a study of 83,000 graduates of 199 liberal arts colleges. See page 450 of the *Seventh Yearbook (1929)*, Department of Superintendence, National Education Association.

<sup>5</sup> A comparison of these figures with column 5 of Table 15 shows a fair degree of agreement. This condition is particularly true when exact data are given in Table 15. See Arizona, California, New Jersey and Washington.

more of their annual demand from other states. Even the states in group II of Table 13 obtain a significant proportion of their teachers from the outside.

Data are not available on the details of this migration between states. Is there a distinct westward movement of teachers? Are teachers moving south? Are some states losing more teachers than they gain? Are several states providing the teacher-training program for their neighbors? These and other problems call for careful study by state school officials.

<sup>1</sup> The report of state departments as to the number of outsiders actually employed in 1929-30 was taken as the total available supply of outsiders. Of course, the total number willing to accept employment in other states was probably much larger than the number actually employed. Hence, the estimate of the total supply for 1929-30 is probably less than actual conditions.

## The Supply of Teachers for the Public Day Elementary and Secondary Schools

The supply for 1929-30 is defined in this study as the sum of (1) the number of persons in each state completing training courses in 1928-29 which qualified them for teaching, (2) the number of persons certificated in each state in 1928-29 for teaching, on the basis of examinations in place of training courses, and (3) the number of persons employed from other states.<sup>1</sup> The facts as reported by state departments of education are given in Table 14.

TABLE 14.—THE NUMBER, TRAINING, AND SOURCES OF TEACHER SUPPLY

| State                     | Total Number of Persons Completing Teacher Training in 1928-29 | Number Years of Training of Persons Reported in Column 2 |           |                 | Number Certificated by Examination | Number of Teachers from Other States | Total Supply (Columns 2, 6, and 7) |
|---------------------------|----------------------------------------------------------------|----------------------------------------------------------|-----------|-----------------|------------------------------------|--------------------------------------|------------------------------------|
|                           |                                                                | Less than 2 years                                        | 2-3 years | 4 or more years |                                    |                                      |                                    |
| 1                         | 2                                                              | 3                                                        | 4         | 5               | 6                                  | 7                                    | 8                                  |
| Alabama.....              | 2,191                                                          | 965                                                      | 593       | 633             | 51                                 | * 129                                | 2,371                              |
| Arizona.....              | 422 <sup>1</sup>                                               | *0                                                       | *307      | *115            | 0                                  | * 626                                | 1,048                              |
| Arkansas.....             | .....                                                          | .....                                                    | .....     | .....           | .....                              | .....                                | .....                              |
| California.....           | 3,603                                                          | *0                                                       | *1,103    | *2,500          | *100                               | 650                                  | 4,353                              |
| Colorado.....             | .....                                                          | .....                                                    | .....     | .....           | .....                              | .....                                | .....                              |
| Connecticut.....          | 447 <sup>2</sup>                                               | 0                                                        | 447       | .....           | .....                              | 474                                  | 921                                |
| Delaware.....             | 40                                                             | *0                                                       | *31       | *9              | *30                                | *75                                  | 145                                |
| District of Columbia..... | *202                                                           | *0                                                       | *0        | *202            | 0                                  | *25                                  | 2,227                              |
| Florida.....              | *850                                                           | *250                                                     | *350      | *250            | 2,786                              | *284                                 | 3,920                              |
| Georgia.....              | *737                                                           | *0                                                       | *584      | *153            | .....                              | .....                                | 737                                |
| Idaho.....                | 412                                                            | 0                                                        | 330       | 82              | 18                                 | *300                                 | 730                                |
| Illinois.....             | .....                                                          | .....                                                    | .....     | .....           | .....                              | .....                                | .....                              |
| Indiana.....              | 4,846                                                          | 0                                                        | 2,284     | 2,562           | 0                                  | .....                                | 4,846                              |
| Iowa.....                 | *5,640                                                         | *1,800                                                   | *1,440    | *2,400          | *3,837                             | 400                                  | 9,877                              |
| Kansas.....               | 6,520                                                          | 2,995                                                    | 2,028     | 1,497           | 1,800                              | *50                                  | 8,370                              |
| Kentucky.....             | *2,600                                                         | *1,800                                                   | *600      | *200            | 1,570                              | *150                                 | 4,320                              |
| Louisiana.....            | 1,293                                                          | 360                                                      | 603       | 330             | 0                                  | .....                                | 1,293                              |
| Maine.....                | 665 <sup>3</sup>                                               | .....                                                    | 665       | .....           | 18                                 | .....                                | 683                                |
| Maryland.....             | 677                                                            | 0                                                        | 510       | 167             | 0                                  | 214                                  | 891                                |
| Massachusetts.....        | *1,484 <sup>2</sup>                                            | 0                                                        | *1,033    | *451            | 0                                  | *550                                 | 2,034                              |
| Michigan.....             | *6,983 <sup>2</sup>                                            | .....                                                    | *785      | *6,198          | *0                                 | .....                                | *6,983                             |
| Minnesota.....            | 3,093                                                          | 900                                                      | 1,193     | 1,000           | 0                                  | *444                                 | 3,537                              |
| Mississippi.....          | *1,750                                                         | *1,000                                                   | *450      | *300            | *1,800                             | *400                                 | 3,950                              |
| Missouri.....             | 1,796                                                          | 1,387                                                    | 267       | 142             | 2,672                              | 185                                  | 4,653                              |
| Montana.....              | .....                                                          | .....                                                    | .....     | .....           | .....                              | .....                                | .....                              |
| Nebraska.....             | .....                                                          | .....                                                    | .....     | .....           | .....                              | .....                                | .....                              |
| Nevada.....               | .....                                                          | .....                                                    | .....     | .....           | .....                              | .....                                | .....                              |
| New Hampshire.....        | *358 <sup>2</sup>                                              | 0                                                        | 273       | *85             | 0                                  | *96                                  | 454                                |
| New Jersey.....           | *1,629                                                         | 0                                                        | *1,400    | *229            | 0                                  | 1,055                                | 2,684                              |
| New Mexico.....           | .....                                                          | .....                                                    | .....     | .....           | .....                              | .....                                | .....                              |
| New York.....             | *5,362 <sup>2</sup>                                            | 1,271                                                    | 2,427     | *1,664          | 0                                  | *744                                 | 6,106                              |
| North Carolina.....       | *1,300                                                         | 0                                                        | *550      | *750            | 0                                  | *500                                 | 1,800                              |
| North Dakota.....         | 2,376                                                          | 1,013                                                    | 1,020     | 343             | 209                                | 363                                  | 2,948                              |
| Ohio.....                 | 3,370                                                          | *1,018                                                   | *780      | *1,572          | .....                              | *750                                 | 4,120                              |
| Oklahoma.....             | .....                                                          | .....                                                    | .....     | .....           | .....                              | .....                                | .....                              |
| Oregon.....               | .....                                                          | .....                                                    | .....     | .....           | .....                              | .....                                | .....                              |
| Pennsylvania.....         | *6,500                                                         | *0                                                       | *3,500    | *3,000          | 0                                  | *200                                 | 6,700                              |
| Rhode Island.....         | *130                                                           | 0                                                        | *50       | *80             | *10                                | 100                                  | 240                                |
| South Carolina.....       | .....                                                          | .....                                                    | .....     | .....           | .....                              | .....                                | .....                              |
| South Dakota.....         | *1,370 <sup>2</sup>                                            | *391                                                     | *432      | *547            | *1,203                             | *500                                 | 3,073                              |
| Tennessee.....            | *2,000                                                         | *1,000                                                   | *825      | *175            | 430                                | *150                                 | 2,580                              |
| Texas.....                | 12,341                                                         | 4,650                                                    | *5,374    | *2,317          | 587                                | .....                                | 12,928                             |
| Utah.....                 | .....                                                          | .....                                                    | .....     | .....           | .....                              | .....                                | .....                              |
| Vermont.....              | *290                                                           | *80                                                      | *160      | *50             | 0                                  | *125                                 | 415                                |
| Virginia.....             | *3,000                                                         | *1,200                                                   | *1,000    | *800            | *200                               | *75                                  | 3,275                              |
| Washington.....           | 2,624                                                          | 0                                                        | 1,743     | 881             | 7                                  | 322                                  | 2,953                              |
| West Virginia.....        | 1,233                                                          | *0                                                       | 506       | 727             | *810                               | *87                                  | 2,130                              |
| Wisconsin.....            | *2,800                                                         | *1,300                                                   | *800      | *700            | *0 <sup>3</sup>                    | *400                                 | 3,200                              |
| Wyoming.....              | *400                                                           | *198                                                     | *152      | *50             | *50                                | *250                                 | 700                                |
| Total.....                | 93,334                                                         | 23,578                                                   | 36,595    | 33,161          | 18,188                             | 10,673                               | 122,195                            |

\* Estimated by state departments of education.

<sup>1</sup> Data for 1927-28.

<sup>2</sup> Not including graduates of colleges and universities, only state teachers colleges.

<sup>3</sup> Wisconsin reported "very few" persons certificated on the basis of examination.

Each group of facts in this definition of supply might be obtained (1) by writing directly to every teacher-training agency in each state, or (2) by asking state departments of education to report the facts. Data on the certificates granted through examinations might be learned from either (1) county and city superintendents,<sup>1</sup> or (2) the state departments of education. The number of teachers from other states is information which may be asked of either (1) local superintendents, or (2) state departments of education. Because of the resources available for this survey it was necessary to obtain all of the basic data on supply from state departments of education.<sup>2</sup> In a few instances supplementary facts were obtained from state education associations, local superintendents, and the United States Office of Education.

*How many persons completed teacher training in 1928-29 in each state?*—In the inquiry blank state departments were asked to report the number of persons who completed teacher training courses in 1928-29. This question was meant to include graduates of high school training classes, normal schools, teachers colleges, liberal arts colleges, universities, and any other training courses which qualified them for a teaching certificate. However, a number of the state departments reported that they had no statistics on the number of graduates of liberal arts colleges and universities who were qualified to enter teaching without examination. Column 2 of Table 14 is undoubtedly, in most instances, less than the total number of persons completing some type of teacher training.<sup>3</sup> Some evidence that column 2 of Table 14 is too small is shown by Table 15. Note particularly Connecticut, Missouri, New Hampshire, New Jersey, and Rhode Island. It is interesting to note how closely columns 4 and 5 of Table 15 agree for Arizona, California, and Washington. The reports from these last three states are based upon exact records and are reliable.

*How many persons obtained teaching licenses in 1928-29 on the basis of examinations?*—Per-

sons who obtained certificates in 1928-29 on the basis of county or state examinations constitute the second part of the supply, as defined earlier in the above section.<sup>4</sup> In some states the county merely administers a state test which entitles the successful candidate to a state license. California and other states have county examinations which certificate the candidate only within the one county.

Column 6 of Table 14 gives the number of persons in each state who obtained licenses in 1928-29 on the examination basis. It is assumed that 1928-29 examinees are available for employment in 1929-30.

It is interesting to note that out of 36 units answering the question, 16 report no certificates granted on examinations. We may restate column 6 of Table 14 in comparison with column 2 as shown in Table 16.<sup>5</sup> That is, what percent of the number of graduates of systematic teacher-training courses does the number of untrained examinees form?

TABLE 15.—ESTIMATED 1928-29 SUPPLY COMPARED WITH STATE DEPARTMENTS' REPORTS AS TO 1929-30 SUPPLY<sup>1</sup>

| State              | Estimated 1928-29 Supply <sup>2</sup> |                | Total  | 1929-30 Supply According to Table 14 <sup>3</sup> |
|--------------------|---------------------------------------|----------------|--------|---------------------------------------------------|
|                    | Normal Schools Teachers Colleges      | Other Colleges |        |                                                   |
| 1                  | 2                                     | 3              | 4      | 5                                                 |
| Arizona.....       | 395                                   | 118            | 513    | 422                                               |
| California.....    | 1,360                                 | 1,780          | 3,140  | 3,603                                             |
| Connecticut.....   | 633                                   | 453            | 1,086  | 447 <sup>4</sup>                                  |
| Louisiana.....     | 492                                   | 383            | 875    | 1,293                                             |
| Missouri.....      | 2,597                                 | 655            | 3,252  | 1,796                                             |
| New Hampshire..... | 343                                   | 270            | 613    | *358                                              |
| New Jersey.....    | 1,560                                 | 406            | 1,966  | *1,629                                            |
| Rhode Island.....  | 40                                    | 209            | 249    | *130 <sup>5</sup>                                 |
| Washington.....    | 1,574                                 | 625            | 2,199  | 2,624                                             |
| Total.....         | 8,994                                 | 4,899          | 13,893 | 12,302                                            |

<sup>1</sup> Graduates of teacher training in 1927-28 are considered as the bulk of the 1928-29 supply. The 1929-30 supply in Table 15 includes only the 1928-29 graduates of teacher-training courses.

<sup>2</sup> See Table 12.

<sup>3</sup> See column 2, Table 14.

<sup>4</sup> Reports from state departments specifically stated that graduates of colleges and universities were not included.

<sup>5</sup> Estimated by state departments, not exact records.

<sup>1</sup> In some states the examinations are county tests, while in other states the counties administer the test prepared by state officials.

<sup>2</sup> As a test questionnaires were sent to all of the colleges and universities in Connecticut, Arizona, and Wyoming. After three or four "check-up" letters, replies were received from about 90 percent of these institutions. The liberal arts colleges were usually unable to report the number of their graduates who became teachers. Even the distinctly teacher-training institutions could not always give exact data. These difficulties indicate that exact and detailed facts must be collected by state agencies, such as the state departments of education.

<sup>3</sup> In some states graduates of teacher-training courses are not certificated until they apply to the state department. Other states consider the diploma a teaching certificate. Since in the first case the application is largely a formality it is reasonable to consider all graduates of teacher-training classes in 1928-29 as potential 1929-30 supply.

<sup>4</sup> Generally speaking persons certificated on the basis of examination have little or no systematic professional training.

<sup>5</sup> Table 16 does not show what percent of the total supply is constituted by the number of persons certificated on the basis of examination. See the definition of supply at the first of this section.



Column 1 of Table 16 and the first footnote of Table 16 show that in 22 out of 36 states<sup>1</sup> the number of persons certificated on the basis of examination is relatively unimportant. Column 4 of Table 16 shows states in which the proportions are significant. For example, Delaware reports that it certificates three persons on the basis of examinations to every four graduating from systematic teacher-training courses. Florida certificates about 300 examinees to every 100 graduates of teacher-training courses. Similar deductions may be made for all of the eight states listed in column 4 of Table 16.

*How many teachers does each state get from its neighbors?*—Each state department was asked to tell how many of the newly appointed teachers in 1929-30 were from outside of the state. For purposes of this study it is assumed that the number of these outsiders for 1929-30 is fairly representative of annual conditions. Each state acquires from the outside a number of teachers which must be added to the number of graduates produced within the state, in

order to determine the total supply.<sup>2</sup> Column 7 of Table 14 gives the reports of each state department as to the new teachers employed from other states.

At the same time that it is acquiring teachers from its neighbors each state is also losing a number of teachers. A common assumption is that the number lost just about equals the number gained. This assumption fails to take into account that states with high salaries tend to attract teachers from a distance. States with high certification standards probably tend to send out more teachers than they acquire. Among those going out of such high-standard states are many who will return after they have had experience.<sup>3</sup> Finally, states with prolific teacher-training institutions, in times of oversupply particularly, tend to flood their neighbors with teachers.

At present, the above points are tentative conclusions based on observation. Few state departments can say with certainty just what are the facts on the problem of the exchange of teachers between states. There is a need here for more extensive and intensive study than has been possible in this survey.

*What was the total supply of teachers for 1929-30?*—Column 8 of Table 14 presents a summary of the various types of supply: (1) the graduates of teacher-training courses in 1928-29, (2) the number of persons certificated in 1928-29 on the basis of examinations, and (3) the number of teachers employed from other states in 1929-30.<sup>4</sup> As explained above (in the text and various footnotes) the totals in column 8 of Table 14 are probably smaller than actual conditions in most states.

TABLE 16.—PERCENT THE NUMBER CERTIFICATED ON BASIS OF EXAMINATION IS OF THE NUMBER OF GRADUATES OF TEACHER-TRAINING COURSES

| 5 percent or less <sup>1</sup>                                 | 6-10 percent                       | 11-30 percent                  | Over 30 percent <sup>2</sup>                                                                                                              |
|----------------------------------------------------------------|------------------------------------|--------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| 1                                                              | 2                                  | 3                              | 4                                                                                                                                         |
| Alabama<br>California<br>Idaho<br>Maine<br>Texas<br>Washington | N. Dakota<br>R. Island<br>Virginia | Tennessee<br>Kansas<br>Wyoming | Delaware (75)<br>Florida (328)<br>Iowa (68)<br>Kentucky (60)<br>Mississippi (103)<br>S. Dakota (88)<br>W. Virginia (66)<br>Missouri (149) |

<sup>1</sup> Units reporting no certificates issued in 1928-29 on basis of examination: Arizona, District of Columbia, Indiana, Louisiana, Maryland, Massachusetts, Michigan, Minnesota, New Hampshire, New Jersey, New York, North Carolina, Pennsylvania, South Carolina, Vermont, and Wisconsin. See column 6, Table 14.

<sup>2</sup> Figures in parentheses are percents. That is, in Florida the number of persons in the 1929-30 supply who were certificated by examinations was three times the number who were licensed on the basis of regular professional training.

## The Status of Teacher Demand and Supply in 1929-30

The two previous sections of this chapter present the separate facts as to teacher demand and supply. It is the purpose of this section to bring the data together in answer to these

<sup>1</sup> The number of states supplying data in column 6 of Table 14.

<sup>2</sup> See the definition of supply at the beginning of this section.

<sup>3</sup> Several state departments pointed this out in the course of the personal interviews. For example, California sends a number of inexperienced persons each year to Oregon, Nevada, and Arizona. Many of these teachers return eventually to the higher salaries and larger opportunities of California. The same condition exists in relation to Massachusetts and such states as Vermont, New Hampshire, Connecticut, and Maine.

<sup>4</sup> It has been explained previously that this third set of facts is in reality "the demand for teachers from other states" because it is the number of new outside teachers actually employed. The "supply of outsiders" is probably very much larger because it would include all persons, who through placement bureaus or otherwise, have shown a willingness to leave their home state and teach in another state. It is impossible at this time to measure the true supply of these outsiders, therefore, the number actually employed is used to represent a group which is probably much larger. This whole question vanishes when we consider the nation, not as a series of states, but as a continuous territory within which a certain number of persons annually become available for teaching service and a certain number are appointed for such service.

questions (1) Was there a surplus of teachers in 1929-30? and (2) Was there an oversupply of trained teachers in 1929-30?

Comparisons between the demand and supply data are summarized in Table 17. It is probably not necessary to caution the readers who have followed the discussion closely up to this point, that the figures in Table 17 are often *estimates* and not exact records. For this reason it is probably unsafe to place too much confidence in relatively small numerical differ-

ences. On the other hand, the status of teacher demand and supply as shown in Table 17 squares reasonably well with expert advice, and it is considerably more exact than current opinion.

*Was there a surplus of teachers in 1929-30?*—Table 17 summarizes the status of teacher<sup>1</sup> supply and demand in 1929-30 according to the records and estimates of state departments of education. Column 2 shows the total supply as summarized previously in Table 14. Column

<sup>1</sup> As previously defined the term "teacher" includes principals, supervisors, superintendents, as well as classroom teachers. The figures include both white and colored teachers in all public day elementary and secondary schools.

**TABLE 17.—COMPARISON BETWEEN DEMAND AND SUPPLY ACCORDING TO FIGURES SUPPLIED BY STATE DEPARTMENTS OF EDUCATION**

| State                             | Supply <sup>1</sup> | Demand <sup>2</sup> | Status of the Supply<br>(Col. 2 minus Col. 3) |         | The Trained Supply <sup>3</sup> |         |
|-----------------------------------|---------------------|---------------------|-----------------------------------------------|---------|---------------------------------|---------|
|                                   |                     |                     | Shortage                                      | Surplus | Shortage                        | Surplus |
| 1                                 | 2                   | 3                   | 4                                             | 5       | 6                               | 7       |
| Alabama.....                      | 2,371               | 2,371               | 0                                             | 0       | 1,016                           | 0       |
| Arizona.....                      | 1,048               | 1,048               | 0                                             | 0       | 0                               | 0       |
| Arkansas.....                     |                     |                     |                                               |         |                                 |         |
| California.....                   | 4,353               | 2,806               |                                               | 1,547   |                                 | 1,447   |
| Colorado.....                     |                     |                     |                                               |         |                                 |         |
| Connecticut.....                  | 921                 | 915                 |                                               | 6       |                                 |         |
| Delaware.....                     | 145                 | *150                | 5                                             |         | 35                              |         |
| District of Columbia.....         | 227                 | *210                |                                               | 17      |                                 | 17      |
| Florida.....                      | 3,920               | *1,135              |                                               | 2,785   | 251                             |         |
| Georgia <sup>4</sup> .....        |                     |                     |                                               |         |                                 |         |
| Idaho.....                        | 730                 | *600                |                                               | 130     |                                 | 112     |
| Illinois.....                     |                     |                     |                                               |         |                                 |         |
| Indiana.....                      | 4,846               | 1,764               |                                               | 3,082   |                                 | 3,082   |
| Iowa.....                         | 9,877               | 5,192               |                                               | 4,685   | 952                             |         |
| Kansas.....                       | 8,370               | *3,400              |                                               | 4,970   |                                 | 175     |
| Kentucky.....                     | 4,320               | *3,500              |                                               | 820     | 2,550                           |         |
| Louisiana.....                    | 1,293               | 1,525               | 232                                           |         | 592                             |         |
| Maine.....                        | 683                 | *975                | 292                                           |         | 310                             |         |
| Maryland.....                     | 891                 | 844                 |                                               | 47      |                                 | 47      |
| Massachusetts.....                | 2,034               | *1,800              |                                               | 234     |                                 | 234     |
| Michigan <sup>4</sup> .....       |                     |                     |                                               |         |                                 |         |
| Minnesota.....                    | 3,537               | *3,329              |                                               | 208     | 692                             |         |
| Mississippi.....                  | 3,950               | *2,000              |                                               | 1,950   | 850                             |         |
| Missouri.....                     | 4,653               | 2,675               |                                               | 1,978   | 2,081                           |         |
| Montana.....                      |                     |                     |                                               |         |                                 |         |
| Nebraska.....                     |                     |                     |                                               |         |                                 |         |
| Nevada.....                       |                     |                     |                                               |         |                                 |         |
| New Hampshire.....                | 454                 | 457                 | 3                                             |         | 3                               |         |
| New Jersey.....                   | 2,684               | 2,317               |                                               | 367     |                                 | 367     |
| New Mexico.....                   |                     |                     |                                               |         |                                 |         |
| New York.....                     | 6,106               | *9,567              | 3,461                                         |         | 4,732                           |         |
| North Carolina <sup>4</sup> ..... |                     |                     |                                               |         |                                 |         |
| North Dakota.....                 | 2,948               | 1,585               |                                               | 1,363   |                                 | 141     |
| Ohio.....                         | 4,120               | 4,355               | 235                                           |         | 1,253                           |         |
| Oklahoma.....                     |                     |                     |                                               |         |                                 |         |
| Oregon.....                       |                     |                     |                                               |         |                                 |         |
| Pennsylvania.....                 | 6,700               | *4,500              |                                               | 2,200   |                                 | 2,200   |
| Rhode Island.....                 | 240                 | *255                | 15                                            |         | 25                              |         |
| South Carolina.....               |                     |                     |                                               |         |                                 |         |
| South Dakota.....                 |                     |                     |                                               |         |                                 |         |
| Tennessee.....                    | 2,580               | *2,500              |                                               | 80      | 1,350                           |         |
| Texas <sup>4</sup> .....          |                     |                     |                                               |         |                                 |         |
| Utah.....                         |                     |                     |                                               |         |                                 |         |
| Vermont.....                      | 415                 | *350                |                                               | 65      | 15                              |         |
| Virginia.....                     | 3,275               | *1,600              |                                               | 1,675   |                                 | 275     |
| Washington.....                   | 2,953               | 2,006               |                                               | 947     |                                 | 940     |
| West Virginia.....                | 2,130               | *1,750              |                                               | 380     | 430                             |         |
| Wisconsin.....                    | 3,200               | *1,200              |                                               | 2,000   |                                 | 700     |
| Wyoming.....                      | 700                 | *500                |                                               | 200     | 48                              |         |
| Total.....                        | 96,674              | 69,181              | 4,243                                         | 31,736  | 17,185                          | 9,737   |

\* Estimated by state departments of education.

<sup>1</sup> Computed. See Table 14, Col. 8.

<sup>2</sup> Exact record or estimates from state departments of education. See Table 10, Col. 2.

<sup>3</sup> Not including persons with less than two years of college preparation or those certificated by examinations.

<sup>4</sup> Supply figures omitted in Col. 2 because no demand figures available for Col. 3.

3 gives the 1929-30 demand as previously summarized in Table 10. Columns 4 and 5 of Table 17 show the states in which a shortage or oversupply of teachers existed in 1929-30.

A quick inspection of Columns 4 and 5 shows that an oversupply is the general typical condition. According to these figures, Alabama and Arizona have an almost perfect balance between demand and supply. Delaware, Louisiana, Maine, New York, Ohio, and Rhode Island have an apparent shortage.<sup>1</sup> Yet when we consider that these and other states were unable to give full data on teacher supply,<sup>2</sup> it is safe to say that an oversupply of persons with certificates to teach existed in most of the states in 1929-30.

What percent of the total demand is the apparent oversupply<sup>3</sup> in each state? Table 18 presents these data. The figure in parenthesis after each state (Table 18) is obtained by dividing Column 5 of Table 17 by Column 3 of Table 17.

Table 18 shows that the apparent oversupply is not large in several states. However, the surplus seems to be a serious problem in Cali-

**TABLE 18.—PERCENT OF THE TOTAL DEMAND IN 1929-30 FORMED BY THE APPARENT OVERSUPPLY**

| 25 percent or less                                                                                                                                          | 25 to 50 percent                                     | 50 to 100 percent                                                | Over 100 percent                                                   |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------|------------------------------------------------------------------|--------------------------------------------------------------------|
| 1                                                                                                                                                           | 2                                                    | 3                                                                | 4                                                                  |
| Conn. (1)<br>D. of C. (8)<br>Idaho (22)<br>Ky. (23)<br>Maryland (6)<br>Mass. (13)<br>Minn. (6)<br>N. J. (16)<br>Vermont (19)<br>W. Va. (22)                 | Penn. (49)<br>Tenn. (32)<br>Wash. (47)<br>Wyom. (40) | Calif. (55)<br>Iowa (90)<br>Miss. (98)<br>Mo. (74)<br>N. D. (86) | Fla. (245)<br>Ind. (175)<br>Kana. (146)<br>Va. (105)<br>Wis. (167) |
| Read table as follows: according to the data reported in Table 17 the apparent surplus of teachers in 1929-30 in Connecticut was one percent of the demand. |                                                      |                                                                  |                                                                    |

<sup>1</sup> Although New York State has an apparent shortage of 4732 teachers in 1929-30 there is evidence that several thousand well-trained teachers are unemployed or working in non-teaching positions in New York City. Obviously, there is an accumulated supply which can hardly be measured on a nation-wide basis. Also, there is a problem of distributing the trained teachers out to communities where they are needed. All of these problems are seriously complicated by economic, social, and psychological factors. The intricacy of these problems calls for intensive state-wide surveys followed by extensive national studies.

<sup>2</sup> We must keep Table 14 in mind, because it shows that the supply figures are too small for many states. Several states could not give statistics on the graduates of teacher training in liberal arts colleges. Nor are state departments able to estimate the number of liberal arts students who enter teaching each year. Finally, there are a number of persons returning to the profession each year from non-teaching jobs. This condition is particularly noticeable in 1930-31. No one except the local superintendents and the individual teachers can supply data on this last point.

<sup>3</sup> The term "apparent oversupply" is meant to imply that the conclusion that an oversupply exists, is only a tentative one. Further discussion in the next few pages will demonstrate that there is a difference between too many people with licenses to teach and an oversupply of persons with adequate professional training.

<sup>4</sup> See "Teacher Training" by Benjamin W. Frazier in *The Biennial Survey of Education, 1926-28*, United States Office of Education, p. 301-35.

<sup>5</sup> In 1926 Cook found that 27 states required two years or more of training beyond high school for elementary school teachers. In 1929 Stoutemyer found that 30 states required two or more years of college training for secondary teachers. See Chapter III in "Teacher Personnel" the April issue (1931) of the *Review of Educational Research*, American Educational Research Association.

fornia, Florida, Indiana, Iowa, Kansas, Mississippi, Missouri, North Dakota, Virginia, and Wisconsin. In several other states the proportion of the surplus is large as compared with the demand.

It may be well at this point to urge state school authorities to avoid drastic steps. The above statistics are challenging, but neither exact nor final. The present need is not for radical changes in the teacher-training program, but for an extensive and intensive search for facts. What is the exact condition of teacher demand and supply? The answer calls for thorough study and research by interested officials under the leadership of state departments of education.

*Was there an oversupply of trained teachers in 1929-30?*—The National Education Association has set as one of its major objectives: "a trained teacher in every classroom." The term "trained teacher" changes its quantitative and qualitative meanings somewhat from year to year. At present, there is general agreement among educators that the minimum preparation for teaching should require two years beyond high school graduation.<sup>4</sup> In fact, in many cities of the country, few teachers who do not hold the baccalaureate or a higher degree are employed.

