Trade and industrial education programs at the high school and post-high school levels have become important parts of the public school systems of Oregon. It is necessary that school officials at state and local levels have a thorough knowledge of sound educational practices to operate these programs in order to meet the needs of the youth and adults of the state.

The purpose of this study is to show the development of trade and industrial education from its beginning to the present time as a definite part of the public school system of Oregon. Besides tracing the history, the study answers the following questions relative to the program: (a) Has the program had general approval in the various communities? (b) What significant trends are noted as to the increase in enrollments in day-trade classes, in part-time classes and in evening classes? (c) What do conclusions show relative to further needs of the state for the program? (d) What are some of the recommendations for meeting these needs?

The Oregon program developed as a result of the national vocational education acts. Development was slow during the early stages of the program because Oregon was largely an agricultural area but increased steadily as the state became more industrialized. After the passage of the Smith-Hughes Act in 1917, the program increased more rapidly because of federal money used to promote the work in local school districts and the increased need of trained workers in industry.

The program is guided by a state plan prepared by the State Board for Vocational Education in 1917 and...
approved by both the state legislature and the Federal Office of Education. The plan has been amended from time to time during the thirty-six year period from 1917 to 1953 to meet changing needs and conditions of local communities.

During the World War II period, the program developed to large proportions to train war workers for specialized jobs. Enrollment decreased slightly during this period in regular classes but increased steadily after the war. Trade and industrial education programs have become well established in more than thirty towns and cities in all sections of the state.

Besides these local centers, three regional vocational schools provide for total state coverage. There is considerable variation in the kinds of classes and schools in order to meet the wide variety of needs of Oregon communities. The study shows that communities that establish the program tend to retain the work as a permanent part of their school systems. In some instances, the program has ceased to operate under the federal and state subsidy but continues to operate under the local school district.

Day-trade classes, first to be established in 1917, were followed by part-time classes the same year. Evening classes were established a year later in 1918. Since that time the largest percentage of enrollment is in the evening classes. During the school year ending in 1952, evening classes enrolled sixty-six percent; day-trade classes, eighteen percent; and part-time classes, sixteen percent of the total enrollment.

The diversified occupations class, originally developed in Oregon in 1926, provides training in small high schools that would not otherwise be possible because of the cost of facilities and equipment provided by the employer.

During the thirty-six year period, the teacher training phase of this program has been carried out as a joint enterprise between Oregon State College and the State Board for Vocational Education.
HISTORY OF TRADE AND INDUSTRIAL EDUCATION
IN OREGON

BY

PAUL ANTHONY MENEGAT

A THESIS
submitted to
OREGON STATE COLLEGE

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the requirements for the
degree of

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INTRODUCTION

"Of all the educational developments in the United States there is no development which has a more interesting story than that of vocational education. The story represents almost a century of progress." (27, p. 1)

One hundred years ago Oregon was a part of the "Oregon Territory", which included portions of what are now the states of Washington, Idaho and Montana. Oregon became a state with its present boundaries in February, 1859. The pioneers, however, did not wait for this event but set out earlier to organize schools. These early schools, private ones for the settlers' children, gave rudimentary training of a domestic and manual nature, though it could hardly be compared to vocational education today. Development was slow in this field during the early period of statehood. Interest increased after the turn of the century as Oregon school systems began to establish trade and industrial education programs. This progress was slow but steady up to 1917.

The present program of trade and industrial education in the Oregon Public School System has developed
in conformity with the provisions of the Smith-Hughes Act approved by the Sixty-fourth Congress, February 23, 1917, which provides for a cooperative plan by the federal government, the state of Oregon and local school districts. The need of further provisions for trade and industrial education programs, along with other types of vocational education programs, has been recognized by Congress through four supplementary acts, the last being the George-Barden Act of 1946.

Governor Withycombe on November 1, 1917, created a State Board for Vocational Education separate from the State Board of Public Education. He appointed a five-member board composed of J. A. Churchill, State Superintendent of Public Instruction; E. J. Lack, Portland; Mrs. George McMath, Portland; Mrs. Charles H. Castner, Hood River; and David M. Dunne, Portland, and directed it to cooperate with the federal government in organizing for Oregon a sound vocational education program of which trade and industrial education was to be a part.

The Oregon Legislature in its regular session on February 20, 1919, passed House Bill No. 225, introduced by William Hare of Washington County, which accepted the terms and provisions of the Smith-Hughes Act.

The first task of the State Board of Vocational Education was to provide an administrative structure which would insure the organization and development of a sound
program. Immediately after the organization of the State Board in 1917, a state plan was prepared and approved by the state and federal boards; this stipulated the types of work for which vocational funds were to be used as well as the kind of school and equipment, course of study, methods of instruction, qualifications of teachers and other requirements. Changes in the plan were frequently made to meet changing conditions and new situations as the program expanded.

Under the Oregon plan, the State Board through its supervisory staff works with local school districts in setting up programs which meet requirements for reimbursement.

Trade and industrial education opportunities in the Oregon plan aim to meet the needs of the youth of the schools and the adults of the community. New offerings from time to time have been added, such as apprenticeship training, firemen's training, foremen's training, war production training and other courses.

The trade and industrial education enrollment has had the largest growth of all state vocational education programs. It has grown from a small beginning of 264 enrolled in 1918 to 8,943 in 1952. As the state becomes more industrialized, further trade and industrial education in the schools will be required.
A study of the history of trade and industrial education in Oregon is timely because of the recent study of the Oregon schools by T. C. Holy. (21, p. 216) His report recommends an increased program of vocational education at the high school and junior college level, as does the interim committee on post high school education. (52, p. 120)

**Purpose of the Study**

The central purpose of this thesis is to show the development of trade and industrial education in Oregon as indicated by historical data relating to this program in the public schools.

Besides tracing the history of the trade and industrial education program, this study will answer the following questions relative to this program in Oregon:

(a) Has the program had general approval in the various communities? (b) What significant trends are noted as to the increase in enrollments in day trade schools and classes, in part-time classes, and in evening classes? (c) What do the findings and conclusions show relative to further needs of the state for trade and industrial education programs? (d) What are some of the recommendations for meeting these needs?
Scope of the Study

While the main part of this study deals with the history of trade and industrial education in Oregon, a review of the vocational education movement on a national basis is included.

The state of Oregon patterned its program of trade and industrial education on those of other states. Beginning with the early part of the 19th century and the Industrial Revolution there were marked developments on a national scale which carried to the West and had a definite influence on the early history of Oregon. This will be discussed in Chapter II.

The early period of Oregon's history, extending from 1850 to 1917, showed little development of trade and industrial education, for industries in the state were essentially farming and lumbering. However, there was some evidence of interest in trade training prior to the passage of the Smith-Hughes Act in 1917. Trade training programs had been started in Portland, Salem, Eugene, Pendleton, Ontario, Dallas, and a few other towns.

