

● Commonwealth of Kentucky ●
EDUCATIONAL BULLETIN

**THE SUPPLY AND DEMAND OF
SECONDARY SCHOOL TEACHERS
IN KENTUCKY**

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H. W. PETERS

Superintendent of Public Instruction

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FOREWORD

The information contained in this bulletin was prepared by Warner M. Willey of the Department of Education, Western Kentucky State Teachers College. It was submitted to George Peabody College for Teachers in partial fulfillment of the requirements for the degree of Doctor of Philosophy. After careful examination of the manuscript, it appeared to me that it contained valuable information for the school people of the Commonwealth. The author has very kindly consented to have it published as an official bulletin of this Department. I recommend it for your careful consideration.

H. W. PETERS,

Superintendent Public Instruction.

THE SUPPLY AND DEMAND
OF SECONDARY SCHOOL
TEACHERS IN KENTUCKY

WARNER MOORE WILLEY
BACHELOR OF SCIENCE
MASTER OF ARTS

GEORGE PEABODY COLLEGE FOR TEACHERS

SUBMITTED IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE DEGREE OF
DOCTOR OF PHILOSOPHY

IN THE

DEPARTMENT OF SECONDARY EDUCATION

OF THE

GRADUATE SCHOOL OF EDUCATION

GEORGE PEABODY COLLEGE FOR TEACHERS

AUGUST, 1937

APPROVED:

Major Professor: JOSEPH ROEMER.

Minor Professor: S. C. GARRISON.

Dean of the Graduate School.

WILLEY
U. C. W.

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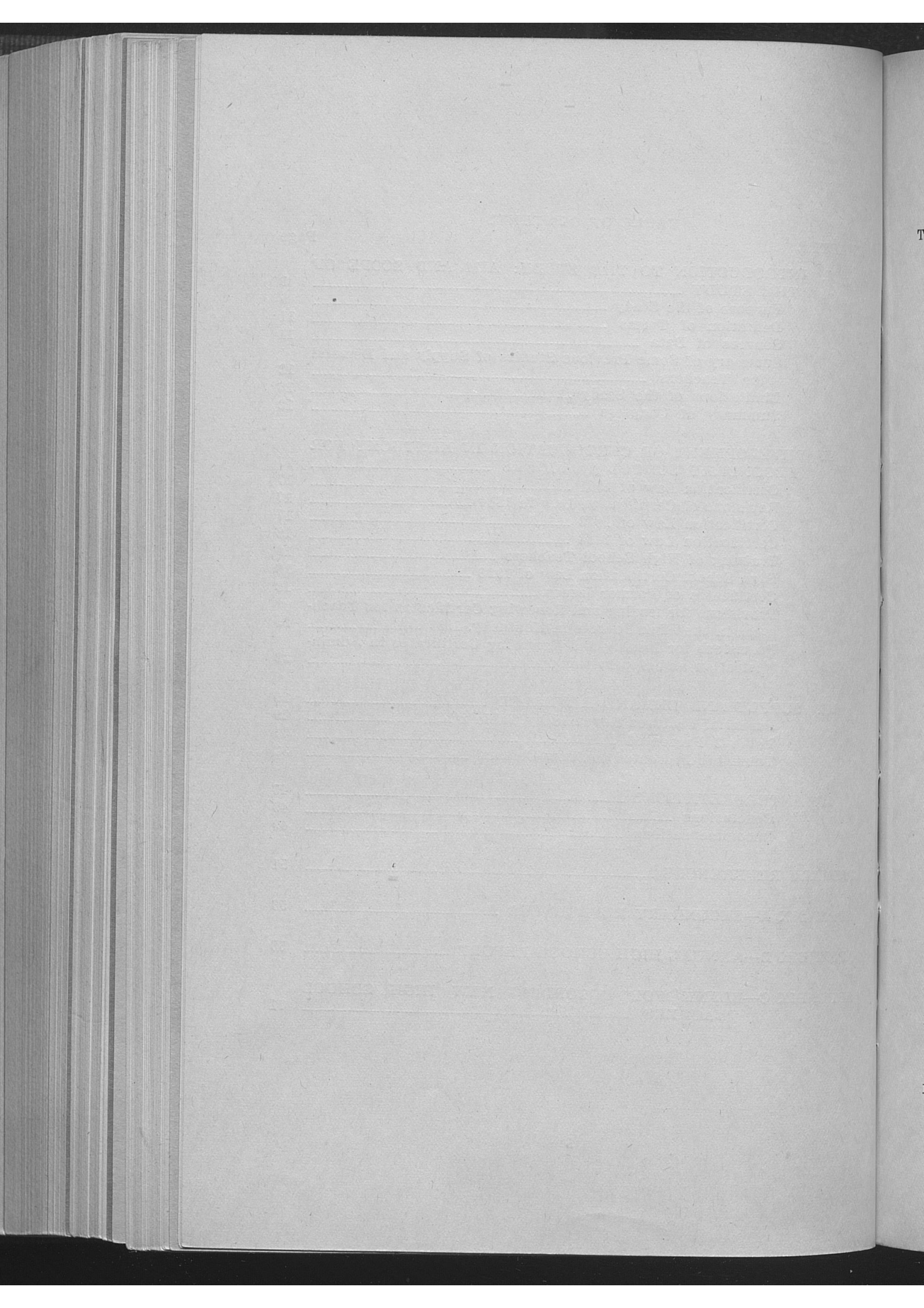
He is particularly indebted to State Superintendent Harry Peters, Supervisor Mark Godman and Dr. Richard E. Jagers, all from the State Department of Education, Frankfort, Kentucky, for their co-operation in making available the files at all times and for numerous suggestions.

Last, but not least, the author desires to express his real appreciation to the registrars of the fifteen colleges and universities in Kentucky, who so cordially opened their offices and records to the writer. Had their assistance not been available this investigation could not have been made.

W. M. W.

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Chapter I

INTRODUCTION TO THE STUDY

AIM AND SCOPE OF THE STUDY

Purpose of the Study

It is the purpose of this study to investigate the status of the supply and demand of white secondary school teachers in Kentucky. No studies restricted to the white secondary school teachers for 1936-37 have been discovered by the writer. This investigation takes into consideration specifically the **new** high school teachers, where they were trained, their major fields of concentration of study and the combinations of subjects which they are teaching. The investigation should be thought of as the starting point in Kentucky for a longer time investigation so that a complete picture of the supply-demand ratio for the secondary level may be available for students in preparation for secondary school teaching, college authorities, and State Department officials.

Each year finds new investigations in education and teacher training. Many teachers probably will raise the question: How does supply and demand of teachers concern my welfare? This term is frequently used in economics to describe market conditions.

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

If experts can predict with accuracy the probable supply and demand for grains, cotton, tobacco and livestock, why should educators not be able to arrive at a fairly close estimate of the required number of teachers for certain regions within definite subject-matter areas?

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 the National Education Association on salaries, tenure, and retirement allowances. Following the appointment in 1927 of a committee to investigate the status of teacher supply and demand, a bulletin² was

¹ Arthur L. Faubel, *Principles of Economics*, New York: Harcourt, Brace and Company, 1923.

² *Teacher Supply and Demand*, Research Bulletin, National Education Association, Vol. IX, No. 5, November, 1931.

published in 1931 summarizing the investigations up to that time. While the efforts of this committee should be highly commended in accumulating the 173 references and presenting much general data, yet very few specific results have been derived from the study.

Few, if any, fields of investigation promise more opportunity for service than the supply and demand of secondary school teachers because the entire secondary area is now experiencing rapid revision. This is particularly noticeable in the field of standards as evidenced by the Cooperative Study of Secondary School Standards sponsored by the six regional associations in the United States.

In teacher training institutions there have been rapid growth and development, but frequently these developments have surpassed the ability of the respective areas to absorb the output of these institutions; hence, the oversupply of some areas and the under-supply in others. This condition is not at all peculiar to the teaching profession, for were not crops plowed up and other attempts made to balance supply and demand a few years ago? The fact that at the present time there is an excess supply of some teachers in some areas while there exists a scarcity in others, causes the recognition of the importance of supply and demand of secondary school workers.

One criticism which can be made of the more than 200 studies of supply and demand of teachers made up to the present time is that too few of them cover a sufficient length of time, and many of them are not restricted to specific areas of definite groups.

When it is realized that a period of depression, prosperity, war, or widespread industrial unrest, can so quickly and extensively influence many of the factors controlling supply and demand of teaching, it becomes apparent that investigations are necessary. Intensive study and concern over prevailing conditions are urgent in the secondary field. There must be continuing attempts to adjust the demand factors and the supply factors in such a way that the one may balance the other, with enough surplus on the side of supply to care for unforeseen emergencies without loss to essential educational services.

The task of assembling the needed data would appear hopelessly discouraging were it not known that such records, once the forms are established and the first set of records obtained, could be maintained as a continuing record system with but a small part of the first cost in time or money.

Wherever large numbers of teachers are available and are unable to secure teaching positions, it is an indictment of the

teacher-preparation institutions. They have failed in the advancement of standards of preparation to suit the times. Can it ever be said that a teacher is too well prepared?

Attempts to study problems in teacher supply and demand have been sporadic.

It is rather surprising that this field of investigation has been neglected so long in Kentucky. Over a decade ago Donovan³ suggested the need of such a study of secondary teachers in the state. His study took into consideration only the elementary teacher-training problem. He sensed the necessity of an investigation of the teachers on the secondary level.

Definition of Terms

Unless otherwise stated a **new** high school teacher as used in this study means one who has taught in that high school for the first time during 1936-37, or who did not teach in that high school during 1935-36.

The term **demand** as used here is the total number of **new** high school teachers in Kentucky.

Supply as used here refers to the total number of graduates of Kentucky colleges and universities eligible to receive any form of secondary school certificate valid in 1936-37.

The supply-demand-quotient or S.D.Q. means the ratio existing between the supply and demand of the secondary school teachers in Kentucky in 1936-37. This measure is derived by dividing the **demand** by the **supply**.