A trained teacher for the purpose of this survey is defined as follows:

A teacher has met the minimum training when he has completed two or more years of specified preparation in an institution supported or approved by the state for teacher-training purposes.

It is recognized that the above definition is somewhat arbitrary.<sup>5</sup> Two years of certain types of training may be utterly inadequate for making teachers out of inferior human material. In contrast, some persons with little more than a high school education, have risen far

above their meager training. Yet the two-year standard suggested above has the advantage of being definite and in conformity with current practices in progressive school systems.

Columns 6 and 7 of Table 17 show what happens when the "untrained supply" is eliminated. That is to say, we subtract from Column 2 of Table 17, (1) the persons with less than two years of training beyond high school,<sup>1</sup> and (2) those who were certificated by examination in place of specific teacher training.<sup>2</sup> Stated in new form these changes may be noted:

1. Florida, with the largest oversupply in terms of demand as shown in Table 18, really has a shortage of well-trained teachers. Referring back to Column 6 of Table 14, we find that Florida has admitted almost 3000 teachers to the 1929-30 supply on the basis of examination in place of systematic teacher training.<sup>3</sup>

2. Indiana's oversupply continues without change in Columns 6 and 7 of Table 17, indicating that no persons are certificated on the basis of examination or with less than two years of training. Of course, no one should assume that Column 7 proves that Indiana had 3000 unemployed teachers in 1929-30. The chances are that many of these trained persons found teaching positions in states in the South and West, or else entered non-teaching occupations.<sup>4</sup>

3. When teachers with less than two years of professional training are removed from the available 1929-30 supply in Kansas and Wisconsin, the apparent surplus is materially diminished. (Column 7, Table 17.)

4. California's oversupply is not materially affected when the "trained teacher" standard is applied to Column 5 of Table 17. This condition is to be expected because salaries, certification and teacher training standards are high in California.

5. Iowa, Mississippi, and Missouri have large surpluses according to Table 18. If we eliminate the untrained supply, these states would have had too few persons to meet the demand in 1929-30. This tendency for the surplus to change to a shortage is shown by Tennessee also.

6. Summing up the conclusions brought out by Columns 6 and 7 of Table 17 we may say that a majority of the states have too few well-trained

teachers. An apparent oversupply of well-trained teachers exists in certain areas: (1) Massachusetts, (2) California and Washington, (3) New Jersey and Pennsylvania, plus New York City, and (4) Indiana and Wisconsin.

## Summary

The major portion of the data presented in this chapter was supplied by state departments of education. In numerous instances, where exact records did not exist, state officials gave estimates based upon such facts as were available. For this reason the following conclusions and summary statements must be looked upon as subject to revision in the light of future research.

1. Demand for 1929-30 is defined as the number of newly appointed teachers in each state who did not hold positions in 1928-29. This group includes, (a) beginning teachers, (b) those returning to teaching after an absence of one year or more, and (c) those entering each state from other states.

2. Supply for 1929-30 is defined as the number of persons who qualified for teaching during 1928-29. This group includes, (a) the graduates of all types of teacher-training courses which make one eligible for certification, (b) those who qualified for teaching licenses on the basis of examination in place of training courses and (c) those teachers who were available from other states.<sup>5</sup>

3. Inspection of the statistical reports of state school systems shows that it is common practice to report the total number of teachers. On the basis of annual increases and other data state departments can usually give a fairly accurate estimate of the annual demand for new teachers.<sup>6</sup> Supply figures on the other hand usually are deficient (a) as to the number of teachers trained by private and public liberal arts colleges, and (b) in regard to the available supply of teachers from other states. For this reason

<sup>1</sup> See Column 3 of Table 14.

<sup>2</sup> See Column 6 of Table 14.

<sup>3</sup> The standard of two years or more of professional training can be defended in terms of child welfare and education. In view of the inadequate taxation systems in many states the question may be raised whether a number of districts will ever be able to pay for a well-trained teacher. This study does not attempt to discuss the economic problems involved by these questions.

<sup>4</sup> Mr. Whisler of the state department made a survey of unemployed teachers in 1928-29. The county and city superintendents reported about 863 unemployed. As the supply for 1928-29 was practically the same as 1929-30 probably not more than 1000 of the 1929-30 supply failed to obtain teaching positions.

<sup>5</sup> The number actually employed from other states was used for the (c) part of supply. Obviously, the number employed was less than the number who sought employment.

<sup>6</sup> However, the complete demand should include (1) the number of unfilled positions, and (2) the number of new teachers required during the year. Unfilled positions include actual vacancies and positions filled by temporary substitutes. New teachers required during the year are those employed to meet unusual enrolments or to fill vacancies due to death retirements, or resignations. Tables in this study do not include the full demand figures because state departments did not have these additional data.



the supply figures in this chapter are undoubtedly smaller than actual conditions would justify concluding.

4. In terms of teacher demand and supply as defined immediately above in 1 and 2 there was a *wide-spread oversupply in 1929-30 of persons with teaching licenses*. This statement does not mean that unemployment necessarily existed in direct proportion to the total surplus.<sup>1</sup>

5. If we accept two years of training beyond high school as the minimum professional training for teaching, there was in reality a *wide-spread shortage of trained teachers in 1929-30*. When we consider the hundreds of persons holding positions who have less than two years of professional training beyond high school, the need for "trained teachers" is even more serious. It must be pointed out, however, that under ex-

isting certification laws these persons usually hold valid teaching licenses.<sup>2</sup> They are employed to the complete satisfaction of local trustees; hence, their positions are not a part of the demand. A discussion of the many problems of economics and of in-service training raised by these points is not included under the purposes of this study.

6. Complete data on teacher supply and demand are not available in most state departments of education. The present annual statistical summaries of state superintendents do not give all of the details which a complete study of teacher personnel should contain.<sup>3</sup> The problems of teacher demand and supply cannot be handled satisfactorily until state departments and other interested state officials gather the necessary facts.

<sup>1</sup> Some persons left teaching through marriage, others went into states where teachers were needed, others returned to teacher training institutions for further study, and a number entered non-teaching occupations.

<sup>2</sup> For example, in 1928 about 41 percent (8010 teachers) of the rural teachers in Missouri held licenses which required only four years of schooling above the eighth grade. See the *Eightieth Report* of the State Superintendent for the year ending June 30, 1929. Similar figures could be cited from other state reports.

<sup>3</sup> Gross figures as to the annual demand and the total output of teacher training institutions are not enough. State departments should know such facts as: (1) how many valid certificates are held by persons living in the state, (2) how many teachers leave the state each year, (3) how many teachers are needed for the elementary, intermediate, and secondary school levels, (4) what are the subject combinations in which high school teachers should be trained, and (5) what percent of the graduates of teacher-training institutions are lost to teaching each year. The present annual reports of state officers are inadequate on these and similar questions of teacher demand and supply.

**N**O INTELLIGENT state policy in teacher-training would be complete which concerned itself alone with the mere preparation of teachers. This is but a part of the general problem. Instead, the authorities in control of teacher-training should also take into account the many collateral problems which condition the training work of the teacher, so as to make the most of possibilities in those whom they train. The problem of finance and an adequate state salary schedule form one of these problems. The improvement of high-school preparation is another. The certification and salary laws should be such as to place a premium on adequate and continued professional preparation, and proper teacher tenure comes in as another phase of the problem. The elimination of the district system, and the provision of close, adequate, and professional school supervision for all teachers in the State is another. The reorganization of rural education is still another problem of large importance for teacher-training.

The development of an adequate state policy in teacher-training, then, means the building up of strong central control and supervision of all such training and certification, and also the formulation of an intelligent and forward-looking state plan with reference to all the factors conditioning the work of a teacher after the training has been given.—Cubberley, *Ellwood P., State School Administration*, pp. 612-13.

## CHAPTER IV

### The Progress of Research on Teacher Supply and Demand Problems in the Various States

The purpose of this chapter is to bring in brief review the important studies of teacher personnel problems for each state. Particular attention is given to investigations of supply and demand completed, or in progress, under the direction of state departments of education. Reference is also made to the research activities of state education associations. A few individual and independent studies of topics related to teacher demand and supply have been included, when they seem particularly significant.<sup>1</sup>

Data for the chapter were obtained largely through a questionnaire sent to the state departments of education.<sup>2</sup> Information in regard to state education associations came from direct correspondence with the secretaries.<sup>3</sup> Between June and December of 1930 officials in 45 state education offices were personally interviewed by the investigator.<sup>4</sup>

The omission of a state from this chapter does not mean that the state department has done nothing about teacher demand and supply problems. In fact many of the annual statistical reports of state offices show tables on the number of certificates issued, the number of graduates of state teachers colleges and similar pertinent data.<sup>5</sup> Since few of these statistics are complete or interpreted in terms of teacher demand and supply, they have been omitted.

Several state and national school surveys have not been included in this chapter although

they contain sections on teacher demand and supply.<sup>6</sup>

#### Alabama

Parkinson, director of teacher training, made a study of teacher supply and demand in 1928-29.<sup>7</sup> Pannell is preparing a thesis on the preparation and work of high-school teachers.<sup>8</sup> Anderson compared the training and the subject combinations of first-year high-school teachers.<sup>9</sup> The United States Office of Education made a general educational survey in 1919.<sup>10</sup>

#### Arizona

A survey made about 1917 by the United States Office of Education dealt with problems of teacher turnover, training, and experience.<sup>11</sup> Tupper studied the preparation and characteristics of teachers.<sup>12</sup>

#### Arkansas

A survey made by the United States Office of Education contained studies of teacher training and characteristics of the teaching staff.<sup>13</sup> Grant laid out a teacher-training program for Arkansas in 1925. His report shows the training of employed teachers, the annual demand, and the annual supply.<sup>14</sup> Colvert has shown the oversupply of high-school teachers and proposed certain next steps.<sup>15</sup> The state department of education is planning to make a study of teacher demand and supply in 1931.

<sup>1</sup> See the bibliography at the end of this report. Also, the bulletin "Teacher Personnel," *Review of Educational Research*, April, 1931. American Educational Research Association, a department of the National Education Association.

<sup>2</sup> Blanks were returned by 42 states, including the District of Columbia.

<sup>3</sup> Replies were received from 47 state education associations.

<sup>4</sup> Personal interviews were held with state officials in 39 states. In six states the state officer received and returned the standard interview blank by mail, making a total of 45 reports out of 49.

<sup>5</sup> For example, see *Education in Wisconsin*. John Callahan, (State Superintendent), Chapters VI, VIII, IX and the appendix; *Sixty-third Annual Report of the Maryland State Board of Education*, Albert S. Cook, (State Superintendent), 1929, p. 133-47, 185-90.

<sup>6</sup> For example: Klein, A. J. (Director) *Survey of Land-Grant Colleges and Universities*, Bulletin, 1930, No. 9. U. S. Department of the Interior, Office of Education, Washington, D. C. p. 113-297. Consult the *Topical Analysis of 234 School Surveys*, Bulletin of the School of Education, Indiana University, Vol. 3, No. 4, March, 1927, 111 p.

<sup>7</sup> Parkinson, R. L. (Director of Teacher Training). *Annual Report*. Alabama State Department of Education, 1929, 47 p.

<sup>8</sup> Pannell, H. C. *The Preparation and Work of High-School Teachers in Alabama*. Unpublished thesis, University of Alabama. (In process.)

<sup>9</sup> Anderson, Julia D. *Some Aspects of Teacher Training at the University of Alabama*. Unpublished master's thesis, University of Alabama, 1927. 73 ms. p.

<sup>10</sup> U. S. Department of the Interior, Office of Education. *An Educational Study of Alabama*. Bulletin, 1919, No. 41. Washington, D. C.: Government Printing Office, 1919. 522 p.

<sup>11</sup> U. S. Department of the Interior, Office of Education. *Educational Conditions in Arizona*. Bulletin, 1917, No. 44. Washington, D. C.: Government Printing Office, 1917. 200 p.

<sup>12</sup> Tupper, C. Ralph. *A Survey of the Arizona Public School System*. Phoenix, Arizona: State Board of Education, 1925. 112 p.

<sup>13</sup> U. S. Department of the Interior, Office of Education. *The Public School System of Arkansas*. Bulletin, 1923, No. 10. Washington, D. C.: Government Printing Office, 1923. 79 p.

<sup>14</sup> Grant, James R. *A State's Teacher-Training Program*. Contributions to Education No. 18, 1925. Nashville, Tenn.: George Peabody College, 1925. 101 p. (The author was on the state department staff at the time of the survey.)

<sup>15</sup> Colvert, Clyde C. *The Demand and Supply of High-School Teachers in Arkansas*. Unpublished master's thesis. Fayetteville, Arkansas: University of Arkansas, 1931. (Typed) 115 p.

## California

Eakin, as a member of the state department, reported on teacher demand and supply in 1926-27.<sup>1</sup> Clement brought Eakin's study up to date.<sup>2</sup> Biaggini has studied the training and qualifications of rural high-school teachers.<sup>3</sup> Teacher demand and supply have been investigated by Henderson,<sup>4</sup> Shambaugh,<sup>5</sup> and Mushlitz.<sup>6</sup> The relationships between training and positions held have been examined by Ogden,<sup>7</sup> Sattgast,<sup>8</sup> and Stum.<sup>9</sup> Richmond has analyzed the subject combinations in California high schools.<sup>10</sup>

## Colorado

The administration and support of the Colorado school system have been studied by the United States Office of Education.<sup>11</sup>

The Research Committee of the Colorado Education Association is beginning a study of teacher certification in teacher supply and demand. One purpose of this investigation is to defend from legislative attacks<sup>12</sup> the present teacher certification law, which requires two years or more of college training. Whitney has compared demand and supply statistics for Colorado with those from other states.<sup>13</sup> Frasier experimented with the use of regression

equations in predicting the success of student teachers.<sup>14</sup>

## Connecticut

Bechtel, assistant in special education, studied the possibility of using intelligence tests in selecting students for admission to normal schools.<sup>15</sup> Myers analyzed the training, experience, and teaching assignments of the new high-school teachers appointed in September, 1929.<sup>16</sup> At the annual conference in 1929 various members of the normal-school faculties contributed papers on the selection and placement of student teachers.<sup>17</sup>

## Delaware

The certification and training of teachers were included in a survey of Delaware schools by the General Education Board.<sup>18</sup>

## Florida

Strayer directed a comprehensive survey of the educational system. Chapter VI deals with teacher personnel problems.<sup>19</sup>

## Georgia

Martin, state supervisor of schools, collected facts in 1923-24 on the qualifications of white teachers in Georgia and made recommendations on the maintenance of an adequate sup-

<sup>1</sup> Eakin, Ruth M. *Supply and Demand of Teachers in California, 1926-27*. Bulletin No. H-3, 1928. Sacramento, California: California State Department of Education, 1928. 23 p.

<sup>2</sup> Clement, Evelyn. "The Supply and Demand of Teachers in California, 1928-30." *California Schools* 1:154-64; June, 1930. Sacramento, California: California State Department of Education.

<sup>3</sup> Biaggini, Albert. *Training and Qualifications of Rural High-School Teachers*. Unpublished master's thesis. Stanford, California: Leland Stanford University, 1929.

<sup>4</sup> Henderson, Adin D. *A Phase of Supply and Demand for Secondary Teachers in the State of California*. Unpublished master's thesis. Stanford, California: Leland Stanford University, 1928.

<sup>5</sup> Shambaugh, Charles Gilbert. *Teacher Supply and Demand in California*. Unpublished doctor's thesis. Stanford, California: Leland Stanford University, 1929. (See "Teacher Turnover in California and Its Significance." *Nation's Schools* 7:77-80; 82, 84; January, 1931).

<sup>6</sup> Mushlitz, Manfred E. *Are There Too Many Teachers?* Unpublished master's thesis. Stanford, California: Leland Stanford University, 1930. (Summarizes opinion of state school officers as to teacher demand and supply in the various states.)

<sup>7</sup> Ogden, George L. *The Relation Between Major and Minor Training of Stanford Graduates and Teaching Position Held*. Unpublished master's thesis. Stanford, California: Leland Stanford University, 1930.

<sup>8</sup> Sattgast, Charles P. *Relation of Teachers' Qualifications to Position Secured*. Unpublished master's thesis. Stanford, California: Leland Stanford University, 1926.

<sup>9</sup> Stum, Margaret. *The Relation Between the Subjects Taught and the Training of California High-School Teachers*. Unpublished master's thesis. University of California, 1923.

<sup>10</sup> Richmond, Preston A. *A Study of Subject Combinations in the California High Schools*. Unpublished master's thesis. Stanford, California: Leland Stanford University, 1927.

<sup>11</sup> U. S. Department of the Interior, Office of Education. *Report of An Inquiry into the Administration and Support of the Colorado School System*. Bulletin, 1917, No. 5. Washington, D. C.: Government Printing Office, 1917. 93 p.

<sup>12</sup> Reported by W. B. Mooney, Secretary, Colorado Education Association, in a letter dated November 4, 1930.

<sup>13</sup> Whitney, Frederick L. *Teacher Demand and Supply in the Public Schools*. Greeley, Colorado: Colorado State Teachers College, 1930. 139 p.

<sup>14</sup> Frasier, C. M. *The Selection of the Student Teacher*. Unpublished master's thesis. Greeley, Colorado: Colorado State Teachers College, August, 1928. 80 p.

<sup>15</sup> Bechtel, Helen W. *Intelligence Test Scores in Relation to Success in the Connecticut State Normal Schools*. Special Education Bulletin No. 1. Hartford, Connecticut: State Board of Education, 1930. 34 p.

<sup>16</sup> Myers, Alonzo F. *New High-School Teachers in Connecticut, September, 1929*. Hartford, Conn.: State Department of Education, January, 1930. (Mimeographed) 9 p.

<sup>17</sup> Myers, Alonzo F. *Proceedings of the Annual Conference of Connecticut Normal School Faculty Members*. Hartford, Conn.: State Board of Education, 1930. 67 p.

<sup>18</sup> General Education Board. *Public Education in Delaware*. New York: General Education Board, 1910. 202 p.

<sup>19</sup> Strayer, George D. (director). *Official Report of the Educational Survey Commission*. Tallahassee, Florida: State of Florida, 1929. 743 p.

ply.<sup>1</sup> The Committee on Disability, Salary, Tenure, Retirement, and Pension, of the Georgia Education Association made a report in 1930.<sup>2</sup>

#### Idaho

A committee of the state teachers association is working on the problem of tenure.<sup>3</sup>

#### Indiana

In a survey of the state school system Bachman collected statistics on the preparation and characteristics of the teachers.<sup>4</sup> Freeman was chairman of a committee which collected data about the rural teachers.<sup>5</sup> Whisler, director of teacher training, collected statistics on the number of unemployed teachers in Indiana for the year 1929-30 by means of a mimeographed inquiry blank to local superintendents and to 33 colleges.<sup>6</sup>

Foster, chairman of a special committee of the Indiana State Teachers Association, reported on the enrolment in teacher training in Indiana colleges and universities in September, 1930.<sup>7</sup> Devricks has made a preliminary report on the subject combinations of high school teachers in 1927-28, 1928-29, and 1929-30. The final committee report will be published in 1931 as a bulletin of the Bureau of Co-operative Research, Indiana University.

#### Illinois

The Illinois School Masters' Club presented data on the demand for teachers and the opportunities for preparation.<sup>8</sup>

#### Iowa

A comprehensive survey of teacher personnel is being made in Iowa under the general direction of the state superintendent, Agnes Samuelson.<sup>9</sup> The survey is under the immediate supervision of E. T. Peterson and E. F. Lindquist of the State University of Iowa. Inman made a study in 1926 of the academic preparation of graduates of the State University of Iowa in relation to their teaching assignments in high school.<sup>10</sup> Later Inman made a more comprehensive study of the graduates of eleven colleges in Iowa.<sup>11</sup> Williams studied the teaching assignments of graduates of the Iowa State Teachers College.<sup>12</sup>

#### Kansas

O'Brien studied the preparation and teaching assignments of high-school teachers in 1924-25.<sup>13</sup> A report of the school code commission devotes sections to teacher tenure and related problems.<sup>14</sup>

#### Kentucky

Bachman directed a survey of public education in Kentucky.<sup>15</sup> Donovan studied the status of elementary school teachers and the teacher-training program in Kentucky just prior to 1925. He used considerable material from the office of the state department of education and the committees of the Kentucky Education Association.<sup>16</sup> Peyton, director of

<sup>1</sup> Martin, J. O. *Varying Types of Service Rendered Georgia by Teachers with Recommendations for Their Training in Service*. Atlanta, Georgia: State Department of Education, August, 1926. 45 p.

<sup>2</sup> Wager, Ralph (chairman). "Report of Committee on Disability, Salary, Tenure, Retirement, and Pension." *Georgia Education Journal* 23:16-19; September, 1930.

<sup>3</sup> Reported by Secretary John I. Hillman, Idaho Education Association, September 3, 1930.

<sup>4</sup> Bachman, Frank P. *Public Education in Indiana*. New York: General Education Board, 1921. 213 p.

<sup>5</sup> Freeman, G. W. (chairman). *Report of the Indiana Rural Education Survey Committee*. Indianapolis, Indiana: State Department of Education, 1926. 130 p.

<sup>6</sup> Whisler, H. M. "Unemployment of Teachers." *Educational News*. Indianapolis, Indiana: State Department of Education, 1930. (Mimeographed bulletin) p. 9, 16.

<sup>7</sup> Foster, J. O. Mimeographed preliminary report of September 5, 1930. 7 p. The committee: J. O. Foster, chairman, Indiana University; H. N. Fitch, Ball Teachers College; E. C. Bowman, DePauw University; G. L. Roberts, Purdue University; and R. K. Devricks, Indiana State College.

<sup>8</sup> Illinois School Masters' Club. *Opportunities for High School Graduates in Public School Teaching in Illinois*. Normal School Quarterly, Series 27, No. 108. Normal, Illinois: State Normal University, 1928. 24 p.

<sup>9</sup> Samuelson, Agnes (state superintendent). *Teachers of the Public Elementary and Secondary Schools of Iowa*. Des Moines, Iowa: State Board of Educational Examiners, 1930. 36 p.

<sup>10</sup> Inman, James H. *The College Preparation of High School Teachers*. Unpublished master's thesis. Iowa City, Iowa: State University of Iowa, 1926.

<sup>11</sup> Inman, James H. *The Training of Iowa High School Teachers in Relation to the Subjects They Teach*. University of Iowa Studies, Vol. IV, No. 9, August 1, 1928. 66 p.

<sup>12</sup> Williams, R. C. *A Study of the Output of the Iowa State Teachers College*. Unpublished master's thesis. Iowa City, Iowa: University of Iowa, 1926.

<sup>13</sup> O'Brien, F. P. *The High School Teaching Load and Preparation of High School Teachers*. Kansas Studies in Education, Vol. I, No. 5. Lawrence, Kansas: University of Kansas, 1926. 37 p.

<sup>14</sup> State School Code Commission. *Report*. Topeka, Kansas: the Commission, 1929. Volumes I, II, and III.

<sup>15</sup> Bachman, Frank P. *Public Education in Kentucky*. New York: General Education Board, 1921. 213 p.

<sup>16</sup> Donovan, Herman L. *A State's Elementary Teacher Training Program (Kentucky)*. Contributions to Education, No. 17. Nashville, Tenn.: George Peabody College for Teachers, 1925. 96 p.



certification, has issued a preliminary report of state certification plans in collaboration with W. D. Cocking.<sup>1</sup>

#### Louisiana

Smith studied the status of high-school teachers in Louisiana, estimated future needs, and proposed training standards.<sup>2</sup>

#### Maryland

Flexner and Bachman directed a survey of the Maryland school system, in which some attention was given to teacher-training.<sup>3</sup>

#### Massachusetts

Lord, director of research, made a study of the salaries of teachers in public day schools in 1926. He included some facts as to the training, experience, and turnover of teachers.<sup>4</sup> A similar report will be made in 1931.

#### Michigan

Woody has studied the number and combinations of subjects taught in the high schools of Michigan.<sup>5</sup> A committee of the state teachers' association has made a study of the preparation, experience, and salaries of rural teachers.<sup>6</sup>

#### Minnesota

Hutson investigated the training of high-school teachers in relation to their teaching assignments.<sup>7</sup> Overan has developed indices for the prediction of teacher demand and supply.<sup>8</sup>

#### Mississippi

O'Shea has directed a study in Mississippi which gave some attention to teacher training and certification.<sup>9</sup>

#### Missouri

A survey of teacher training in Missouri, about 1920, includes data closely related to teacher demand and supply.<sup>10</sup> Hill followed the 1920 investigation with a survey of progress in teacher training.<sup>11</sup> Much of the 1924 survey is devoted to the qualifications, placements, and certification of teachers.<sup>12</sup> At the present time Strayer and Engelhardt are directing a survey of public schools and higher institutions in Missouri. The preliminary report of this survey contains facts on teacher personnel and estimates as to the annual demand.<sup>13</sup>

#### Nebraska

Rosenlof, director of secondary education and teacher training, has completed a study of the rural teacher personnel.<sup>14</sup> He is now working upon the status of urban elementary and secondary school teachers. Cushing, director of certification, has written a thesis on desirable procedures for the issuance of teachers' certificates.<sup>15</sup> Moritz has published charts showing the supply and demand for college and high school teachers.<sup>16</sup>

<sup>1</sup> Peyton, W. W., and Cocking, W. D. *Certification of Teachers*. (Typewritten, printed cover). 1930. 51 p.

<sup>2</sup> Smith, James Monroe. *The Training of High School Teachers in Louisiana*. Contributions to Education, No. 247. New York: Bureau of Publications, Teachers College, Columbia University, 1926. 101 p.

<sup>3</sup> Flexner, Abraham, and Bachman, Frank P. *Public Education in Maryland*. New York: General Education Board, 1916. 230 p.

<sup>4</sup> Lord, Arthur B. *Salaries of Teachers*. Bulletin, 1926, No. 5, Whole Number 170. Boston, Mass.: State Department of Education. 45 p.

<sup>5</sup> Woody, Clifford. "Number of Subjects Taught by Graduates of the University of Michigan Who Began Teaching in the School Year 1922-23 and the Amount of Academic Preparation in the Subjects Taught." *Educational Administration and Supervision* 10:368-84; September, 1924. Also, "Number and Combinations of Subjects Taught in the 1924-25 School Year in North Central High Schools of Michigan." *Educational Administration and Supervision* 12:529-48; November, 1926.

<sup>6</sup> Michigan State Teachers Association. *Rural Teachers Salaries in Michigan*. Bulletin No. 5, Part I. Lansing, Mich.: the Association, 1925. 35 p.

<sup>7</sup> Hutson, P. W. *The Training of High School Teachers in Minnesota*. Educational Monographs, No. 3. Minneapolis, Minnesota: University of Minnesota, 1923.

<sup>8</sup> Overan, A. V. Study to be published sometime in 1931 by the University of Minnesota Press, Minneapolis.

<sup>9</sup> O'Shea, M. V. (director), *Public Education in Mississippi*. Jackson: Mississippi: State Department of Education, 1926. 362 p. Bulletin No. 14. New York: the Foundation, 1920. 475 p.

<sup>10</sup> Hill, Clyde M. *A Decade of Progress in Teacher Training*. Contributions to Education, No. 233. New York: Bureau of Publications, Teachers College, Columbia University, 1927. 217 p.

<sup>11</sup> Lee, Charles. (state superintendent) *Facts Concerning Public Education in Missouri*. Missouri School Survey, Jefferson City, Missouri: State Department of Education, 1924. 139 p.

<sup>12</sup> Strayer, G. D., and Engelhardt, N. L. *Preliminary Report of the Survey of the Public Schools and Higher Institutions*. In the *Eightieth Report of the Public Schools*, Charles A. Lee, State superintendent. Jefferson City, Missouri: State Department of Education, 1929. 464 p.

<sup>13</sup> Rosenlof, G. W. *The Rural Teacher Situation in Nebraska*. (Mimeographed) 3 p.

<sup>14</sup> Cushing, Herbert L. *A Desirable Procedure for the Issuance of Teachers' Certificates*. Unpublished master's thesis. Lincoln, Nebraska: University of Nebraska. June, 1930. 100 p.

<sup>15</sup> Moritz, R. D. "Report of the Department of Educational Service of the University of Nebraska." *Educational Research Record* 11:49-66; December, 1929.

## New Jersey

The state department in New Jersey has laid plans for a continuous study of teacher supply and demand. West, former director of teacher training, circulated questionnaires regularly among local superintendents. Data as to demand are reported each year along with the enrolments of state teachers colleges.<sup>1</sup> Updegraff is directing a study of public education in New Jersey, including problems of teacher personnel.<sup>2</sup>

## New York

Works directed a survey which collected data on the experience, preparation, certificates, and teaching assignments of rural teachers.<sup>3</sup> Coxe, director of research in the state department, has made a study of demand in 1926-27.<sup>4</sup> Elsbree made an investigation of teacher turnover in the city and village school systems.<sup>5</sup> Belknap studied the teacher demand according to the appointment office records of 40 teacher-training institutions.<sup>6</sup> Coxe and Soper reported data on the preparation and teaching assignments of high school teachers.<sup>7</sup>

## North Carolina

The General Education Board's study of education in North Carolina included sections on teacher training and experience.<sup>8</sup> Morrison

has presented data on tenure and similar topics.<sup>9</sup> Noble, director of information and statistics in the state department, made a study of teacher demand and supply.<sup>10</sup> He also studied the relationship between the home areas of student teachers and the areas where their first teaching positions were obtained.<sup>11</sup> Hillman summarized the resources, facilities, and practices of the colleges of North Carolina.<sup>12</sup> Hill examined the subject combinations of high-school teachers.<sup>13</sup> A recent governmental survey proposes the reorganization of the state's educational machinery.<sup>14</sup>

## North Dakota

Peik has studied the training of teachers in North Dakota. His report includes data on teacher supply and demand.<sup>15</sup> The study was made at the request of the state board of administration, governing body of all state higher institutions of learning.