The impetus given to this program by the passage of the Smith-Hughes Act caused a gradual development in the program until World War II. Chapter III of this thesis will discuss the development of the program on the state level.
A chronological discussion of the development of the trade and industrial education program in the cities and towns of Oregon is discussed in Chapter IV.

Since the development of the program differed according to the needs of the various communities, Chapter V discusses the types of programs which have developed in Oregon.

The vocational acts require that a portion of the federal funds be spent for training teachers in trade and industrial education. Chapter VI will discuss the history of teacher training in the program developed by the Division of Vocational Education in cooperation with Oregon State College and the local school districts. Chapter VII will include the summary, conclusions, and recommendations of the study.

Sources of Information and Previous Research

The writing of this thesis has necessitated a close working relationship with the State Department of Vocational Education in Salem. Much data has been obtained from state office records dating back to the inception of the program. Reports of the State Department of Education, the Division of Vocational Education and of the Federal Bureaus in Washington have been utilized. Laws relating to vocational education in the United States and in Oregon
were scrutinized. A large amount of material and historical references has been obtained from various bulletins, surveys, plans and records of the State Department and from local school districts. A number of old files, school board minutes, early newspaper writeups and committee reports have also been utilized, especially on the state and local levels.

In order to obtain a clear conception of the historical forces and the relationship of the schools and the society from which trade and industrial education stems, it is necessary to go to their origins. A large number of historical sources have been investigated in order to make this background study, and information has been obtained from primary ones whenever possible. Materials gathered have been compared in order to secure a more accurate picture of the problem.

The study has been extended into the local communities, and the various programs have been discussed in chronological order of their establishment in the local school system.

This was accomplished through personal interviews with the various trade and industrial education coordinators and school administrators, personal visits made to a number of the larger schools of Oregon and to some of the special type vocational schools, and from correspondence with former educators and supervisors.
A questionnaire was sent to each trade and industrial education coordinator to obtain special information to be used in writing the history of the various communities. In addition, the writer's personal experience as an administrator working in communities where this program has been in effect were drawn upon.

Other references which were of value in writing this paper include several theses and historical studies related to trade and industrial education in Oregon.

Adams (1) in 1930 made a study evaluating vocational education by making a survey of conditions in Medford, Oregon. This study surveyed the industrial and business places of the community as a basis for showing need for vocational trade and industrial education.

Two specific recommendations were made for the trade and industrial education program in the Medford schools. First was that a general industrial school be set up for trade training in machine, auto and electricity shops.

Second was the establishment of a work experience program for students on a half day basis. The other half day the student would take related and other subjects at school. Shortly after the completion of this study the Medford Public schools, in accepting this second recommendation, established a program of part-time cooperative training.
Adams' study was influential in the development and expansion of the part-time cooperative program in Oregon, as he was state supervisor of the program. Recommendations in the study were used as a basis for new programs throughout the state.

A master's thesis written in 1933 by Thacker (69) describes the economic trends in secondary education in Oregon and the consequent effects on vocational classes. While the title of the thesis indicates the survey was made for vocational subjects, the largest proportion of the work includes various aspects of the high school programs from 1929 to 1933. The study is valuable in that it gives a picture of Oregon vocational educational trends during an unusual period, the depression years.

Another historical type of study on the local level is the thesis of Hamill (19) in 1934. His brief but extremely valuable history of vocational development within the Portland, Oregon, public schools establishes the date of the first vocational school in the state as 1884 and gives a clear account of its early struggle. He also gives a history of private vocational schools.

A History of Education in Portland written by the Federal Works Progress Administration in 1937 as an adult education project under sponsorship of the General Extension Division and edited by Alfred Powers and Howard
McKinley Corning (64) contains 373 mimeographed pages of factual historical data. Its chief value lies in the wealth of background and source materials dealing with public and private vocational schools in Portland. Trade and industrial training in these schools became a pattern for schools in other towns and cities.

A History of Vocational Education in Oregon Since 1917 written in 1939 by Urlaub (75) makes a general survey of all the various types of vocational education in Oregon at that time. Included in the study is a discussion of the passing of the vocational acts, the Eugene Vocational School and other vocational developments. As this study was made before World War II, there naturally has been considerable development since. This is especially true with respect to trade and industrial education. The study is among the first to describe the Eugene Vocational School, important as the first area vocational school of the state.

The thesis of Beard (5) in 1940 deals with the part-time cooperative programs in Oregon. This study is an excellent account of the origin of the part-time cooperative program (more technically known as diversified occupations) as it was first established in Roseburg, Oregon, in 1926.

Further accounts and materials from Beard's thesis
are used in Chapter IV. As there have been very few studies of the trade and industrial education program on a local level, his study may well be the forerunner of more to follow, especially where the follow-up method is used for students who have been trained in the program.

A thesis on Apprenticeship Training in the State of Oregon by Thompson (70) June, 1949, deals with the apprenticeship program in the state of Oregon at that time and considers such phases as the relationship of the Oregon State Apprenticeship Council to the Division of Vocational Education and to the local school districts. Since classes in apprenticeship in Oregon are a part of the trade and industrial program, the thesis is valuable in showing this relationship.

**Definition of Terms**

The definition of terms which are used in this study includes the commonly accepted meanings which have been arrived at over a period of time through common usage. In order that the use of these terms may be clear, the following definitions are given:

**General Education**: General Education is the larger term and includes the other phases of education included in this study. The purpose of general education is to enable men and women to live and work to the optimum and
to assume responsibilities of citizenship in a free democracy. Vocational education is related to general education in that both contribute to each other.

**Vocational Education:** The primary purpose of vocational education is to develop the individual so that he will become competent in a vocation and thus be better prepared to earn a living. Since the passage of the Smith-Hughes Act as the basic federal vocational act, some definite clear-cut interpretations in education have become widely accepted within the meaning of the term—Vocational education.

Vocational education on the secondary level includes knowledge and training contributing to a satisfactory and useful life of employment. While this includes education in general, emphasis is on preparation for entry into an occupational field. Vocational education as defined in this thesis is designed to meet the needs of four groups of people—(a) youth enrolled in regular high schools, (b) young people who have finished high school but need additional training for an occupation or trade, (c) youth who have dropped out of school, (d) adults who wish to increase their skills and knowledge.

Some of the accepted terms used to describe vocational education are: "instruction of less than college
grade", "for pupils 14 years of age or older", designed to "fit for useful employment", or as "supplemental to daily employment". In this study these interpretations will be used in describing the history and development of trade and industrial education as a part of the public school system.

**Industrial Education**: This term in its broadest sense includes two main areas of education: (a) industrial arts and (b) vocational industrial education.