Sources of Data

The primary sources of data include records in the registrars' offices in the fifteen Kentucky colleges and universities training secondary school teachers. These furnished the sources for the **supply** as shown by the tables. The official records in the High School Supervisor's office, State Department of Education, Frankfort, Kentucky, furnished the data upon which the total number of **new** high school teachers were based. This resulted in arrival at the figure for the **demand** for secondary school teachers. It is recognized that this gives an incomplete picture of the demand status as some of these **new** secondary school teachers were possibly teaching in other positions previously; however, this limitation will be discussed later.

³Herman Lee Donovan, *A State's Elementary Teacher-Training Problem (Kentucky)*, Contributions to Education No. 17, Nashville, Tennessee: George Peabody College for Teachers, 1925.

Another valuable primary source of data is the record secured from the office of the Director of Certification and Teacher Training, State Department of Education, Frankfort, Kentucky. This is the only source for certification study.

The Official Directory of Kentucky High School Teachers for 1936-37 furnished valuable primary source material.

The secondary source data were derived from bibliographies, dissertations, bulletins, articles, and investigations which have been made in states other than Kentucky. No one has previously investigated the supply and demand of white secondary school teachers in Kentucky. Donovan⁴ investigated the status of elementary teachers in Kentucky in 1925 and pointed out the necessity for such a study of secondary teaching.

Summary of Some Previous Studies of Supply and Demand for Teachers

Studies have been made in several states concerning the supply and demand of public school teachers.

Eliassen and Anderson of Ohio State University have made numerous investigations of teacher supply and demand. One of their most recent articles⁵ summarizes investigations reported to them during 1936. They report 11 studies and predict that "the oversupply of teachers will continue to decrease." They base their prediction upon the falling off in the number of investigations of supply and demand from year to year. They reported 26 studies made in 1935 and 20 studies completed in 1934. During the period from 1924 to 1930 they reported a total of 119 investigations on supply and demand of teachers. Prior to 1924 there were so many more calls for teachers in practically every field than could be supplied that no studies were made.

The most important study for 1936 is that of Umstadd.⁶ His data concern placement success in 260 collegiate institutions for the year 1934-35 representing every section of the country. Sixty-five per cent of the graduates of that year were placed, which compares favorably with 56 per cent for 1933-34. The West Central States made the best showing in placing graduates in teaching positions; the New England States rated lowest. According to Umstadd's report the demand for teachers of the sciences, particularly biology and chemistry, headed the list together with the elementary school

⁴ *Ibid.*, p. 9.

⁵ R. H. Eliassen and Earl W. Anderson, "Investigations of Teacher Supply," *Edu. Res. Bull.*, XVI (March 17, 1937), 72.

⁶ James Greenleaf Umstadd, *Placement Success of 1934-35*. Mimeographed report, University of Minnesota, 1936.

field. Secondary school placements in biology, chemistry, and physics showed increases of 22 per cent, 20 per cent, and 23 per cent, respectively, in 1933-34. Special fields, such as agriculture, industrial education, nursing education, and public school music, offered better opportunities than did academic fields.

At the Ohio State University 90 per cent of the available candidates in agriculture, industrial arts, and home economics, and 80 per cent of those in music and elementary education in 1935 secured teaching positions. Fewer were placed in French, chemistry, and history during 1935 than in 1934.⁷

Anderson and Rhode show a great oversupply of certificated administrators for secondary schools in California. They found that there are about 2,000 persons certificated when there are only 400 high school principalships in the state.⁸

A report of a committee from the Commission on Secondary Schools of the Southern Association of Colleges and Secondary Schools showed a considerable oversupply of secondary school teachers in the eleven states whose schools are members of the association.⁹

The possibility of increased opportunities for teaching is mentioned by Wightman.¹⁰ Some of the new opportunities are in adult education, vocational rehabilitation, visiting teachers, psychological work, nursery school, and kindergarten.

Two of the most thorough studies were made by Donovan¹¹ in Kentucky in 1925 and Buckingham¹² in Ohio in 1926. Both of these studies deal with the status of the supply of elementary teachers which will not be treated in this investigation.

A committee from the Michigan Education Association published an investigation¹³ in 1933 in which the entire state's teacher training program was studied, both elementary and secondary. A mass of data is presented with definitely recommended principles of guidance in teacher training in Michigan. A ten-year period, 1921-22 to 1931-32, is covered and a ratio of public school **field**

⁷ Earl W. Anderson, "Teaching Opportunities in 1935," *Educ. Res. Bull.*, XV (March 18, 1936), 72-75.

⁸ Dewey Anderson and Ellis G. Rhode, "Troublesome Situation in California," *Nation's Schools*, XVII, No. 2 (February, 1936), 34-35.

⁹ Southern Association of Colleges and Secondary Schools, Joint Committee on the study of Curricula, *Proceedings*, 1936, pp. 152-63.

¹⁰ Clair S. Wightman, "Opportunities in Teaching," *New Jersey Educational Review*, IX (May, 1936), 206-7.

¹¹ *Op. cit.*

¹² B. R. Buckingham, "The Demand for Trained Teachers in Ohio," *Educ. Res. Bull.*, IV, No. 11 (May 27, 1925), 221-26.

¹³ Eugene Bradley Elliott, *A Study of the Supply of and Demand for Teachers in Michigan*, Ph. D. Thesis, University of Michigan, Lansing, Michigan: Franklin De Kleine Company, 1933. Prepared at the request of Michigan Conference of City Superintendents of the Michigan Education Association.

demand to net institutional production is furnished. A study of this nature should be continuous in every state in the Union. In the recommendations at the close of this study a program for the purpose of balancing supply and demand is suggested which, if followed, would eliminate the surplus certificated teachers in Michigan by 1939.

Parsons¹⁴ investigated teacher education in Tennessee in 1935. In Chapter VIII of his report, he studied the problem of supplying an adequate teaching personnel. Definite recommendations are made with respect to each type of school employee's training in the state, specifically mentioning types of degrees and training desirable. Few, if any, of his recommendations have been used or considered in Tennessee up to the present time. Colvert¹⁵ investigated the supply and demand of high school teachers in Arkansas and included in his study for the Master's degree at the University of Arkansas the combinations of subjects taught during 1924-25 and 1929-30. His study makes no effort at geographical distribution by counties. This investigation is partially a questionnaire and State Department official record study. While this study illustrates an interesting technique in research, evidently the writer places very little reliability upon the findings as he says: "The projected data for 1930-31 on demand and for the first two sources on supply are perhaps not very reliable in that the expected increase per year can only be roughly estimated from the data at hand."

In a Master's thesis study in George Peabody College for Teachers, Campbell¹⁶ summarized the findings of certain previous investigations of supply and demand for teachers in the United States. No effort was made to restrict the realm of investigation to the secondary level of teaching. The writer suggests that: "Limitations prevent one from reaching any definite conclusions."

Ligon¹⁷ and others investigated the academic and professional training of teachers of the high schools of the Southern Association of Colleges and Secondary Schools but confined their efforts largely to a study of subject matter combinations which these 14,612 high school teachers taught. This study represents a relatively small per cent of the poorest trained teachers of the South inasmuch as

¹⁴ Rhey Boyd Parsons, *Teacher Education in Tennessee*, Ph. D. Thesis, Chicago: University of Chicago, 1935.

¹⁵ Clyde C. Colvert, *The Demand and Supply of High School Teachers in Arkansas*, Unpublished M. A. Thesis, University of Arkansas, 1930.

¹⁶ Mary Louise Campbell, *Supply of and Demand for Teachers in the United States*, Unpublished M. A. Thesis, George Peabody College for Teachers, 1935.

¹⁷ Moses E. Ligon and Others, "Training of High School Teachers," *Proceedings of the Southern Association of Colleges and Secondary Schools*, 1931.

the standards of the Southern Association require that 75 per cent of the staffs be college graduates. This investigation eliminates the small high schools where the poorest teachers are located. Other limitations might be cited such as the limited scope of time over which the study was made. No attempt was made to relate supply and demand in this report.

Another study¹⁸ sponsored by the Southern Association of Colleges and Secondary Schools takes into account teacher supply, demand, and certification, in the 11 states comprising the area. In their summary the authors recommend continuous investigations and "the provision and dissemination of adequate supply and demand information." They deplore the fact that "present methods of studying supply and demand are inadequate." The committee found that in the states covered by the association there was not sufficient information available for estimating the demand and that little is being done to control the supply. It was recommended that the resources of the association be used to stimulate provisions for securing the necessary data through the various state departments of education and for bringing about cooperative action toward a satisfactory solution of the problem.

There are listed in the Appendix A as secondary references, many studies of supply and demand of teachers grouped under certain headings. These show trends in the direction of supply and demand of teachers; subject supply and demand in high schools; tenure, turnover, and general status of teachers; guidance and placement; certification of teachers; and state administrative policies in control of teacher supply.

There seem to be no important conflicts in these trends indicated, but, marked similarities in the manner of balancing supply and demand for teachers.

The outstanding strengths of these studies seem to be in the fact that attention is being directed more and more to the prevention of oversupply. The chief weaknesses, in the fact that areas of investigation are so unlimited that generalizations are difficult.

The fact that no one has made a study of the supply and demand of white secondary school teachers in Kentucky is the justification of this investigation.

¹⁸ Doak S. Campbell and C. Currien Smith, Directors, Joint Committee on Study of Curricula of the Southern Association of Colleges and Secondary Schools, *Education of Secondary School Teachers*, Nashville, Tennessee: Division of Surveys and Field Studies, George Peabody College for Teachers, 1936.

Limitations of the Study

There are some possible limitations to which attention should be called. It is likely inadvisable to generalize for a universe of unlimited extent and duration from a population sample obtained during only one year. At the same time one probably is justified in studying such a sample in order to deduce the major facts inherent to it. If possible such a study should be continued each year by more than one person, preferably a committee in order to give comprehensiveness.

Another limitation is the consideration of all teachers as new high school teachers, who are teaching in their present positions for the first time. Many are in all probability **changes** rather than **new** teachers. The available records do not permit any other classification.

It is thought best in this investigation to include only white secondary school teachers. When white and colored are educated in separate schools, as in Kentucky, it seems best to keep the data separate. Another similar study devoted to supply and demand of Negro high school teachers obviously is needed.