## Ohio

Buckingham's pioneer study in 1923-24 started a series of very valuable studies of teacher demand and supply. The state department cooperated with the questionnaires and communications sent to local superintendents.<sup>16</sup> Myers followed in 1927 with a study of Ohio's teacher-training facilities and with recommendations for the future.<sup>17</sup>

<sup>1</sup> West, Roscoe L. *Official Report*. Trenton, New Jersey: State Department of Education. (Mimeographed) 1929-30. 12 p.

<sup>2</sup> Updegraff, Harlan (director). *Report of Commission to Survey Public Education*. Trenton, New Jersey: State Department of Education, 1930. 204 p.

<sup>3</sup> Works, George A. and others. *Rural School Survey of New York State*. Ithaca, New York: Joint Committee on Rural Schools, 1922. 8 vols.

<sup>4</sup> Coxe, W. W. *Teacher Demand in New York State*. (Mimeographed) 23 p. *Teacher Demand in New York City*. (Mimeographed). Albany, New York: State Department of Education, 1926-27.

<sup>5</sup> Elsbree, W. S. *Teacher Turnover in Cities and Villages of New York State*. Contributions to Education, No. 300. New York: Bureau of Publications, Teachers College, Columbia University, 1928. 88 p.

<sup>6</sup> Belknap, Fredericka. *A Comparison of Supply and Demand for Teachers and School Administrators Based on Statistics of the Bureau of Appointments from May 1, 1926 to July 1, 1927*. Unpublished master's thesis. New York: New York University, 1928. 45 p.

<sup>7</sup> Coxe, W. W., and Soper, Wayne W. *A Study of the High School Teacher in New York State*. Bulletin No. 964. Albany, New York: University of the State of New York, 1931. 42 p.

<sup>8</sup> General Education Board. *Public Education in North Carolina*. Report of Public School Commission. New York: General Education Board, 1921. 137 p.

<sup>9</sup> Morrison, Fred and others. *Report on the Public School System of North Carolina*. Raleigh, North Carolina: State Educational Commission, 1927. 269 p.

<sup>10</sup> Noble, M. C. J. *Teacher Training in North Carolina*. Educational Publication No. 135. Raleigh, North Carolina: State Department of Public Instruction, 1929. 70 p.

<sup>11</sup> Noble, M. C. S., Jr. *Relationship between Area of Source of Supply from High Schools and Area of Beginning Service for the Teaching Profession in North Carolina*. Raleigh, North Carolina: State Department of Public Instruction. (Mimeographed) 23 p.

<sup>12</sup> Hillman, James E. *Certain Statistical Data on North Carolina Colleges for the School Year 1928-29*. Raleigh, North Carolina: State Department of Public Instruction. (Mimeographed) 26 p.

<sup>13</sup> Hill, Henry H. *State High School Standardization*. Bulletin of the Bureau of School Service, University of Kentucky, March, 1930. p. 46-76.

<sup>14</sup> Institute for Government Research, Brookings Institution. *Report of a Survey of the Organization and Administration of the State Government of North Carolina*. Raleigh, North Carolina: State of North Carolina, 1930. p. 152-75.

<sup>15</sup> Peik, W. E. *The Training of Teachers in North Dakota*. Reprint from the Biennial Report of the Superintendent of Public Instruction. Bismarck, North Dakota: State Board of Administration, 1930. 76 p.

<sup>16</sup> Buckingham, B. R. *Supply and Demand in Teacher Training*. Bureau of Educational Research, Monograph No. 4. Columbus Ohio: Ohio State University, March, 1926. 182 p.

<sup>17</sup> Myers, Alonzo F. *A Teacher-Training Program for Ohio*. Contributions to Education, No. 266. New York: Bureau of Publications, Teachers College, Columbia University, 1927. 144 p.

In May 1929, Foster, director of research of the Ohio Education Association, brought the data on supply and demand up-to-date.<sup>1</sup> Recently, Foster and Anderson have completed reports of demand and supply which are based upon data gathered through the cooperation of the state department of education and the Ohio Education Association.<sup>2</sup>

The plans in Ohio call for continuous surveys to keep up-to-date the above studies. Record forms and questionnaires for this purpose are to be sent out under the direction of the state director of teacher training.

#### Oklahoma

A study by the United States Office of Education includes sections on the tenure, experience, and preparation of teachers.<sup>3</sup>

#### Oregon

The Committee on Investigations, of the Oregon State Teachers Association, made a study in 1928 of the status of the elementary teacher. Data were included as to salaries, training, turnover, experience, and responsibilities of teachers.<sup>4</sup> Recently, Huffaker completed a study of teacher demand and supply in Oregon.<sup>5</sup>

#### Pennsylvania

Taylor presented figures on the teacher demand and supply situation in 1923.<sup>6</sup> King di-

rected a survey which devoted sections to the experience, training, and tenure of teachers.<sup>7</sup> The state department of education made a comprehensive study of teacher personnel in 1928. Data from this survey have been used by MacDonald in a study of the preparation of elementary school principals.<sup>8</sup> Van Houten has investigated the tenure and stability of high-school teachers.<sup>9</sup> Yeager studied state certification as a factor in the training of elementary teachers in service.<sup>10</sup> Blackburn surveyed the preparation, salary, experience, and teaching assignments of newly appointed high-school teachers.<sup>11</sup>

#### South Carolina

Parkinson reported on the professional preparation and certification of white public school teachers in South Carolina in 1924-25.<sup>12</sup> A committee of the state teachers association is working on the problem of tenure.<sup>13</sup>

#### South Dakota

The study of the state educational system by the United States Office of Education included sections on the tenure, certificates, experience, and training of teachers.<sup>14</sup>

#### Tennessee

Vance has studied the contributions to the supply of the public and private colleges. He compares supply with the demand for well-trained teachers.<sup>15</sup>

<sup>1</sup> Foster, Richard R. *The Relation Between the Demand and Supply of Elementary Teachers in Ohio With Special Reference to the Question of Raising the Statutory Training Requirements for Admission to the Profession*. Columbus, Ohio: Ohio Education Association, May, 1929. (Mimeographed) 54 p.

<sup>2</sup> The study of elementary school teachers by R. R. Foster and of secondary school teachers by Earl W. Anderson is to be published jointly by the Ohio State University Bureau of Educational Research and the Ohio Education Association.

<sup>3</sup> U. S. Department of the Interior, Office of Education. *Public Education in Oklahoma*. Bulletin, 1923, No. 14. Washington, D. C.: Government Printing Office, 1923. 420 p.

<sup>4</sup> Spooner, Julia (chairman). *Professional and Financial Status of the Elementary Teacher*. Portland, Oregon: Oregon State Teachers Association, January, 1928. (Multigraphed) 44 p.

<sup>5</sup> Huffaker, C. L. *Teacher Supply and Demand in Oregon*. University of Oregon Publication, Vol. II, No. 5. Education Series. Eugene, Oregon: the University Press, January, 1931. 156 p.

<sup>6</sup> Taylor, W. S. *The Development of Professional Education of Teachers in Pennsylvania*. Philadelphia, Pennsylvania: J. B. Lippincott Company, 1924. 293 p.

<sup>7</sup> King, LeRoy. (director) *Report of Committee on Appropriations, Subsidies, High Schools, Normal Schools, Rural Schools, and Teachers Institutes*. Harrisburg, Pennsylvania: State Department of Public Instruction, 1925. 398 p.

<sup>8</sup> MacDonald, Marion E. *Significance of the Various Kinds of Preparation for the City Elementary School Principalship in Pennsylvania*. New York: Teachers College, Columbia University, 1930. 104 p.

<sup>9</sup> Van Houten, L. W. Study to be available about June, 1931 as a Contribution to Education at Teachers College, Columbia University, New York City.

<sup>10</sup> Yeager, William A. *State Certification as a Factor in the Training of Elementary Teachers in Service*. Doctor's dissertation, University of Pennsylvania, Kutztown, Pennsylvania: Kutztown Publishing Company, 1929. 350 p.

<sup>11</sup> Blackburn, J. Albert. *A Study of the New Teacher Situation in Public Secondary Schools of Pennsylvania*. Doctor's thesis, University of Pennsylvania. Philadelphia, Pennsylvania: Westbrook Publishing Company, 1928. 155 p.

<sup>12</sup> Parkinson, Burney L. *The Professional Preparation and Certification of White Elementary and Secondary Public School Teachers in South Carolina*. Bulletin of the University of South Carolina, Columbia, South Carolina, June, 1926. 270 p.

<sup>13</sup> Reported by Secretary J. P. Coates, South Carolina State Teachers Association, October, 1930.

<sup>14</sup> U. S. Department of the Interior, Office of Education. *The Educational System of South Dakota*. Bulletin, 1918, No. 31. Washington, D. C.: Government Printing Office, 1918. 304 p.

<sup>15</sup> Vance, John Q. "Contributions of the Teacher-Training Agencies in Tennessee Toward Supplying the Demand for Trained Teachers in the State." *Peabody Journal of Education*. 7:272-80; March, 1930.

### Texas

Works directed a survey which dealt with such topics as the tenure, experience, certificates, and preparation of teachers.<sup>1</sup>

### Utah

Parratt, secretary of the Utah Education Association, has made frequent studies of teacher turnover in Utah.<sup>2</sup> The United States Office of Education included sections on teacher tenure and training in its survey report.<sup>3</sup>

### Vermont

The Carnegie Foundation for the Advancement of Teaching collected facts on the tenure, turnover, training, and qualifications of teachers.<sup>4</sup> Steele made a study of teacher training in Vermont during 1925 and 1926.<sup>5</sup> He included some data on teacher turnover. The state department of education cooperated in supplying information and records.

### Virginia

Inglis directed a state survey including an examination of turnover, tenure, certificates, salaries, and training of teachers.<sup>6</sup> Ellis of the Richmond Normal School is working upon a plan for making a continuous state survey of teacher demand and supply.<sup>7</sup>

### Washington

Koos and Woody surveyed the demand for high school teachers in 1919.<sup>8</sup> Sections of the investigation of the United State Office of Edu-

cation are given to problems of teacher personnel.<sup>9</sup>

The state department is making a continuous study of the interchange of teachers with other states and the teacher supply provided by state institutions.<sup>10</sup> Bolton made a survey of the training and supply of high school teachers in the northwest states in 1928.<sup>11</sup> The state education association has a committee studying the causes of teacher turnover.<sup>12</sup>

### West Virginia

Cavins has directed a state survey, in which facts have been collected on the training, certification, and tenure of city and rural teachers.<sup>13</sup>

Clark, state supervisor of teacher training, summarized some of the facts of teacher training in February, 1930.<sup>14</sup> In 1928 a committee of representatives of the public and private colleges revised the teacher-training curricula.<sup>15</sup>

### Wisconsin

Anderson reported conditions relating to teacher personnel in one-room rural, elementary, and secondary schools.<sup>16</sup> In 1928 Clarke published a study of teacher tenure, with special reference to Wisconsin.<sup>17</sup> He recommends that state departments accumulate certain data on teacher personnel. Plenzke, assistant state superintendent, has collaborated with the Wisconsin Teachers Association in a report on the training, qualifications, and salaries of rural

<sup>1</sup> Works, George A. (director). *Educational Survey Reports*. Austin, Texas: Educational Survey Commission 1925. 8 Vols.

<sup>2</sup> Each year Secretary D. W. Parratt circulated an inquiry blank on tenure and kindred questions among the county superintendents. A mimeographed report was sent back to all counties.

<sup>3</sup> U. S. Department of the Interior, Office of Education. *Survey of Education in Utah*. Bulletin, 1926, No. 18. Washington, D. C.: Government Printing Office, 1926. 510 p.

<sup>4</sup> Carnegie Foundation for the Advancement of Teaching. *A Study of Education in Vermont*. Bulletin, No. 7, 1914. New York: the Foundation, 1914. 241 p.

<sup>5</sup> Steele, Robert M. *A Study of Teacher Training in Vermont*. Contributions to Education, No. 243. New York: Bureau of Publications, Teachers College, Columbia University, 1926. 111 p.

<sup>6</sup> Inglis, Alexander. (director) *Virginia Public Schools*. Virginia Education Commission. Education Series, Vol. VII. Yonkers-on-Hudson, New York: World Book Company, 1920. 400 p.

<sup>7</sup> Communications with Mr. Ellis show that his study will be presented as a doctor's dissertation at Teachers College, Columbia University, New York City sometime in 1931.

<sup>8</sup> Koos, L. V., and Woody, Clifford. "The Training of Teachers in the Accredited High Schools of Washington." *Eighteenth Yearbook, Part II*. National Society for the Study of Education. Bloomington, Illinois: Public School Publishing Company, 1919. p. 213-57.

<sup>9</sup> U. S. Department of the Interior, Office of Education. *Survey of Educational Institutions of the State of Washington*. Bulletin, 1916, No. 26. Washington, D. C.: Government Printing Office, 1916. 228 p.

<sup>10</sup> Typewritten summary of interchange of teachers supplied by W. F. Martin, Deputy Superintendent of Schools, State Department of Education. Summary of Teacher Surplus in the *Washington Education Journal*, p. 86. November, 1930.

<sup>11</sup> Bolton, Frederick E. "Training and Supply of High School Teachers in the Northwest States." *Oregon Education Journal* 2:5-6, 28-30; June, 1928. Report of a committee of the Northwest Association of Secondary and Higher Schools.

<sup>12</sup> Reported by Secretary Arthur L. Marsh in a letter of November 19, 1930.

<sup>13</sup> Cavina, Lorimer V. (director). *Survey of Education in West Virginia*, Vol. I. Charleston, West Virginia: State Board of Education, 1929. 342 p.

<sup>14</sup> Clark, Robert. "Facts and Problems of Training Public School Teachers in West Virginia." *Educational Administration and Supervision* 16:116-21; February, 1930.

<sup>15</sup> Clark, Robert. (chairman) *Training and Certification of Teachers in West Virginia*. Teacher Training Bulletin, No. 7, 1928. Charleston, West Virginia: State Board of Education, 1928. 85 p.

<sup>16</sup> Anderson, C. J. *The Status of Teachers in Wisconsin*. Madison, Wisconsin: State Department of Education, 1924. 156 p.

<sup>17</sup> Clarke, Clarence L. *Tenure of Teachers in the Profession*. Ann Arbor, Michigan: Alumni Press, University of Michigan, 1928. 144 p.



teachers.<sup>1</sup> Another report has been made on the training and work of high school teachers in new positions.<sup>2</sup>

### Wyoming

A study by the United States Office of Education includes sections on teacher training and certification.<sup>3</sup>

### Summary and Conclusion

Certain tentative implications from this chapter are:

1. In 42 states there has been research on phases of teacher demand and supply. A number of these studies owe their genesis to state teachers associations, or to students in institutions of higher learning. State departments have frequently assisted investigators by approving inquiry blanks, or by supplying official records.

2. In most states the investigations have omitted details on teacher demand and supply which should be included, if the findings are to be most helpful in teacher-training.

3. Few states have laid plans for a continuous study of supply and demand. The studies

made up to date have been at irregular intervals and not in terms of long-time policies.

4. Undoubtedly one reason for the rather sporadic tendency of teacher personnel studies is that state departments lack the machinery and the funds to make continuous studies. Statistical bureaus in state offices seem to be heavily taxed in tabulating the present reports of county superintendents. State record forms do not always ask local authorities for full data as to demand. Teacher-training agencies do not always report fully to the state departments of education.

5. The significance of demand and supply studies to the economic welfare of teachers is seldom referred to in the studies to date. Most surveys of the status of teachers have led to recommendations as to the type and length of teacher-training. Few studies to date point out that a training program may be so prolific or so restricted in the number of graduates as to actually damage the morale and the economic welfare of the state's teaching body.

<sup>1</sup> Plenzke, O. H. *Teacher Welfare Survey in Rural Schools*. (In cooperation with committee of the Wisconsin Teachers' Association.) Madison, Wisconsin: Wisconsin Teachers Association Bulletin, No. 6, February, 1930. 11 p.

<sup>2</sup> Plenzke, O. H., and Doudna, E. G. *The Training and Work of High School Teachers in Wisconsin in New Positions*. Madison, Wisconsin: State Department of Education, 1930. 16 p.

<sup>3</sup> U. S. Department of the Interior, Office of Education. *Educational Survey of Wyoming*. Bulletin, 1916, No. 29. Washington D. C.: Government Printing Office, 1916. 120 p.

THE study of the needs of the public schools on the one hand, and of the means of meeting the needs on the other hand, the conscious attempt to make available to all institutions the methods of the most successful few, the analysis of the processes of teacher-training into their essential elements with the rejection of those that are superfluous and the development of those that are vital, the presentation with daylight clearness of the need for more money to do a far greater work than is now possible, and the development of an effective instrumentality for placing graduates and for following them up—these are some of the opportunities that the present situation discloses. Above all, the state must vest authority somewhere for the continuous study of the big problems at the basis of training, placing, and holding a sufficient corps of teachers "of first-rate intellect, morals, and skill"; at the same time giving to this authority the power to put into effect the results of its findings.—Buckingham, B. R., *Supply and Demand in Teacher-Training*. pp. 181-82.

## CHAPTER V

### Procedures in the Study, Management, and Adjustment of Teacher Personnel Problems

Preceding chapters have pointed out that the employment of teachers is subject to the law of demand and supply. Briefly: (1) a shortage of teachers places the school administrator (demand) in difficulties, (2) a surplus of teachers works hardship on the teaching group (supply), (3) either condition ultimately does damage to the education of children. Apparently, a reasonable balance between demand and supply is best for all concerned.<sup>1</sup>

What factors unbalance teacher demand and supply? Can these factors be manipulated so as to develop and to maintain an equilibrium? What roles in teacher demand and supply are played by such factors as: (1) the state control of teacher training, (2) certification of teachers, (3) guidance of high-school students, (4) selection of student teachers, and (5) records and research of state departments of education? The purpose of this chapter is to throw some light upon the status and future development of these factors.<sup>2</sup>

It cannot be stated too emphatically that teacher demand and supply problems are very intricate. No panacea has been discovered as yet. Meanwhile, there is a need for much painstaking and patient research. The contents of this chapter should be valuable to investigators. The practices in vogue, the experiments under way, and the solutions proposed, should be stimulants to further research. After the fact-gathering should come the necessary reorganization of teacher training, the revision of certification laws, the creation of administrative machinery, and the promulgation of future laws. Adjustment, however, waits upon facts.

#### State Control of Teacher Training

*Basic philosophy*—Education is a state function. Under this principle, state and local

authorities establish and maintain public schools. From this it follows that teacher training is a state function, because the state must insure itself an adequate supply of qualified teachers.<sup>3</sup>

States have not set up public schools as the sole agency for the education of youth. Nor have states assumed teacher-training work as an exclusive right. However, states have assumed enough control of education to insure to each child the minimum of schooling. In the same way, states have a right to assume control of teacher preparation to the extent of providing enough well-trained teachers.

For years a number of the states have controlled public and private teacher-training agencies through certification powers. That is, a state extended or withheld the right to prepare teachers according to the way teacher-training agencies met certain basic requirements. Such control is largely inspectional and "check rein" in type. Has not the time come for a forward-looking, cooperative, and constructive program of teacher training? Will not such a program save both money and human energy, and at the same time prevent the worst effects of an unbalanced teacher demand and supply?

*Administration of teacher-training institutions*—Most states obtain the majority of their public school teachers<sup>4</sup> from, (1) state teachers colleges or normal schools, (2) state universities, (3) state agricultural or special schools, and (4) private universities and colleges.

The control of private universities and colleges usually rests with their own boards of trustees or management. The participation of these institutions in a state teacher-training program, on a voluntary basis, is discussed in the next section of this chapter under statewide conferences on teacher training.

<sup>1</sup> It is not possible to say at this time what the exact nature of this equilibrium will be. Our knowledge of the specific characteristics of teacher demand and supply is too general, and too often obtained only for one or two years. Continuous record-keeping and research in phases of teacher personnel should provide the necessary data.

<sup>2</sup> Data for this chapter were obtained largely through personal interviews with officials in 39 state departments. The interview form was filled in and returned by mail by six additional state offices. A total of 45, out of 49 governmental units, cooperated in this phase of the study.

<sup>3</sup> See Cubberley, E. P., *State School Administration*, Houghton Mifflin Co., 1927. Chapters V, XI, XIII, and XXII.

<sup>4</sup> This classification omits municipal normal schools. Few of these institutions influence teacher supply beyond the local area. Also, in a few states a number of persons enter teaching each year on the basis of high school or post-high school teacher training courses. These persons enter the rural schools almost exclusively. When rural salaries improve and normal schools provide training for rural school positions the need for these high school classes should end. Ohio has abolished the high school teacher-training classes since Dr. Buckingham's study in 1923-24.

<sup>5</sup> Certification on the basis of examination in place of professional courses has diminished to a small point. See Column 6, Table 14, Chapter III.

The control of state institutions of higher education may be classified as three types: (1) separate boards for all types of schools, (2) a single board for normal schools and teachers colleges, and (3) a unified control of all institutions. Table 19 shows the distribution of the 48 states as to the type of control.<sup>1</sup>

It will be noted in Table 19 that the movement toward unified control has made progress. According to Cubberley this movement began with Oregon, Iowa, and Montana in 1909.<sup>2</sup> By 1921 nine states had some form of unified control. The effort toward centralization has aimed to eliminate duplication in instruction, legislative lobbying for appropriations, rivalry for students, and community jealousies.<sup>3</sup> On the more positive side, the unification makes for a consistent, forward-looking program of higher education, with each state school sharing a reasonable portion of the responsibility.

TABLE 20.—PLACE OF STATE EDUCATIONAL AUTHORITIES IN SINGLE BOARD TYPE OF CONTROL OF HIGHER EDUCATION

| Type of Control                                                                                                                            | States                                                    |                                                                 |
|--------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|-----------------------------------------------------------------|
| A. Authority largely under the state board of education, state superintendent, or state department of education.                           | Idaho<br>New York                                         |                                                                 |
| B. Authority resides with the state board of administration, or other group more or less independent of the state department of education. | Florida<br>Georgia<br>Iowa<br>Kansas<br>Montana<br>Nevada | New Jersey<br>North Dakota<br>Oregon<br>South Dakota<br>Wyoming |

This table gives Type III of Table 19 in greater detail so as to show the authority of state departments of education.  
Data taken from pages 296-300 of the *Ninth Yearbook*, Department of Superintendence, National Education Association, 1931.

Greater detail on the types of unified control is shown in Table 20. Apparently only Idaho and New York centralize full authority for all higher education in the state offices of edu-

<sup>1</sup> At least twelve of the state organizations do not lend themselves readily to classifications. Compare Table 19 with the tables in Chapter XV, *Ninth Yearbook*, Department of Superintendence, 1931, p. 281-301.

<sup>2</sup> Cubberley, E. P. *State School Administration*, p. 346-48.

<sup>3</sup> The new Oregon board of higher education is described by M. M. Chambers in "State Administration of Education," *Journal of Higher Education* 1:203-207, April, 1930.

TABLE 19.—TYPES OF GENERAL CONTROL OF STATE INSTITUTIONS FOR HIGHER EDUCATION

| Type of Control                                                                                                        | States                                                                                                                                                         |                                                                                                                                                                    |                                                                                                                           |
|------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|
| I. Separate boards for normal schools teachers colleges, universities and special colleges                             | Arizona<br>Arkansas<br>Delaware<br>Kentucky                                                                                                                    | Mississippi <sup>1</sup><br>Missouri <sup>2</sup><br>New Mexico <sup>3</sup><br>North Carolina                                                                     | Ohio<br>Pennsylvania<br>South Carolina<br>Washington                                                                      |
| II. One board for the normal schools and teachers colleges. Separate boards for the universities and special colleges. | Alabama <sup>4</sup><br>California<br>Colorado <sup>5</sup><br>Connecticut<br>Illinois <sup>6</sup><br>Indiana <sup>7</sup><br>Louisiana<br>Maine <sup>8</sup> | Maryland<br>Massachusetts<br>Michigan <sup>9</sup><br>Minnesota <sup>10</sup><br>Nebraska <sup>11</sup><br>New Hampshire<br>Oklahoma<br>Rhode Island <sup>12</sup> | Tennessee<br>Texas <sup>13</sup><br>Utah <sup>14</sup><br>Vermont<br>Virginia<br>West Virginia <sup>15</sup><br>Wisconsin |
| III. One board for all state institutions of higher education.                                                         | Florida<br>Georgia <sup>17</sup><br>Idaho<br>Iowa<br>Kansas                                                                                                    | Montana<br>Nevada <sup>18</sup><br>New Jersey <sup>19</sup><br>New York<br>North Dakota                                                                            | Oregon<br>South Dakota<br>Wyoming <sup>16</sup>                                                                           |

Adapted from Chapter XV of the *Ninth Yearbook*, Department of Superintendence, National Education Association, 1931, p. 281-301. Supplemented by records of interviews and an unpublished study by Dr. G. W. Rosenlof, Nebraska State Department of Education.

<sup>1</sup> A single board controls the universities and special colleges, but the normal schools are under separate boards.

<sup>2</sup> Missouri has an unofficial conference of representatives of all colleges and universities. In Alabama the state superintendent (for the normal schools) and representatives of the universities form a council of education.

<sup>3</sup> The single board is not the state board or state department of education.

<sup>4</sup> Teacher training chiefly centered in one college. State board of education allots money to the agricultural college for the training of vocational teachers.

<sup>5</sup> Normal school part of the state university. Agricultural college is separate.

<sup>6</sup> State board has general control of teachers colleges. State university has its own board. Both groups under the fiscal supervision of the state board of control.

<sup>7</sup> All colleges and normal schools associated with the state university in a single board. Each institution has its own board also.

<sup>8</sup> State normal school is a part of the state university under a single board of regents.

<sup>9</sup> New Jersey state board of regents has charge of publicly supported higher education but Rutgers has its own board of trustees.

<sup>10</sup> Higher education centered in the state university.

cation.<sup>1</sup> Nevada and Wyoming concentrate authority with the regular board of regents of the state university. Florida, Iowa, Kansas, Montana, New Jersey, North Dakota, Oregon, and South Dakota have created more or less independent and unique types of boards to control higher education.<sup>2</sup> Are all of these types in conformity with the best principles of state school administration? Until there is further research and experimentation we must agree with Cubberley:

Many different plans will be tried, many mistakes probably will be made during the experimental period, and no one uniform plan for unified control will finally be decided upon. It is likely to be a trying period for those responsible for the development of higher education, but there is little question that the public which supports these institutions is ready and impatient for better working relations between the institutions of the state.<sup>3</sup>

It may be added, that not only is the "public impatient," but the teaching body itself is beginning to realize that a haphazard training program is dangerous to the economic welfare of the profession. The training colleges prepare the supply which the public schools demand. If equilibrium is to be brought between these two great forces, a comprehensive state-wide teacher preparation program is a necessity.<sup>4</sup>

*Budget procedures and financial support of state teacher-training institutions*—The above section has dealt chiefly with the educational

and administrative leadership of state teacher-training colleges. Important as these administrative responsibilities are they may be relatively ineffective without authority. Authority in most matters is closely associated with finances. The hand which holds the purse strings usually controls the development of any program.

In almost every state the state legislature provides the money to support the state institutions engaged in teacher training.<sup>5</sup> State educational leadership usually rests with the state board of education, and its assistants, the state superintendent, and the state department of education. The leadership of the state board of education and its assistants is seriously impaired if the individual institutions have a right to go directly to the legislature for budget requests. In states where the fiscal problems are referred to non-educational boards of control before going to the legislature, the state educational officers can do little to shape the budget in terms of a state-wide teacher-training program.

In an effort to make higher education less haphazard several states have tried to unify not only the educational leadership,<sup>6</sup> but the budget requests. The types of budget procedures in vogue at the present time, for institutions engaged in teacher training, are shown in Table 21. Column 1 describes the general

<sup>1</sup> That is, the state board of education, state superintendent, and state department of education.

<sup>2</sup> The titles of these boards do not help much in making classifications. For example, the Iowa board in charge of higher education is called the "State board of education" although it has little direct contact with the state department of education and the public schools.

<sup>3</sup> Cubberley, E. P. *State School Administration*, p. 346.

<sup>4</sup> Some interesting suggestions on the topic: "How can we regulate the supply and at the same time improve the quality of candidates legally available to enter the public school service as novice teachers?" in the *Ninth Yearbook* (1930), American Association of Teachers Colleges.

<sup>5</sup> See "Fiscal Articulation through the Operation of State Budget Systems," Chapter XVI, *Ninth Yearbook*, Department of Superintendence, National Education Association, 1931, p. 302-309.

<sup>6</sup> See Table 19 and previous discussion.