Since both of these deal with the materials and processes of industry, they are classified as "industrial education". While this study deals with the second phase of industrial education, (the vocational-industrial education), it seems desirable to define both terms so the reader may have an understanding of these often-used terms.

Of the two types of education, the industrial arts is the older by far. The vocational-industrial education program came into being with the rise of the vocational movement in the country and was given impetus by the passage of the Smith-Hughes Act and the establishment of federal regulations and policies. In this respect it is a comparatively new phase of education.

The purpose of industrial arts education is to provide experience for pupils which will aid them in
understanding the industrial factors which surround them, in exploring their interests and aptitudes for industrial occupations, in developing interest in industry, and in developing good habits of constructive activities and work.

Vocational-industrial education is concerned with the vocational education of both youth and adults who have made a choice of an industrial occupation with which to make their living, and the aim is strictly vocational training. It is therefore necessary in this study to differentiate between them. There are times when the word "vocational" and "industrial" are used interchangeably, particularly in the earlier history. In most instances the term "vocational and industrial" is used in the development of this topic historically.

The meaning of the word "industrial education" did not always carry the same connotation that it does at the present time because the federal legislation has brought in relations to the program which were not a part of it at the beginning.

Trade and Industrial Education: The term "trade and industrial education" which is to be found in the title of this thesis and which is the central theme of this study is best defined by stating the purposes which are given in the Federal Bulletin of Vocational Education. The term
"trade and industrial education" is more limited than the term "industrial education", since it is only one phase of it.

1. To provide instruction of an extension or supplemental type for the further development of performance skills, technical knowledge, related industrial information, safety and job judgment for persons already employed in trade and industrial pursuits.

2. To provide instruction of a preparatory type in the development of basic manipulative skills, safety judgment, technical knowledge and related industrial information for the purpose of fitting persons for useful employment in trade and industrial pursuits.

(17, p. 61)

These objectives are attained through various types of programs, each of which is specific in purpose and designed to serve the training needs of individual industrial workers. These objectives are discussed in detail in Chapter V under types of trade and industrial education classes.

Cooperative Part-Time Education: This is a phase of general continuation vocational education carried on in the trade and industrial education area, usually in grades eleven and twelve. These classes are to be found in high schools which offer trades and industries or distributive education programs.

The plan is to have students alternate between school and industry or school and business. There are many
variations in cooperative part-time education which will be explained in detail in the discussion of specific types of trade and industrial education under the state plan in Chapter V of this thesis.

Coordinator: The term "coordinator" designates the individual responsible for correlating the in-school training of students with their work experience. In some cases where the coordinator teaches the vocational related and technical class work in school he is referred to as a teacher-coordinator.

Limitations of the Study

An effect has been made wherever possible to use original or primary sources of the historical information presented. This is especially true in writing the history of the Oregon program from the state level and the history of the various communities. Little difficulty was experienced in obtaining the letter information, as there was 100 per cent return of questionnaires from the various coordinators queried. In some cases, however, exact records of the enrollments and various figures for tables were unavailable, since in some centers the program had been discontinued, personnel had changed, and local records had not been kept.

Another limitation is the small number of high
schools which have diversified occupations programs; however, the schools are located in various areas of the state and represent student populations from 200 to 2,000. There are also three regional vocational schools operating under the trade and industrial education program which provide complete state coverage.

The main portion of this study has been confined to vocational education activities fostered by the public schools which are federally reimbursed. Mention is made of private vocational schools only when related to the total historical development. The study covers quite extensively the history and development of trade and industrial education as organized under the National Vocational Acts in those Oregon public school systems which have these programs.

Significance of the Study

An extensive study of early literature dealing with the history of education in general reveals that problems of trade and industrial education are closely related to the economic, social, cultural, and political aspects of the country and are almost immediately responsive to them. Trade and industrial education in Oregon, as in the nation, has ceased to be a movement, becoming instead a definite part of our public school system under a
cooperative plan of federal and state aids and grants, funds being furnished federally and control being handled locally.

Since ours is an industrial society, to provide effective vocational education becomes one of the major obligations of such an organized society. Trade and industrial education is a major aspect of this obligation.

As Oregon has been active in meeting this obligation, data in this study on the development of the trade and industrial education program in Oregon should give valuable information in guiding similar programs in the future.
CHAPTER II

HISTORY OF TRADE AND INDUSTRIAL EDUCATION
IN THE UNITED STATES

The Morrill Act of 1862

If any one man can be credited with the paternity of federal aid for education in the United States, it is Senator Justin S. Morrill, of Vermont, who served in Congress for forty-four years from 1854 to 1898. During this time he was persistent in his efforts to provide educational opportunities for young men who were not in the professional fields. McCarthy has the following to say on this point:

He distinguished between agricultural colleges as vocational institutions in contrast with literary colleges which he considered professional institutions. Thus Senator Morrill seemed to have had the basic concepts for federal aid for vocational education in the fields of agriculture and mechanical arts. However, there is no evidence to show that Senator Morrill had any concept of vocational education beyond these two fields because he made no effort to secure aid for the field which was his first source of wage earning. This was merchandising. (27, p.17-18)

After considerable opposition based on fears that federal aid would bring with it a violation of constitutional rights, unequal benefits to the states, and federal control of education, the bill framed by Senator Morrill was
passed by Congress and signed by President Lincoln, July 2, 1862.

With the passage of the Morrill Act of 1862 the United States Congress introduced new plans in making public grants for education. By this act the federal government began a program of financial aid for specialized types of education and related activities in order to extend them rapidly throughout the nation. While its goal was not reached until almost forty years later, the Morrill Act was a forerunner of federal aid programs.

Specifically the Morrill Act granted to each state 30,000 acres of federal lands for each senator and representative then in Congress. The money from the sale of these lands was to provide for endowment purposes only, the interest to be used to support the institution thus established. At least one college was to be established in each state. Section 4 of the act stated the purpose as:

.....the endowment, support, and the maintenance of at least one college where the leading objects shall be, without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanical arts, in such manner as the legislatures of the States may respectively prescribe in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions in life. (2, p. 63)
Under the impetus of this act twenty colleges were established between 1862 and 1900, most of them in the middle and far western states.

There have been four additional acts by the United States Congress, either making or authorizing annual appropriations for institutions established under the first Morrill Act.

First was the Hatch Act, passed by Congress in 1887. Under the terms of this act a state agricultural experiment station was established in each state and $15,000 appropriated annually from the United States Treasury for its support.

The second Morrill Act, passed in 1890, was also a land grant law which authorized the use of a part of the money received from the sale of public lands under the first Morrill Act to a more extensive endowment and support of land-grant colleges. Each state and territory received an increase of $1,500 annually. This amount was in turn to be supplemented by an automatic annual increase of $1,000 until the year 1900.