Chapter II

DEVELOPMENT OF CERTIFICATION IN KENTUCKY FOR SECONDARY SCHOOL TEACHERS

During the first few years following the establishment of Kentucky's common-school system, the matter of certification of teachers was extremely vague. In 1838 mention was made of a certificate, but it was not until four years later that an examination was specified, and this presumably was an oral one.¹

Certification Law of 1851

During Dr. Breckinridge's term of office as State Superintendent of Public Instruction, 1847-1851, legislation was enacted to the effect that the county commissioners shall appoint one or more examiners of teachers whose duty it shall be to "carefully examine all applicants as to their qualifications to teach the elements of a plain English education."² The certificate "may be permanent, or for only a year." Elsewhere in the statutes of this administration a "plain English education" is described as "including grammar, arithmetic, and geography."

Revisions of Certification Law in 1864

In 1864 a revision of the certification laws was effected during State Superintendent Daniel Stevenson's administration, in which two classes of certificates were mentioned: first class,³ renewable and good for two years, granted to persons well qualified to teach; and second class, good for one year and not renewable unless the teacher shows improvement.

Certification Law of 1878

In the law of 1878 three classes of certificates were specified, first class and second class with two grades in each class. "Those who understand clearly the principles involved, as well as the forms, shall be entitled to first class, first grade; those who know the forms well and have a knowledge of principles shall be entitled

¹ Acts of March 1, 1842.

² Acts of 1851, Section 10, Chapter 35.

³ Acts of January 30, 1864.

to the second class, first grade."⁴ All certificates were valid only in the county in which the applicant appeared.

Certification Law of 1888

In the law of 1888, certificates were granted on the following bases: First class, obtained on an average grade of 85 per cent, good for four years with a possible extension for four additional years; second class, requiring an average grade of 75 per cent, good for two years; and a third class requiring an average grade of 65 per cent, good for only one year, and not granted twice to an applicant.

There were also two other types of certificates which were obtainable through examinations, the "State Certificate" and "State Diploma". Both of these certificates were state-wide in their validity. The former, good for a period of eight years with a possible extension of eight additional years, was secured by making an average grade of 90 per cent on a series of examinations required for the county certificates, also algebra, English, and American literature; the State Diploma required an average grade of 95 per cent in all subjects required for a state certificate together with additional examinations in geometry, physics, and two years of Latin. It certificated for life.⁵

As late as 1921 the Kentucky Educational Commission recommended changing the certification scheme in the state.

The fundamental defect arises from the lack of trained teachers. Higher certificates of all kinds, whether issued by the state board of examiners, the state university, or the normal schools, have always been valid in high schools. Many teachers are now teaching on these old certificates, issued without the slightest regard to proper qualification for high school instruction. Others are teaching on county certificates, and still others have no certificate of any kind. The result is that only 23 per cent of the high school teachers in service are properly prepared for their work.⁶

Training of High School Teachers

Under the same caption the same commission continues:

As stated above, 130 high school teachers are annually needed to take the place of those who drop out at the end of each year. To supply this demand, the state university turned out, in 1920-1921, 28 qualified graduates. The private colleges, or, rather, those belonging to the Association of Kentucky Colleges, graduated, in 1920-1921, 89 persons who had pursued some professional high school courses. Some of these graduates will undoubtedly enter private high schools, but the majority will probably find their way into public high schools. At

⁴ Acts of February 20, 1878.

⁵ Acts of July 6, 1893.

⁶ *Public Education in Kentucky*, Kentucky Educational Commission, New York: General Education Board, 1921.

all events, the state university and the private colleges are now producing annually 117 high school teachers of fairly acceptable preparation and the total annual output is rapidly increasing.⁷

High School Certification Law of 1926

It is evident that the certification law of 1926 marked a milestone in the development of certification in Kentucky as two distinctly high school certificates were authorized. These were the provisional high school certificate, issued on the basis of sixty-four semester hours' college work earned in an institution of at least standard junior college rank, not less than twelve of which shall be in education subjects.⁸ The standard high school certificate shall be issued on the basis of graduation from a standard four-year college, including at least twelve semester hours of credit in education subjects with practice teaching or satisfactory evidence of two years of successful high school teaching. It shall be issued for four school years and shall be eligible for four years' renewal on presentation of satisfactory evidence of successful teaching experience; and may be extended for life on presentation of credit of twelve additional semester hours of education subjects and satisfactory evidence of three years of successful teaching experience.⁹

Certificates of Former Issues

No certification laws passed in Kentucky have been retroactive. These laws apply to beginning teachers and to those in training as evidenced by the following quotation: "The validity and tenure of certificates in effect when this act becomes operative shall not be impaired by this act."¹⁰

The teacher training programs of the various institutions of higher education in Kentucky were based on the above laws until the appearance in 1933 of the report of the Kentucky Educational Commission created by the state legislature of 1932. This Commission made the following statement regarding certificates in Kentucky:

This tabulation shows 14 different types of certificates were in force. Thirteen of this number were in use in both elementary and secondary grades, the single exception being that of the provisional elementary certificate. The study shows that 15.6 per cent of those holding the standard high school certificate, 46.4 per cent of those holding the provisional high school certificate were holding elementary positions. The conditions revealed by these figures prevent the operation of an effective teacher-training program in Kentucky.¹¹

⁷ *Ibid.*

⁸ *Laws, enacted by the 1926 General Assembly, Section 8, p. 24.*

⁹ *Kentucky School Laws, 1926, Section 8, p. 24.*

¹⁰ *Ibid.*, p. 22.

¹¹ *Report of the Kentucky Educational Commission, Frankfort, Kentucky: State Department of Education, 1933, p. 103.*

Following the recommendation of the Kentucky Educational Commission in 1933 the state legislature in 1934 passed the present law for issuing and renewing certificates for teaching in high schools. This law is not retroactive but applies to all new and prospective high school teachers in the state.

Provisions for Issuing and Renewing Certificates for Teaching in the High Schools in Kentucky, 1936¹²

THE PROVISIONAL HIGH SCHOOL CERTIFICATE valid for four years shall be issued to a person who meets the general requirements of law and the regulations of the State Board of Education, and files a transcript of standard college credits showing the completion of a curriculum which includes the following courses and minimum standards

- a. Major (minimum of 24 semester hours) and two minors (minimum of 18 semester hours each) or two majors selected from subject fields in the curriculum adopted by the State Board of Education for the public elementary and/or public secondary schools.
- b. A core curriculum as follows:
 1. English 12 hours
 2. Science, selected from biology, chemistry, general science, geology, physics 12 hours
 3. Health 2 hours
 4. Social sciences, selected from economics, government, history, sociology 12 hours
 5. Mathematics (exclusive of Arithmetic) or 6 hours
 6. Foreign language 6 to 12 hours
 7. Physical education 1 hour
- c. 18 semester hours in education as follows:
 1. Supervised student teaching 6 hours
(At least three hours in student teaching shall be done in the secondary schools.)
 2. Psychology or educational psychology 3 hours
 3. Elective in secondary education 6 hours
 4. Elective in education 3 hours
- d. Elective 51 to 65 hours
Total required 120 to 128, plus degree

*A PROVISIONAL HIGH SCHOOL CERTIFICATE valid for four years shall be issued to a person who meets the requirements of law and general regulations of the State Board of Education and files a transcript of standard college credits showing the completion for a Smith-Hughes teacher of Agriculture or Home Economics, who holds at least a Baccalaureate degree, and who has met the education requirements set by the Council on Public Higher Education and approved by the State Board of Education as follows:

- a. Supervised Student Teaching 6 hours
(At least three hours in student teaching shall be done in the secondary school.)
- b. Psychology or educational psychology 3 hours
- c. Elective in secondary education 6 hours
- d. Elective in education 3 hours

¹² *Regulations for the Issuance and Reissuance of Certificates*, Department of Education, Bulletin No. 12, Vol. IV, pp. 5, 6, 7.

*Note.—The Provisional High School Certificate is valid for teaching only in the high school.

A PROVISIONAL HIGH SCHOOL CERTIFICATE valid for four years shall be issued to a person who meets the requirements of law and general regulations of the State Board of Education and files a transcript of standard college credits showing that he has met the requirements for a Baccalaureate degree in music or music education and the requirements set by the Council on Public Higher Education and approved by the State Board of Education as follows:

- a. Supervised Student Teaching 6 hours
(At least three hours in student teaching shall be done in the secondary school.)
- b. Psychology or educational psychology 3 hours
- c. Elective in secondary education 6 hours
- d. Elective in education 3 hours

THE PROVISIONAL HIGH SCHOOL CERTIFICATE may be renewed every four years after three years' teaching experience, or upon presentation of one-half year of standard college or university work of graduate grade, earned since issuance of last renewal of the certificate. If the holder fails to teach the three years required for renewal or reissuance, the certificate may be renewed or reissued upon 6 semester hours of standard college or university work of graduate grade for each year he fails to teach upon the certificate.

SUBJECT-FIELDS in which majors with a minimum of 24 semester hours each may be chosen by applicants for High School Certificates:

Agriculture	History and Political Science
Art	Home Economics
Biology	Industrial Arts
Biological Sciences	Latin
Chemistry	Library Science
Commerce	Mathematics
Economics and Sociology	Music
English	Physical Education
French	Physics
Geography and Geology	Physical Science
German	Science
Government	Social Science
History	Spanish

SUBJECT-FIELDS in which minors with a minimum of 18 semester hours each may be chosen by applicants for High School Certificates:

Agriculture	English
Art	French
Biology	Geography and Geology
Chemistry	German
Commerce	History
Economics and Sociology	Home Economics
Industrial Arts	Music
Latin	Physical Science
Library Science	Physics
Mathematics	Spanish

*THE STANDARD HIGH SCHOOL CERTIFICATE valid for five years shall be issued to a person who meets the requirements of law and general regulations of the State Board of Education and files a transcript of credits showing the completion of the four-year curriculum for the training of high school teachers as prescribed by the Council on Public Higher Education and approved by the State Board of Education, and who, in addition thereto, completes the requirements for a Master's degree in a standard graduate school.

*Note.—The Standard High School Certificate is valid for teaching only in the high school.