**TABLE 21.—BUDGET PROCEDURES OF STATE INSTITUTIONS ENGAGED IN TEACHER TRAINING**

| Type                                                                                                                                                            | Examples                                    |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|
| I. Presidents of normal schools meet in informal conference on budgets. University's request sent direct to legislature. <sup>1</sup>                           | Kentucky, Missouri, and Washington.         |
| II. Budgetary conferences of normal school presidents in which state department representatives participate. University budget sent direct to legislature.      | California, Ohio, and West Virginia.        |
| III. Budgets of normal schools reviewed by state normal school board. University budget independent of this control. <sup>1</sup>                               | Indiana, Illinois, Nebraska, and Wisconsin. |
| IV. Budgets of all state institutions reviewed and approved by state board of education and commissioner of education before going to legislature. <sup>2</sup> | Idaho.                                      |
| V. Budgets of all state institutions reviewed by a separate board on higher education before presentation to legislature. <sup>1</sup>                          | Iowa and Oregon.                            |

<sup>1</sup> In Types I, III, and V the state superintendent, state board of education, and state department often have little to do with the financial affairs of the state teacher-training agencies.

<sup>2</sup> In Idaho the state superintendent is a member of the state board of education. The commissioner of education is in general charge of higher education under the direction of the state board of education. See state pamphlets on Idaho's system.



type of budget procedure. It should be kept in mind that often after a budget leaves the various educational authorities listed in Column 1, it may not go directly to the legislature. Sometimes it must be approved by one or all of the following authorities: state budget director, state board of control, governor, and the finance committee of the legislature.

Column 2 of Table 21 does not attempt to be exhaustive. The states are listed in this column according to reports given in personal interviews to the investigator of this present study. No doubt other types of classifications could be used.<sup>1</sup>

The purpose of this section is not to prove that any particular state budget plan is financially safer than any other plan. No doubt various procedures are equally sound and effective. From the viewpoint of educational leadership one question needs to be kept to the fore: Should not the budget for higher educational institutions represent the unified program of institutional representatives and state education officials?

*State-wide conferences on teacher training*—The preceding paragraphs of this chapter describe a movement toward unified control of the state institutions engaged in teacher-training work. Progress along such lines of centralization requires legislative programs extending over months and often years. Also, the unification of the state agencies engaged in teacher training does not solve the problem of private colleges.

A device, now in use in several states to bring about a unified program, is the state-wide conference on teacher training. The organization of such meetings is often informal and unofficial. Usually, the meeting is called by the state superintendent or the state department of education. Representation includes both public and private institutions engaged in the work of preparing teachers. The decisions of the conferences are not binding usually upon a particular institution until approved by its own board of trustees.

Space limitations make it impossible to describe in detail the various state conferences on

teacher training. In 1915 the Carnegie survey of Missouri<sup>2</sup> suggested the organization of a teacher-training conference.<sup>3</sup> Leonard wrote in 1922<sup>4</sup> of the conference as follows:

In 1916, an attempt of an entirely different sort from any of those thus far mentioned was made in Missouri in an effort to establish closer working relationships among the institutions in this state. A state educational conference was organized composed of representatives from the state department of education, the state university, and the state normal schools. The conference was entirely unofficial, and had no legal status. It was a movement arising out of the necessities of the situation, and supported, at least nominally, by all of the institutions. The problems brought before the conference related to standards for faculties, definitions of units and credits, the transfer of students from one school to another, and other like questions. While larger questions of institutional policies have not come before this body, at least up to the summer of 1922, it represents a sincere effort on the part of certain officers and instructors in the institutions to foster harmony and cooperation.

Indiana has a somewhat different type of teacher-training control in its State Teacher-Training Committee. The organization and authority of this committee were described in an interview<sup>5</sup> as follows:

The State Teacher-Training Committee consists of five persons: two presidents of state teachers colleges, one representative of the private liberal arts colleges, one city superintendent, and one layman. The State Teacher-Training Committee may be called at any time, but meets regularly at least once a month. Calls are issued by the chairman of the Teacher-Training Committee or by the director of teacher training with the approval of the state superintendent of schools. The director is also responsible for providing this meeting with a program and an agenda.

The recommendations of the State Teacher-Training Committee, when approved by the state board of education, are as effective as state law. Failure of any institution to live up to the requirements of the state board of education is sufficient cause for depriving the school of teacher-training rights. However, no attempt has been made up to date to control the output of teachers by means of this state teacher-training committee, except that whenever a considerable surplus of teachers has existed the committee has been instrumental in securing an advance in standards of training.

<sup>1</sup> See Chapter XVI of the *Ninth Yearbook*, Department of Superintendence, National Education Association, 1931, p. 302-309.  
<sup>2</sup> Carnegie Foundation for the Advancement of Teaching, *The Professional Preparation of Teachers for American Public Schools*, (Bulletin No. 14), 1920, p. 62.

<sup>3</sup> Hill, Clyde M. *A Decade of Progress in Teacher Training*, Contributions to Education, No. 233, Teachers College, Columbia University, 1927, p. 149-75.

<sup>4</sup> Leonard, R. J. *The Coordination of State Institutions for Higher Education Through Supplementary Curricular Boards*, University of California, Bureau of Research, Study No. 13, 1923, p. 14-15.

<sup>5</sup> From a summary of the interview with H. M. Whisler, Director of Teacher Training, July 7, 1930. Summary on file in the Research Division, National Education Association.

Utah holds informal conferences between the representatives of private and public institutions engaged in teacher preparation work. The meetings are called by the state superintendent of public instruction. Decisions are binding by mutual agreement, rather than by law. The title "Utah Conference on Teacher Training" is used to designate the group. Minutes and committees of the conference indicate an interest in such problems as curriculums, units, faculty scholarship, and teacher supply.<sup>1</sup>

Descriptions might be given of the work and organization of teacher-training conferences in other states. Among these states are: California, Illinois, Idaho, Kentucky, Ohio, and West Virginia.<sup>2</sup> Sufficient for our purposes is the demonstration that private and public teacher-training institutions can cooperate on a state-wide program.<sup>3</sup> This harmony has been brought about in several states by extra-legal

conferences which depend upon public opinion and mutual understanding for the enforcement of decisions. Already several of these unofficial conferences are working upon phases of teacher demand and supply.

### Certification of Teachers

*Basic philosophy*—State school administration accepts certification as a state function. In this way the state can admit to teaching the persons who are qualified by age, personality, and preparation. However, a survey of the United States does not show that certification is an exclusive state function. This condition is due to the fact that, originally, local districts determined the qualifications of the teachers employed. The movement, however, is distinctly in the direction of centralizing certification powers in the hands of state officers of education.<sup>4</sup> A summary of practices in the United States is shown in Table 22.

<sup>1</sup> A copy of the proceedings of several meetings is on file in the Research Division, National Education Association. Details on the work of the conference were obtained in an interview August 13, 1930, with A. C. Matheson, Assistant State Superintendent of Public Instruction.

<sup>2</sup> In West Virginia a state-wide conference of public and private teachers colleges has recently developed a basic curriculum for all institutions. See *Training and Certification of Teachers in West Virginia* (Report of State Conference Committee), Teacher Training Bulletin, No. 7, 1928, 85 p. West Virginia State Department of Education.

<sup>3</sup> For different viewpoints on the role of the private college in a state program of teacher training see such references as the following: Buckingham, B. R. *Supply and Demand in Teacher Training*. Ohio State University Studies, Educational Research Monograph, No. 4, March, 1926, p. 161; Tulloss, R. E. "The College and Teacher Training." *Educational Research Bulletin*, Ohio State University, May 29, 1929, p. 238-45; and in the same bulletin "Teacher Training in Liberal Arts Colleges" by E. E. Lewis, p. 247-48; and "The Arts College as a Teacher Training Institution" in the *Seventh Yearbook*, Department of Superintendence, National Education Association, 1929, p. 450-64.

<sup>4</sup> Cubberley, E. P. *State School Administration*, p. 621-41.

TABLE 22.—ADMINISTRATIVE AGENCIES ISSUING TEACHING CERTIFICATES IN THE UNITED STATES IN 1928<sup>1</sup>

| Type of system                                                                                                                                             | States                                                                                                       |                                                                                                                                       |                                                                                                                                       |
|------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| 1                                                                                                                                                          | 2                                                                                                            |                                                                                                                                       |                                                                                                                                       |
| I. State superintendent or state board                                                                                                                     | Alabama<br>Arizona<br>Connecticut<br>Delaware<br>Florida<br>Georgia<br>Indiana<br>Iowa<br>Louisiana<br>Maine | Maryland<br>Minnesota<br>Montana<br>Nevada<br>New Hampshire<br>New Mexico<br>North Carolina<br>North Dakota<br>Oregon<br>Pennsylvania | Rhode Island<br>South Carolina<br>South Dakota<br>Tennessee<br>Texas<br>Virginia<br>Vermont<br>Washington<br>West Virginia<br>Wyoming |
| II. State superintendent, teachers colleges, and county superintendent.                                                                                    | Arkansas<br>Colorado                                                                                         | Idaho<br>Kansas                                                                                                                       | Michigan                                                                                                                              |
| III. State board and state teachers colleges.                                                                                                              | Kentucky                                                                                                     | New Jersey                                                                                                                            | Utah                                                                                                                                  |
| IV. State superintendent and county superintendent-district superintendent.                                                                                | Illinois<br>Mississippi                                                                                      | Missouri<br>New York                                                                                                                  | Oklahoma<br>Wisconsin                                                                                                                 |
| V. State, county, city, and village authorities.                                                                                                           | Ohio                                                                                                         |                                                                                                                                       |                                                                                                                                       |
| VI. County boards of education.                                                                                                                            | California <sup>2</sup>                                                                                      |                                                                                                                                       |                                                                                                                                       |
| VII. Local district.                                                                                                                                       | Massachusetts <sup>3</sup>                                                                                   |                                                                                                                                       |                                                                                                                                       |
| VIII. State superintendent, state normals, cities, state university, private colleges, state board for vocational education, and county boards of regents. | Nebraska                                                                                                     |                                                                                                                                       |                                                                                                                                       |

<sup>1</sup> Adapted from an unpublished master's thesis by Herbert L. Cushing, Director of Certification, Nebraska State Department of Education. Title: *A Desirable Procedure for the Issuance of Teachers Certificates*, University of Nebraska. June, 1930.

<sup>2</sup> State issues a credential upon which the counties grant a teaching certificate. County boards may certificate elementary teachers on the basis of county examinations.

<sup>3</sup> State issues vocational certificates.

*How certification is used to control the supply of teachers*—States use the certification power to influence the supply of teachers as follows: (1) the existence of any requirement as to age or training acts as a selective factor; (2) the short term certificate with requirements for renewal tends to select from those who have taught; (3) the gradual lifting of minimum requirements tends to sort out those who can not or will not meet the new standards; and (4) the radical revision or rapid lifting of certification standards cuts off certain types of supply.

1. When states first set up definite professional requirements for teaching, the way was closed to many who might want "to teach for awhile." Yet, in a number of states these minimum requirements are so low that most college graduates can qualify. Furthermore, in spite of high requirements for certificates, a number of states still permit an influx of persons with less than the desired training. These persons enter teaching on the basis of county examinations or on the basis of short-term professional courses. Table 14 gives some indication of the influx of teachers with less than two years of professional training above high school.

2. The short term certificate, with additional requirements for renewals, has some selective value. Under such a scheme the state could exercise rather direct control over its supply from year to year. However, the effect of short term licenses is somewhat minimized by permanent or life credentials. Such permanent licenses can be obtained in some states solely on the basis of training, and in other states on the basis of professional training plus a few months of teaching. Usually, state departments cannot suspend or revoke a life certificate except for a criminal act.<sup>1</sup> Therefore, those persons with life licenses can leave teaching and return to the supply at will. How can the supply be measured accurately or directed effectively under such conditions?

3. The gradual lifting of requirements for certificates tends to sort out or to "up-grade" those holding teaching positions. Actually, the "up-grading" is lessened in its effectiveness by (1) the existence of life credentials, and (2) the rapid influx of persons with less than the desired training. Yeager's study in Pennsylvania shows that a gradual lifting of certification requirements does tend to increase the number of high grade certificates. However, he points out that as late as 1927 at least 30 percent of the rural elementary school teachers in Pennsylvania had less than the standard training, because of weak spots in the certification laws.<sup>2</sup>

4. The radical revision of certification laws often shuts off large blocks of teacher supply. For example, the abolition of the examination system in Iowa would eliminate 3,837 persons from the annual supply according to Column 6 of Table 14. Other radical means for diminishing or increasing supply might be suggested. We often hear the statement: "In times of oversupply lift certification requirements to high levels."

This statement has encouraged states to increase the normal school training to four years or to abolish the low grade certificates. The effects of such changes have not been measured, but interviews with state department officials indicate that the reduction of the supply is only temporary. The high standards simply force teachers from the field into teacher-training courses for a short term or hold the student-teachers back for a year or two; then the supply leaps to new increases.<sup>3</sup> Seven years after the high requirements of the Edmonds Act<sup>4</sup> went into effect in Pennsylvania, Yeager asked the question of local school authorities: "What is the present situation in your community regarding the supply of properly certificated teachers?" The replies to this question in Table 23 show an oversupply of teachers in 1928.

<sup>1</sup> In Kansas and Nebraska life certificates lapse if not used for a period of three years.

<sup>2</sup> Yeager, W. A. *State Certification as a Factor in the Training of Elementary Teachers in Service*. Doctor's thesis, University of Pennsylvania. Kutztown, Pennsylvania: Kutztown Publishing Company, 1929. p. 261.

<sup>3</sup> As long as salaries in urban schools are attractive, particularly during the present economic depression, persons with certificates will do everything to keep the licenses from becoming void.

<sup>4</sup> The Qualification and Salary Act (the Edmonds Act) was passed in 1921. Table 23 is based on 1928 data.

TABLE 23.—REPLIES OF LOCAL SCHOOL AUTHORITIES AS TO THE STATUS OF SUPPLY OF TEACHERS IN PENNSYLVANIA IN 1928.

| Type of teacher   | Percent replying |                |                      |       |
|-------------------|------------------|----------------|----------------------|-------|
|                   | Scarcity         | Slight surplus | Considerable surplus | Total |
| 1                 | 2                | 3              | 4                    | 5     |
| Elementary.....   | 9.4              | 39.4           | 51.2                 | 100   |
| High school.....  | 13.7             | 47.7           | 38.6                 | 100   |
| All teachers..... | 11.5             | 43.4           | 45.1                 | 100   |

Adapted from Table 69 of Yeager's *State Certification as a Factor in the Training of Elementary Teachers in Service*, p. 274.

Yeager concludes: (1) that over a period of time enough well-trained teachers have met the high standards, and (2) that the over supply was due to the constant infiltration of teachers with "below standard" training.

If the certification requirements are to be raised and manipulated in balancing teacher supply, what state agency is to perform this work? Table 22 indicates that the movement is in the direction of making the state department of education the sole certifying authority.

If the state department of education has the exclusive right to issue certificates, how specific should the certification law be? That is, should the law describe the types of certificates and the specific requirements of qualification? Should the law merely grant general powers of certification to the state department of education, and leave the details to state board rules? Certainly, the latter procedure allows much more flexibility in the management of teacher supply.

*Certification and the special subjects*—Discussion up to this point has dealt with certification laws and their influence upon gross supply. An even more difficult problem is that of placing trained teachers in positions for which they have been prepared.

In a number of states "blanket" or general credentials are issued to both elementary and secondary school teachers.<sup>1</sup> Usually, in these states the secondary credential may be used for teaching either in high schools or elementary schools. If there is a shortage of persons with elementary school licenses, superintendents employ those with secondary school certificates to teach elementary school positions. Theoretically, this is wasteful of training, and pedagogically unsound. Have state departments investigated the extent and effect of such practices?

A second problem is placing people so they may teach subjects for which they are prepared. Williams studied the output of the Iowa State Teachers College in 1928. He checked the students in their first teaching positions to determine whether they were in subject fields in which they held college majors and minors. The percent of those teaching subjects for which they were prepared is shown in Table 24.

Buckingham found in his study of Ohio

**TABLE 24.—PERCENT OF STUDENTS TEACHING SUBJECTS FOR WHICH THEY WERE PREPARED<sup>1</sup>**

| Subjects                | Percent |
|-------------------------|---------|
| Art.....                | 100     |
| Music.....              | 86      |
| Home economics.....     | 86      |
| Manual arts.....        | 86      |
| Physical education..... | 85      |
| English.....            | 78      |
| Science.....            | 69      |
| Commercial.....         | 64      |
| Social science.....     | 64      |
| Mathematics.....        | 61      |
| Foreign language.....   | 45      |
| Average.....            | 72.5    |

<sup>1</sup> Williams, R. C. *A Study of the Output of the Iowa State Teachers College for 1928*. Unpublished master's thesis, University of Iowa, Table 37, p. 79. In 1925 Patterson found more than 50 percent of the graduates of the Colorado State Teachers College teaching outside of the fields in which they had specialized (Unpublished master's thesis, 1925, Colorado State Teachers College). See references in selected bibliography at end of this study and those in Chapter IV.

in 1923-24 that the newly appointed high school teachers frequently do not teach their college majors and minors. Table 25 reports only enough of the Ohio findings to illustrate the point above.

Table 25 shows that too often students prepare to teach certain subjects. In other subjects the supply is larger than the demand. Does this suggest the need for exact surveys as to the annual demand in each subject field? Is there a need for more guidance during the teacher-training period? Should the certifica-

**TABLE 25.—DISTRIBUTION OF NEWLY APPOINTED SUBJECT TEACHERS WHO WERE COLLEGE GRADUATES ACCORDING TO THEIR MAJOR AND MINOR SUBJECTS**

| Subject                  | Number with majors and minors | Number of new teachers appointed in each subject |
|--------------------------|-------------------------------|--------------------------------------------------|
| 1                        | 2                             | 3                                                |
| Agriculture.....         | 66                            | 132                                              |
| Biology.....             | 156                           | 154                                              |
| Chemistry.....           | 248                           | 95                                               |
| Commercial subjects..... | 59                            | 206                                              |
| English.....             | 1,201                         | 975                                              |
| French.....              | 393                           | 150                                              |
| History and civics.....  | 377                           | 637                                              |
| Total.....               | 2,500                         | 2,349                                            |

Read table: Whereas 132 persons were appointed to teach agriculture only 66 teachers reported agriculture as their major or minor subject. Twelve hundred and one had studied English, but only 975 were appointed to teach this subject.  
Adapted from Table 32 of *Supply and Demand in Teacher Training* by B. R. Buckingham, page 105.

<sup>1</sup> Cook, Katherine M. *State Laws and Regulations Governing Teachers Certificates*. U. S. Office of Education Bulletin, No. 19, 1927. 296 p.



tion requirements prescribe the definite subject fields and force students to prepare accordingly?<sup>1</sup> What state agency should be responsible for keeping the guidance adjusted to demands?<sup>2</sup>

### Guidance of High-School Students

What part should high-school guidance play in the balancing of teacher demand and supply? Is it possible to guide away from teaching those high-school students who are personally unsuited for careers in education? Is it desirable to guide certain high-school students toward positions in educational fields? What is being done in high-school guidance insofar as teaching is concerned?

*Are high-school students interested in teaching?*—In 1919-20 Book examined approximately 6000 high-school seniors in the secondary schools of Indiana.<sup>3</sup> About 60 percent of those students had decided upon a specific life work. Among the ten occupations most frequently chosen are those shown in Table 26.

Book gave these seniors an extensive series of tests to measure their intelligence. Twenty-two percent of the 6000 students received ratings of A or B. Among the boys who had made occupational choices the highest percents of A's and B's were found in journalism, minis-

try, and science. Among the girls, journalism, law, and social service had the highest percents of A's and B's. These facts are shown in Columns 3 and 6 of Table 26.

As a result of facts similar to those shown in Table 26, Book concludes: (1) that high schools are unconsciously directing students toward a few lines of work, (2) that the student's occupational choices are often made on limited high-school experience, and (3) that occupational choices fail to take into account the student's mental abilities. He suggests more efficient high-school guidance as one means of meeting the difficulties.<sup>4</sup>

What does the whole problem of high-school guidance mean to the teaching profession? Should the brightest students be consciously directed toward teaching careers? Does the person with the high I. Q. make the best teacher? Data upon these and similar questions are still inadequate.

*What are high schools doing with guidance in relation to teacher training?*—The resources were not available to ascertain from each high school its program in high-school guidance; particularly, the special attempts of high schools to influence or to inform students regarding the opportunities of the teaching profession.<sup>5</sup>

<sup>1</sup> West Virginia has recently adopted 31 teaching combinations for first-class high school certificates. See *The Training and Certification of Teachers*, Teacher Training Bulletin No. 7, 1928, p. 47-8, West Virginia State Department of Education.

<sup>2</sup> A full discussion of many of these questions is found in *Supply and Demand in Teacher Training* by B. R. Buckingham, p. 87-132.

<sup>3</sup> Book, W. F. *The Intelligence of High School Seniors*. Macmillan, 1922. 371 p.

<sup>4</sup> Book, W. F., *Ibid.* p. 139-42.

<sup>5</sup> See certain general articles on junior and senior high-school guidance programs as related to teacher training in Volume III (1928) and Volume IV (1929) of the *Proceedings of the Normal School and Teachers College Section of the New York Society for the Experimental Study of Education*. Published by the Brandow Printing Company, Albany, New York.

TABLE 26.—THE TEN LIFE CAREERS CHOSEN MOST FREQUENTLY BY HIGH-SCHOOL SENIORS IN INDIANA

| Boys            |                 |                                      | Girls              |                 |                                      |
|-----------------|-----------------|--------------------------------------|--------------------|-----------------|--------------------------------------|
| Occupations     | Number of cases | Percent rated A or B in intelligence | Occupations        | Number of cases | Percent rated A or B in intelligence |
| 1               | 2               | 3                                    | 4                  | 5               | 6                                    |
| Engineer.....   | 432             | 30                                   | Teacher.....       | 905             | 24                                   |
| Farmer.....     | 327             | 16                                   | Clerical.....      | 646             | 16                                   |
| Mechanic.....   | 182             | 18                                   | Musician.....      | 128             | 16                                   |
| Business.....   | 151             | 23                                   | Nurse.....         | 101             | 18                                   |
| Teacher.....    | 75              | 33                                   | Physician.....     | 36              | 19                                   |
| Lawyer.....     | 69              | 32                                   | Lawyer.....        | 26              | 38                                   |
| Physician.....  | 51              | 12                                   | Social worker..... | 22              | 31                                   |
| Scientist.....  | 41              | 41                                   | Journalist.....    | 18              | 44                                   |
| Journalist..... | 16              | 44                                   | Entertainer.....   | 16              | 25                                   |
| Minister.....   | 12              | 42                                   | Homemaker.....     | 10              | 20                                   |

Adapted from Tables XVI and XVIII of *The Intelligence of High School Seniors*, W. F. Book, p. 123.

In the personal interviews state officials of education were asked to name high schools in their states which qualified under the paragraph above. Many high schools were named as doing general guidance work, but state school officers were not sure of specific instances where superior high-school students were guided toward careers in teaching. Evidently, there are no state programs to set forth the opportunities of teaching to the superior students of American secondary schools.<sup>1</sup>

What should the high schools place before their students regarding teaching as a life work? Where can these facts be obtained? How can this vocational information be presented without undue influence or bias? High-school guidance will profit by more facts bearing upon such questions.

*Are state normal schools doing anything to interest high-school students in teaching?*—In the personal interviews state officials of education were asked to report on the guidance activities of state normal schools in relation to high schools. Practically all states report that normal schools, upon request, send out speakers to the secondary schools. Also, state normal schools often have field representatives who recruit students and locate teaching vacancies. None of these efforts merit recognition as constructive and systematic guidance work.

Recent reports to a New York conference on teacher training indicate certain practices of apparent value. The Bridgeport City Normal has a normal school adviser who holds conferences with high-school seniors.<sup>2</sup> In Rhode Island each town selects and gives special preparation to the students who are to be recommended to the teacher-training colleges.<sup>3</sup>

The state normal school at Castleton, Vermont, sends a personal letter, with normal school literature, to all high-school seniors who show an inclination toward teaching.<sup>4</sup>

How much guidance should the teachers college give to high school seniors? Should the college give the literature to the high school prin-

cipal or directly to the senior student? How can normal schools avoid the charge of recruiting their enrolments? What information and records can the college expect from the high-school authorities? Is it possible to determine in high school the students who will succeed in teacher training?

*What are state education associations doing about high school guidance?*—In the opinion of state departments, the state education associations have made no systematic attempt to inform high-school students in regard to teaching. Studies of tenure, salaries, and other phrases of teaching are made by state associations, but these reports never reach secondary pupils as a part of any systematic program.<sup>5</sup>

*Are state departments touching high-school guidance in any systematic way?*—A few state departments of education are issuing pamphlets in the general field of guidance.<sup>6</sup> In 1929-30 the Ohio State Department of Education directed the testing of approximately 40,000 high-school seniors. A number of students were advised not to attempt higher education on the basis of these tests.

### The Selection of Student Teachers Before and During Training

Is the public-supported teacher-training college a "public school open to all" or a vocational school with a selected clientele? This question in similar form has been debated from the time state normal schools first came into existence. In 1898 Principal Marion Brown of the New Orleans State Normal School expressed the viewpoint of specialization,<sup>7</sup> as follows:

The normal school is not, like the elementary or the secondary school, for all who want to come, but it is established by the state for a special purpose, viz., to provide properly equipped teachers for its schools, and its authorities must have the best obtainable material for making teachers; consequently, the standard they fix will be the preparation to which all applicants for entrance therein will aspire; through the state normal school the state says to the prospective teachers: "This is what we demand as employer. Can you fill the bill?"

<sup>1</sup> In 1927 S. C. Clement inquired into the high-school guidance programs in relation to the municipal training colleges in seven of the largest cities of the United States. He reports only sporadic and limited guidance work. Unpublished master's thesis, New York University, 1927.

<sup>2</sup> Reported by W. Warren, Assistant Superintendent of Schools. In *Proceedings*, Volume III, Normal School Section, New York Society for the Experimental Study of Education, 1928, p. 63-71.

<sup>3</sup> White, Frank E., *Proceedings*, The Normal School Section of the New York Society for the Experimental Study of Education, 1928, p. 74-77.

<sup>4</sup> Woodruff, Caroline, *Ibid.*, p. 77-83.

<sup>5</sup> Studies of tenure, retirement, etc., by state education associations are reported in Chapter IV.

<sup>6</sup> For example, *Guidance in Ohio Schools* by D. H. Eikenberry, Director of Guidance, State Department, Columbus, Ohio, 1930, 31 p.

<sup>7</sup> Brown, Marion. "The Southern State Normal Schools." *Proceedings*, National Education Association, 1898, p. 734-35.

The above statement of the specialized purpose of the normal school raises many problems. Should high-school seniors be examined for likely teacher-training candidates? Should normal schools select applicants on the basis of intelligence or personality? Can the normal school discover during the training period the students who are most likely to succeed as teachers? May a normal school withhold recommendation or even graduation from the least capable students, even though they have "passed," in order to take account of market conditions? If all graduates are not to be recommended for certificates, upon what basis should the future teachers be selected? If all graduates are not granted certificates, how can the state justify the expenditure of funds for training? Can the state help to keep a balance between teacher demand and supply by controlling the number of students in the teacher training? What state agency should exercise this control over enrolments?

Interviews with state department of education officials did not reveal much information as to whether state teacher institutions selected their students before or during training. The answers from state departments usually were: (1) that state normals admitted any recommended high school graduate from a four-year school, (2) that students who failed academically were dropped during the training period, and (3) that students of peculiar or antisocial personal habits were usually excluded from teacher training. Apparently, we must go directly to the teacher-training agencies for data as to selective devices.<sup>1</sup>

*What are the entrance requirements to teacher-training institutions?*—McNeil has recently made a comparative study of admission requirements to teacher training in ten countries and the United States. The study traces historical practices and summarizes current procedures. Some of the commonest admission requirements are summarized in Table 27. It is sufficient at this point to quote briefly the requirements in the United States, as follows:

In 1930 entrance to state teacher-training institutions in the United States required for unconditional academic admission a high school diploma or its

equivalent, or passing an entrance examination; or, if the candidates are mature students, they may enter conditionally and work off the entrance requirements before a diploma is granted. The majority of states require specific units or combinations of units in the high school work offered. In age, character, and health, states vary from no requirements to very specific ones. Aptitude and achievement tests are being used in some states; grades must be in the upper half or reach a particular standard in others; personality ratings are being tried in still others. Though the institutions are still groping to find the right entrance requirements, a comparison of present requirements with those of 1910 shows, in general, that candidates to teacher-training institutions are selected on a much higher academic plane.<sup>2</sup>

Among some of the foreign practices suggested for study and adoption in America are the following:

Another method, which was popular in England, Wales, Scotland, Australia, New Zealand, and Germany, was to have the teachers choose the candidates at about thirteen years of age, basing their judgment upon the cleverness, physical fitness, and future promise of their pupils. In all countries except Germany, these students became pupil teachers; in Germany, they entered the preparatory teacher-training school.<sup>3</sup>

With a limitation placed upon the number of candidates admitted from year to year to the teacher-training institutions, which is a practice in most of the foreign countries, there is the possibility of considerable elimination and selection of students. Applications for entrance are made weeks or months in

TABLE 27.—SUMMARY OF CERTAIN COMMON ADMISSION REQUIREMENTS TO STATE NORMAL SCHOOLS AND STATE TEACHERS COLLEGES

| Admission Requirement                                                                     | Number of States Specifying |
|-------------------------------------------------------------------------------------------|-----------------------------|
| 1                                                                                         | 2                           |
| 1. Graduation from high school or equivalent.                                             | 48                          |
| 2. Minimum age of 16 years.                                                               | 21                          |
| 3. Health qualifications.                                                                 | 26                          |
| (a) General.                                                                              | 5                           |
| (b) Doctor's certificate.                                                                 | 16                          |
| (c) Specific defects or standards mentioned.                                              | 7                           |
| 4. Specific units or combinations of units of high school work.                           | 31                          |
| 5. Pledge to teach after graduation.                                                      | 9                           |
| 6. Mature students admitted, usually over twenty-one years and not high school graduates. | 31                          |

Adapted from Chart II of *A Comparative Study of Entrance to Teacher Training Institutions* by Mellicent McNeil, 1930, p. 40-7 and 91-94.