Senator Morrill's persistency was rewarded when the Second Agricultural College Bill was signed by President Benjamin Harrison, August 30, 1890.

The Adams Act, passed in 1906, granted an additional sum of $15,000 annually to each state to establish
research and experiment stations in agriculture. In 1907 another act known as the Nelson Amendment Act was passed by Congress which provided for a gradual increase eventually totaling an additional $25,000 each year in further support of the land-grant colleges.

Institutions located in the United States territories and Puerto Rico were qualified to receive benefits of the first Morrill Act and its supplementary amendments.

Beginning with the first Morrill Act, the present philosophy and policy in the use of national money for vocational education have gradually developed.

Vocational Education Movement

Interest in more adequate trade training programs in the United States continued to increase, as it became apparent that the manual training programs in the high schools, in the private trade schools, and the Land Grant Colleges did not fully meet the needs of agriculture, industry, or labor on the worker's level.

Industrial leaders, labor leaders, agriculturalists, merchants, and public spirited citizens began a search for further means of training workers for specific trades and occupations. During the first decade of the twentieth century there appeared three notable reports on industrial education which gave impetus to the movement. In 1902 and
again in 1910 the United States Commissioner of Labor published comprehensive surveys of industrial education in Europe and in the United States which gave advocates of industrial education factual bases for claims. Bennett is specific in his statement as to the beginning of this movement.

The Vocational Education Movement in the United States began in 1906 with the report of the Douglas Commission to the Massachusetts Legislature and the organization of the National Society for the Promotion of Industrial Education, but for thirty years previous to that time interest in practical education had been increasing. (8, p. 507)

The following pages briefly describe some of the more influential organizations affecting the development of vocational education in the United States.

Douglas Commission

Interest in more adequate trade training programs was seen in the industrial state of Massachusetts. The needs were first outlined to Governor William L. Douglas in a report in May, 1905. He later signed a bill creating a Commission on Industrial and Technical Education and followed this act by appointing a Commission composed of representatives from the various fields of agriculture, labor, and education for the purpose of investigating educational needs in the different grades of school. This
group was further instructed to determine to what extent the needs of industrial education were being met by existing institutions and to report what new aspects of educational work would be advisable. The Commission was given power to make investigations, print reports, and secure testimony of experts as to existing programs in other states and foreign countries. McCarthy says of this Commission:

This Commission, known as the Douglas Commission, has a very definite place in the educational history of the nation. It has made a definite contribution to the development of vocational education in America. (27, p. 15)

The result of the Commission's work was a carefully made study of industrial education in Massachusetts. The report attracted attention throughout the nation and resulted in an increased interest in industrial vocational education.

One of the most revealing parts of the report was a study of the relation of children to the industries. This was conducted by Doctor Susan M. Kinsbury at Simmons College. (8, p. 514)

On the basis of facts and figures collected in 1905 it was estimated that 25,000 Massachusetts children between fourteen and sixteen years of age were at work or were idle and were not in school. About one sixth of
them had completed the eighth grade; none was learning a trade. Further study revealed that not more than one third of them needed to work to help support the family.

The Douglas Commission made two recommendations. The first is stated in part by Bennett:

The work of the elementary school be so modified as to include instruction and practice in the elements of productive industry, including agriculture and the mechanic and domestic arts, and that this instruction be of such a character as to secure from it the highest cultural as well as the highest industrial value; the second, that the work in the high schools be modified so that the instruction in mathematics, the sciences, and drawing shall show the application and use of these subjects in industrial life, with special reference to local industries, so that the students may see that these subjects are not designed primarily and solely for academic purposes, but that they may be utilized for the purposes of practical life.

(8, p. 514-515)

The Commission further made recommendations in the form of an act to be presented to the legislature. This provided that the governor appoint another commission on industrial education to serve five years and to be assisted by a paid executive officer. This commission was to establish independent industrial schools and to perform many other acts necessary to establishing an industrial school system, independent of and parallel to the public school system under the State Board of Education. The bill was passed and approved by the governor in June, 1906.
National Society for Promotion of Industrial Education

Growing almost immediately out of the report of the Douglas Commission, along with widespread interest among similar groups in other states, was the organization known as the National Society for Promotion of Industrial Education.

Through the influence of two men, Dr. James P. Haney, director of art and manual training in the public schools of New York City, and Charles R. Richards, professor of manual training at Teachers College, Columbia University, thirteen men met at the Engineers' Club in New York City on June 9, 1906. At this meeting, it was revealed that a deep and widespread interest in industrial education prevailed throughout the country. An organization committee of five was appointed and held frequent meetings in New York and Boston during the summer to prepare for a meeting to be held November 16, 1906, at Cooper Union in New York City. About 250 persons, representing more than twenty states, were present.

At this meeting a constitution was adopted, and Henry S. Pritchett, president of the Massachusetts Institute of Technology, was elected president; M. W. Alexander of the General Electric Company, vice-president; F. Everit Macy of New York City, treasurer; and Charles R. Richards,
secretary. Twenty-seven directors were elected; heading the list was Milton P. Higgins, who had acted as chairman of the organization committee. On this board of directors were not only manufacturers and educators but also representatives of organized labor and social workers. Miss Jane Addams of Hull House, Chicago, was one of the latter. Among the hundreds who expressed approval of the organization were President Theodore Roosevelt, Dr. Felix Adler, Andrew Carnegie, Charles W. Eliot, Jacob Riis, and Dr. Elmer E. Brown, then U. S. Commissioner of Education.

The Constitution provided that:

....the objects of the proposed society are to bring prominently to public attention the importance of industrial education as a factor in the industrial development of the United States; to provide opportunities for the study and discussion of the problem; to make available through publication of the results of experience in industrial education both in this country and toward the establishment of institutions for industrial training. (29, p. 1)

The society thought that by uniting all of the forces of industrial education a greater impression on public opinion could be made. It was known that educational, industrial, and social conditions varied greatly in the different states and the methods of propaganda would of necessity have to fit local conditions. The board of governors of the society, at a meeting on March 14, 1908, prepared plans to organize a state branch in each of the
states from which effective activity might radiate. As an example of the effectiveness of the work of the state societies, the Milwaukee School of Trades was established under public school auspices, largely through the aid of the state branch of the National Society.

The early conventions and publications did much to crystallize public opinion that led to enactment of legislation both on the state and national level. In time, the society broadened the scope of its undertakings to include other areas of vocational training, such as agriculture, commerce, and home making.

The society set to work at once on the preparation of bulletins, organization of annual conventions, and formation of new state branches. Their activities carried the ideas of the leaders to all parts of the country. Perhaps the most notable work of the society was its part in securing the passage of the Smith-Hughes Act.