THE STANDARD HIGH SCHOOL CERTIFICATE may be extended for life upon three years' teaching experience during the life of the certificate. If the holder fails to meet the requirements for life extension before the certificate expires, the certificate may be reissued or renewed for five years upon two years' teaching experience during the life of the certificate, or upon 6 semester hours of additional work of graduate grade for each of the two years he failed to teach upon the certificate.

Provisions for Issuing and Renewing Certificates in Administration and Supervision

*THE PROVISIONAL CERTIFICATE IN ADMINISTRATION AND SUPERVISION valid for four years shall be issued to a person who has fulfilled the requirements of law and the general regulations of the State Board of Education, who has had a minimum of two years' successful teaching experience, who has completed a four-year curriculum for the training of elementary or high school teachers as approved by the State Board of Education, and who presents a transcript of standard college credits showing the completion of the following courses in education:

- a. Courses in administration and supervision..... 6 hours
- b. Courses in elementary education 6 hours
- c. Supervised student teaching 6 hours
- d. Courses in secondary education 6 hours

THE PROVISIONAL CERTIFICATE IN ADMINISTRATION AND SUPERVISION valid for four years shall be issued to a person who holds a standard certificate in Administration and Supervision issued under the laws of 1932, provided that the holder makes application and presents a transcript of standard college credits upon which the certificate-to-be-converted was issued.

THE PROVISIONAL CERTIFICATE OF ADMINISTRATION AND SUPERVISION may be renewed after four years upon three years' teaching experience during the life of the certificate, or upon presentation of one-half year of standard college or university work of graduate grade earned since issuance or last renewal. If the holder fails to have the three years' experience during the life of the certificate, the certificate may be reissued or renewed upon 6 semester hours of standard college or university work of graduate grade for each year of experience he fails to obtain.

The material in this chapter shows that certification of teachers in Kentucky has passed through many stages of development in the eighty-six years of its existence. Beginning as certification did in 1851 with examination on an oral basis and confined to county limits, it gradually emerged to a status where the examination was written, then based on college credits, and finally to the present stage of centralization in the office of the State Department of Education, based wholly on work pursued in standard colleges and universities, state-wide in scope, and confined wholly to elementary or secondary levels.

In order to get some idea of the present status of the number, type, and distribution of high school certificates now held in Ken-

*Note.—The Provisional Certificate in Administration and Supervision is valid for holding the position of teacher, principal, supervisor and/or superintendent in the public secondary schools.

tucky, Table 1 was prepared from data secured in the State Department of Education.

For obvious reasons these certificates are distributed by counties in the state.

Attention is called to only a few of the more pertinent facts in the table. They are:

1. That there are 10,412 valid high school certificates now in Kentucky.
2. That nearly one-half of these (4,957) will expire in four years.
3. That nearly another one-third of these (3,206) are either of two or four years duration only.
4. That within a period of four or five years at most, under the present law, all these undesirable types of certificates will have expired. This will leave only those certified to teach who have been authorized under the present law.
5. That there are 743 Life Certificates.

TABLE 1
Number of Persons Holding Certificates Valid on Secondary Level by Counties and Types of Certificates 1936-37.

Counties	* St. Adm. Old 4 Yrs. †	* St. Adm. New 5 Yrs.	* Pr. Adm. New 4 Yrs.	** St. H. S. Old 4 Yrs.	** Pr. H. S. Old 2 Yrs.	** College St. Nor. 4 Yrs.	** State Cert. Life	** St. H. S. New 5 Yrs.	*** Pr. H. S. New 4 Yrs.	Total
Adair	4	.....	1	18	6	12	9	.....	4	54
Allen	1	.....	.....	13	2	5	6	1	4	32
Anderson	3	1	.....	10	5	5	1	.....	3	28
Ballard	2	.....	.....	13	5	19	4	1	3	47
Barren	7	1	1	26	16	10	6	.....	1	68
Bath	5	.....	.....	9	6	5	3	.....	1	29
Bell	12	.....	.....	77	45	6	3	.....	10	153
Boone	7	.....	.....	20	7	8	4	.....	1	47
Bourbon	2	1	3	60	45	11	5	.....	9	136
Boyd	5	3	3	80	38	15	7	.....	12	163
Boyle	8	.....	.....	62	14	12	7	.....	4	107
Bracken	6	.....	.....	13	7	8	4	.....	1	39
Breathitt	2	.....	.....	35	10	2	7	1	5	62
Breckinridge ..	5	.....	.....	12	8	4	5	.....	3	37
Bullitt	1	.....	.....	9	.....	3	1	.....	1	15
Butler .....	.....	.....	1	13	4	8	1	.....	2	29
Caldwell	9	.....	1	18	9	7	13	1	9	67
Calloway	8	1	1	97	5	112	.....	.....	11	235
Campbell	15	.....	2	138	31	6	19	1	8	220
Carlisle	4	.....	.....	6	4	6	3	.....	1	24
Carroll	3	1	.....	17	7	4	2	.....	2	36
Carter	6	.....	1	18	15	15	8	.....	4	67
Casey	6	.....	1	11	10	5	2	.....	.....	35
Christian	5	1	.....	70	36	15	12	.....	9	148
Clark	4	.....	1	78	32	7	7	.....	2	131

* Eligible for superintendent, high school, elementary, and attendance officer.
 ** For elementary, secondary, principals if they have had two years experience.
 *** For secondary level only.
 † The "years" under each title indicate training required for that particular type of certificate.

* Eligible for superintendent, high school, elementary, and attendance officer.
 ** For elementary, secondary, principals if they have had two years experience.
 *** For secondary level only.
 † The "years" under each title indicate training required for that particular type of certificate.

TABLE 1—Continued

Counties	* St. Adm. Old 4 Yrs. †	* St. Adm. New 5 Yrs.	* Pr. Adm. New 4 Yrs.	** St. H. S. Old 4 Yrs.	** Pr. H. S. Old 2 Yrs.	** College St. Nor. 4 Yrs.	** State Cert. Life	** St. H. S. New 5 Yrs.	*** Pr. H. S. New 4 Yrs.	Total
Clay	4		2	20	21	6	10			63
Clinton	3			9	7		4		1	24
Crittenden	2			18	2	9	1		3	35
Cumberland	4			9	3	3	3			22
Daviess	4	1	1	110	20	22	17	1	12	188
Edmonson	3		1	1	4	2	1		1	13
Elliott	1		1	3	1	3	3			12
Estill	5			9	4	5	3		1	27
Fayette	10		1	303	97	64	7	2	33	517
Fleming	7			21	6	4	9		3	50
Floyd	13		3	38	31	2	10		5	102
Franklin	11	2	1	100	21	16	22		2	175
Fulton	5	2		24	12	20	9		4	76
Gallatin	3			4	2		1		1	11
Garrard	3		1	37	9	9	2		3	64
Grant	5		1	22	8	6	5		2	49
Graves	4			40	20	56	5		8	133
Grayson	10	1		13	2	12	3		2	43
Green	2			1		3	5			11
Greenup	6	1	2	38	22	10			5	84
Hancock	1			8	2	1	3		1	16
Hardin	12	1	1	31	4	14	10		2	75
Harlan	8	3		64	50	2	10		10	147
Harrison	8			35	22	8	6		2	81
Hart	5			15	7	6	3		3	39
Henderson	5	1		54	21	10	7	1	5	104

* Eligible for superintendent, high school, elementary, and attendance officer.
 ** For elementary, secondary, principals if they have had two years experience.
 *** For secondary level only.
 † The "years" under each title indicate training required for that particular type of certificate.

TABLE 1—Continued

Counties	* St. Adm. Old 4 Yrs. †	* St. Adm. New 5 Yrs.	* Pr. Adm. New 4 Yrs.	** St. H. S. Old 4 Yrs.	** Pr. H. S. Old 2 Yrs.	** College St. Nor. 4 Yrs.	** State Cert. Life	** St. H. S. New 5 Yrs.	*** Pr. H. S. New 4 Yrs.	Total
Henry	4	1	.....	24	14	6	3	.....	1	53
Hickman	2	.....	1	13	5	2	2	.....	.....	25
Hopkins	15	.....	4	48	13	15	11	.....	8	114
Jackson	3	.....	1	12	4	2	9	.....	2	33
Jefferson	54	10	.....	832	211	18	46	12	94	1,277
Jessamine	3	2	.....	45	23	17	1	.....	4	95
Johnson	12	.....	1	24	16	5	2	.....	3	63
Kenton	12	2	.....	174	45	9	21	1	11	275
Knott	2	.....	.....	54	30	9	19	.....	3	117
Knox	15	1	3	60	32	2	10	1	13	137
Larue	6	.....	.....	6	2	.....	9	.....	1	24
Laurel	7	.....	1	30	20	10	8	.....	8	84
Lawrence	3	.....	.....	15	15	7	5	.....	11	56
Lee	5	.....	.....	14	12	5	1	.....	3	40
Leslie	7	.....	.....	12	7	2	6	.....	3	37
Letcher	6	1	1	35	33	4	2	.....	8	90
Lewis	1	.....	.....	8	2	1	5	.....	2	19
Lincoln	8	.....	.....	20	15	16	7	.....	6	72
Livingston	4	.....	1	7	.....	5	1	.....	3	21
Logan	2	.....	3	36	14	22	6	1	4	88
Lyon	5	.....	.....	5	2	2	2	.....	.....	16
Madison	10	1	1	105	30	110	16	.....	14	287
Magoffin	7	.....	.....	18	5	4	3	.....	5	42
Marion	.....	.....	.....	12	14	5	6	.....	1	38
Marshall	5	.....	2	24	8	28	4	.....	3	74
Martin	.....	.....	1	2	5	1	7	.....	3	19

* Eligible for superintendent, high school, elementary, and attendance officer.
 ** For elementary, secondary, principals if they have had two years experience.
 *** For secondary level only.
 † The "years" under each title indicate training required for that particular type of certificate.

* Eligible for superintendent, high school, elementary, and attendance officer.
 ** For elementary, secondary, principals if they have had two years experience.
 *** For secondary level only.
 † The "years" under each title indicate training required for that particular type of certificate.