<sup>1</sup> See *A Study of Some Problems Arising in the Admission of Students as Candidates for Professional Degrees in Education* by Clarence Linton; *A Comparative Study of Entrance to Teacher-training Institutions* by Mellicent McNeil, and similar references in the selected bibliography at the end of this report.

<sup>2</sup> McNeil, Mellicent. *A Comparative Study of Entrance to Teacher Training Institutions*. Contributions to Education, No. 443, Teachers College, Columbia University, 1930. p. 94.

<sup>3</sup> McNeil, Mellicent. *Ibid.* p. 96.

advance, so that personal interviews are frequently possible and the candidates who are best fitted, so far as that can be judged, are chosen. Of course, in sparsely settled countries, like parts of Australia and Canada, this condition does not exist.<sup>1</sup>

The high academic qualification which is required of the candidates of most of the foreign countries is, perhaps, the most important example which the United States could profitably follow.<sup>2</sup>

*Selection of students on the basis of intelligence tests*—Recently the state normal schools of Connecticut completed a study of the intelligence of 2,652 students in comparison with success in the colleges.<sup>3</sup> Intelligence was measured by Part III of the *Thorndike Intelligence Examination for High School Graduates*.<sup>4</sup> Success was taken to mean "academic success" in obtaining good marks, not repeating courses, and completing the required program each year. A summary of the intelligence scores, number of students failing and number of students graduating is shown in Table 28.

On the basis of the data in Table 28, the conclusion is reached that students obtaining an intelligence test score below 59 on the *Thorndike Intelligence Examination for High School Graduates*, Part III, should be excluded from normal school. Two out of three students, whose scores fall between 60 and 69 in the intelligence test, succeeded in normal school.

The recommendations include the following: (1) students receiving intelligence test scores below 59 should be excluded from teacher training; (2) students with high personal qualifications who fall below 59 should be given another form of the same test; (3) students with scores between 60-69 should be admitted only after rigid examination of previous academic and personal qualifications; (4) intelligence tests should be supplemented by rating scales, aptitude tests, and high-school subject tests, and (5) there is a need for more research so as to isolate more exactly the qualities essential to successful teachers.<sup>5</sup>

TABLE 28.—DISTRIBUTION OF SCORES OF STUDENT ENTRANTS FROM 1925 TO 1928

| Intelligence Test Score | Number Entering | Number Voluntarily Withdrawing | Number Failing | Number Completing Work |
|-------------------------|-----------------|--------------------------------|----------------|------------------------|
| 1                       | 2               | 3                              | 4              | 5                      |
| 20-29                   | 4               | .....                          | 2              | 2                      |
| 30-39                   | 19              | 1                              | 6              | 12                     |
| 40-49                   | 43              | 9                              | 16             | 18                     |
| 50-59                   | 67              | 15                             | 18             | 34                     |
| 60-69                   | 116             | 14                             | 33             | 69                     |
| 70-79                   | 184             | 33                             | 39             | 112                    |
| 80-89                   | 228             | 27                             | 34             | 167                    |
| 90-99                   | 278             | 34                             | 37             | 207                    |
| 100-109                 | 255             | 31                             | 27             | 197                    |
| 110-119                 | 203             | 17                             | 16             | 170                    |
| 120-129                 | 243             | 12                             | 28             | 203                    |
| 130-139                 | 179             | 14                             | 10             | 155                    |
| 140-149                 | 136             | 10                             | 6              | 120                    |
| 150-159                 | 87              | 8                              | 2              | 77                     |
| 160-169                 | 54              | 5                              | 3              | 46                     |
| 170-179                 | 32              | 1                              | 1              | 30                     |
| 180-189                 | 27              | 1                              | 2              | 24                     |
| 190-199                 | 18              | 2                              | 2              | 14                     |
| 200-209                 | 8               | .....                          | 0              | 8                      |
| 210-219                 | 1               | .....                          | 0              | 1                      |
| 220-229                 | 2               | .....                          | 1              | 1                      |
| 230-239                 | 0               | .....                          | .....          | 0                      |
| 240-249                 | 2               | .....                          | .....          | 2                      |
| Total..                 | 2,186           | 234                            | 283            | 1,669                  |

Adapted from Table XVI of *Intelligence Test Scores in Relation to Success*, Connecticut State Board of Education, p. 28. Table 28 does not include 466 students who entered in 1929 for which only intelligence scores are available.

*Selection by rating scales and aptitude tests*—Observation and surveys agree that teacher rating is a common procedure in school administration. Teachers in service, student teachers, and applicants for teacher training are frequently analyzed by rating devices. Research has yet to demonstrate that rating scales really isolate and estimate the essential qualities of the successful teacher.<sup>6</sup>

It is not possible to give at this point the development and value of rating scales and similar devices. Rather extensive summaries of this material are readily available in the *Eighteenth Yearbook* of the National Society of College Teachers of Education.<sup>7</sup> McPhail reported the use of intelligence tests in colleges up to 1924.<sup>8</sup> Wood has the use of the

<sup>1</sup> McNeill, Mellicent. Op. Cit., p. 97.

<sup>2</sup> McNeill, Mellicent, Op. Cit., p. 98.

<sup>3</sup> Connecticut State Board of Education. *Intelligence Test Scores in Relation to Success in the Connecticut State Normal Schools*. Special Education Bulletin 1, 1930, 34 p. (Helen W. Bechtel, Assistant in Special Education.)

<sup>4</sup> For an explanation of the basis for using this test see page 6 of the study reported in footnote (2) above.

<sup>5</sup> A rather complete summary of the use of psychological tests in predicting academic success in college will be found in *Prediction of Success in Professional Courses for Teachers* by Laura B. M. Krieger, Contributions to Education, No. 420, Teachers College, Columbia University, 1930, p. 7-21.

<sup>6</sup> Tieg, Ernest W. *An Evaluation of Some Technics of Teacher Selection*. Bloomington, Illinois: Public School Publishing Company, 1928, p. 16-35.

<sup>7</sup> Woody, Clifford (Chairman). *Quantitative Measurement in Institutions of Higher Learning*. Eighteenth Yearbook, National Society of College Teachers of Education. University of Chicago Press, 1930, 253 p.

<sup>8</sup> McPhail, A. H. *Intelligence of College Students*. Baltimore: Warwick and York, 1924, 176 p.



Thorndike Examination in connection with admissions to Columbia University.<sup>1</sup> The report of the Commonwealth Teacher Training study contains an extensive list of teachers' traits and trait-actions.<sup>2</sup>

A recent bulletin from the University of Illinois summarizes the more important educational tests for use in institutions of higher learning. The section on education lists ten rating scales and ten aptitude tests of teaching ability.<sup>3</sup>

*Composite procedures in selecting students or predicting success in professional courses*—Practice seems to move in the direction of the use of several types of data in selecting students for teacher training. The study of students in Connecticut normal schools suggested that intelligence tests should be supplemented by rating scales and achievement tests.<sup>4</sup>

Dearborn has summarized the points to be considered in the selection of candidates for teacher training, as follows: (1) mental capacity, (2) scholastic achievement, (3) personal conduct, (4) professional attitudes, (5) school habits, and (6) physical fitness. He proposes that training schools and high school authorities cooperate through such procedures as: (1) summer review courses, (2) developing school habits, (3) guidance, (4) tests, (5) personal rating, and (6) exchange of information.<sup>5</sup>

Meador has questioned the reliability of chronological age, personality rating, and high-school marks, as bases for predicting success in normal school work.<sup>6</sup>

The experiments of Morris of the Albany State Teachers College with a "trait index" and the comparison of the index with other types of personal data may give some suggestions for teacher training.<sup>7</sup> The *Trait Index* consists of an eight-page booklet of problem and "best answer" materials. The five sections

of the "test" attempt to bring out such qualities as resourcefulness, insight, tact, positiveness, and certain emotional attitudes. Morris says that all of these traits are evidence of leadership.

The Morris test was given to about 750 persons, and of this number 402 were students at the Albany State Teachers College. The rest of the 750 were experienced teachers, principals, and superintendents. Various measures were also used in estimating practice teaching,<sup>8</sup> intelligence, academic success, and other data. The significant correlations between these various measures, according to Morris, are those shown in Table 29.

TABLE 29.—SIGNIFICANT PARTIAL CORRELATIONS REPORTED BY MORRIS

| Kinds of Data                                       | Partial Correlations |
|-----------------------------------------------------|----------------------|
| 1                                                   | 2                    |
| 1. Practice teaching and Trait Index . . . . .      | + .463               |
| 2. Academic average and practice teaching . . . . . | + .429               |
| 3. Intelligence and practice teaching . . . . .     | + .327               |
| 4. Intelligence and Trait Index . . . . .           | — .262               |

Adapted from *Personal Traits and Success in Teaching* by Elizabeth Morris, p. 48-51.

After working the multiple R's for the academic averages, grades in practice teaching, and *Trait Index* scores Morris concludes:

In general, the statistical results seem to justify the conclusion that *Trait Index* scores are of value in indicating probable success in practice teaching, and measure other than primarily intellectual traits. A combination of academic average, health grade, intelligence score, and *Trait Index* score would much more nearly give an estimate of an individual student's whole personality than would any one of the measures alone.

Ullman collected data on 166 prospective high-school teachers in professional classes at the University of Michigan.<sup>9</sup> He used such

<sup>1</sup> Wood, B. D. *Measurement in Higher Education*. Yonkers: World Book Co., 1923. 337 p.

<sup>2</sup> Charters, W. W. and Waples, Douglas. *The Commonwealth Teacher Training Survey*. Chicago: University of Chicago Press, 1929. p. 223-303.

<sup>3</sup> Kinder, J. S., and Odell, Charles W. *Educational Tests for Use in Institutions of Higher Learning*. Educational Research Circular, No. 55, University of Illinois, August 5, 1930. p. 21-25.

<sup>4</sup> See preceding section.

<sup>5</sup> Dearborn, N. H. "What Considerations Should Determine the Acceptance of Individual Students." *Proceedings, Normal School and Teachers College Section, New York Society for the Experimental Study of Education*, 1928, p. 18-27.

<sup>6</sup> Meador, J. L. "Summary." *Proceedings, Normal School and Teachers College Section, New York Society for the Experimental Study of Education*, 1928, p. 27-32.

<sup>7</sup> Morris, Elizabeth H. *Personal Traits and Success in Teaching*. Contributions to Education, No. 342. New York: Teachers College, Columbia University, 1929. 75 p.

<sup>8</sup> According to Whitney there is higher correlation between student teaching and teaching success than any other variables. See *Journal of Educational Research Monographs*, No. 6, 1924, p. 24. Bloomington, Illinois: Public School Publishing Company.

<sup>9</sup> Ullman, Roy R. *The Prognostic Value of Certain Factors Related to Teaching Success*. (Doctor's dissertation at the University of Michigan) Ashland, Ohio: A. L. Garber Co., 1931. 133 p.

sources of data as the following: teaching aptitude tests, intelligence tests, score cards of socio-economic status, self-rating form of personal and social traits, college success, and tests of professional knowledge. His conclusions are as follows:

1. When several factors found to be related to teaching success are combined in a regression equation, predictions of teaching success which are quite accurate may be made.

2. Success in practice teaching is the best single measure of teaching success.

3. Factors other than practice teaching which have been shown to have predictive value are: socio-economic status, academic and professional marks, social intelligence, general intelligence, interest in teaching, and knowledge of principles of teaching.

4. The factors studied are not the only ones contributing to teaching success and others must be studied before highly accurate predictions can be made.

5. It is not denied that a certain amount of knowledge in the subject taught is essential to success, but after this minimum is attained the mark in the major subject seems to be a constant value. When academic and professional marks form part of the regression equation, major subject marks have little, if any, predictive value.

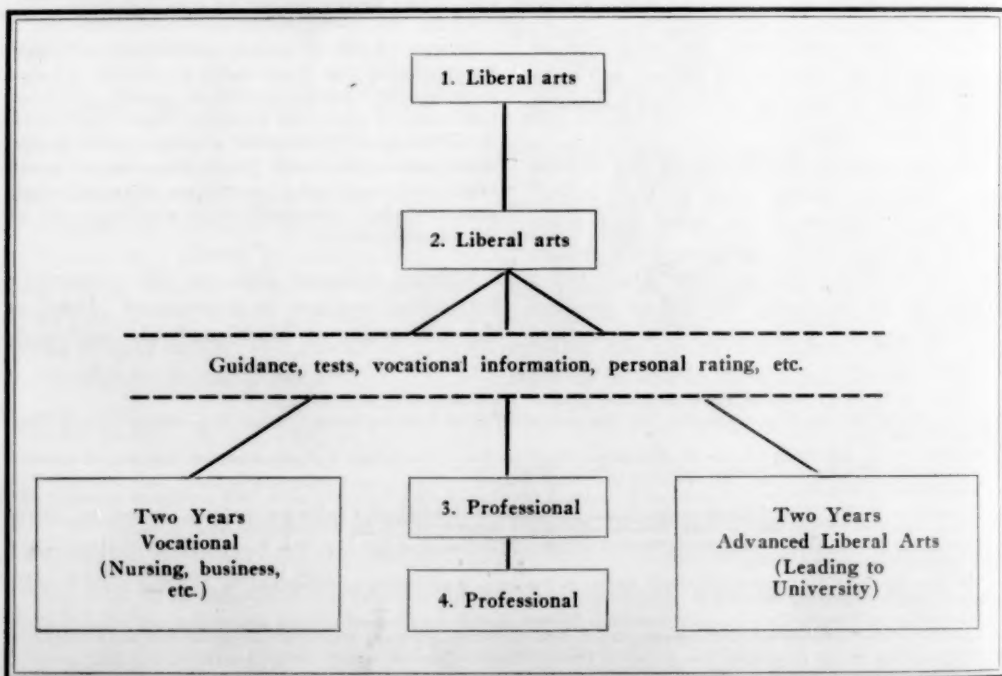
6. Personality, health, vitality, and general conditions existing in the school were found to contribute to the success or failure of the teacher. Since these factors were not measured their exact influence is not known.

*Selection during training by means of curriculums, organization, and tests*—The normal schools in California have become four-year teachers colleges. There has been some discussion of the plan shown in Chart II. The advocates suggest that the first two years of the college be organized as a general liberal arts training. At the beginning of the junior year students should be required to select either (1) teacher training, (2) vocational instruction, or (3) advanced liberal arts training. Students are to be aided in their vocational choices by an extensive program of guidance and measurement.

Most of the sections given above have implied that teachers colleges might sort out their students from high-school seniors or college freshmen. Chart II proposes postponing the selective process until the junior year.<sup>1</sup> Obviously, there are both advantages and weaknesses in

<sup>1</sup> Clearly this plan cannot be applied in the usual two-year curriculum. It would seem that in such cases selection, if it is to be effective, must reach back into the secondary school.

**CHART II.—PROPOSED ORGANIZATION OF STATE TEACHERS COLLEGES IN CALIFORNIA**



the plan proposed. Would the teachers college become a typical liberal arts college? Only experimentation and research can supply the answer.

### Records and Studies by State Departments of Education

Are the records and reports of state departments of education possible factors in influencing teacher demand and supply? What data do state departments collect each year as to teacher demand? Do state departments survey the annual supply of teachers? Many questions of this type should be raised in considering the possibility of balancing teacher demand with the supply of trained teachers. While this section does not report conditions in every state, it does suggest widespread conditions.

*Facts collected by state departments*—In the personal interviews officials of state departments of education were asked whether they had collected certain important facts. The replies to four questions on records and studies are given in Table 30.

Practically all state departments obtain reports as to school population. Are such data used in estimating the annual need for teachers? Column 5 shows that little attempt is made to use the data for the pupil census to predict the future demand for teachers.

Column 2 of Table 30 shows that most of the states collect data annually as to the names, training, and certification of each teacher employed. Sample blanks obtained from several states show that some details pertinent in a study of teacher demand and supply are collected also. On the other hand, the published reports of state superintendents show totals in which the details are often submerged.

Table 30 shows that very few states make annual surveys of teacher demand and supply in the local districts. Usually, local superintendents report facts on turnover and unemployment only upon request.

Another question, not shown in Table 30, is: Do public and private teacher-training institutions report annually the number of persons

trained for teaching? No doubt the best answer to this question is found in Column 2 of Table 14. Note that many figures reported by state departments for public institutions are estimates, not exact records. Also, it should be noted in Table 14 that state departments lack information as to the number of graduates of teacher training in private colleges.

Do state departments know how much of the teacher supply comes from other states each year? Refer to the number of estimates and blank spaces in Column 5 of Table 10. A number of states wrote that they could not even make an estimate of the teachers from the outside.

Do state departments know how many teachers leave each state annually? Where do these teachers go? Why do teachers leave the home state? How many teachers die each year? How many teachers get married and stop teaching?<sup>1</sup> These questions wait for further study in almost every state.

*Contents of the annual reports of state school officers*—Shaw examined the current reports of state superintendents, state departments of education, and state boards of education. Since most of the reports examined were for the years between 1922-1924, some of the specific conclusions and recommendations are no longer valid. For our present purposes we can refer to several general weaknesses of state reports which are true even today: (1) reports are not organized around the problems and programs of the state office; (2) discussions of educational problems are made without reference to the statistics presented; (3) statistical tables omit important details and are improperly presented.<sup>2</sup>

Are the state school reports giving sufficient space to problems in teacher demand and supply? Shaw shows that 30 out of the 48 state superintendents' reports analyzed in his study dealt with "teacher training and certification." The amount of space given in the 30 reports ranged from two to fifty-seven percent of the whole report.<sup>3</sup> Recent state annual reports show the same amount of variation as to the

<sup>1</sup> The interviews did not disclose any state rules against married teachers, but the practice of not employing married women is common in local districts. Few states have any exact idea as to the number of married women actually employed. Does the married woman seriously disturb the teacher demand and supply equilibrium? Few states can give exact answers.

<sup>2</sup> Shaw, Frank L. *State School Reports*. Contributions to Education, No. 242, New York: Teachers College, Columbia University, 1926, p. 52-116.

<sup>3</sup> Shaw, Frank L. *Ibid.*, Table 21, p. 73-74.

TABLE 30.—DO STATE DEPARTMENTS COLLECT CERTAIN FACTS WHICH CONCERN  
TEACHER DEMAND AND SUPPLY PROBLEMS?

| State                          | Are local superintendents required to report annually the names, training, certificates, etc. of all teachers employed? | Do local superintendents report annually as to the status of teacher demand and supply in their districts? | Does the state (or local districts) make a pupil census at least once in two years? | Does the state department make population surveys or predictions as to future need for teachers? |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|
| 1                              | 2                                                                                                                       | 3                                                                                                          | 4                                                                                   | 5                                                                                                |
| 1. Alabama                     | Y                                                                                                                       | N                                                                                                          | Y                                                                                   | Y                                                                                                |
| 2. Arkansas                    | Y                                                                                                                       | N                                                                                                          | Y                                                                                   | Y                                                                                                |
| 3. California <sup>1</sup> *   | N                                                                                                                       | N                                                                                                          | Y                                                                                   | Y                                                                                                |
| 4. Colorado                    | Y                                                                                                                       | N                                                                                                          | Y                                                                                   | N                                                                                                |
| 5. Connecticut <sup>2</sup>    | Y                                                                                                                       | N                                                                                                          | Y                                                                                   | Y                                                                                                |
| 6. Delaware                    | Y                                                                                                                       | N                                                                                                          | Y                                                                                   | Y                                                                                                |
| 7. Florida                     | N <sup>3</sup>                                                                                                          | N                                                                                                          | Y                                                                                   | N                                                                                                |
| 8. Georgia                     | N <sup>3</sup>                                                                                                          | N                                                                                                          | N <sup>4</sup>                                                                      | Y                                                                                                |
| 9. Idaho                       | Y                                                                                                                       | N                                                                                                          | Y                                                                                   | N                                                                                                |
| 10. Illinois <sup>5</sup>      | Y                                                                                                                       | N                                                                                                          | Y                                                                                   | N                                                                                                |
| 11. Indiana <sup>6</sup>       | Y                                                                                                                       | N <sup>4</sup>                                                                                             | Y                                                                                   | N                                                                                                |
| 12. Iowa                       | Y                                                                                                                       | N                                                                                                          | Y                                                                                   | N                                                                                                |
| 13. Kansas                     | Y                                                                                                                       | N                                                                                                          | Y                                                                                   | N                                                                                                |
| 14. Kentucky                   | Y                                                                                                                       | N                                                                                                          | Y                                                                                   | N                                                                                                |
| 15. Louisiana                  | Y                                                                                                                       | N                                                                                                          | N <sup>6</sup>                                                                      | N                                                                                                |
| 16. Maine <sup>7</sup>         | Y                                                                                                                       | N                                                                                                          | Y                                                                                   | Y                                                                                                |
| 17. Maryland <sup>8</sup>      | Y                                                                                                                       | N <sup>8</sup>                                                                                             | Y                                                                                   | Y                                                                                                |
| 18. Massachusetts <sup>9</sup> | Y                                                                                                                       | N                                                                                                          | Y                                                                                   | Y                                                                                                |
| 19. Michigan <sup>9</sup>      | Y                                                                                                                       | N                                                                                                          | Y                                                                                   | N                                                                                                |
| 20. Minnesota <sup>9</sup>     | Y                                                                                                                       | N                                                                                                          | Y                                                                                   | N                                                                                                |
| 21. Missouri                   | Y                                                                                                                       | N                                                                                                          | Y                                                                                   | N <sup>7</sup>                                                                                   |
| 22. Nebraska                   | Y                                                                                                                       | N                                                                                                          | Y                                                                                   | N                                                                                                |
| 23. Nevada <sup>9</sup>        | N <sup>3</sup>                                                                                                          | N                                                                                                          | N                                                                                   | N                                                                                                |
| 24. New Hampshire              | Y                                                                                                                       | N <sup>8</sup>                                                                                             | Y                                                                                   | N                                                                                                |
| 25. New Jersey <sup>9</sup>    | Y                                                                                                                       | N                                                                                                          | Y                                                                                   | Y                                                                                                |
| 26. New Mexico                 | Y <sup>9</sup>                                                                                                          | N                                                                                                          | N                                                                                   | N                                                                                                |
| 27. New York <sup>9</sup>      | Y <sup>10</sup>                                                                                                         | N                                                                                                          | Y                                                                                   | Y                                                                                                |
| 28. North Carolina             | Y                                                                                                                       | N                                                                                                          | Y                                                                                   | N                                                                                                |
| 29. North Dakota <sup>9</sup>  | Y                                                                                                                       | N                                                                                                          | Y                                                                                   | N <sup>7</sup>                                                                                   |
| 30. Ohio <sup>9</sup>          | N <sup>11</sup>                                                                                                         | N                                                                                                          | Y                                                                                   | N                                                                                                |
| 31. Oregon                     | Y                                                                                                                       | N                                                                                                          | Y                                                                                   | Y                                                                                                |
| 32. Pennsylvania <sup>9</sup>  | Y                                                                                                                       | N                                                                                                          | Y                                                                                   | Y                                                                                                |
| 33. Rhode Island <sup>9</sup>  | Y                                                                                                                       | N                                                                                                          | Y                                                                                   | N                                                                                                |
| 34. South Carolina             | Y                                                                                                                       | N                                                                                                          | Y                                                                                   | N                                                                                                |
| 35. South Dakota               | Y                                                                                                                       | N                                                                                                          | Y                                                                                   | N                                                                                                |
| 36. Tennessee                  | Y                                                                                                                       | N                                                                                                          | Y                                                                                   | N                                                                                                |
| 37. Texas                      | Y <sup>12</sup>                                                                                                         | N                                                                                                          | Y                                                                                   | N                                                                                                |
| 38. Utah                       | Y                                                                                                                       | N                                                                                                          | Y                                                                                   | N                                                                                                |
| 39. Vermont <sup>9</sup>       | Y <sup>12</sup>                                                                                                         | N                                                                                                          | Y                                                                                   | N                                                                                                |
| 40. Virginia <sup>9</sup>      | Y                                                                                                                       | N                                                                                                          | N <sup>3</sup>                                                                      | N                                                                                                |
| 41. Washington <sup>9</sup>    | N <sup>14</sup>                                                                                                         | N                                                                                                          | Y                                                                                   | N                                                                                                |
| 42. West Virginia              | Y                                                                                                                       | N                                                                                                          | Y                                                                                   | Y                                                                                                |
| 43. Wisconsin <sup>9</sup>     | Y                                                                                                                       | N                                                                                                          | Y                                                                                   | N                                                                                                |
| 44. Wyoming                    | Y                                                                                                                       | Y <sup>15</sup>                                                                                            | Y                                                                                   | N                                                                                                |
| Totals                         | Yes 38<br>No 6                                                                                                          | Yes 1<br>No 43                                                                                             | Yes 39<br>No 5                                                                      | Yes 14<br>No 30                                                                                  |

<sup>1</sup> States marked with an asterisk have state retirement systems. Most retirement systems require exact data on each teacher which might be used to supplement studies of teacher demand and supply.

<sup>2</sup> Local superintendents report annually the number of teachers employed, but give no details as to training, certificate, and so forth.

<sup>3</sup> Pupil census made every five years.

<sup>4</sup> The Director of Teacher Training has been asking recently for certain data as to the total turnover and apparent unemployment among teachers.

<sup>5</sup> Pupil census made every four years.

<sup>6</sup> State summarizes annually the data reported in Column 2 of Table 30 for each district outside of Baltimore.

<sup>7</sup> Several special surveys made by the outside agencies reported in Chapter IV.

<sup>8</sup> Since all local superintendents are appointed by, and paid by, the state office, these data could be obtained readily as annual reports.

<sup>9</sup> Detailed reports obtained on new teachers only.

<sup>10</sup> Rural superintendents report details on all teachers, city superintendents report on new teachers only.

<sup>11</sup> In 1929-30 each teacher was required to report for himself his training, certification, experience, salary, teaching load, and similar data.

<sup>12</sup> Each teacher files a registration card with the state department of education.

<sup>13</sup> Local authorities report three times a year on all teachers employed.

<sup>14</sup> Teachers register each year with the county superintendents.

<sup>15</sup> County superintendents report orally at annual conference.



space given to problems of teacher demand and supply.<sup>1</sup>

Shaw criticized most of the reports for being disconnected and not clear as to major educational problems. Can statistics be presented and interpreted so as to help superintendents, college presidents, deans of teacher-training institutions, directors of placement bureaus, student teachers, classroom teachers and other interested parties? What is the responsibility of the state board, or the state superintendent, for making known the facts as to teacher supply and demand?<sup>2</sup>

### Summary

The proper control of teacher demand and supply is not easy. It is an intricate problem, calling in each state for the active interest of prospective teachers, teachers in service, administrators, officers of teacher-training institutions, and state school officials. Nationally, it is a problem calling for cooperative effort between

state school officials, federal officers of education, and teachers associations of all types.

Up to the present, many studies have been made of teacher training, certification, teacher selection, teacher aptitude tests, rating scales, guidance, state records, state reports, systems of teacher training, and a hundred other problems which wield some influence over teacher demand and supply.<sup>3</sup> Now other studies are complete or in progress which will throw additional light upon problems of teacher personnel.<sup>4</sup> In addition to surveys and research studies there are many administrative and experimental adjustments to be tried as suggested above in this chapter.

How can the proper teacher demand and supply equilibrium be maintained? There is no panacea available. The question places heavy responsibilities upon state officers of education. What should the next steps be? Chapter VI suggests some of the basic procedures ahead.

<sup>1</sup> In the personal visits to state officers several excellent annual reports were obtained. A few of the reports which discussed teacher demand and supply were: Maryland (1929), Missouri (1929), and Nebraska (1929).

<sup>2</sup> It is interesting to note that the new law (1929) establishing a state board of higher education in Oregon specifically provides that the board shall "present to the citizens of the state and prospective students a fair and impartial view of the higher education facilities provided by the state, and the prospects for useful employment in the various fields for which those facilities afford preparation" (Section 13).

<sup>3</sup> See the bibliography at the end of this report.

<sup>4</sup> See Chapter II and Chapter IV.