In 1917 the society changed its name to the National Society for Vocational Education. In 1925 the National Society merged with the Vocational Education Association of the Middle West, which had been organized in 1914, to form the present American Vocation Association, thus forming the strong national organization with nation-wide interest and influence of today.
In 1912 the City Club of Chicago published a report on vocational training dealing with an analysis of the need for industrial and commercial training in Chicago. Included were a study of existing provisions in comparison with those in twenty-nine other cities and recommendations as to the best form in which such training might be given in the public school system of Chicago.

This detailed study, compiled by the sub-committee on education, made a number of recommendations based on studies of the school programs and the needs of industry for trained people in skilled trades.

The committee made an intensive study of the schooling of a number of boys engaged in industries in Chicago who had left school at different grades after the fifth. This early follow-up study had the assistance of graduate students under direction of the Department of Education of the University of Chicago.

Their findings were revealing as mentioned in the preliminary part of the report:

A little over one half of the children complete the elementary course. Forty-three per cent of those who enter the first grade do not reach the eighth grade at all, and forty-nine per cent do not complete the eighth grade. (10, p. 2)
The study, which gained evidence from boys and girls who had left school to go to work between the ages of 14 and 16, confirmed the judgment of educators and legislators that the schools could not give the minimum education for American citizenship in less than eight grades.

Based on these and other findings, the committee worked out a detailed plan, as a part of their recommendation, for a type of school in which half the time in the seventh and eighth grades would be given to vocational work. The recommended plan followed to a large extent the ideas for vocational education found in cities of Albany, New York City, Boston, and Menominee, Wisconsin.

The report in describing these schools says:

The work done in these schools is not of a manual training character. It consists in actual trade processes and produces articles which have commercial value. The courses do not attempt in the nature of the case to make artisans or mechanics of the children. The training is of a preparatory trade character. (10, p. 7)

This study concluded that vocational training should be introduced into the school system as an essential part of its educational program. The committee attempted to indicate in detail how the vocational training might be introduced and furnished additional data in favor of national aid for vocational training in the public schools.
Another strong force in the development of the movement for federal aid for vocational education resulted from the creation of a federal commission on national aid to vocational education in 1914.

On January 20, 1914, Congress had approved a joint resolution authorizing the President to appoint a commission to study national aid for vocational education. This resolution provided that the nine members should report to the Congress not later than June 1, 1914.

The Commission's report has had a far reaching effect on vocational education in this country. Published by the Government Printing Office as one of the House documents, Volume 149, 1914, the report is in two sections. The first outlines the need for vocational education and the need for federal grants to the states. Included is a recommendation for a program of vocational education to conserve and develop national resources, to prevent waste of human labor, to supplement apprenticeship, to increase wage earning powers, to increase the supply of trained workmen to offset the increased cost of living, and to preserve national property.

The second section deals with a hearing of the Commission and gives an account of programs conducted and
administered by federal agencies and the views of representatives of organized labor, educators, and others interested in vocational education.

McCarthy says of the Commission's findings:

The investigations and hearings of the Commission were thorough, and the principles guiding the Commission were sound. They were as sound in 1914 as they are today. (27, p. 31)

McCarthy further summarizes some of the principles guiding the Commission in their findings:

1. National grants should be given to the states for those forms of vocational education for which there is an acknowledged and widespread need which is not now being met.

2. National grants should be given to the states only for those forms of vocational education where the need is of such importance to the national welfare as to justify national aid for encouragement.

3. National grants should be given to the states only for those forms of vocational education where it is clear that in the absence of such aid the states could not take the initiative in time to meet the present growing need. (27, p. 32)

Other Influences on Federal Bills

Interest in vocational education aid had developed to a high degree among a number of organizations, clubs, and legislative and educational leaders during the first two decades of the twentieth century. These various groups had different opinions concerning various measures which were being formulated at this time into federal bills.
Another social agency, The American Federation of Labor, had done much in stimulating and supporting vocational education in America. At a meeting of this organization in Denver, November, 1908, a resolution was adopted urging the study and promotion of industrial education. A committee of fifteen was appointed whose purpose is stated by Barlow:

.....to investigate the methods and means of industrial education in this country and abroad, and to report its findings, conclusions, and recommendations to the next annual meeting of the American Federation of Labor. (3, p. 63)

A report of this committee on industrial education, drafted largely by Charles H. Winslow and John Mitchell, was adopted in its final form by the convention of 1911. In it the committee placed itself squarely on record in favor of industrial education.

Results of this report were that the American Federation of Labor came to support industrial education with a definite program in mind. The report is of important significance because it led labor forces throughout the country in a constructive program favoring vocational education. Many state federations began to study means of helping to promote industrial education. Samuel Gompers pledged the support of labor at the 1914 convention of the National Society for the Promotion of Industrial Education. His influence was used in securing the
passage of the Smith-Hughes bill in Congress.

Another group which helped support industrial training at an early period was the National Association of Manufacturers. Mr. J. W. Van Cleave, president of the Association, stated:

As an indispensable step toward securing uniformity in industrial training we must begin instructing boys just as soon as they can hold tools in their hands. A manual training department should be attached to every public primary school in the United States and an hour a day given to the use of tools under competent instructors. This work should be made compulsory. The boy begins the instruction at the age of nine or ten and continues it till he is fourteen—which is the age most of our boys leave the public schools to go to work. He will thus acquire a good deal of skill in handling the tools used in most of the mechanical trades. As a second step we should have free industrial high schools fully equipped with capable instructors. (76, p. 15)

The National Association of Manufacturers, along with the American Federation of Labor, supported the Smith-Hughes Bill for federal aid.

In 1910 Mr. H. E. Miles, of Wisconsin, was made chairman of the Committee on Industrial Education of the National Association of Manufacturers and a series of reports of a progressive nature was made under his supervision. Their 1911 report recommended that compulsory continuation schools should be universally adopted for those who were over fourteen and employed
in industry. To that end, federal and state aid were urged. The convention as a whole resolved that:

We favor the establishment in every community of continuation schools wherein the children of fourteen and eighteen years of age now in the industries shall be instructed in the science and art of their respective industries and in citizenship. (29, p. 15)

In 1912 and again in 1913 the reports stated that the continuation schools should furnish a broad base upon which a system of industrial education should be built.

A number of other organizations exerted influence to bring to a focal point the activity in the country in the promotion of the early federal aid bill. The idea of using public money for the educational training of individuals in a private trade had gradually come into general favor. The rapidly developing industrial expansion was a big factor in this change in American attitude.