TABLE 1—Continued

Counties	* St. Adm. Old 4 Yrs. †	* St. Adm. New 5 Yrs.	* Pr. Adm. New 4 Yrs.	** St. H. S. Old 4 Yrs.	** Pr. H. S. Old 2 Yrs.	** College St. Nor. 4 Yrs.	** State Cert. Life	** St. H. S. New 5 Yrs.	*** Pr. H. S. New 4 Yrs.	Total
Mason	6		2	41	7	9	6		3	74
McCracken	9	2		32	16	38	4		6	157
McCreary	4		1	13	7	0	1		3	29
McLean	7			17	3	10	3		4	44
Meade	4			10	1	4				19
Menifee	1			10	5	2	3		1	22
Mercer	4		2	45	12	9	11		4	87
Metcalfe	1			6	2	4	1		2	16
Monroe	5			9	4	2	2		2	24
Montgomery	4	1	1	37	20	10	3		3	79
Morgan	4			18	5	7	7	1	3	45
Muhlenberg	11	1		44	11	12	8		9	96
Nelson	6	1		30	18	6	7	1	5	74
Nicholas	9		1	11	12	9	2		2	46
Ohio	4		1	24	9	10	11		9	68
Oldham	3			18	6	1	4			32
Owen	3	1	1	20	4	15	5		2	51
Owsley	5			2	2	3	1		1	14
Pendleton	5		1	9	7		4		1	27
Perry	6	1		39	27	8	11	1	11	104
Pike	9			38	23	8	16	1	8	103
Powell	3		1	14	6	2				26
Pulaski	11			50	28	8	18		11	126
Robertson	3			3	2	2				10
Rockcastle	6		1	7	6	1	7			28
Rowan	1			33	7	33	3		8	85

* Eligible for superintendent, high school, elementary, and attendance officer.
 ** For elementary, secondary, principals if they have had two years experience.
 *** For secondary level only.
 † The "years" under each title indicate training required for that particular type of certificate.

TABLE 1—Continued

Counties	* St. Adm. Old 4 Yrs. †	* St. Adm. New 5 Yrs.	* Pr. Adm. New 4 Yrs.	** St. H. S. Old 4 Yrs.	** Pr. H. S. Old 2 Yrs.	** College St. Nor. 4 Yrs.	** State Cert. Life	** St. H. S. New 5 Yrs.	*** Pr. H. S. New 4 Yrs.	Total
Russell	2	.....	.....	13	3	8	2	.....	1	29
Scott	1	.....	1	62	16	3	5	.....	1	89
Shelby	3	.....	.....	46	12	6	4	1	6	78
Simpson	1	.....	.....	11	2	7	2	.....	6	29
Spencer	3	.....	.....	8	3	1	1	.....	.....	16
Taylor	4	1	.....	23	8	6	8	1	2	53
Todd	4	.....	.....	11	7	5	5	.....	3	35
Trigg	4	.....	3	10	1	10	6	.....	2	36
Trimble	2	.....	.....	6	3	1	3	.....	.....	15
Union	6	1	1	26	8	11	12	.....	5	70
Warren	4	2	2	114	15	79	10	1	20	247
Washington ..	2	.....	1	7	11	5	5	.....	1	32
Wayne	5	.....	.....	10	7	4	3	.....	3	32
Webster	10	.....	.....	38	18	11	1	.....	4	82
Whitley	13	1	.....	50	59	11	6	.....	6	146
Wolfe	4	.....	1	4	4	1	7	.....	.....	21
Woodford	2	.....	.....	36	6	8	2	.....	8	62
Out-of-State ..	7	3	2	267	73	58	13	2	63	488
Total	683	54	74	4,957	1,848	1,358	743	33	662	10,412

* Eligible for superintendent, high school, elementary, and attendance officer.
 ** For elementary, secondary, principals if they have had two years experience.
 *** For secondary level only.
 † The "years" under each title indicate training required for that particular type of certificate.

Chapter III

SUPPLY AND DEMAND REVEALED

From a study of the certification law now in force in Kentucky it is seen that the only avenue for entrance into secondary school teaching is through the colleges and universities training teachers.

There are fifteen colleges and universities in Kentucky offering work leading to teaching in secondary schools in the state. It seems advisable, therefore, to consider all those graduating from these institutions in 1936 eligible for certification on the secondary level, as the source of **supply**. Consequently, in gathering the materials for this study, the records in the registrars' offices of these fifteen colleges and universities were compiled to determine the total number from each institution with their major and minor fields of concentration.

It is assumed also that the total number of **new** high school teachers in Kentucky represents the demand.

In order to determine the ratio existing between the supply and demand for high school teachers in Kentucky a measure called the **supply-demand-quotient** was devised. This measure was secured by dividing the **demand** by the **supply**. A perfect ratio, therefore, would be 1.00. Any number or fraction above or below 1.00 would indicate that the balance between the supply and demand is uneven. Thus a S.D.Q. of .85 means that the demand is 85 per cent of the supply while a S.D.Q. of 1.5 means that the demand is one and one-half times as great as the supply.

The following table shows the total number of college and university graduates in Kentucky in 1936 eligible for certification on the secondary level, and their majors or minors.

Essential Features Revealed by Table 2

1. The figures following the colleges and universities represent the total number eligible to receive high school teaching certificates in Kentucky in 1936. These totals were secured from records in the registrars' offices of the respective institutions.
2. The figures in the **demand** vertical column represent the totals secured from the office of the State High School Supervisor.
3. The fractional numbers show the ratio existing between supply and demand for the high school teachers in Kentucky in

TABLE 2

Table Showing the Majors of Graduates of Colleges and Universities in Kentucky Eligible for High School Teaching Certificates in 1936 and Fields of Concentration. This represents the Supply Available.

	Agriculture	Biology	Chemistry	Commer.	Education	English	Fine Arts	French	Geography	History	Home Eco.	Ind. Arts	Latin	Math.	Music	Phys. Ed.	Physics	Soc. and Eco.	Others	Total Supply	Demand	Supply-Demand-Quotient*
Asbury College		1			1	1				1	1									5	3	.60
Berea College	11	6	3		2	14		2		13	13			2	3		1			70	42	.60
Bowling Green Business University				14																14	10	.71
Centre College		1	1			4		1		5	1			1			1	1		16	15	.93
Eastern Kentucky State Teachers College	5		1	12		19	1	2	3	5	8	1		5	2	3	2	11		80	85	1.06
Georgetown College		3	3		8	21		2		22			2	2	5	1			3	74	37	.50
Kentucky Wesleyan College			1			2		1		3									3	10	16	1.60
Morehead Ky. State Teachers College	3	3	2		10	17		2	3	13	2	1		10	2		3	7		78	54	.69
Murray Ky. State Teachers College	7	3	4			11	5	9	11	6	3		3	8	10	3	2	5		90	64	.71
Nazareth College		2				6		2		1	3		2	2					1	19	17	.89
Transylvania University		1	1			4	1	1	1	5			1	2	2	1	1	2		23	11	.47
Union College		3				9				2							3			17	25	1.47
University of Kentucky	4	3	7			10		1		9			1	6	1	3	2	9		56	136	2.43
University of Louisville		2		4		3		3		5	3		1	6	1				1	30	17	.56
Western Ky. State Teachers College	5	19	9		45	46	3	1	6	12	16	3	6	9	13	9	1	6		209	160	.76
Total	31	46	30	33	70	167	10	27	24	102	50	5	16	53	39	20	17	49	2	791		
Demand	30	31	3	12		200	1	3	5	64	55	6	10	139	19	5	5	81	20		692	
*Supply-Demand-Quotient .....	.97	.67	.10	.36		1.20	.10	.11	.21	.63	1.10	1.20	.63	2.62	.49	.25	.29	1.65	10.00			.87

* It should be observed that the Supply-Demand-Quotients are derived from figures varying in size in the vertical supply column from 5 to 209 and in the demand column from 3 to 160, consequently each quotient should be read back against its particular base.

TABLE 4
Demand

Table Showing Colleges and Universities Training the New High School Teachers Teaching in Secondary Schools in Kentucky in 1936-1937.

Name of Institution	Total Number Trained	Number Teaching Major or Minor	Percentage Teaching Major or Minor	Percentage Not Teaching Major or Minor
Asbury College	5	4	80	20
Berea College	43	38	90	10
Bowling Green Business University	16	4	25	75
Centre College	16	15	93	7
Eastern Kentucky State Teachers College	86	74	84	16
Georgetown College	35	31	90	10
Kentucky Wesleyan College	14	11	65	35
Morehead State Teachers College	62	47	75	25
Murray State Teachers College	64	55	86	14
Nazareth College	15	11	66	34
Transylvania College	12	12	100	0
Union College	20	20	100	0
University of Kentucky	129	115	89	11
University of Louisville	19	12	63	37
Western Kentucky State Teachers College	166	135	81	19
Total	704	584	82.9	17.1

There were 79 per cent of the total (889) new high school teachers trained in Kentucky while there were 185, or 21 per cent, trained in out-of-state institutions.

Table 4 is Presented to Show Demand

The following features are revealed:

1. The total number of **new** high school teachers trained in each institution and beginning to teach in the present position in 1936.
2. The total number teaching a major or minor.
3. The percentage teaching a major or minor.
4. The percentage not teaching a major or minor.

Explanation of Tables 5 to 19 Inclusive

In Table 1 the supply of eligible high school teachers is presented.

In Tables 5 to 19, inclusive, the **demand** as revealed by the records in the High School Supervisor's office is shown.

These tables are arranged according to the institutions training the teachers as well as the **combinations** of subjects taught.

The figures indicated are totals, and the supply-demand-quotients may be found in the lower right hand corner for each institution.

School
37.
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TABLE 5

Table Showing Combinations of Subjects Taught and Institutions Where the New High School Teachers Were Trained in Kentucky Colleges Representing DEMAND as Revealed by Records in the High School Supervisor's Office.