ANY systematic selection of the types of teachers to be trained must be determined by the relationship between the demand and the supply within the state unit. This relationship is determined by the processes known as "market" analysis and "plant" analysis. Through market analysis the numbers of each type of teacher needed each year to meet replacements and deficiencies are determined by well-known techniques. The trend of the demand over preceding years can be determined to forecast the needs for succeeding years. The present supply of teachers is secured by an analysis of the qualifications of the graduates of the teacher-training institutions which supply the state, and the probable trend of the supply in the future can be forecast. When the supply and the demand do not co-ordinate, either through an oversupply of certain types of teachers, or through an undersupply of other types of teachers, it becomes the responsibility of the state unit to adjust the discrepancies. This involves the study of the facilities of the teacher-training institutions established to prepare the types of teachers needed, and this in turn may require changes in the types of teachers to be trained in the particular institutions. If the established institutions cannot supply the demand, then it becomes the responsibility of the state legislature to see that additional facilities are provided.—*The Commonwealth Teacher-Training Study, Directed by W. W. Charters, and Douglas Waples, p. 8.*

## CHAPTER VI

### A Suggested State Program

The report up to this point has developed certain important facts: (1) that the economic welfare of teachers depends much upon the law of supply and demand, (2) that a balance between teacher demand and supply makes for fair wages and reasonable employment, (3) that attractive working conditions will bring highly competent teachers in contact with children, (4) that the attempts to study problems in teacher demand and supply have been sporadic, (5) that there is a need for continuous fact gathering and research, (6) that administrative adjustments and experimentations should follow surveys of conditions, and (7) that the primary responsibility for leadership in the above problems rests on such state officials as the state departments of education, state boards of education, and the state superintendents of public instruction.

What are the next steps? The purpose of this chapter is to list and to discuss briefly some future procedures. Most of these matters have been treated elsewhere in the text, but the purpose here is to bring the points together. A few states have already made remarkable progress along these lines. Will the other states follow?

1. *Establish a research organization*—Each state department of education should have a research bureau under competent leadership. This organization could be the nucleus for committees formed from local school officers, representatives of teacher-training institutions, and leaders of the state teachers association. The bureau should be free from administrative duties and the compilation of routine statistical information.<sup>1</sup>

2. *Revise present records and devise new inquiry forms*—Much of the information collected by state departments of education is required by state laws. Such requirements have grown up gradually over the years with little thought of systematic investigation into

specific educational problems. In a number of states the existing reports of county superintendents, teacher-training institutions, and other sources could be revised so as to provide information on problems of teacher demand and supply. However, many of such reports probably require supplementing with specially designed inquiry forms.

3. *Survey the existing teacher personnel*—Item 2 above refers to such totals as the number of new teachers, the length of service, and general data. There is need for detailed facts from each new and old teacher as to training, teaching assignments, salary, types of experience, and similar facts. Ohio and Iowa have made extensive investigations along this line.

4. *Provide for continuous surveys of teacher personnel*—The facts obtained from the survey proposed above as item 3 would soon be obsolete, unless followed by regular and systematic investigations. Every new teacher entering the profession should keep the state department informed as to her training, place of employment, experience, salary, teaching assignment and residence. In states where state retirement systems exist, combined reports might be developed.<sup>2</sup>

5. *Require all teacher-training institutions to report statistics*—Both public and private teacher-training agencies should report full statistics as to their graduates to the state department of education. These data might include a report on placement work and information obtained from following up graduates for several years.

6. *Discover all special sources of teacher supply*—The reports of accredited teacher-training institutions alone will not give a complete summary of teacher supply. Private and public liberal arts colleges should give an accounting of their graduates who enter teach-

<sup>1</sup> At least 29 states have directors or supervisors of research, statistics and similar bureaus. See "Staffs and Salaries in State Departments of Education," *Studies in State Educational Administration*, No. 9, March 1931, 61 p. National Education Association.

<sup>2</sup> Of 22 state retirement systems (including Hawaii and the District of Columbia) 21 require new teachers to become members. See Table 6 of "Current Issues in Teacher Retirement," *Research Bulletin* 8: 246, November, 1930. National Education Association.

ing. Graduates of technical, agricultural, and commercial schools who enter teaching should be accounted for in the state offices. Teachers who enter non-teaching occupations for several years should be required to register with county superintendents before becoming eligible again for teaching.

7. *Develop the means for attracting to teaching a fair share of the superior students.* State teachers' associations can do much to make teaching attractive to persons with superior personal qualities. High school guidance has its role. Teacher-training agencies need to develop better technics for discovering, attracting, and preparing the persons who make the best teachers. Not everyone makes a good teacher, and the selective devices should be a part of the state program.

8. *Revise certification requirements and procedures*—The certification power should be exercised exclusively by a central state bureau under the direction of state school officers. Certification requirements should be the outcome of conferences between local school authorities, teacher-training representatives, and state school officials. The specific standards and types of certificates should not be embodied in legislative enactments, but in state board rules which are more responsive to changes. Permanent or life certificates should lapse after a period of non-use and be renewed only on the basis of standards set up by the state department of education. A system of registration should be established so that the central certification agency would know the location and status of all certificates.

9. *Insure cooperation of state agencies*—The present reciprocity between states as to certification should extend to an exchange of information on such matters as: (1) the demand for teachers, (2) the potential supply in training institutions, (3) the miscellaneous sources of supply, and (4) the movement of teachers between states. In certain instances,

cooperative studies should be made of the influence of training institutions located near state lines, the effect the change of certification standards in one state has upon its neighbor, and the need for central placement bureaus.

10. *Provide widespread publicity of facts*—States should give publicity to the teacher-training program and possibilities of employment. The Oregon law, requiring the state board of higher education to place unbiased facts before the citizens and potential students, is worthy of widespread emulation.

11. *Formulate a state-wide program of teacher training*—It is clear that one important step in balancing teacher demand and supply is cooperation in teacher training. Each state needs a state-wide program for preparing teachers which will include both public and private institutions. State departments of education and teacher-training agencies can borrow much from the conference procedures used in Missouri and Utah. Perhaps in time a program should be drawn up by regional conferences which include several states in a particular geographical area.

12. *Cooperate in systematic and continuous national surveys of teacher demand and supply*—There is a need for continuous publicity and investigation as to teacher demand and supply in relation to the movement of teachers between states. Such information would be invaluable to teacher-training agencies which exert a sectional, if not a national, influence. Also, state school officers can learn much from the experiments and practices by similar officials in other states. When each state has taken, or even begun, the eleven steps proposed above, a national agency should assemble the facts on a nation-wide basis. Either the National Education Association, or the United States Office of Education, could perform this service. The national survey should be continuous and comparable from year to year.

## CHAPTER VII

### Summary and Conclusions

Is there a surplus of teachers? Is the surplus simply of persons with teaching licenses of some kind, or is it an oversupply of well-trained persons? What facts do state departments of education have in answer to the above questions? These and similar problems have been discussed in this study.

The introduction tells of the origin, the sponsorship, the purposes, and the technics of the study.

Chapter I points out the influence of demand and supply upon the economic welfare of teachers. Certain questions are raised as to the real significance of a teacher surplus. It is suggested that fact-gathering should precede drastic change in present procedures of certification and teacher training.

Nine of the outstanding previous investigations of teacher demand and supply are summarized in Chapter II. Certain general conclusions assembled from these nine studies are brought together at the end of the chapter.

Chapter III presents estimates and exact records on teacher demand in 1929-30 and supply in 1928-29. The data were obtained largely from questionnaires sent to state departments of education in May, 1930. The evidence shows that many state departments are unable to present exact information. Apparently, however, there was a surplus of persons with teaching licenses in 1929-30 in a number of the states. If the supply could be restricted to persons with two or more years of professional training, a teacher shortage would exist in many states. The soundest conclusion to this chapter is: State departments and other interested parties should get the facts before trying to deal with the "apparent" teacher surplus.

Studies in the general field of teacher personnel, which have some bearing on teacher demand and supply, are reported in Chapter IV. Data for this chapter were obtained from state departments of education and state education associations. While many of the studies completed or under way have value, there is a shortage of direct and continuous attacks upon the

problems of teacher demand and supply. In a number of states the research machinery and the funds are lacking to make the extensive and intensive surveys which are necessary.

Chapter V points out that the study and control of teacher demand and supply are complex problems. Studies of guidance, certification, and teacher training, must be made. Many experimental forms of college administration and conferences on teacher training will have to be tried out. Data for this chapter were obtained from personal interviews with state officers of education. Supplementary facts from current research and practices in teacher training are included.

Chapter VI brings together in one place a number of statements or implications presented elsewhere in the report. Twelve basic steps are summarized for state departments of education, representatives of teacher-training agencies, and state education associations. In a few instances, certain states have advanced far along the lines suggested. The need in such cases is the extension of helpful cooperation to those states where progress is less rapid.

Chapter VII presents certain general summaries and conclusions.

The law of demand and supply exerts a widespread influence upon the economic welfare of teachers. In times of an oversupply many excellent teachers are forced into more lucrative non-teaching occupations. When a shortage of teachers exists, administrators are forced to place inadequately trained persons in classrooms. In both cases, the children are the losers. Hence, the importance of maintaining a reasonable balance between teacher demand and supply.

How can the balance be maintained? No panacea exists, and none will be found. There is a need for extensive and intensive research, followed thereafter by wise adjustments in state school administration. These problems call for cooperative studies and extensive experimentation, in which it is reasonable to expect state departments of education to take the lead.



## Selected Bibliography

This bibliography is divided into two major parts: (1) technics in the study of teacher demand and supply, and (2) factors in the control of teacher demand and supply.

The references below are usually available in printed or mimeographed form. Unpublished theses are not listed, but a number of these important researches may be located through the footnotes in Chapter IV. References not annotated are reported in full in Chapter II.

Students of problems of teacher personnel may locate other important references in the April issue (1931) of the *Review of Educational Research*, American Educational Research Association, a department of the National Education Association.

### Part I. Technics in the Study of Teacher Demand and Supply

#### General Supply and Demand

1. ANDERSON, EARL W. *Supply and Demand in High School Teaching in Ohio, 1929-30*. In press.

This study will appear together with reference 18 of this bibliography as a joint publication of the Bureau of Educational Research, Ohio State University and the Educational Council of the Ohio Education Association.

2. BOSSING, N. L. "Oversupply of High School Teachers, Present Situation, National and Local." *High School* 7: 39-46; January, 1930.

Reports data to show numerical oversupply of high school teachers in a number of states and especially in Oregon.

3. BUCKINGHAM, B. R. "The Demand for Trained Teachers in Ohio." *Educational Research Bulletin* 4: 221-6; May 27, 1925.

Describes method used in arriving at an estimated need of approximately 6,000 new teachers in Ohio. Defines "teacher demand" in terms of "newness" of teachers.

4. BUCKINGHAM, B. R. "Research in Teacher Supply and Demand." *Educational Administration and Supervision* 15: 259-68; April, 1929.

Defines teacher demand and teacher supply, and emphasizes the importance to the state educational program of maintaining a balance between these two.

5. \*BUCKINGHAM, B. R. *Supply and Demand in Teacher Training*. Ohio State University Studies, Vol. 2, No. 15. Bureau of Educational

Research Monographs, No. 4. Columbus, Ohio: Ohio State University, March 15, 1926, 182 p.

6. CARROTHERS, GEORGE E. "The Supply of Trained Teachers in Michigan." *University of Michigan School of Education Bulletin*, Vol. 1, March, 1930. Ann Arbor, Michigan: University of Michigan, 1930. p. 82-3.

Reports data on supply of teachers trained for rural, elementary, and high school positions. Reports that 15 of 111 rural school teachers and 17 of 148 high school teachers were not placed.

7. CHARTERS, W. W. "The Demand and Supply of Teachers." *Educational Research Bulletin* 7: 282-3; October 3, 1928. Also, *Kentucky School Journal* 7: 18-19; December, 1928.

Suggests technics used in industry for making a careful state analysis of the teacher market and teacher supply. Recommends forecasts of the demand for new teachers at least four years in advance, these forecasts to serve as a basis for regulating the supply.

8. CLARK, ROBERT. "Facts and Problems of Training Public School Teachers in West Virginia." *Educational Administration and Supervision* 16: 116-21; February, 1930.

Outlines efforts already made to establish a unified state teacher-training program, and suggests further steps to be taken.

9. CLARK, ROBERT. "Meeting the Demand for Trained Teachers in West Virginia." *West Virginia School Journal* 57: 237-8, 264; April, 1929.

Presents data to show a surplus of "certificated" teachers; a shortage of "trained" teachers in the state as a whole; and a rapid improvement in the professional status of teachers since 1920.

10. CLEMENT, EVELYN. "The Supply and Demand of Teachers in California, 1928-30." *California Schools* 1: 154-64; June, 1930.

Supplements 1926-27 study by Ruth M. Eakin, cited as No. 14 of this bibliography.

11. COXE, WARREN W. *Teacher Demand in New York City*. Albany, N. Y.: Educational Measurements Bureau, State Educational Department, 1929. Mimeographed.

A parallel study to the author's study of "Teacher Demand in New York State."

12. \*COXE, WARREN W. *Teacher Demand in New York State*. Albany, N. Y.: Educational Meas-

\*References marked with an asterisk are reviewed in full in Chapter II.

irements Bureau, State Education Department, 1928. Mimeographed. 23 p.

13. DONOVAN, HERMAN LEE. *A State's Elementary Teacher-training Problem (Kentucky)*. George Peabody College for Teachers, Contributions to Education, No. 17. Nashville, Tenn.: George Peabody College for Teachers, 1925. 93 p.

Studies the status of elementary teacher training in Kentucky, the need for trained teachers and the cost to the state of meeting this need.

14. \*EAKIN, RUTH M. *Supply and Demand of Teachers in California, 1926-27*. Bulletin No. H-3. Sacramento, Calif.: Division of Teacher Training and Certification, State Department of Education, 1928. 23 p.
15. ELIASSEN, R. H. and ANDERSON, EARL W. "The Supply of Teachers and the Demand." *Educational Research Bulletin* 9: 437-73; November 5, 1930.

Reviews the more significant studies of teacher supply and demand, that have appeared since 1924. Presents annotated bibliography of 119 titles.

16. EVENDEN, E. S. "Are There Too Many Teachers?" *School Life* 16: 81-2; January, 1931.

Discusses causes of the existing oversupply of certificated teachers and describes proposed National Survey of the Education of Teachers to be conducted by the U. S. Office of Education.

17. FOSTER, RICHARD R. "Demand and Supply of Elementary Teachers—Shall Minimum Training Requirements Be Increased?" *Ohio Schools* 235-6; 242-3; June, 1929.

Summarizes study cited as reference No. 18.

18. FOSTER, RICHARD R. *Demand and Supply of Professional Elementary School Employees in Ohio Public Schools in 1929-30*. In press.

This study will appear together with reference 1 of this bibliography as a joint publication of the Bureau of Educational Research, Ohio State University and the Educational Council of the Ohio Education Association.

19. FOSTER, RICHARD R. *The Relation Between the Demand and Supply of Elementary Teachers in Ohio With Special Reference to Raising the Statutory Requirements for Admission to the Profession*. Columbus, Ohio: Ohio Education Association, May, 1929. Mimeographed. 54 p.

Brings up to date previous supply and demand studies in Ohio, insofar as the elementary school teaching field is concerned. Reports a shortage of trained teachers and an oversupply of "untrained" persons seeking positions.

20. GRANT, JAMES RICHARD. *A State's Teacher-training Problem*. George Peabody College for Teachers, Contributions to Education, No. 18. Nashville, Tenn.: George Peabody College for Teachers, 1925. 101 p.

A study of the size and educational qualifications of the teaching force of Arkansas, the number of new teachers needed annually, and existing facilities for meeting this need. Develops a proposed state teacher-training program based on findings of the study.

21. HUFFAKER, C. L. *Teacher Supply and Demand in Oregon*. University of Oregon Publication, Education Series, Vol. 2, No. 5. Eugene, Oregon: University Press, January, 1931. 156 p.

Seeks to discover whether the failure of graduates of accredited institutions to obtain positions is due to overproduction on the part of the institutions or to poor distribution of the product.

22. KLONOWER, HENRY. "Demand Versus Supply Among Teachers in the Public High Schools." *Seventh Annual Meeting of the National Assn. of Placement and Personnel Officers*. 1930. p. 10-12. Atlantic City, N. J.: the Association, 1930. (Lillian M. Barbour, Sec'y, Ohio University, Athens, Ohio.)

Reports an annual need of 1300 new secondary teachers and a supply in 1930 of 3200 persons qualified to teach in high schools.

23. LUDEMAN, W. W. "Supply and Demand for Teachers in South Dakota." *South Dakota Educator* 33: 172-3; January, 1925.

Reports for the year 1925 a supply of 3347 teachers to fill 1152 positions. Eight percent of this supply was said to consist of teachers trained outside the state.

24. McCrory, J. R. "Elementary School Teachers: Supply and Demand." *School and Society* 20: 222-4; August 16, 1924.

Tabulates answers from 38 states to the following questions: (1) Approximately how many new candidates will qualify in the schools and colleges of your state for teaching positions in the elementary schools of your state in 1924-25? (2) Approximately how many additional teachers of the type defined in (1) will be needed?

25. MARTIN, J. O. *Varying Types of Service Rendered Georgia by Teachers, with Recommendations for Their Training in Service*. Atlanta, Ga.: State Department of Education, 1926. 45 p.

A study of the relationship between degree of training of teachers in Georgia and size of school, grades taught, length of service, and the balance of teacher supply and demand.

26. MILLER, CLYDE R. "The Overproduction of Teachers." *Journal of Education* 112: 108-9; September 1, 1930.

Declares that while overproduction must be avoided by limiting enrolments, careful selection is necessary, as well. Warns of the possibilities of danger in tenure laws. Denies that there is, or ever will be, an oversupply of superior teachers.

27. \*MYERS, ALONZO FRANKLIN. *A Teacher-training Program for Ohio*. Teachers College, Contributions to Education, No. 266. New York: Bureau of Publications, Teachers College, Columbia University, 1927. 144 p.
28. \*NOBLE, M. C. S., JR. *Teacher Training in North Carolina*. Educational Publication No. 135, Division of Information and Statistics, No. 1. Raleigh, N. C.: State Superintendent of Public Instruction, 1929. 70 p.
29. PARKINSON, B. L. *The Professional Preparation and Certification of White Elementary and Secondary Public School Teachers in South Carolina*. Bulletin of the University of South Carolina, No. 184, June 1, 1926. Columbia, S. C.: University Extension Division, University of South Carolina, 1926. 270 p.

Brings together information needed for the formulation of a comprehensive and systematic state plan for the training of teachers.

30. \*PEIK, W. E. *The Training of Teachers in North Dakota*. Reprinted from Biennial Report of the State Superintendent of Public Instruction. Bismarck, N. D.: State Department of Public Instruction, 1930. 76 p.
31. \*SMITH, JAMES MONROE. *The Training of High School Teachers in Louisiana*. Teachers College, Columbia University, Contributions to Education, No. 247. New York: Bureau of Publications, Teachers College, Columbia University, 1926. 101 p.
32. STATE BOARD OF EDUCATIONAL EXAMINERS, AGNES SAMUELSON, President. *Teachers of the Public Elementary and Secondary Schools of Iowa: A Summary*. Des Moines, Iowa: State of Iowa, 1931. 36 p.

A preliminary report on the findings of a comprehensive study of teacher personnel in Iowa elementary and secondary schools, during the school year 1928-29.

33. \*STEELE, ROBERT McCURDY. *A Study of Teacher Training in Vermont*. Teachers College, Columbia University, Contributions to Education, No. 243. New York: Bureau of Publications, Teachers College, Columbia University, 1926. 111 p.

34. SUHRIE, AMBROSE L. "How Can We Regulate the Supply and at the Same Time Improve the Quality of Candidates Legally Available to Enter the Public School Service as 'Novice Teachers'? What are the Basic Facts and Conditions Bearing Upon This Problem?" *Ninth Yearbook*. American Association of Teachers Colleges. Washington, D. C.: National Education Association, 1930. p. 22-9.

Emphasizes particularly the need of a continuous survey by a central state agency of specific replacement needs of the state teaching force and of the supply of teachers available from both public and private institutions both within and without the state. City school superintendents are also urged to study replacement needs within their school systems. Coordination of the efforts of teacher-training institutions on the basis of information thus collected and the establishment of higher training standards are recommended.

35. ULLRICH, F. H. "Combating the Problem of Too Many Teachers." *Nation's Schools* 5: 31-6; January, 1930.

Reaches conclusion that, while present oversupply of teachers is a serious one, if schools would refuse to employ those without proper academic and professional qualifications, the demand for well-trained teachers would be brisk.

36. VANCE, JOHN Q. "Contributions of the Teacher-training Agencies in Tennessee Toward Supplying the Demand for Trained Teachers in the State." *Peabody Journal of Education* 7: 272-80; March, 1930.

Reports a shortage in the total supply from all sources of trained elementary school teachers and an excess in the supply of trained high school teachers in relation to the demand.

37. WEST, ROSCOE L. *Annual Report to Commissioner, 1929-30*. Trenton, N. J.: State Department of Education, 1929-30. Mimeographed. 12 p.

Presents statistics on sources of supply of elementary and secondary teachers in the states and in various types of schools.

38. WHISLER, H. M. "Unemployment of Teachers." *Educational News*. Indianapolis, Ind.: State Department of Education, 1930. p. 9, 16.

Figures on number of unemployed teachers and number of teacher-training graduates eligible for teaching specified subjects are reported, based on replies to questionnaires sent to local superintendents and 35 teacher-training institutions of Indiana.

39. \*WHITNEY, FREDERICK L. *Teacher Demand and Supply in the Public Schools*. Greeley, Colo.: Colorado State Teachers College, 1930. 139 p.

40. WHITNEY, FREDERICK L. "Teacher Demand and Supply in the Public Schools: Part I. The Need of the State for Teachers; Part II. Teacher Tenure in the United States." *American School Board Journal* 81: 53, September, 1930; 45-6, October, 1930.

Two articles, the first of which gives briefly some of the facts relating to teacher demand as shown by the writer's recent study in Colorado, and by earlier investigations in Ohio and Wisconsin. The second deals with the teacher's tenure of service as it affects supply and demand.

#### Subject Supply and Demand in High Schools

41. ANDERSON, EARL W. "Combinations of Subjects." *Educational Research Bulletin* 8: 234-8; May 29, 1929.

Presents results of an analysis of the programs of inexperienced teachers in Ohio high schools, in 1927-28 and 1928-29, to discover the subject-combinations most in demand.

42. ANDERSON, EARL W. "A Study in Supply and Demand." *Educational Research Bulletin* 8: 399-403; December 4, 1929.

Reveals an excess of supply over demand and a wide difference between subject combinations taught in teacher-training institutions and those demanded in high school teaching.

43. BAER, J. A. "Do High School Teachers Teach the Subjects for Which They are Trained?" *Educational Research Bulletin* 7: 23-8; January 25, 1928.

Reports about one-fifth of the teachers whose records were studied as teaching subjects in which they had neither majored nor minored.

44. BOLTON, FREDERICK E. "Training and Supply of High School Teachers in the Northwest States." *Oregon Education Journal* 2: 5-6; June, 1928.

An attempt was made to obtain information as to the number of new high school teachers needed in general and in specific lines and as to the number of graduates produced by teacher-training institutions. It was discovered that in none of the states questioned were adequate data available.

45. COLE, ROBERT D. *The High School Teaching Population of North Dakota*. University of North Dakota, Departmental Bulletin, Vol. 13, No. 5. School of Education Bulletin, No. 5. University, N. Dak.: the University, October, 1929. 48 p.

Finds that the amount of professional preparation is adequate but that teachers do not, to any large extent, teach in their fields of major or minor specialization. Predicts that this situa-

tion will not be remedied until the three agencies most concerned,—the training institutions, the school superintendents, and state educational authorities—cooperate in attacking the problem.

46. COXE, WARREN W. and SOPER, WAYNE W. *A Study of the High School Teacher in New York State*. University of the State of New York Bulletin, No. 964, January 15, 1931. Albany, N. Y.: The University of the State of New York, 1931. 42 p.

Presents facts concerning academic and professional training, certificates held, and teaching programs of high school teachers in New York State.

47. CREAGER, J. O. "Making Teaching a Profession by Professionalizing the Training of Teachers." *Educational Administration and Supervision* 16: 19-28; January, 1930.

Suggests changes in curriculum administration in colleges and universities to relieve the maladjustment between preparation of high school teachers and the demands made upon them in actual teaching positions.

48. DEVRICKS, ROBERT K. *Teacher Demands in Indiana*. Parts I and II. In cooperation with a Committee of the Indiana State Teachers Association (I. O. Foster, chairman). Indianapolis, Indiana: Indiana State Teachers Association, 1930. Mimeographed. 19 p.

Part I deals with "New Teachers for 1929-30, Types of Schools in Which Employed, and Subject Combinations for High School Teachers." Part II presents information as to combinations of subjects taught by all high school teachers in Indiana in 1927-28, 1928-29, and 1929-30. Parts III and IV, now in preparation, will deal with teachers in training and their subsequent employment. The completed study consisting of Parts I-IV will be published as a bulletin of the School of Education, Bureau of Cooperative Research of Indiana University.

49. DEVRICKS, ROBERT K. "Teacher Supply in Indiana." *Teachers College Journal* 2: 73-5; January, 1931.

Computes index numbers to show surplus or shortage of teachers trained to teach various high school subjects in Indiana. Indexes are based on a comparison of the percent of all teachers in training preparing to teach each subject.

50. DOUGLASS, AUBREY A. "The Market for Prospective High School Teachers." *School and Society* 13: 602-6; May 21, 1921.

Presents information obtained from the Washington State High School Directory as to the number of high school teaching positions,



number of inexperienced teachers, and prevailing teaching combinations in the state.

51. GRANT, ALBERT, and COWLEY, W. H. "A Technique for Analyzing the Supply and Demand of Educational Workers." *School and Society* 29: 618-20; May 11, 1929.

Develops method for computing an index of the relation of supply to demand in the various subject fields in higher education. Illustrative data are from the files of the Bureau of Vocational Guidance and Placement, University of Chicago.

52. HEIGES, J. S. "How Many and What Subjects Should a High School Teacher in Pennsylvania Be Prepared to Teach?" *School Review* 38: 286-99; April, 1930.

Teaching programs of teachers in Pennsylvania high schools exclusive of Philadelphia and Pittsburgh were studied with a view to furnishing a basis for guidance in teacher training.

53. HUTSON, PERCIVAL W. *The Training of High School Teachers in Minnesota*. College of Education, Bulletin Vol. 26, No. 46. Educational Monograph, No. 3. Minneapolis, Minn.: College of Education, University of Minnesota, 1923. 79 p.

Deals with the relationship between subject-combinations taught by Minnesota high school teachers and their training.

54. INMAN, JAMES H. *The Training of Iowa High School Teachers in Relation to the Subjects They Teach*. Studies in Education, Vol. 4, No. 9. August 1, 1928. Iowa City: University of Iowa, 1928. 66 p.

A study of the training and teaching programs of 1048 teachers graduated from privately supported colleges in Iowa. Little relation is revealed between preparation and subjects taught.

55. KIRBY, T. J. "Subject Combinations in High School Teachers' Programs." *School Review* 34: 494-505; September, 1926.

Presents evidence to show need of job analysis as a basis for organizing teacher-training curriculum.

56. KOOS, LEONARD V. and WOODY, CLIFFORD L. "The Training of Teachers in the Accredited High Schools of the State of Washington." *Eighteenth Yearbook*. Part I. National Society for the Study of Education. Bloomington, Ill.: Public School Publishing Co., 1919. p. 213-57.

Deals with the demand for high school teachers in the State of Washington, in 1919. Presents information as to the distribution of teachers on the basis of various high school subject combinations.

57. LIGON, M. E. "Training and Teaching Combinations of Teachers in Accredited Secondary Schools of the South." *School Life* 15: 44-5; November, 1929.

Data showed approximately 14 percent of teachers trained in liberal arts colleges and 26 percent of teachers trained in teachers colleges teaching subjects in which they had neither majored nor minored.

58. MEAD, A. R. "How Many Subjects Should a High School Teacher be Prepared to Teach?" *Peabody Journal of Education* 4: 195-207; January, 1927.

Summarizes results of earlier studies to show that high school teachers should prepare to teach three subjects, that the number of subjects required of each teacher varies inversely with the size of the school, and that present placement services are failing, to a large extent, to locate teachers in positions which they are fully qualified to fill.

59. MORITZ, R. D. "Report of the Department of Educational Service of the University of Nebraska." *Educational Research Record* 21: 49-66; December, 1929.

Presents charts showing the supply of and demand for college and high school teachers. Reports a shortage of candidates for college positions.

60. NOBLE, STUART G. and ROY, VICTOR L. *The Personnel, Preparation and Programs of the High School Teaching Staff of Louisiana*. Department of Education Publications, Vol. 2, No. 2. Education Pamphlets, No. 14. Baton Rouge, La.: State Department of Education, December, 1928. 57 p.

Information is given concerning the distribution, in relation to their training, of high school teachers among the various fields of the high school curriculum in the school year 1925-26.

61. O'BRIEN, F. P. *The High School Teaching Load and Preparation of High School Teachers*. Kansas Studies in Education, Vol. 1, No. 5. May 15, 1926. Bulletin of the University of Kansas, Vol. 27, No. 10. Lawrence, Kansas: University of Kansas, 1926. 37 p.

Furnishes detailed information concerning the preparation and teaching load of 2449 high school teachers and 410 high school principals in Kansas in 1924-25. A failure to utilize the teacher's preparation in assigning subjects to be taught is evidenced by the data presented.

62. PLENZKE, O. H. and DOUDNA, E. G. *The Training and Work of High School Teachers in Wisconsin in New Positions*. Madison, Wisconsin: State Department of Education. 1930. 16 p.

Seeks to determine the demand for new high school teachers in Wisconsin in 1929-30, the

subjects which these teachers were required to teach, their training, and the extra curricular activities which they were called upon to direct. Discovers a shortage of teachers of certain subjects and an oversupply in others.