The National Education Association at a meeting of its board of directors in Los Angeles in 1907 appointed a committee to study industries in relation to public education. This committee reported in 1910 at the national convention. Another influential factor in shaping public sentiment was the work of the Vocational Association of the Middle West. The leaders of this organization joined with those of the National Society
for the Promotion of Industrial Education in providing public information by use of a public forum for the discussion of vital topics on vocational training in relation to public education. The United States Chamber of Commerce helped bring discussion of the Smith-Hughes bill to a climax. It took a nationwide referendum vote on the subject of vocational education in 1916. The result was an overwhelming vote in favor of the provisions of the Smith-Hughes bill. Undoubtedly the need for trained workers in industry to produce war materials for World War I helped tip the balance in sentiment for the bill.

The Smith-Hughes Act

A part of the final report of the Commission on National Aid to Vocational Education included a draft of a proposed bill to Congress. Included with the proposed bill were recommendations that grants be given for the purpose of stimulating vocational education for part-payment of salaries to teachers, supervisors, and directors; for teacher training; and for the support of the Federal Board for making studies useful to vocational education. The schools thus aided should be properly supported and controlled and should be of less than
college grade. No action was taken on the report of the Commission until 1916. In January of that year the vocational bill was again introduced into the House of Representatives and was referred to the Committee on Education. After careful consideration by the Committee, it was recommended unanimously that it pass.

In his report on the bill D. M. Hughes, Representative, remarked:

The American people have hardly begun the work of providing for the practical education of these millions of our wage workers. In this whole country there are fewer trade schools than are to be found in the little German Kingdom of Bavaria, with a population not much greater than that of New York City. (22, p. 2)

After the bill had traveled from House Committee to Senate Committee and back again with a number of changes being made, on February 14, 1917, the Committees of both Houses were able to agree on all points. The bill passed both Houses and was signed by President Woodrow Wilson February 23, 1917.

The Smith-Hughes Act, sponsored by Hoke Smith and Dudley Hughes, both from Georgia, is recognized as a milestone in the development of federal aid for public education to the states.

The first purpose of this act is "to provide for the promotion of vocational education". Other purposes are
to provide for cooperation with the states in the promotion of such education in agriculture and trade and industries; to provide for cooperation with the states in preparation of teachers of vocational education; and to regulate expenditures of money set forth for this purpose. Cooperation with the states is one of the main purposes stressed.

The safeguard against federal domination which was the intent of Congress is evidenced in these sections which stress cooperation with the states. The federal board makes reports on studies and investigations in the various fields of education. The state through its legislature sets up state boards for vocational education according to a plan which is approved by the federal board and which indicates the type of program the state wishes to conduct. The state treasurer is designated to handle the funds, and for each dollar supplied by the federal government the state matches the amount.

The Smith-Hughes Act has now been in operation thirty-six years, during which time it has been the subject of much discussion in educational circles. Many attempts have been made to amend the act, to reduce appropriations, or to have it repealed. Arguments advanced that the act is too narrow or that it represents federal
control have not proved to be valid during its history. The survival of the vocational education program during the depression years and the tremendous contributions of the vocational schools during the war and again during these emergency years prove that the Smith-Hughes Act ably serves the nation in peace and in war.

Additional sections of legislation have been added to the basic act from time to time, increasing the appropriations and extending the use of budget funds to other fields of vocational education. No change in the basic act was needed to add these features of vocational education.

Federal Board for Vocational Education

The Commission on national aid to vocational education appointed in 1914 recommended a separate board as the agency to administer the provisions of the Smith-Hughes Act. Three years later in 1917 when Congress passed the Smith-Hughes Act, Section 6 of the Act provided:

"That a Federal Board for Vocational Education is hereby created, to consist of the Secretary of Agriculture, the Secretary of Commerce, the Secretary of Labor, the United States Commissioner of Education, and three citizens of the United States to be appointed by the President, by and with the advice and consent of the Senate. One of said three citizens shall be a representative of the manufacturing and commercial interests, one
a representative of the agricultural interests, and one a representative of labor. The board shall elect annually one of its members as chairman. In the first instance, one of the citizen members shall be appointed for one year, one for two years, and one for three years, and thereafter for three years each. (20, p. 136)

The Federal Board for Vocational Education was established as an independent board and had no affiliation with the United States Office of Education or any other federal agency or bureau. This board continued as the administrative agency for vocational education for a period of seventeen years before it was eliminated in 1934.

The George-Reed Act

The George-Reed Act, passed and adopted February 5, 1929, was a new type of federal legislation which indicated a trend toward governmental control of appropriations by Congress. By this Act appropriations were made only in the fields of agriculture and home economics. The separate appropriation for home economics removed that field of vocational education from the trade and industrial section of the Smith-Hughes Act, thus making it possible to expand the home economics field to include the services for home-making. Appropriations to the states under this act were for a period of five successive years in the fields of home economics and agriculture.
This indicated a new trend in the federal office, that of authorizing annual appropriations without making them permanent. As the George-Reed Act was a temporary means of extending federal aid with a specific time limit during a period of economic depression, it did not permit sufficient planning for a long-term extension of vocational education. The act had barely been passed before a movement started among vocational education people for a more permanent type of legislation.

**The George-Ellzey Act**

The George-Ellzey Act of May 21, 1934, promoted and passed prior to the expiration of the George-Reed Act, was enacted largely to prevent a lapse of the additional funds provided by the latter. The annual appropriations, which were for three successive years only, were even more restrictive for long-time planning than the longer time limit of the George-Reed Act. Appropriations were extended for the salaries of teachers, supervisors, and directors in the field of agriculture, home economics, and trades and industries. There was also an appropriation of $100,000 for each of the three years to the Department of Interior, Office of Education, and for administrative purposes delegated to the Federal Board
of Education under the Smith-Hughes Act. This act eliminated the provision in the Smith-Hughes Act for direct or supervised practice for at least six months a year in the field of agriculture as well as the requirements for part-time classes for trade and industries to be operated for a minimum of 144 hours per year. No additional appropriations were made for teacher training.

**George-Deen Act**

On June 8, 1936, the fourth national vocational act, the George-Deen Act, was passed to become effective July 1, 1937. This act included the same provisions as did the Smith-Hughes Act, the George-Reed and the George-Ellzey Acts, except for two points. The first of these was provision of funds for education in distributive occupations, which had not been included before; the second was the provision for matching of federal funds. The Smith-Hughes Act provided that each state match from state or local funds or both, on a dollar for dollar basis, all expenditures from federal funds.

Under the George-Deen Act the state or local community or both, were required to match only fifty per cent of the federal appropriations for the period ending June 30, 1942; sixty per cent for the year ending June 30, 1943;
seventy per cent for the year ending June 30, 1944; eighty per cent for the year ending June 30, 1945; and ninety per cent for the year ending June 30, 1946. This matching plan increased state and local appropriations ten per cent each year up to 1947 but did not increase federal funds. In each succeeding year after 1947 federal money was to be matched one hundred per cent or the dollar for dollar basis similar to the Smith-Hughes requirements.