Asbury College	Agriculture	Biology	Chemistry	Commer.	Education	English	Fine Arts	French	Geography	History	Home Eco.	Ind. Arts	Latin	Math.	Music	Phys. Ed.	Physics	Soc. and Eco.	Others	Total	
Agriculture																					
Biology																					
Chemistry																					
Commer.																					
Education																					
English																		1			1
Fine Arts																					
French																					
Geography																					
History																					
Home Eco.																					
Ind. Arts																					
Latin													1								1
Mathematics																					
Music																					
Phys. Ed.																					
Physics																					
Soc. and Eco.												1									1
Others																					
Total												1	1					1			3
Supply		1			1	1					1	1									5
Supply-Demand Quotient .....																					.6

TABLE 6

Table Showing Combinations of Subjects Taught and Institutions Where the New High School Teachers Were Trained in Kentucky Colleges Representing DEMAND as Revealed by Records in the High School Supervisor's Office.

Bowling Green Business University	Agriculture	Biology	Chemistry	Commer.	Education	English	Fine Arts	French	Geography	History	Home Eco.	Ind. Arts	Latin	Math.	Music	Phys. Ed.	Physics	Soc. and Eco.	Others	Total	
Agriculture																					
Biology																					
Chemistry																					
Commer.				1																	1
Education																					
English																					
Fine Arts																					
French																					
Geography																					
History										1											1
Home Eco.																					
Ind. Arts																					
Latin																					
Mathematics				1																	1
Music																					
Phys. Ed.																					
Physics																					
Soc. and Eco.				1																	1
Others																			6		6
Total				3						1										6	10
Supply				14																	14
Supply-Demand Quotient .....				.21																	.71

TABLE 7

Table Showing Combinations of Subjects Taught and Institutions Where the New High School Teachers Were Trained in Kentucky Colleges Representing DEMAND as Revealed by Records in the High School Supervisor's Office.

Berea College	Agriculture	Biology	Chemistry	Commer.	Education	English	Fine Arts	French	Geography	History	Home Eco.	Ind. Arts	Latin	Math.	Music	Phys. Ed.	Physics	Soc. and Eco.	Others	Total
	Agriculture	2																	2		4
Biology														1				1		2
Chemistry																				
Commer.																				
Education																				
English	1			1		4				4				1					2	13
Fine Arts																				
French																				
Geography																				
History	2															1		1	1	6
Home Eco.								1			1							1		3
Ind. Arts																				
Latin																				
Mathematics	1									1				4				2		8
Music															1					1
Phys. Ed.																				
Physics																				
Soc. and Eco.																				
Others																			1	1
Total	6			1		4		1		6	1			6	1	1		10	5	42
Supply	11	6	3		2	14		2		13	13			2	3		1			70
Supply-Demand Quotient	.54					.28		.5		.46	.07			3	.33			.54		.6

TABLE 8

Table Showing Combinations of Subjects Taught and Institutions Where the New High School Teachers Were Trained in Kentucky Colleges Representing DEMAND as Revealed by Records in the High School Supervisor's Office.

Centre College	Agriculture	Biology	Chemistry	Commer.	Education	English	Fine Arts	French	Geography	History	Home Eco.	Ind. Arts	Latin	Math.	Music	Phys. Ed.	Physics	Soc. and Eco.	Others	Total
Agriculture																				
Biology																		1		1
Chemistry																				
Commer.																				
Education																				
English						5		1		1			2	2						11
Fine Arts																				
French																				
Geography																				
History																				
Home Eco.																				
Ind. Arts																				
Latin																				
Mathematics										1				1				2		4
Music																				
Phys. Ed.																				
Physics																				
Soc. and Eco.																				
Others																				
Total						5	1	2		2		2	3					3		16
Supply		1	1			4	1	5	1				1				1	1		15
Supply-Demand Quotient						1.25	1	4					3					3		.94

TABLE 9

Table Showing Combinations of Subjects Taught and Institutions Where the New High School Teachers Were Trained in Kentucky Colleges Representing DEMAND as Revealed by Records in the High School Supervisor's Office.

Eastern State Teachers College	Agriculture	Biology	Chemistry	Commer.	Education	English	Fine Arts	French	Geography	History	Home Eco.	Ind. Arts	Latin	Math.	Music	Phys. Ed.	Physics	Soc. and Eco.	Others	Total
Agriculture	2																		2	4
Biology																		3		3
Chemistry																				
Commer.				2										1						3
Education																				
English		1				6	1			4	1			3				5	1	22
Fine Arts	1																			1
French																				
Geography																				
History						2			1	2				1	1			1	1	9
Home Eco.											2								1	3
Ind. Arts																			1	1
Latin																				
Mathematics		1												10				8	1	20
Music																				
Phys. Ed.																1				1
Physics																				
Soc. and Eco.																1		16	1	18
Others																				
Total	4	1		2		8	1		1	2	3			15		3	33	8	85	
Supply	5	1	12		19	1	2		5	8	1		5	2	3	2	11			80
Supply-Demand Quotient	.8		.16		.42	1			1.2	.37			3		1		3			1.06

TABLE 10

Table Showing Combinations of Subjects Taught and Institutions Where the New High School Teachers Were Trained in Kentucky Colleges Representing DEMAND as Revealed by Records in the High School Supervisor's Office.

Georgetown College	Agriculture	Biology	Chemistry	Commer.	Education	English	Fine Arts	French	Geography	History	Home Eco.	Ind. Arts	Latin	Math.	Music	Phys. Ed.	Physics	Soc. and Eco.	Others	Total
Agriculture																1				1
Biology																				
Chemistry		1																		1
Commer.																				
Education																				
English						4	1	1		2			2	1	2			2		15
Fine Arts																				
French																	1			1
History														2				1	1	4
Home Eco.																				
Ind. Arts																				
Latin													1							1
Mathematics	1								1					1				2	1	6
Music						1														1
Phys. Ed.																				
Physics																				
Soc. and Eco.																		6		6
Others																			1	1
Total	1	1				5	1	1	1	2			3	4	2	1	1	11	3	37
Supply			3	8	21		2		22				2	2	5	1	1	3	1	74
Supply-Demand Quotient33			.23		.5		.09				1.5	2	.4	1	1	3.6	3	.50

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Soc. and Eco.
Others
Total
1
3
37
3
1
74
6
3
.50

TABLE 11

Table Showing Combinations of Subjects Taught and Institutions Where the New High School Teachers Were Trained in Kentucky Colleges Representing DEMAND as Revealed by Records in the High School Supervisor's Office.

Kentucky Wesleyan College	Agriculture	Biology	Chemistry	Commer.	Education	English	Fine Arts	French	Geography	History	Home Eco.	Ind. Arts	Latin	Math.	Music	Phys. Ed.	Physics	Soc. and Eco.	Others	Total
Agriculture	1																			1
Biology										1								1	1	3
Chemistry																				
Commer.																				
Education																				
English						1											1	2		4
Fine Arts																				
French																				
Geography																				
History										1									1	2
Home Eco.																				
Ind. Arts																				
Latin																				
Mathematics							1							1						2
Music																				
Phys. Ed.										1										1
Physics																				
Soc. and Eco.										1			2							3
Others																			1	1
Total						1	1			4			2	1			1	3	3	16
Supply			1		2		1			3									3	10
Supply-Demand Quotient					.5					1.3									1	1.6

TABLE 12

Table Showing Combinations of Subjects Taught and Institutions Where the New High School Teachers Were Trained in Kentucky Colleges Representing DEMAND as Revealed by Records in the High School Supervisor's Office.

Morehead State Teachers College	Agriculture	Biology	Chemistry	Commer.	Education	English	Fine Arts	French	Geography	History	Home Eco.	Ind. Arts	Latin	Math.	Music	Phys. Ed.	Physics	Soc. and Eco.	Others	Total
Agriculture																		1		1
Biology	1													3						4
Chemistry													1							1
Commer.																				
Education																				
English						5			3				3	4			1	3	1	20
Fine Arts																				
French								1		4										1
Geography																				1
History		1																		7
Home Eco.																				
Ind. Arts																				
Latin																				
Mathematics	1													6			1	5		13
Music																				
Phys. Ed.																1				1
Physics																		1	1	2
Soc. and Eco.																1		6		7
Others																			2	2
Total	2	1				5		1	7			4	13		2	2	16	6	59	
Supply	3	3	2	10	17		2	3	13	2	1		10	2		3	7		78	
Supply-Demand Quotient66	.33				.29		.5	.5				1.3			.66	2.2		.69	

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Soc. and Eco.	Others	Total
1		1
		4
		1
3	1	20
	1	1
	1	7
5		13
		1
1	1	2
6		7
	2	2
16	6	59
7		78
2.2		.69

TABLE 13

Table Showing Combinations of Subjects Taught and Institutions Where the New High School Teachers Were Trained in Kentucky Colleges Representing DEMAND as Revealed by Records in the High School Supervisor's Office.

Murray State Teachers College	Agriculture	Biology	Chemistry	Commer.	Education	English	Fine Arts	French	Geography	History	Home Eco.	Ind. Arts	Latin	Math.	Music	Phys. Ed.	Physics	Soc. and Eco.	Others	Total	
Agriculture																		1		1	
Biology																				1	1
Chemistry																					
Commer.				2																	2
Education																					
English				1		1				3	1		1	2	1			3	1	14	
Fine Arts																					
French																					
Geography																		1			1
History									1					4					3	8	
Home Eco.		1									2							3	1	7	
Ind. Arts																					
Latin													1								1
Mathematics									1					3			1	13			18
Music														1	2			1			4
Phys. Ed.																1					1
Physics																					
Soc. and Eco.																		6			6
Others																			1		1
Total		1		3		1			2	3	3		2	10	3		1	29	6	64	
Supply	7	3	4			11	5	9	11	6	3		3	8	10	3	2	5		90	
Supply-Demand Quotient		.33				.09			.18	.5	1		.66	1.25	.3		.5	5.8		.71	

TABLE 14

Table Showing Combinations of Subjects Taught and Institutions Where the New High School Teachers Were Trained in Kentucky Colleges Representing DEMAND as Revealed by Records in the High School Supervisor's Office.