63. RHODES, EARL N. "The Extent to Which Graduates from Differentiated Curricula of Teachers' Colleges Teach in Their Specialized Fields." *Educational Administration and Supervision* 15: 667-77; December, 1929.

Data are reported on preparation and service during the first year after graduation, of 1924-28 graduates of a Pennsylvania state teachers college. The figures reveal a shortage in the number of teachers trained for rural teaching in relation to positions available and a surplus of teachers in all other branches, especially in the primary and intermediate groups.

64. WOODY, CLIFFORD. "Number and Combinations of Subjects Taught in the 1924-25 School Year in North Central High Schools of Michigan." *Educational Administration and Supervision* 12: 529-48; November, 1926.

Supplements earlier article cited as reference No. 63. Gives information as to number of subjects taught, the most prevalent subject combinations and the relation of these to size of school and the experience of the teacher in his present position.

65. WOODY, CLIFFORD. "Number of Subjects Taught by Graduates of the University of Michigan Who Began Teaching in 1922-23 School Year and the Amount of Academic Preparation in the Subjects Taught." *Educational Administration and Supervision* 10: 368-84; September, 1924.

Studies the relation between teaching programs and amount of academic training in subjects taught of University graduates who began teaching in 1922-23. Data are based on replies to questionnaires sent to individual teachers.

#### Tenure, Turnover, and General Status of Teachers

66. ALLEN, HOLLIS P. "Teacher Turnover and the Placement Problem." *American School Board Journal* 70: 45-6; May, 1925.

A study of the teacher turnover and placement problem in connection with California high school teachers in 1921-22. Presents data on turnover due to three factors: growth and expansion; replacement; and fluidity.

67. ANDERSON, C. J. *The Status of Teachers in Wisconsin*. Madison, Wis.: State Superintendent of Public Instruction, 1923. 156 p.

Reports conditions relating to teacher personnel in one-room rural, elementary and high

schools. Recommends higher certification requirements, the centralization of certifying authority, limitation of enrolments in courses that are oversupplied, and intelligent guidance of students in training.

68. BENSON, CHARLES E. *The Output of Professional Schools for Teachers*. Baltimore: Warwick and York, 1922. 88 p.

Reports a decrease in the proportion of graduates entering rural school teaching, an increasing tendency on the part of the teachers colleges toward curriculum differentiation, and a lack of adequate student accounting.

69. BLACKBURN, J. ALBERT. *A Study of the New Teacher Situation in Public Secondary Schools of Pennsylvania*. Doctor's thesis, 1928. University of Pennsylvania. Philadelphia: Westbrook Publishing Co., 1928. 155 p.

A survey of the preparation, experience, salary, teaching load, and teaching programs of newly appointed teachers in public high schools of Pennsylvania.

70. BOWDEN, A. O. "Qualifications of the Teachers of New Mexico." *School and Society* 30: 818-24; December 14, 1929.

Reports results of a survey of teacher qualifications in twelve high-, twelve low-, and twelve middle-ranking counties of the state, with respect to taxable wealth. Finds the typical teacher in the lowest-ranking counties is immature, inexperienced and without satisfactory training.

71. CLARKE, CLARENCE L. *Tenure of Teachers in the Profession with Special Reference to Wisconsin*. Ann Arbor, Michigan: Annual Press, University of Michigan, 1928. 144 p.

This study develops an index of mean tenure of Wisconsin teachers and seeks to determine the relation of length of service to other characteristics of the teaching personnel, such as training and position held. Reviews critically methods used by previous studies in the field. Urges the need of wider use and further refinement of teacher accounting methods.

72. ELSBREE, WILLARD S. *Teacher Turnover in the Cities and Villages of New York State*. Teachers College, Contributions to Education, No. 300. New York: Bureau of Publications, Teachers College, Columbia University, 1928. 88 p.

A study of turnover, as measured by the number of replacements, in cities and villages of New York State in the year 1925-26. Causes of turnover are analyzed in order to determine what proportion is avoidable.

73. FRENCH, WILL, chairman. "The Professional Training of Secondary School Teachers." *North Central Association Quarterly* 3: 333-75; December, 1928.

Presents committee's observations and recommendations and digests research studies of various aspects of the problem such as certification, placement, and the work of the beginning teacher. Includes annotated bibliography.

74. HUNTER, FRED M., chairman. *Report of the Committee of One Hundred on the Problem of Tenure*. Washington, D. C.: National Education Association, July, 1924. 59 p. Also, reprinted as National Education Association, Research Division. "The Problem of Teacher Tenure." *Research Bulletin* 2: 141-75; November, 1924.

Reports estimates of chief state school officers as to percent of the teaching force required annually for replacements in each of the 48 states.

75. HUNTER, FRED M., chairman. "Teacher Tenure in the United States." Report of Committee of One Hundred on the Problem of Tenure. *Proceedings, 1926*. Vol. 64. Washington, D. C.: National Education Association, 1926. p. 202-20.

Deals with needs for tenure legislation as shown by high rate of teacher turnover reported by state superintendents of education. Data presented are for the year 1924-25.

76. HUNTER, FRED M., chairman. "Teacher Tenure in the United States." Report of Committee of One Hundred on the Problem of Tenure. *Proceedings, 1927*. Vol. 65. Washington, D. C.: National Education Association, 1927. p. 208-35.

Presents figures on teacher turnover in cities of the United States which are over 100,000 in population and in rural schools of Washington and Nebraska.

77. KEITH, J. A. H. "Teacher Preparation in Pennsylvania: Its Present Status and Future Outlook." *Pennsylvania School Journal* 78: 366-70; February, 1930.

Gives information as to qualifications of the present teaching personnel, certificates now held by teachers, trends in certification, and quality of preparation offered by teacher-training institutions of the state.

78. PETERSON, A. G. "The Turnover of Rural Teachers." *Educational Administration and Supervision* 16: 659-67; December, 1930.

Summarizes the results of a number of recent studies of tenure and turnover of rural teachers.

79. PLENZKE, O. H., compiler. *Report of Committee on Teachers Welfare Survey in Rural Schools*. Bulletin of the Wisconsin Teachers Association, No. 6. Madison, Wisconsin: Wisconsin Teachers Association, February, 1930. 11 p.

Provides information on turnover, experience, salaries, training and other items bearing a direct relation to professional and economic welfare of 1250 rural teachers in the state of Wisconsin.

80. SEEDER, R. I. "Aspects of Tenure and Turnover Among Minnesota Teachers." *American School Board Journal* 77: 55-6; October, 1928.

Summarizes average length of service of teachers in different types of schools, rate of turnover in different types of schools, and the surplus of teachers as indicated by the excess in the number certificated in 1924-25 over the number required for replacement and growth.

81. SHARP, LAWRENCE A. *Present Status of Rural Teachers in the South*. Contributions to Education, No. 2. Nashville, Tenn.: George Peabody College for Teachers, 1921. p. 17-19.

Gives figures on median experience and ratio of experienced to inexperienced teachers in rural schools of southern states.

82. SPOONER, JULIA, chairman. *The Status of the Elementary Teacher*. Report of Committee on Investigations. Portland, Oregon: Oregon State Teachers' Association, January, 1923. Multigraphed. 44 p.

An investigation of salaries, tenure, teaching load, turnover and certain other conditions directly influencing the professional and financial status of the elementary teacher in Oregon.

83. STETSON, F. L. "Supply, Tenure and Salary of Administrators and High School Teachers in Oregon." *Oregon Education Journal* 3: 9-10, 34-35; October, 1928.

Deals with the loss to the state caused by a transitory and inexperienced teaching personnel. Of 1732 administrative and teaching positions it was found that 633 or 35.5 percent were newly filled in the fall of 1924 while 360 of the teachers appointed to these positions were new to the state, 236 were inexperienced, and 119 had migrated from other states.

84. STRAYER, GEORGE D., and ENGELHARDT, N. L. *A Preliminary Report of the Survey of the Public Schools and Higher Institutions in the State of Missouri*. Division of Field Studies, Institute of Educational Research, Teachers College, Columbia University, Eightieth Re-

port of the Public Schools of the State of Missouri for the School Year Ending June 30, 1929. Parts I-III. Jackson City, Mo.: Chas. A. Lee, State Superintendent of Public Schools, 1930. 464 p.

Chapter 8, on "Teaching Personnel in Missouri," p. 136-47, sets up a revised certification plan requiring higher standards of qualification for teaching and estimates the number of new teachers needed annually up to 1940.

85. WALLER, JESSE CRAWFORD. *Tenure and Transiency of Teachers in Kentucky*. Nashville, Tenn.: George Peabody College for Teachers, 1929. 54 p.

A study of the length of service and the amount and causes of transiency of teachers in typical city and rural schools and graded school districts in Kentucky during the decade from 1918 to 1928. Seeks to make available facts necessary to the formulation of a program for raising the professional status of the teaching force of the state.

86. WHITE, WENDELL. "Rate and Causes of Turnover of Iowa Teachers." *American School Board Journal* 71: 52-54; December, 1925.

Presents data on rate of turnover as measured by replacements of elementary and secondary teachers in cities of varying population groups. Seeks to determine causes of high rate of turnover in smaller schools.

## Part II. Factors in the Control of Teacher Demand and Supply

### Selection of Students in Teacher Training Institutions

87. ADAMS, EDWIN W. "How Can We Effect the Early Identification and the Certain Elimination of Students Distinctly Unpromising as Prospective Teachers?" *Ninth Yearbook*. American Association of Teachers Colleges. Washington, D. C.: National Education Association, 1930. p. 40-46.

Outlines in brief the plan that is being tried out at the Philadelphia Normal School.

88. BECHTEL, HELEN. *Intelligence Test Scores in Relation to Success in the Connecticut State Normal Schools*. Special Education Bulletin 1, 1930. Hartford, Conn.: State Board of Education, 1930. 34 p.

A study of the relation of intelligence, as indicated by scores in the Thorndike Intelligence Examination, Part III, to academic success in Connecticut State Normal Schools.

89. BROWN, EDWIN J., and TRUSLER, VICTOR T. "Methods of Entrance Employed by Four-Year Teachers Colleges of the United States." *School and Society* 33: 379-82; March 14, 1931.

Finds presentation of a transcript and evidence of graduation from a four-year high school the most commonly used method of admission and beyond this requirement a great variety of practice.

90. COURTIS, S. A. "Identifying and Eliminating the Unfit in Teachers Colleges." *Nation's Schools* 4: 21-26; September, 1929.

Criteria for determining unfitness for teaching, their objective application and their validity as a basis for elimination are discussed. Technics for elimination are suggested.

91. DEARBORN, NED H. "A Program for the Selection of Prospective Teachers for Elementary Schools of New York State." *Educational Administration and Supervision* 14: 15-26; January, 1928.

A better selection of teachers on the basis of test results and physical examinations is made possible by the present oversupply, it is declared.

92. DIEMER, G. W. "Gates to Teachers Colleges." *Journal of Education* 110: 463-64; November 25, 1929.

Summarizes selective admission practices in nineteen municipal teacher training institutions.

93. DUNKLE, JOHN L. "Standards in 1950 for Selection and Graduation of Students in the Teachers Colleges and for the Success and Professional Growth of the Graduates Who Are to Continue Teaching." *Proceedings, 1929*. Vol. 67. Washington, D. C.: National Education Association, 1929. p. 892-98.

States that although the professional equipment of the present teaching force is very low, the real job of the teachers colleges is to train all the teachers for all the public schools.

94. ENGLEMAN, J. O. "A Survey of Entrance Requirements and Recent Tendencies in the Courses of Study of the Normal Schools in the United States." *Pedagogical Seminary* 21: 532-58; December, 1914.

Finds great diversity in academic requirements for admission although an approach toward a minimum requirement of graduation from a four-year high school is noted.

95. FLORY, C. D. "Personality Rating of Prospective Teachers." *Educational Administration and Supervision* 16: 135-43; February, 1930.

States that results indicate self-rating of personality is about as reliable as rating by friends and that predictive scales such as the one presented are needed for use with prospective teachers.

96. FRAZIER, CLARK M. "Intelligence as a Factor in Determining Student Teaching Success."



*Educational Administration and Supervision* 15: 623-29; November, 1929.

Reaches the conclusion that, given enough intelligence for high school graduation, further intelligence as determined by standard intelligence tests has little effect upon the success of the student teacher.

97. FRAZIER, GEORGE W., and HEILMAN, JACOB D. "Experiments in Teachers College Administration: Intelligence Tests." *Educational Administration and Supervision* 14: 268-78; April, 1928.

Reports experience since 1920 of the Greeley, Colo., State Teachers College with the Army Alpha, Thorndike, and Thurstone intelligence examinations. Names seven ways in which the intelligence test has proved of value as an aid to teachers college administration.

98. GAMBRILL, BESSIE LEE. "Some Administrative Uses of Intelligence Tests in the Normal School." *Twenty-First Yearbook, Part II*. National Society for the Study of Education. Bloomington, Ill.: Public School Publishing Company, 1922. p. 223-43.

A description of the use of the Thorndike Intelligence Examination at the Trenton, N. J., State Normal School is given with some supplementary data from the New Britain, Conn., State Normal School, the Towson, Md., State Normal School and a number of state normal schools in Pennsylvania.

99. GUILER, W. S. "Selective Value of Mental Tests." *Elementary School Journal* 26: 112-15; October, 1925.

Seeks to determine the amount of intelligence, as indicated by scores made in the Otis Self Administering Test of Mental Ability, Higher Examination, Forms A and B, necessary to obtain an average mark of C in the work of the curriculum of Teachers College, Miami University.

100. HUNT, THELMA. "Measuring Teaching Aptitude." *Educational Administration and Supervision* 15: 334-35; May, 1929.

Describes test of aptitude for teaching developed by the Department of Psychology at George Washington University. States that correlations of results with intelligence test scores are sufficiently high to indicate that both abstract and social intelligence are component factors in teaching ability.

101. JACOBS, CHARLES L. *The Relation of the Teacher's Education to Her Effectiveness*. Contributions to Education, No. 277. New York: Bureau of Publications, Teachers College, Columbia University, 1928. 97 p.

Seeks to present information needed to guide teachers colleges in formulating their program for the preparation of teachers.

102. INDIANA UNIVERSITY, SCHOOL OF EDUCATION. *Sixteenth Annual Conference on Educational Measurements*. Held at Indiana University, April 19 and 20, 1929. Bulletin of the School of Education, Vol. 5, No. 6, July, 1929. Bloomington, Ind.: Bureau of Cooperative Research, School of Education, the University. 96 p.

The following addresses are of especial interest: "A Study of Certain Problems Dealing with Scholastic Achievement in a Teachers College," by John William Jones, p. 33-40. "Aptitude Tests for Teachers," by Frances Dearborn, p. 62-68. "Psychological Tests in Ball Teachers College," by Robert C. Scarf, p. 72-75. "A Report on the Late H. G. Childs Study of Factors Entering Into Successful Teaching," by Carl G. F. Franzen, p. 76. "The Use of Teacher Rating at Purdue University and Its Implications for the Elementary and Secondary Schools," p. 77-83.

103. KELLEY, E. LOWELL. *Bases for Selection of Teachers College Freshmen*. Greeley, Colo.: Colorado State Teachers College, April, 1928. Mimeographed. 25 p.

Entrance requirements of 65 leading colleges and universities with their implications for the state teachers college are surveyed.

104. KINDER, J. S., and ODELL, CHARLES W. *Educational Tests for Use in Institutions of Higher Learning*. Educational Research Circular, No. 55; August 5, 1930. University of Illinois, Bulletin 27, No. 49. Urbana, Ill.: University of Illinois. 95 p.

Lists the more important tests available for measuring achievement at the college level. Aptitude tests and scales for the rating of teaching ability are briefly described in p. 24-25.

105. KNIGHT, F. B. *Qualities Related to Success in Teaching*. Contributions to Education, No. 120. New York: Bureau of Publications, Teachers College, Columbia University, 1922. 67 p.

Correlates merit ratings of teachers obtained from judgments of fellow teachers, supervisory officers, and students with certain objective facts concerning each teacher, including scores made in the Knight-Franzen Trade Test for Elementary School Teachers.

106. LINSCHIED, A. "Twenty Years of Progress in the Selection and Admission of Students in State Normal Schools and Teachers Colleges." *Proceedings, 1928*. Vol. 66. Washington, D. C.: National Education Association, 1928. p. 862-72.

Traces trend toward higher standards of admission to teacher training institutions and suggests as the next step the following requirements: (1) graduation from an approved high school; (2) rank in the upper fifty percentile of the graduating class; (3) evidence of good

moral character and personal fitness for teaching; (4) good health; (5) more than average intelligence as revealed by test scores.

107. KRIEGER, LAURA B. M. *Prediction of Success in Professional Courses for Teachers*. Contributions to Education, No. 420. New York: Bureau of Publications, Teachers College, Columbia University, 1930. 77 p.

Summarizes results of a study of the relationship between scores made in psychological examinations, and grades, in over fifty universities and colleges in the United States.

108. LINTON, CLARENCE. *Study of Some Problems Arising in the Admission of Students as Candidates for Professional Degrees in Education*. Contributions to Education, No. 285. New York: Bureau of Publications, Teachers College, Columbia University, 1927. 164 p.

An investigation of the admission requirements of 122 liberal arts colleges, 56 teachers colleges, 32 publicly supported colleges and universities, and 12 privately supported universities.

109. LUCEY, MICHAEL H. "Cooperation in Attracting, Selecting and Training a Professional Staff for the Teaching Service." *Problems in Teacher Training*. Vol. 4. Proceedings, 1929. Normal School and Teachers College Section, National Society for the Study of Education. (Ambrose L. Suhrie, compiler and editor.) New York: New York University Press Book Store, 1929. p. 1-90.

A series of addresses dealing with the responsibility and current practices of secondary schools, normal schools and teachers colleges, and public school superintendents in connection with this problem.

110. MCCRORY, JOHN C. "A Study of the Relation Between Ability and Achievement." *Educational Administration and Supervision* 12: 481-90; October, 1926.

Concludes that no one criterion alone is reliable in the prediction of success, that intelligence test scores and high school records furnish at present the most dependable data and that early achievement in college is not a reliable index of later achievement.

111. MCNEIL, MELLICENT. *A Comparative Study of Entrance to Teacher Training Institutions*. Contributions to Education, No. 443. New York: Bureau of Publications, Teachers College, Columbia University, 1930. 104 p.

Reviews and seeks to evaluate present present status of requirements for admission to teacher training in the United States and ten foreign countries.

112. MADSEN, I. N. "The Prediction of Teaching Success." *Educational Administration and Supervision* 13: 39-47; January, 1927.

Reports a study of causes of teacher failure, the results of which seem to indicate a majority of failures are due to lack of intelligence.

113. MANSON, GRACE E. *Bibliography of the Analysis and Measurement of Human Personality up to 1926*. Reprint and Circular Series, No. 72. Washington, D. C.: National Research Council, 1926. 59 p.

A bibliography of 1364 titles.

114. MORRIS, ELIZABETH HUNT. *Personal Traits and Success in Teaching*. Contributions to Education, No. 342. New York: Bureau of Publications, Teachers College, Columbia University, 1929. 75 p.

Describes *Trait Index-L*, developed by the author, and its use at the Albany, N. Y., State Teachers College in predicting teaching success. The index, as constructed, consists of a series of multiple choice tests designed to measure such personal traits as resourcefulness and insight.

115. MYERS, ALONZO F. "How Can We Set Up Defensible Policies and Work Out Effective Programs for the Selective Admission of Entrants to Teacher-Training Institutions?" *Ninth Yearbook*. American Association of Teachers Colleges. Washington, D. C.: National Education Association, 1930. p. 37-40.

Describes plan of selective admissions to state normal schools set up by the Connecticut State Board of Education.

116. PYLE, WILLIAM H. "Intelligence and Teaching: an Experimental Study." *Educational Administration and Supervision* 13: 433-48; October, 1927.

On the basis of comparative studies of successful student teachers and those considered as failures, finds that intelligence is "just a barely perceptible factor in teaching success as measured by the Training Department of Detroit Teachers College." Concludes that "intelligence is only one of probably many factors that lead to successful teaching."

117. PYLE, WILLIAM H. "Relation Between Intelligence and Teaching Success." *Educational Administration and Supervision* 14: 257-67; April, 1928.

Supplements earlier study by the author of the relation of intelligence to practice teaching. (See reference 116.) The present study deals with teaching during the first two years after graduation. The conclusion is reached that neither success in practice teaching nor later teaching success can be predicted on the basis of intelligence test scores.

118. SHANNON, JOHN RAYMOND. *Personal and Social Traits Requisite for High Grade Teaching in Secondary Schools*. Doctor's Dissertation,

School of Education, Indiana University. Terre Haute, Ind.: State Normal Press, 1928. 112 p.

Seeks to determine on nine different bases what personal and social traits are most necessary to excellence in high school teaching.

119. SOMERS, GROVER T. *Pedagogical Prognosis; Predicting the Success of Prospective Teachers*. Contributions to Education, No. 140. New York; Bureau of Publications, Teachers College, Columbia University. 1923. 129 p.

Advocates selection of candidates for admission to training on the basis of tests, personality, and high school record.

120. SUHRIE, AMBROSE L., and OTHERS. "The Selection of Candidates for Admission to Teacher-Training Institutions." *Problems in Teacher Training*. Vol 3. Proceedings, 1928. Normal School and Teachers College Section, New York Society for the Experimental Study of Education. (Ambrose L. Suhrie, compiler and editor.) Albany, N. Y.: Fort Orange Press, Bradow Printing Co., 1928. p. 1-99.

A series of addresses centering around the major topic stated in the title. Discussions of specific problems are included, as follows: "What Considerations Justify the Policy of Limiting the Number of Students Admitted to Public Teacher Training Institutions?" by Alfred D. Simpson and Carroll R. Reed; "What Specific Information Is Needed Concerning (1) the Number of Teachers Required Annually in Each Grade or Level of Service, and (2) the Supply of Teachers Available from All Possible Sources, as a Basis for Determining the Number of Students That Should Be Admitted to the Public Teacher-Training Institutions of a State?" by Marion R. Trabue and Armand J. Gerson; "What Considerations Should Determine the Acceptance of Individual Students in Filling the Quota to a Given Institution or System of Institutions?" by Ned H. Dearborn and Newton D. Nichols; five addresses on "What Are the Opportunities and Responsibilities of Secondary Schools for the Vocational and Educational Guidance of Candidates for Admission to Teacher-Training Institutions?" and seven addresses dealing with "Examples of Effective Cooperation (Between High Schools and Teachers Colleges) in the Administration of an Authorized Plan for Selective Admission."

121. TIEGS, ERNEST WALTER. *An Evaluation of Some Techniques of Teacher Selection*. Bloomington, Ill.: Public School Publishing Company, 1928. 108 p.

Reviews the historical development and practices in teacher selection. Summarizes the results of research in this field and suggests problems for future research.

122. ULLMAN, ROY ROLAND. *The Prognostic Value of Certain Factors Related to Teaching Suc-*

*cess*. Doctor's Dissertation, University of Michigan, 1931. Ashland, Ohio: A. L. Garber Co., 1931. 133 p.

Seeks to determine with reference to university graduates teaching in junior or senior high schools, the relationship between teaching success and each of eleven items of personal equipment and preparation.

123. WHITNEY, FREDERICK L. *The Prediction of Teaching Success*. Journal of Educational Research Monographs, No. 6. Bloomington, Ill.: Public School Publishing Company, 1924. 85 p.

A median score of 135 in the Army Alpha tests for 780 normal school graduates and a correlation of 160 between intelligence measured on this basis and success in student teaching were discovered.

124. ZANT, JAMES H. "Predicting Success in Practice Teaching." *Educational Administration and Supervision* 14: 664-70; December, 1928.

A study of 200 students of the Southeastern State Teachers College, Durant, Okla. It was found that marks in educational psychology and in education and methods courses were not good indication of success in practice teaching.

#### Guidance and Placement

125. ANDERSON, EARL W. "The Work of an Appointments Division." *Educational Research Bulletin* 8: 67-73; February 20, 1929.

Reports in general an oversupply of high school teachers, but not in all fields. A shortage of available teachers in the kindergarten and primary fields was revealed.

126. ANDERSON, EARL W., and MORRILL, J. L. *Do You Want to Teach?—Suggestions for Students in the College of Education*. Columbus, Ohio: Ohio State University, 1929. 19 p.

Guidance material for students in the College of Education at Ohio State University. Information is presented, based on appointment office records and other data, concerning the demand for teachers of the various subject-combinations.

127. BOARDMAN, C. W. *Factors in the Appointment of Teachers Influencing Students' Preparation for Teaching; Student Counselling in the College of Education*. Minneapolis, Minn.: University of Minnesota, 1929. Mimeographed.

The need of information concerning opportunities in teaching, as a basis for the selection of majors and minors, is emphasized.

128. BROGAN, WHIT. *Work of Placement Offices in Teacher Training Institutions*. Contributions to Education, No. 434. New York: Bureau of Publications, Teachers College, Columbia University, 1930. 97 p.

Surveys present placement practices in the teachers colleges. Outlines a program for co-

operation between the teacher training institutions and employers of teachers, designed to aid in the solution of problems growing out of the increasing congestion of the teaching population.

129. BURK, JOSEPH E. "How Can We Induce a Satisfactory Percent of the Best Potential Teachers to Undertake Preparation for This Service?" *Ninth Yearbook*. American Association of Teachers Colleges. Washington, D. C.: National Education Association, 1930. p. 30-37.

Traces four lines of action in current efforts of teacher training institutions to secure the best potential teachers: (1) establishment of closer contacts with public schools brought about through conferences of superintendents and other school executives held at teacher training institutions; (2) circulation among high school students of printed material concerning the teacher training institution and its program; (3) the setting up of definite programs of vocational guidance and selection in the high schools; (4) visits of members of teacher training faculties to high schools for the purpose of interpreting teacher training objectives and opportunities to high school students.

130. CLARK, HAROLD F. "What Is Correct Occupational Distribution?" *Teachers College Record* 31: 617-23; April, 1930.

Free education of all kinds and grades, and the obtaining and disseminating of supply and demand information concerning every occupation are essentials of the program of occupational adjustment outlined.

131. CUNLIFFE, R. B. "Why This Career? Significance of Vocational Information in Decisions of College Students." *Personnel Journal* 7: 376-84; February, 1929.

Of 533 students who were asked to express vocational preferences and to list factors influencing these preferences, less than two percent reported that their choice had been based upon a study of occupations.

132. HOLLIS, E. V. "Why They Teach." *Educational Administration and Supervision* 15: 678-84; December, 1929.

Summarizes results of a study of factors influencing the choice of teaching as a profession.

133. ILLINOIS SCHOOL MASTERS CLUB. *Opportunities for High School Graduates in Public School Teaching in Illinois*. Normal School Quarterly, Series 27, No. 108. Normal, Ill.: Illinois State Normal University, 1928. 24 p.

On the basis of estimates of the need for re-placements and for new positions due to increased enrolments, the annual demand for

new teachers in Illinois is placed at 4500. With regard to supply it is reported that, of 7000 persons certificated each year, only 1448 are graduates of teachers colleges.

134. LEONARD, ROBERT J. "Appointment Service for Teachers: Progress and Problems." *Educational Record* 6: 58-68; April, 1925.

Characterizes our "apparent inability to . . . market professional talent in accordance with personal merit and institutional and community needs" as one of the outstanding problems affecting all professions. Urges coordination between teacher placement bureaus within a state and cooperation between those in separate states. Recommends a national commission for purposes of research, standardization, coordination, and advice concerning state legislation.

135. MAHLER, H. R. "A New Plan for Teacher Employment." *School and Society* 29: 331-33; March 9, 1929.

Favors the establishment of teacher placement bureaus in state departments of education as a plan which would make available reliable personnel information concerning applicants for positions and would supplant a system unfair to superintendents and teachers alike.

136. RANKIN, MARJORIE. *Trends in Educational Occupations*. Contributions to Education, No. 412. New York: Bureau of Publications, Teachers College, Columbia University, 1930. 83 p.

This study presents information concerning types of educational positions, their present distribution, and trends during the period from 1898 to 1928, based on data covering 78,713 educational workers employed in school systems of 10 large and 4 small cities.

137. TOOTHAKER, O. H. "Basic Principles in Teacher Placement." *Education* 47: 472-82; April, 1927.

Urges more detailed job analyses at each grade level and in every specialized subject-field of the teacher service; the development of more objective methods for measuring those personal traits desirable for teaching; the making of studies to determine the interrelationship of high school academic success, abstract intelligence, social intelligence, and success in teaching at each grade level and in each subject-field; and the application of the results of these studies not only to the selection of candidates for training, but also to guidance of those admitted to training, which shall lead to their successful placement.

138. UMSTATT, J. G. "Research Studies in Placement." *Minnesota Journal of Education* 11: 252-55; March, 1931.

States that the Bureau of Recommendations in the College of Education, University of Minnesota, exists for the purpose of supplying



economically its quota of judiciously selected teachers, as determined by the demand due to increase and replacement.

139. WILLETT, GEORGE W. "Efficiency of Teacher Placement Agencies." (Committee Report.) *North Central Association Quarterly* 3: 187-99; September, 1928.

Presents information obtained from college and university placement bureaus and from public school systems employing new teachers. On the basis of the facts determined, eight recommendations are offered for solving existing difficulties.

### Certification of Teachers

140. BACHMAN, FRANK P. *Training and Certification of High School Teachers*. Nashville, Tenn.; Division of Surveys and Field Studies, George Peabody College for Teachers, 1930. 175 p.