This plan for matching funds did much to encourage and develop vocational education. School administrators were able to plan in advance on a long-time basis with the knowledge that federal funds would be available on a liberal matching basis during the early stages of a new program.

As these programs proved their value to the communities, the appropriations were gradually reduced and by the time the federal aid reached the dollar for dollar matching basis, the communities were willing and ready to carry their own load on the equal matching basis.

The George-Deen Act included provision for a minimum payment of $20,000 each year for states and territories which would not otherwise receive that amount under the population ratio of the former act. Also included was authorization for $14,200,000 for the training of teachers, supervisors and directors of agriculture, trade and
industry, and home economics subjects. There had been no added appropriation for teacher training in the George-Deen Act or George-Ellzey Act in addition to those of the Smith-Hughes Act. A special provision for the appropriation of $350,000 for the year beginning July 1, 1937, and "annually thereafter" was made in the George-Deen Act to the Office of Education in the Department of Interior. This was to be expended for the same purposes and in the same manner as provided in Section 7 of the Smith-Hughes Act, these purposes being studies, investigations and reports and other office expenses necessary for the administration of the act.

At the time of the approval of the George-Deen Act in 1936 the country was still in a period of economic depression with the largest number of unemployed in its history. Since the George-Deen Act included some of the same liberal exceptions over the Smith-Hughes Act as did the George-Ellzey Act, Congress was liberal in extending the purposes for which the appropriations could be used.

Some states took advantage of the liberal appropriations of the George-Deen Act and used the funds for training of tax assessors and minor administrative offices and for other purposes which had no connection with trade and industry.
Another section included in the George-Deen Act which was not in previous legislation prohibited expenditures of funds for industrial in-plant training—except such industrial plant training be bonafide vocational training and not a device to use the services of the trainee for private profit. Specific policies were developed by representatives from industry, organized labor, and vocational education leaders; these are included in Bulletin No. 1, Statement of Policies for Administration of Vocational Education. (17, p. 27) This bulletin, a valuable guide for all persons working with vocational education, has helped lessen complaints regarding programs of in-plant training.

The additional federal funds and the more liberal matching plan of state and local funds came at a time in the country's history when state and local funds were low. Also with the first rumblings of World War II in 1937 and 1938, it was recognized that it would be a war of production and machines. Smith-Hughes and George-Deen funds were available during the entire war period and were further supplemented by specific appropriations for National Defense Training which later was changed to War-Production Training Programs.
George-Barden Act

The George-Barden Act became effective August 1, 1946, when signed by President Harry S. Truman. Its effective date, like that of the George-Deen Act, was set one year ahead to allow sufficient time to make changes in old policies and to issue new ones covering new provisions of the act. Fifth in the series of federal acts dealing with vocational education, it came less than five years after the passage of the George-Deen Act.

This act was technically an amendment to the George-Deen Act and superseded it in granting federal funds needed to meet the expanding vocational education programs in all fields, including trade and industrial education. The George-Barden Act is more extensive than the George-Deen Act, which it amends. The act broadened the scope of the original appropriations for occupations and certain types of commercial subjects. The terminology of the George-Barden Act is more simple and specific, being more easily understood by school people and laymen than the George-Deen Act which was too wordy and too involved for clear understanding.

One of the moving forces behind the George-Barden legislation was the American Vocational Association, which provided the leadership in the campaign for
additional funds to expand activities in the fields of agriculture, home economics, trades and industries, and distributive education as well as funds for the new field of occupation guidance.

This new legislation included matching provisions on a graduated scale similar to those in the George-Deen Act; in addition it expanded the reimbursement to include salaries of administrators, travel expense of local and state supervisory personnel, salaries for supervisory staff, supplies and equipment. A proposal for $500,000 for supervision of industrial arts was also included in the original bill. However, before this act received final approval from Congress, certain appropriations for public service training, vocational guidance, vocational commercial subjects, and industrial arts were eliminated and the over-all amount of aid greatly reduced.

While these few specific amounts in money were not provided by the act, it did, nevertheless, make provisions for Congress to appropriate money to be used for these services in trades and industrial education and other fields. This aspect, making possible appropriations by Congress, was one of the main differences of the George-Barden Act compared with previous vocational acts. While the George-Barden Act eliminates the
George-Deen Act in federal administration of vocational education, the Smith-Hughes Act continues to function as the basic act for federal aid for vocational education. The George-Barden Act of 1946 actually gave legal status to the use of the term Smith-Hughes Act.

The George-Barden Act is significant in that for the first time recognition was given to the use of federal funds for purposes of vocational guidance. While no monies were specifically allocated to vocational guidance, Congress recognized that monies allocated to the other services could be utilized for counselor training, purchase of equipment and supplies, transportation, and salaries of vocational counselors in local schools.

At the present time, all federally aided vocational programs in the United States and territories operate under the provision of the Smith-Hughes Act and the George-Barden Act.

**Vocational Agencies and Functions Transferred and Consolidated**

Congress in 1933 gave President Roosevelt powers to consolidate federal agencies for economy purposes. He accordingly transferred on June 10, 1933, the functions of the Federal Board for Vocational Education, created as a separate board by Congress in 1917 to administer the
Smith-Hughes Act, to the Department of Interior and designated the members of the board to act in an advisory capacity without pay. For all administrative purposes this marked the end of the Federal Board for Vocational Education.

On October 10 of the same year, Harold Ickes, Secretary of the Interior, pursuant to executive order No. 6166, issued an order effective immediately providing that:

The functions of said board are hereby assigned to the Commissioner of Education and the necessary personnel under the Board will be reorganized as a subdivision of the Office of Education under the general supervision of the Commissioner of Education who has been directed to proceed with necessary reorganization of the Office of Education. (73, p. 2)

Following this order in October 1933, the Division of Vocational Education was organized within the Office of Education with the assistant commissioner for vocational education as the administrative head to carry out responsibilities of the federal government under provisions of the vocational education acts.

In July 1939, the United States Office of Education was transferred from the Department of Interior to the Federal Security Agency where it has continued to function up to this time.

The Division of Vocational Education in the United States Office of Education in Washington, D. C., works
directly with the staffs of the various state administra-
tions for vocational education and does not attempt to
deal directly with the state institutions providing voca-
tional education. Control of the program lies within the
states and is administered under the various state plans.
The state plan and its relation to the local program will
be discussed in detail in Chapter III of this study.