Nazareth College, Louisville, Kentucky	Agriculture	Biology	Chemistry	Commer.	Education	English	Fine Arts	French	Geography	History	Home Eco.	Ind. Arts	Latin	Math.	Music	Phys. Ed.	Physics	Soc. and Eco.	Others	Total	
Agriculture																					
Biology																					
Chemistry																					
Commer.																					
Education																					
English											1		4	2							7
Fine Arts																					
French																					
Geography																					
History										2											2
Home Eco.											1										1
Ind. Arts																					
Latin										1											1
Mathematics													1	1							5
Music																					
Phys. Ed.																					
Physics																					
Soc. and Eco.										1											1
Others																					
Total										4	2		5	3						3	17
Supply		2			6		2		1	3		2	2							1	19
Supply-Demand Quotient									4	.66		2.5	1.5							3	.89

TABLE 15

Table Showing Combinations of Subjects Taught and Institutions Where the New High School Teachers Were Trained in Kentucky Colleges Representing DEMAND as Revealed by Records in the High School Supervisor's Office.

Transylvania College	Agriculture	Biology	Chemistry	Commer.	Education	English	Fine Arts	French	Geography	History	Home Eco.	Ind. Arts	Latin	Math.	Music	Phys. Ed.	Physics	Soc. and Eco.	Others	Total	
	Agriculture																				
Biology																					
Chemistry																					
Commer.																					
Education																				7	
English				1		1								1				1			4
Fine Arts																					
French																					
Geography																					
History																					
Home Eco.																					
Ind. Arts																					
Latin														1							1
Mathematics													1					2			3
Music																					
Phys. Ed.																					
Physics																					
Soc. and Eco.										1								2			3
Others																					
Total				1		1				1			1	2				5			11
Supply		1	1			4	1	1	1	5			1	2	2	1	1	2			23
Supply-Demand Quotient .....						.25				.2			1					2.5			.47

TABLE 16

Table Showing Combinations of Subjects Taught and Institutions Where the New High School Teachers Were Trained in Kentucky Colleges Representing DEMAND as Revealed by Records in the High School Supervisor's Office.

Union College	Agriculture	Biology	Chemistry	Commer.	Education	English	Fine Arts	French	Geography	History	Home Eco.	Ind. Arts	Latin	Math.	Music	Phys. Ed.	Physics	Soc. and Eco.	Others	Total
Agriculture																				
Biology		1																2		3
Chemistry						1				2										3
Commer.																				
Education																				
English						5				1										6
Fine Arts																				
French																				
Geography																				
History										2				1						3
Home Eco.														1						1
Ind. Arts																				
Latin																				
Mathematics						2								1						3
Music																				
Phys. Ed.														1						1
Physics															1					1
Soc. and Eco.	1													1				2		4
Others																				
Total	1	1				8				5				5	1			4		25
Supply		3				9				2								3		17
Supply-Demand Quotient		.33				.88				2.5										1.47

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TABLE 17

Table Showing Combinations of Subjects Taught and Institutions Where the New High School Teachers Were Trained in Kentucky Colleges Representing DEMAND as Revealed by Records in the High School Supervisor's Office.

University of Kentucky	Subjects Taught																	Total		
	Agriculture	Biology	Chemistry	Commer.	Education	English	Fine Arts	French	Geography	History	Home Eco.	Ind. Arts	Latin	Math.	Music	Phys. Ed.	Physics		Soc. and Eco.	Others
Agriculture	4	1																2	2	9
Biology	1																1	4		6
Chemistry																				
Commer.				6																6
Education					1															1
English						14	3			3	1		1	2				5	3	32
Fine Arts							1													1
French																				
Geography																				1
History	1					1				3			1	3				1	1	11
Home Eco.						1				1	12							2		16
Ind. Arts																				
Latin																				4
Mathematics	1						1							11				9	1	23
Music						2									1				1	4
Phys. Ed.																1				1
Physics																	1			1
Soc. and Eco.																		12	1	13
Others																			7	7
Total	7	1		6	1	18	5	1	1	7	13		2	16	1	1	2	37	17	136
Supply			4	3	7	10		1		9			1	6	1	3	2	9		56
Supply-Demand Quotient			.25	.85	1.8	1		.77		2	2.6	1	.33	1	4.1					2.43

TABLE 18

Table Showing Combinations of Subjects Taught and Institutions Where the New High School Teachers Were Trained in Kentucky Colleges Representing DEMAND as Revealed by Records in the High School Supervisor's Office.

University of Louisville	Agriculture	Biology	Chemistry	Commer.	Education	English	Fine Arts	French	Geography	History	Home Eco.	Ind. Arts	Latin	Math.	Music	Phys. Ed.	Physics	Soc. and Eco.	Others	Total
Agriculture																				
Biology																		1		1
Chemistry			1																	1
Commer.																				
Education																				
English						1												1	1	3
Fine Arts																			1	1
French																				
Geography																				
History																				
Home Eco.											3						1			4
Ind. Arts																				
Latin													1							1
Mathematics																				
Music														1		1		1		3
Phys. Ed.															1					1
Physics																				
Soc. and Eco.																			2	2
Others																				
Total			1			1					3		1	1	1	1	1	5	2	17
Supply			2	4	3	3	3	5	3	1	6	1						1	1	30
Supply-Demand Quotient .....			.5		.33				1	1	.16	1					5	2	.56	

Chapter IV

INTERPRETATIONS

In order that the tables in the preceding pages may be better understood it seems worth while to discuss certain factors that affect supply and demand of secondary teachers in Kentucky.

The figures regarding supply may be thought of as qualitative results while those bearing on demand are quantitative results.

Certain factors, such as teachers being drawn into industry, marriage of women teachers, improved economic conditions, have a tendency to increase the demand for teachers.

The fact that a number of Kentucky secondary school teachers were trained in other states causes an increase of the supply which should be taken into consideration.

The high school principal is an important factor in the regulation of supply and demand of high school teachers.

The demand for teachers with more training than the present certification law requires indicates a trend in the direction of qualitative results. From a study of the combined table, Table 2, page 36, showing the supply and demand in all colleges and all subjects, it may readily be seen that there are four institutions whose demand exceeded the supply. These institutions are Eastern Kentucky State Teachers College, Kentucky Wesleyan College, University of Kentucky, and Union College. In none of the institutions was there a great excess of supply over demand found.

If all the **new** high school teachers in Kentucky in 1936-37 are counted as the demand (889) then there is an excess of demand over supply in the state of 98. If those trained in colleges out of the state (a total of 185) are deducted, it is seen that the excess of supply over demand is 99.

This is not a serious overbalance regardless of the interpretation used.

It is the opinion of the writer that in order to preserve stability in the profession a slight oversupply is desirable, possibly as much as 15 per cent. This statement is in accord with the Michigan Study discussed in Chapter I. "A recent study of teacher supply and demand exhibited 15 per cent as the necessary surplus to insure satisfactory supply of teaching personnel."¹

¹ Elliott, *op. cit.*, p. 164.

Conclusions

The following conclusions seem justified:

1. That there is a correlation of .82 between supply in the various subject matter fields and the demand in those fields. This would tend to indicate that the colleges on the whole are training secondary school teachers in fields of subject matter specialization according to the demands which exist.

2. That Kentucky's balance between supply and demand of high school teachers in the writer's opinion seems to be fairly satisfactory. With careful adherence to the present high school certification law there should not be a serious surplus of high school teachers provided the old certificates are discontinued.

3. That more facilities for training high school teachers in some subjects in some colleges are needed. No specific suggestions are made here since this comes in the realm of internal institutional administration.

4. That there are fifteen colleges and universities in Kentucky offering work leading to teaching in the secondary schools in the state.

5. That certification has passed through many stages in Kentucky. Beginning with examination on an oral basis and confined to county limits, it gradually emerged to a status where the examination was written, then based on college credits, and finally to the present stage of centralization in the office of the State Department of Education, based wholly on work pursued in standard colleges, statewide in scope, and confined wholly to elementary or secondary levels.

6. That the balance between supply and demand of high school teachers in Kentucky will probably be reversed within five years unless more secondary school teachers are trained in certain areas. This is due to the fact that more than half of the present high school teaching certificates will expire within five years.

7. That contrary to the popular belief, there does not exist such an excess of supply over demand of high school teachers in Kentucky when the total output of the Kentucky colleges and universities is compared with the annual demand in the state.

Recommendations

The writer submits the following recommendations as his own personal analyses of certain outstanding needs in connection with

the supply and demand problem of secondary school teachers in Kentucky:

1. That a continuation of the study of supply and demand for secondary school teachers in Kentucky be made by a properly constituted committee from year to year.

2. That a discontinuance of certificates not complying with the latest enacted certification laws be strictly adhered to. This should apply especially to new teachers and to those not now teaching.

3. That an unreasonable oversupply of teachers be avoided by the limitation of institutional production through increasing the standards of selection and the standards of achievement. The principle of limiting output by intelligent planning, greater selection, and general cultural and professional attainment has precedent in medicine, dentistry, and law as well as in past certification practice in the teaching profession itself.

4. That the improvement of teachers in service should be easily accomplished during a period of surplus while additional well trained personnel may be secured as replacements. Undertrained teachers should be given leaves of absence for further study and preparation.

5. That certification for life, without suspension after an extended period of non-teaching, serves as a constant threat to bring back during periods of economic unrest, inadequately trained teachers; consequently, this phase of certification should be studiously avoided.

6. That encouragement should be given to teachers preparing for the undersupplied subject matter fields. These fields are: home economics, industrial arts, sociology and economics, mathematics and English.

7. That guidance, information, and advice should be furnished all students who are preparing to teach in the high schools in Kentucky that they may be informed concerning the probability of employment upon graduation.

8. That the following methods be considered in controlling the oversupply of teachers:

- (a) Raising the standards of admission to teacher training.
- (b) Holding students in training to a higher standard of performance.
- (c) Increasing the length of curricula.
- (d) Raising the standards of certification of teachers.

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APPENDIX A
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APPENDIX B
ANNUAL HIGH SCHOOL REPORT

DEPARTMENT OF PUBLIC INSTRUCTION
Frankfort, Kentucky

ANNUAL HIGH SCHOOL REPORT

White _____
Colored _____

Date _____ Classification _____
Official Name of School _____ County _____ Post Office _____ (Do not write here)
Principal _____ Superintendent _____ Type of School _____
(County, City, Graded, Private)

IMPORTANT.—This report must be made annually before October 10 to the Superintendent of Public Instruction, Frankfort, Kentucky. High schools will not be approved or accredited until this report is made. Please use typewriter.