Reviews existing status of training and certification of high school teachers in the United States and discusses obstacles in the way of raising teaching in the secondary schools to a strictly professional level.

141. BENNETT, RAYMOND D. "Standards for Certification of High School Teachers." *Educational Research Bulletin* 7: 67-71, 89-94; February 22, March 7, 1928.

Two articles on standards of preparation for teaching in the high schools of the forty-eight states.

142. BROWNELL, W. A. "State Requirements for High School Teachers." *School Review* 34: 295-99; April, 1926.

Gives information as to the number of hours and titles of education courses required for certification of high school teachers in forty-seven states. Data presented are for 1925.

143. BURRIS, B. J. "Problem of Certification in Relation to Teacher Training." *Proceedings*, 1926. Vol. 64. Washington, D. C.: National Education Association, 1926. p. 932-39.

Sets up principles which should govern a state program of teacher certification among which are more complete cooperation between teacher training and state administrative officials, and certification for specific types of teaching positions based upon specific preparation for those positions.

144. CLARK, ROBERT, chairman. *Training and Certification of Teachers in West Virginia*. Teacher Training Bulletin, No. 7. 1928. Charleston, W. Va.: State Department of Education, 1928. 85 p.

Outlines recently adopted program for the training and certification of teachers embodying the recommendations of the State Confer-

ence Committee on the Revision of the Curricula for Teacher Training Institutions.

145. COCKING, W. D., and PEYTON, W. W. *Certification of Teachers*. Typed, printed cover. 1930. 51 p.

Summarizes teacher certification provisions in each of the 48 states. Also gives brief history of certification in the United States and cites opinions bearing on the problem.

146. COOK, KATHERINE M. *State Regulations Governing Teachers' Certificates*. U. S. Department of the Interior, Bureau of Education, Bulletin, 1927, No. 19. Washington, D. C.: Government Printing Office, 1927. 296 p.

A study of progress made in the 48 states in improving state laws and regulations governing the certification of teachers. Tendencies toward centralization of the certifying power and higher educational requirements are revealed.

147. KINDER, J. S. "Requirements for Secondary-School Teaching Certificates in the Case of Persons Without Teaching Experience." *School Review* 38: 110-14; February, 1930.

Summarizes certification practices of the states with regard to beginning high school teachers.

148. NATIONAL EDUCATION ASSOCIATION, Division of Research. "A Self-Survey Plan for State School Systems. Part I: Checklists. Part II: Handbook." *Research Bulletin* 8: 66, 78-80, March, 1930; 118-20, May, 1930. Washington, D. C.: the Association.

The March bulletin presents a checklist for judging state administration of certification. A discussion supporting the criteria set up is given in the May bulletin.

149. SHERROD, C. C. "How Can We Establish and Maintain Qualitative Standards for Graduation and for Provisional Certification?" *Ninth Yearbook*. American Association of Teachers Colleges. Washington, D. C.: National Education Association, 1930. p. 47-50.

Out of 90 teacher training institutions replying to a questionnaire, 57 report an attempt in their states to abandon the issuance of temporary and provisional certificates, 32 say that high school training classes and county normal schools are operating in such a way as to interfere with high standards of training, and 65 state that certification standards could be materially raised without reducing the supply of teachers below replacement needs.

150. STOUTEMYER, J. HOWARD. "Facts and Fallacies in the Certification of Secondary School Teachers." *Educational Administration and Supervision* 15: 38-46; January, 1929.

A summary of the provisions of the several states governing teachers' certificates. Con-

siders some of the fallacies underlying current state practices.

151. YEAGER, WILLIAM A. *State Certification as a Factor in the Training of Elementary Teachers in Service*. Doctor's Dissertation, University of Pennsylvania, 1929. Kutztown, Pa.: Kutztown Publishing Co., 1929. 350 p.

An investigation of the effects, upon the training in service of elementary school teachers, of the program for the up-grading of certification requirements, adopted in 1921.

#### State Administrative Policies in Control of Teacher Supply

152. BEICHLEY, ENOCH. "Concerning That Over-Supply of Teachers." *Kansas Teacher and Western School Journal* 27: 8-9; June-July, 1928.

Suggests higher standards for admission to teacher training institutions and greater uniformity in teacher requirements as means for reducing the existing teacher surplus. Reports an oversupply of 4,000 teachers in Kansas, for the year 1927.

153. BUNTING, R. L., and MCGUFFEY, VERNE. "Preparation of Rural Teachers." *Teachers College Record* 29: 716-27; May, 1928.

Presents findings of a questionnaire study of what public normal schools and teachers colleges of the United States were doing in 1927 with regard to the preparation of teachers for positions in rural schools.

154. COFFMAN, LOTUS D. *Teacher-Training Departments in Minnesota High Schools*. New York: General Education Board, 1920. 92 p.

An evaluation of the work of the high school teacher training departments in supplying teachers for the rural schools of Minnesota:

155. COOPER, HOMER E. *Cost of Training Teachers*. Baltimore: Warwick & York, Inc., 1924. 112 p.

Outlines method by which a state may test the adequacy of its system of teacher training, decide upon a program to fit the needs of the schools, and determine the cost of such a program.

156. GOSLING, T. W. "Articulation of State Agencies for Teacher-Training with the Field Staffs of Their Service." *Educational Administration and Supervision* 15: 689-92; December, 1929.

Follows 1929 Yearbook of Department of Superintendence, in pointing out certain ways in which state teacher training institutions may serve the staffs of their service areas. Selective admissions, guidance of students in training, and supervision are emphasized.

157. HAGGERTY, M. E. "Whither the Teachers Colleges in the Academic World?" *Proceedings, 1929*. Vol. 67, Washington, D. C.: National Education Association, 1929. p. 849-61.

Maintains that increased competition for teaching positions due to the stabilizing of school enrolments and a consequent reduction in the demand for teachers will not only imperil the welfare of the profession but will result in an increased competition between teachers colleges in the matter of enrolments. Urges a cooperative national study of the whole teacher training situation.

158. HIGBIE, E. C. "A Challenge to State Teachers Colleges." *Peabody Journal of Education* 7: 236-40; January, 1930.

Favors limitation of enrolment and area of service and a more extended knowledge of the needs of both teachers and schools within the delimited area served.

159. HILL, CLYDE MILTON. *A Decade of Progress in Teacher Training*. Contributions to Education, No. 233. New York: Bureau of Publications, Teachers College, Columbia University, 1927. 219 p.

Traces teacher training progress in Missouri during the period from 1915 to 1926.

160. HILLMAN, JAMES E. "State Program of Training Rural Teachers." *Proceedings, 1925*. Vol. 63. Washington, D. C.: National Education Association, 1925. p. 554-63.

The writer argues that not only must the teacher training program in any state be pre-faced by policies as to consolidation, supervision, and salaries, but the law of supply and demand should also be taken into account and teacher training institutions should be informed concerning the needs of the state with reference to any particular type of teaching service.

161. LEARNED, W. S., BAGLEY, W. C., and others. *The Professional Preparation of Teachers for American Public Schools*. Bulletin Number 14. New York: Carnegie Foundation for the Advancement of Teaching, 1920. 475 p.

A study of the professional preparation of teachers as carried on by the normal schools of Missouri in 1914. The product of the normal schools, as a part of the teaching personnel of the state, is surveyed. Holds that the teacher training process is fundamentally a state enterprise which should be administered by a single directing body.

162. LEONARD, ROBERT J. *The Coordination of State Institutions for Higher Education through Supplementary Curricular Boards*. Bureau of Research in Education, Department of Education, Study No. 13. Berkeley, Calif.: University of California, 1923. 188 p.

The state educational conference of representatives of state department of education, state university, and state normal schools organized in Missouri in 1916 is described in p. 14-15.

163. MEREDITH, ALBERT B. "Preparation of Teachers for Rural Schools." *Proceedings*, 1928. Vol. 66. Washington, D. C.: National Education Association, 1928. p. 481-84.

Contents that differentiation in the training of rural teachers is unnecessary but that no teacher is broadly prepared without being fitted for teaching in several types of schools, including rural schools.

164. MEREDITH, ALBERT B. "The Relation Which the Administration of the Teachers Colleges Shall Have to the Administration of Other Units of Public Education and to the Whole Administration of Public Education in 1950." *Proceedings*, 1929. Vol. 67. Washington, D. C.: National Education Association, 1929. p. 922-28.

Prophesies centralization of teacher training administration in state departments of education, the continuous study of facts regarding teacher demand and turnover and control of teachers college enrolments and certification of teachers on the basis of the knowledge thus gained.

165. MEYER, JACOB G. *Small Colleges and Teacher Training*. Bloomington, Ill.: Public School Publishing Company, 1928. 162 p.

In order to ascertain whether there is a need or a justification for the training of teachers by liberal arts colleges, studies were made of: the occupational and professional distribution of graduates of small American colleges; the teacher supply and demand situation throughout the country; public obligations of the liberal arts college; professional training for teaching offered by liberal arts colleges.

166. NOYER, RALPH. "Best Type of a Governing Body for a Teachers College in 1950." *Proceedings*, 1929. Vol. 67. Washington, D. C.: National Education Association, 1929. p. 914-22.

Predicts that the tendency toward centralization now apparent in industrial organization will affect teachers college administration during the next twenty years and that such centralization under state authority will be necessary in order to meet the complex demands of the period.

167. RAINEY, HOMER P. "What Is the Future of Professional and Liberal Education?" *School and Society* 32: 79-85; July 19, 1930.

In refutation of the argument that the four-year liberal arts college is doomed, data are presented indicating that the saturation point is being reached in many fields of professional education.

168. RUTLEDGE, SAMUEL A. *The Development of Guiding Principles for the Administration of Teachers Colleges and Normal Schools*. Con-

tributions to Education, No. 449. New York: Bureau of Publications, Teachers College, Columbia University, 1930. 107 p.

Presents the results of an evaluation of 96 principles of teachers college administration by a jury of 45 experts in educational administration. Sets up a list of representative duties of the teachers college president consistent with the evaluated principles.

169. SHAW, FRANK L. *State School Reports*. Contributions to Education, No. 242. New York: Bureau of Publications, Teachers College, Columbia University, 1926.

An analysis of annual and biennial reports issued by state departments of education to determine (1) what are the functions of state school reports? (2) how well are the current reports fulfilling these functions?

170. TULLOSS, R. E. "College and Teacher Training." *Educational Research Bulletin* 8: 238-45; May 29, 1929.

Presents pro and con arguments with regard to the right of the state to require liberal arts colleges to meet state standards governing teacher training curriculums.

171. WEST, ROSCOE L. *Annual Report of the Director of Teacher Training to the Commissioner of Education, for the Year 1929-1930*. Trenton, N. J.: New Jersey State Department of Education, 1930. Mimeographed. 12 p.

Describes major activities of the Division of Teacher Training, New Jersey Department of Education, in developing and carrying out the state teacher training program.

172. WITHERS, JOHN W., chairman. "Articulation in the Field of Teacher Training." (Committee Report.) *Seventh Yearbook*. Part V. Washington, D. C.: Department of Superintendence, National Education Association, 1929. p. 395-465.

Sets up principles considered fundamental to the articulation of the units of American education and applies these principles to the professional education of teachers.

173. WITHERS, JOHN W., chairman. "Teacher Demand and Supply." (In Report of Committee on the Relation of General to Professional Education of Teachers.) *Ninth Yearbook*. Part III. Washington, D. C.: Department of Superintendence, National Education Association, 1931. p. 254-67.

Emphasizes the need for more facts concerning the teacher supply and demand situation and reports plans for the study of this problem on a nation-wide basis.

Interview Blank - Teacher Supply and Demand

State Department of Education

State \_\_\_\_\_ Date \_\_\_\_\_

Name of person interviewed \_\_\_\_\_

Official position \_\_\_\_\_

I. State control of teacher training

A. Which of the following authorities administers the state normal schools:

1. State board of education \_\_\_\_\_ 3. Local boards for each school \_\_\_\_\_  
2. State normal school board \_\_\_\_\_ 4. (Other) \_\_\_\_\_

B. Can the above authority restrict the state normal schools as to the number of students they may enrol? \_\_\_\_\_  
Or as to the number of graduates? \_\_\_\_\_  
Has this been done? \_\_\_\_\_

C. Does the authority mentioned in (A) above prepare or review the budget of the state normal schools? \_\_\_\_\_

D. Does the state authority have the right to limit the enrolment or the number of graduates of city and county normal schools? \_\_\_\_\_  
Has it ever done so? \_\_\_\_\_

E. Are city and county normal schools required to report their enrolments and graduates to the state department of education? \_\_\_\_\_  
Do they report voluntarily? \_\_\_\_\_

F. Does the state authority mentioned in Question A (or the state department of education) have the power to limit the enrolment and number of graduates of the teacher training departments in the state university and other public liberal arts colleges? \_\_\_\_\_  
Has this power been used? \_\_\_\_\_

G. Has any state authority ( \_\_\_\_\_ ) the power to limit the enrolment and number of graduates of teacher training departments in private or parochial liberal arts colleges? \_\_\_\_\_  
In private normal schools? \_\_\_\_\_  
Has this power been used? \_\_\_\_\_



H. Do the (public ) liberal arts college report (voluntarily) the number of  
(private) ( by law )  
persons prepared for teaching each year \_\_\_\_\_

I. Are conferences called each year between state teachers college officials  
and the state department of education for the purpose of making a state  
teacher training program? \_\_\_\_\_  
Are the private and state universities invited in on these conferences?  
\_\_\_\_\_

## II. State normal schools and teachers colleges

A. How many schools of this type? \_\_\_\_\_ How long is the training  
for elementary and secondary school teachers? \_\_\_\_\_

B. Are the normal schools required to admit all high school graduates who  
apply for admission? \_\_\_\_\_  
Or, are there certain specifications as to high school standards and train-  
ing? \_\_\_\_\_ (Get copy)

C. Do the state normal schools have the authority to select by examination  
the applicants for admission even though they meet the specified high  
school training? \_\_\_\_\_  
Do any schools use such examinations now? \_\_\_\_\_

D. Do the state normal schools systematically eliminate during training  
students who are personally unqualified to become teachers? \_\_\_\_\_  
What tests are used? \_\_\_\_\_

E. Do all graduates of state teachers colleges automatically receive a cre-  
dential or license to teach? \_\_\_\_\_

F. Do the state normal schools maintain placement bureaus or is this work done  
by a central state bureau or official? \_\_\_\_\_

G. Do the state normal schools follow-up their graduates for one or two years?  
\_\_\_\_\_  
\_\_\_\_\_

### III. High School guidance

- A. Does the state department of education (or the normal school board) send bulletins or representatives into the high schools to inform the students as to the needs, the training, and the opportunities of teaching? \_\_\_\_\_

Do the individual normal schools do any high school guidance work? \_\_\_\_\_

- B. Do the high schools systematically guide the superior students into teaching? \_\_\_\_\_

- C. Does the state teachers association do anything to influence the number and the quality of the students entering the teachers colleges from the high schools? \_\_\_\_\_

### IV. Certification

- A. Have the certification requirements for elementary and secondary school teachers been raised since 1926 because of evidence or belief that there was any oversupply of teachers in this state? \_\_\_\_\_

- B. Has the step taken in (A) reduced:

1. The number of state teachers college graduates? \_\_\_\_\_
2. The number applying for state credentials? \_\_\_\_\_
3. The number entering from other states? \_\_\_\_\_
4. The apparent oversupply? \_\_\_\_\_

- C. Are graduates of teacher training institutions required to serve a probationary year before receiving a regular certificate or license to teach? \_\_\_\_\_

- D. What is the usual term of the first certificate granted to normal school graduates? \_\_\_\_\_  
The renewals? \_\_\_\_\_

- E. Does the state department have the power to revoke any permanent or life certificates now in use? \_\_\_\_\_

V. Records and surveys

- A. Are city and county superintendents required to report each year to the state department the number, names, and training of all <sup>(new)</sup><sub>(old)</sub> teachers employed? \_\_\_\_\_
- B. Do local superintendents report each year to the state department the status of teacher supply and demand in their districts? \_\_\_\_\_
- C. Does the state department make and maintain a state-wide pupil census? \_\_\_\_\_  
How often? \_\_\_\_\_
- D. Does the state department make population surveys and growth predictions from time to time? \_\_\_\_\_
- E. Do you make other studies or collect data which would bear on the problem of teacher supply and demand? \_\_\_\_\_

VI. Migration of teachers between states

- A. Do you have any state rules or state certification requirements designed in part to restrict the influx of teachers from other states? \_\_\_\_\_
- B. Do the local board rules or practices discourage the employment of teachers from other states? \_\_\_\_\_
- C. From which states does much of your influx come? \_\_\_\_\_  
Any reason for this? \_\_\_\_\_
- D. Do you lose many teachers or graduates to other states? \_\_\_\_\_  
Which states? \_\_\_\_\_  
Why? \_\_\_\_\_
- E. What steps, if any, has this state taken in preventing losses of teachers and graduates to other states? \_\_\_\_\_

VII. Miscellaneous

- A. Is the married teacher an important problem in supply and demand in this state? \_\_\_\_\_

Any studies been made? \_\_\_\_\_

- B. Have local boards or state board made any rules to restrict the employment of married teachers? \_\_\_\_\_

- C. Is one of your outstanding supply and demand problems concerned with getting persons to train for teaching in specific subjects in proportion to the demand? \_\_\_\_\_

- D. Do you have a problem of geographical distribution in supply and demand - that is, an oversupply of teachers in one part of the state and a shortage in other districts? \_\_\_\_\_

- E. Are you doing anything in this state to adjust or study teacher supply and demand which has not been touched upon in the above questions? \_\_\_\_\_



THE NATIONAL EDUCATION ASSOCIATION  
OF THE UNITED STATES

1201 Sixteenth Street, Washington, D. C.

May, 1930

Committee on the Economic Status of the Teacher

B. R. Buckingham, *Chairman*

To State Departments of Education:

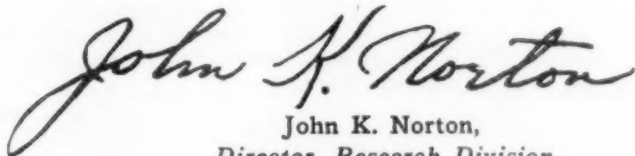
In the subsequent pages of this blank The Committee on the Economic Status of the Teacher of the National Education Association requests certain information relative to teacher supply and demand in your state. The Committee is attempting to meet a national demand for a study of this problem.

Some states will have no difficulty in supplying the data asked for herein. Other states have not collected the information requested. The blank has been constructed so that this second group of states may give approximate estimates based upon such records and general knowledge as are available.

Please give particular attention to the columns of page 3 of this blank. Here each state department can check to show whether each answer is an exact report or an approximate estimate of the facts. *Please give estimates in all cases where exact reports cannot be made.*

Summaries of these data will be made available within a reasonable period. The Committee will appreciate your interest and cooperation.

Very sincerely yours,



John K. Norton,  
*Director, Research Division.*

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Return one copy of this leaflet to the Research Division, National Education Association, 1201 Sixteenth St. N. W., Washington, D. C.

The extra copy of this blank is for your files.

## Explanation of Questions

*Question 1* asks for the total number of *teaching positions* in 1929-30 in public day, elementary, and secondary schools. Include positions held by school superintendents, supervisors, principals, etc., as well as classroom teachers. Please include positions in kindergartens, elementary schools, junior, senior, and continuation high schools, and similar tax-supported schools of less than college grade. Please do *not* include positions in *night* schools of any type, nor those in junior colleges. Do *not* include positions in special state institutions such as those for the blind, deaf, delinquents, etc.

*Question 2* asks for the total number of different persons employed during 1929-30 to fill the positions reported in *Question 1*. This number will be somewhat larger than the actual number of positions. For example: If Miss A resigns her position in the middle of the year and Miss B is employed to complete the year then *two* persons have been required to fill the *one* position during 1929-30.

*Question 3* asks for an estimate of the average number of years taught by public elementary and secondary school teachers<sup>1</sup> in your state before withdrawing or retiring from teaching.

*Question 4* asks for the number of vacancies in the day elementary and secondary schools at the end of the first term of the school year 1929-30. This total includes all unfilled positions in both urban and rural schools.

*Question 5* asks for the number of persons employed to teach in your state in 1929-30 who were not holding positions in your state in 1928-29. This total includes all beginning teachers, all those returning to teaching after an absence of one year or more, and all those entering your state from other states.

*Question 6* asks you to segregate the total reported in *Question 5* into divisions based on experience. Inexperienced teachers<sup>1</sup> are those with no teaching experience, or with practice teaching only, previous to 1929-30; experienced teachers mean those who have held regular teaching positions in your state or elsewhere previous to 1929-30.

*Question 7* asks you to report the number of elementary and secondary school teachers<sup>1</sup> in your state in 1929-30 who were employed in or residents in other states in 1928-29. In other words, how many teachers did you get from other states in 1929-30?

*Question 8* asks for the total number of persons who completed preparation in 1928-29 for elementary and secondary school teaching positions<sup>1</sup> by means of teacher training courses in high schools, normal schools, teacher colleges, liberal arts colleges, universities and so forth. Include only those who *could* have accepted teaching positions in accordance with the certification laws of your state without further training or special examination. Ordinarily, the total number reported on *Question 8* would exceed the number who *actually applied for and received teaching credentials*.

*Question 9* asks you to segregate the total reported in *Question 8* on the basis of the amount of training received since high school graduation.

*Question 10* asks for the number of persons who obtained teaching credentials (licenses to teach) in 1928-29 in your state through examinations (state, county, or city) taken *in place of* a regular teacher training course. For example, in some states any high school graduate who passes a *county teachers'* examination may receive credentials to teach. Such persons and others licensed to teach through examinations given in lieu of a regular teacher training course should be *reported* in *Question 10*.

<sup>1</sup>Teachers or teaching positions in *every* case should be defined as in *Question 1*.

## Questions and Data

*Note:* Whenever possible please answer the questions on this page on the basis of exact records. Where such records do not exist give your best estimate based on such records or such knowledge of the situation as you may have. Place a check in either column 3 or 4 after each question to indicate whether your answer is based on exact records or is an approximate estimate of the situation in your state. *Please give an estimate in all cases where an exact report cannot be given.* The questions on this page have been stated briefly. For fuller definitions of terms please consult page 2 opposite.

| Questions                                                                                                                                                                                                      | Record answers in this column | Check below to indicate whether answer in column 2 is based on: |                       |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|-----------------------------------------------------------------|-----------------------|
|                                                                                                                                                                                                                |                               | Exact records                                                   | Approximate estimates |
| 1                                                                                                                                                                                                              | 2                             | 3                                                               | 4                     |
| 1. What was the total number of teaching positions in public day schools of your state in 1929-30?.....                                                                                                        |                               |                                                                 |                       |
| 2. What was the total number of different persons employed in 1929-30 to fill the positions reported in Question 1 above?                                                                                      |                               |                                                                 |                       |
| 3. On the average how long do teachers remain in service in your state? .....                                                                                                                                  |                               |                                                                 |                       |
| 4. How many teaching positions were unfilled in your state at the end of the first term of the school year 1929-30?....                                                                                        |                               |                                                                 |                       |
| 5. How many regular full-time teachers were appointed to public day school positions in 1929-30 who did not serve as public school teachers in your state in 1928-29?.....                                     |                               |                                                                 |                       |
| 6. How many of the total reported in Question 5 could be classified in each of the following groups?.....                                                                                                      |                               |                                                                 |                       |
| (a) Inexperienced .....                                                                                                                                                                                        |                               |                                                                 |                       |
| (b) Experienced .....                                                                                                                                                                                          |                               |                                                                 |                       |
| 7. How many of the total reported in Question 5 were from other states than your own?.....                                                                                                                     |                               |                                                                 |                       |
| 8. What was the total number of persons completing teacher training courses in your state in 1928-29 which prepared them for teaching in your state?.....                                                      |                               |                                                                 |                       |
| 9. How many of the total reported in Question 8 could be classified under each of the following groups?.....                                                                                                   |                               |                                                                 |                       |
| (a) Less than two years of training beyond high school graduation .....                                                                                                                                        |                               |                                                                 |                       |
| (b) Two, but less than four years beyond high school graduation .....                                                                                                                                          |                               |                                                                 |                       |
| (c) Four, or more years of training beyond high school graduation .....                                                                                                                                        |                               |                                                                 |                       |
| 10. In 1928-29 how many individuals obtained teaching credentials in your state on the basis of state, county, or city examination taken in place of the completion of a regular teacher training course?..... |                               |                                                                 |                       |

### Other Sources of Data

We have listed below the studies reported to us which bear upon teacher supply and demand in your state. Are there other important sources of data concerning the situation in your state, which should be known to us?

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### Comment and Explanation

This space may be used for suggestions which may be helpful to the committee in its study of teacher supply and demand.

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Name of officer reporting.....

Official title ..... State .....



# Research Bulletin

OF THE

## National Education Association

VOLUME IX

January to November, 1931

The Research Bulletin is issued by the Research Division, a section of the headquarters staff of the National Education Association. This division was created in February, 1922, for the purpose of conducting scientific studies of special interest to members of the teaching profession.

*Bulletin One* was issued by the Research Division in June, 1922, and *Bulletin Two*, in November, 1922. The first number of the *Research Bulletin* is Volume I, No. 1, January, 1923, entitled *Facts on State Educational Needs*. With Volume I, No. 1, the *Research Bulletin* became a regular publication, issued five times each year—January, March, May, September, and November. The Research Bulletins composing Volumes I, II, III, IV, V, VI, VII, VIII, and IX are listed on the inside back cover of the November, 1931, Bulletin.

RESEARCH DIVISION  
THE NATIONAL EDUCATION ASSOCIATION  
OF THE UNITED STATES

1201 Sixteenth Street Northwest, Washington, D. C.

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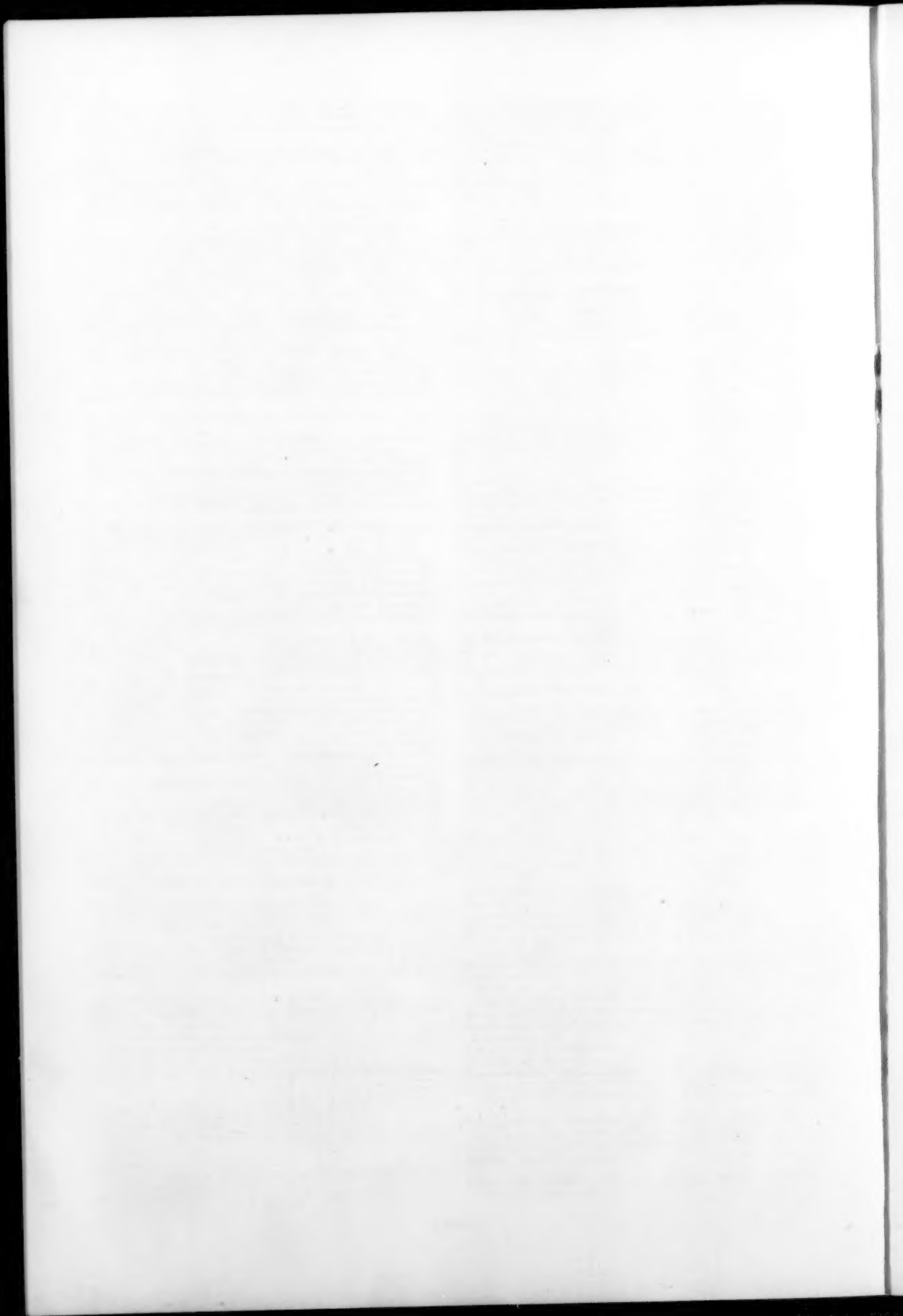
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