1. HIGH SCHOOL REGISTRATION				2. LAST YEAR'S GRADUATES*				3. LABORATORY EQUIPMENT*		
Grades	Boys	Girls	Total	Distribution	Boys	Girls	Total	Subjects	Value Added This Year	Total Value
7th*				College or University				Agriculture		
8th*				Schools for Nurses				Home Economics		
9th				Commercial Schools				Commercial		
10th				Store or Office				Industrial Arts		
11th				Farming				Trades Courses		
12th				Factory or Trades				Art		
				Other Employment				Music		
				At Home				Physical Education		
Total				Unknown				General Science		
				Total				Biology		
								Physics		
								Chemistry		
								Total		

* Record if in high school organization.

* Include both Feb. and June graduates.

* Do not include furniture.

4. LABORATORY FACILITIES—

- (1) For how many pupils is table space provided in the science laboratory? _____
- (2) Are your laboratories supplied with running water? _____ Gas? _____ Electricity? _____
- (3) Are chemicals and apparatus stored separately? _____
- (4) Is there a teacher's lecture desk? _____
- (5) Are the science tables of proper type? _____
- (6) Are the cases in your laboratories ample for keeping all apparatus in good order? _____
- (7) Can these cases be locked? _____

5. THE LIBRARY—

- (1) Name of librarian _____
- (2) How much time during day does librarian actually devote to library duties? (Do not include time spent in checking attendance in study hall, etc.) _____ hours, _____ minutes.
- (3) Is librarian a standard college graduate? _____
- (4) Number of semester hours of library training _____
- (5) Number of volumes exclusive of textbooks, duplicates, and government publications _____
- (6) Number of volumes added since last report: by purchase _____, gifts _____
- (7) Give number of library books in good condition: in high school _____, elementary school _____
- (8) Give present year's appropriation exclusive of salaries and furniture for the high school library \$ _____
- (9) Give appropriation for the elementary school \$ _____
- (10) Is systematic instruction given in the use of books and libraries? _____
- (11) Location of library: separate room; study hall; classroom; elsewhere. (Underline answer.) _____
- (12) Does your school have a full-time librarian? _____

- (13) How many periods daily is the library open to pupils? _____
- (14) Estimate number of pupils using library for reference work or recreational reading per school day _____
- (15) Are books cataloged and classified by the Dewey Decimal System? _____
- (16) Number of different current periodicals being received by the library _____

6. QUESTIONS—

- (1) How many days is school in session? _____
- (2) How many pupils have more than four credit-unit loads? _____
- (3) Did all these pupils make better than class average record last year? _____
- (4) How many have more than five-unit loads? _____
- (5) What is the high school pupil-teacher ratio? (Number of pupils divided by number of teachers) _____
- (6) What is the elementary pupil-teacher ratio? _____
- (7) Is the water supply pure and convenient? _____
- (8) Are the toilet rooms kept in good condition? _____
- (9) Are classrooms properly heated, lighted, ventilated and furnished? _____
- (10) Do cleanliness and orderliness prevail in the buildings and on the grounds? _____
- (11) Are the required maps in American and World History provided? _____
- (12) What form of permanent records is used, looseleaf, cards, ledger, etc.? _____
- (13) Are they kept in duplicate? _____
- (14) Is one copy kept at the school? _____
- (15) Is the other kept by the superintendent? _____
- (16) Are records adequately protected from fire and unauthorized entries? _____
- (17) How many of the high school teachers are not graduates of four-year colleges? _____
- (18) How many of them have made progress towards graduation in this calendar year? _____

* If this is teacher's first year in this school indicate by putting O in this column.
 ** If a change of name has occurred since the certificate was issued, indicate clearly the name as it appears on the certificate.
 † A double period recitation or two periods of study-room supervision will count as one recitation.

DAILY SCHEDULE OF HIGH SCHOOL RECITATIONS

In larger schools, use additional blanks furnished by the Department.
 Include specifically all duties of each teacher, such as library, study hall, extra-curricular activities, office duties, etc.

Time	Name of Teacher	No. in Class	Name of Teacher	No. in Class	Name of Teacher	No. in Class	Name of Teacher	No. in Class	Name of Teacher	No. in Class	Name of Teacher	No. in Class	Name of Teacher	No. in Class
to	Subjects		Subjects		Subjects		Subjects		Subjects		Subjects		Subjects	
to														
to														
to														
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SIZES OF CLASSES OR SECTIONS

Number of Pupils in Class	1 to 5	6 to 10	11 to 15	16 to 20	21 to 25	26 to 30	31 to 35	Over 35	Total Number of Classes
Number of Classes									

Number of minutes per week devoted to Physics for one unit of credit..... Chemistry..... Biology..... Art.....
 Vocational Agriculture..... Home Economics..... Shop Work..... Typewriting..... Bookkeeping.....

PROGRAM OF STUDIES

Give Program of Studies as Adopted by Your Board of Education.

See "Manual of Organization and Administration for High Schools" for the program approved by the State Board of Education for Schools of this type.

SEVENTH GRADE (If in H. S. Org.)				EIGHTH GRADE (If in H. S. Org.)				NINTH GRADE			
Subjects (Star Electives)	No. Rec. a Wk.	No. Wks. in Course	Units	Subjects (Star Electives)	No. Rec. a Wk.	No. Wks. in Course	Units	Subjects (Star Electives)	No. Rec. a Wk.	No. Wks. in Course	Units
			Not given in this grade				Not given in this grade				

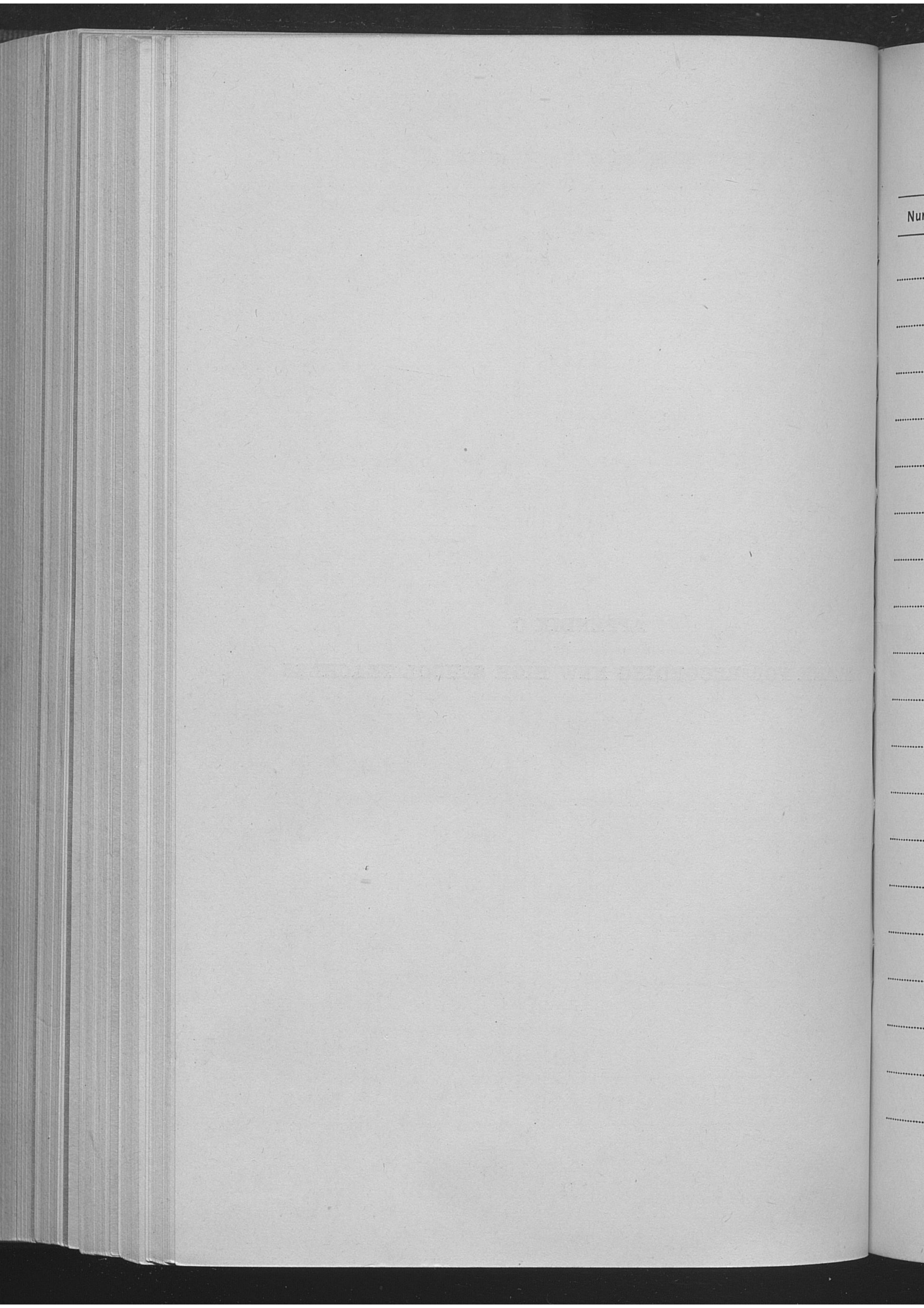
TENTH GRADE				ELEVENTH GRADE				TWELFTH GRADE			
Subjects (Star Electives)	No. Rec. a Wk.	No. Wks. in Course	Units	Subjects (Star Electives)	No. Rec. a Wk.	No. Wks. in Course	Units	Subjects (Star Electives)	No. Rec. a Wk.	No. Wks. in Course	Units

70

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|---|---|
| (1) Are all basal textbooks the legally adopted ones? _____ | (5) Are more than eight credits accepted from any approved two-year high school? _____ |
| (2) How many units of credit are required for graduations? _____ | (6) Are more than twelve credits accepted from any three-year approved high school? _____ |
| (3) Do all graduates complete the above curriculum without substitutions? _____ | (7) If this is a two- or three-year high school, does the district provide a four-year high school for pupils who complete work at this school? _____ |
| (4) Are credits accepted from any unapproved high schools? _____ | |

I hereby certify that this report is correct.

_____, Principal.



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