New Interpretations of Federal Acts

In 1938 a new interpretation of the federal acts was
made by the Office of Education which extended the services
to a new phase of work, that of occupational information
and guidance which had not been eligible for federal
reimbursement from vocational funds. In order that this
service be effectively secured, it was ruled that teacher-
training funds provided under the Smith-Hughes and George-
Deen Acts might be used for training and supervision of
teachers who would provide occupational information and
guidance in the schools. This service has continued as
a part of the Federal Vocational Education Program from
1938 until July of 1952 when a new ruling in the Office
of Education has discontinued this service as a separate
phase of vocational education.
Federal Relations

A considerable portion of this study necessarily deals with federal relations to education, as it is in the area of vocational education that the federal government has been most concerned in relation to public schools. The educational pattern of the United States is largely one of local district and state concern, control being in the state but actually administered by the local districts. The higher institutions of learning operate under state laws and receive support through state legislative apportionments. While the Federal Constitution makes no direct provision for education, in practice it has actually taken an extensive part in promoting education from the beginning by allotting funds to carry on such work. The amount of participation of the federal government in education has increased steadily during each period of history, as shown by this study.

The earliest federal grants for education involved practically no control of education beyond designating the kind of institution to be benefited. There were no educational standards or requirements. For the most part the grants were for education in general rather than for a specific type. The first Morrill Act in 1862 changed
the federal policy by specifying a special form of education to be aided: mechanical arts and agriculture. The second Morrill Act in 1890 listed the groups of subjects for which money appropriated could be expended. The act gave authority to the Secretary of State to certify those states and territories entitled to the appropriations; he could also withhold appropriations from those which did not meet requirement certifications.

A cooperative feature was initiated into federal relations with the passage of the Marine School Act of 1911 and continued with the Smith-Lever Act of 1914 and the Smith-Hughes Act of 1917. This plan has reached its most complicated form of development in the Smith-Hughes Act, which has numerous financial restrictions and many details of administration of the program, including the form of the state organization.

At this point it is interesting to note that federal legislation in the interest of vocational education received great impetus and implementation from the growing public demand for an extended program just prior to both of the last two World War periods. The Smith-Hughes Act was passed by both Houses of Congress with scarcely any opposition.

In the present period of national emergency there
are already signs of a new vocational training program for the defense of the nation. Public pressure and demands in 1953 will probably have important implications for possible future federal implementations in the field of vocational education.
CHAPTER III

THE DEVELOPMENT OF TRADE AND INDUSTRIAL EDUCATION IN OREGON

Early Development

From the early beginning of education in Oregon the city of Portland was destined to become the first and largest unified city system. This condition of one large city and one large school system has had its influences on trade and industrial education development in the state. The early history and also the later development of trade and industrial education in Portland is considered in this study in its relation to the state as a whole.

Early Private Vocational Schools

The earliest vocational schools in Oregon were private trade schools. The early history of Portland education is a good illustration of the same struggle for existence of many schools, both public and private, in various communities of the state.

The earliest trade school in Oregon, now known as Multnomah College, had its beginning as a night school for adults in the fall of 1884. (24, p. 68) Classes
were first held in a building located on the northeast corner of First and Salmon Streets under auspices of the Portland YMCA. At the turn of the twentieth century the program of the school was broadened considerably with the advent of the automobile and the industrial and trade development of the city. A college of engineering was added in 1919. A year later, in 1920, Oregon Institute of Technology became the official name of the school. The junior college curriculum, which the school still follows, was established in 1930. In 1937 the name was changed to Multnomah College because the old name was too long and confusing since the school had become a junior college. In 1945 the school separated from the YMCA and became an incorporated institution. This school in its sixty-eight-year history has had a steady and continuous growth.

As a junior college with several business and technical departments, it admits students throughout the year. Total enrollment for a school year has reached a total of 1,500 a year for the past several years.

Private trade schools are an important part of vocational training in Oregon, having served a useful purpose in the state as well as the nation in meeting the needs
for occupational training. The offerings of private trade schools in the field of vocational education are often more extensive than those of the public schools. Since 1937 all private trade schools in Oregon must be licensed and approved by the State Department of Education in Salem.

**Industrial Training in Early Higher Institutions**

In 1868 the legislature of Oregon selected Corvallis as the site for a school of agriculture. Corvallis College was then under the control of the Methodist Episcopal Church, South, and the legislature entered into a contract to use this as the state college.

This institution has had rapid and phenomenal growth and prosperity. The social, economic and cultural influence of this institution on the development of trade and industrial education has been far reaching and has extended into every city and town of the state. It has been the policy of the school to place its departments and personnel at the disposal of the citizens of Oregon. The training of full-time trade and industrial education teachers, like that of other vocational education teachers, is carried out on a cooperative basis by the State Board of Vocational Education and Oregon State College.
Later Developments in Public Schools 1900-1917

Development of vocational education in Oregon public schools had a slow beginning. Only meager accounts of vocational training of the trade type in the public schools outside Portland are to be found before the passage of the Smith-Hughes Act in 1917. Mention is made in the biennial reports of the state superintendent of public instruction of courses in Pendleton, Ontario, Salem, Eugene, Astoria, and a few other towns. The pattern in Oregon of trade and industrial education development followed that of the nation in that development came first in the large city schools. This was to be expected, since the demand for skilled workers in business and industry was constantly a force of development of these schools.

Early traces of attempts to establish vocational training are to be found in the Portland Public Schools' records. Mr. O. W. Pratt, city superintendent of Portland Public Schools in 1896, in a report to the Board of Directors, made an attempt to start manual training in the school system as seen in the following report:

Portland is the only city of its population in the United States that has not a well organized system of manual training. Educators who understand the aims and objects convince them of its usefulness. I would therefore recommend that the basement of the high school be fitted up and a
sufficient number of tools purchased for the first course in woodwork. Let us make a beginning. (59, p. 57)

The plan proposed by Superintendent Pratt was never put into effect. It was decided that manual training was too expensive to be included as a part of the public schools at that time. It was not until 1904 that an appropriation of $15,000 (19, p. 7) was put in the budget for manual training.

In 1905 the school directors were able to report:

Manual training, so long anticipated, has at last been introduced, under the supervision of W. J. Standley. At present there are five centers.

To give the girls an equal opportunity with the boys, classes in sewing have been formed during the present term, and though the work is in its beginning, it gives promise of furnishing results as satisfactory as those of Manual Training. (60, p. 13-14)

This marked the beginning of manual training in the public schools of Portland. Manual training was included in a number of the Portland high schools as a part of their regular curriculum along with a few other vocational courses in an attempt to meet the needs of the time.
Benson Polytechnic

In 1908, four years after the Portland Public School system first appropriated a definite amount toward the vocational type of school work, the present Benson Polytechnic High School was opened under the name of "Portland School of Trades".

Commercial and industrial expansion of the city had simultaneously created a demand for a similar type of education. People felt that such education should enable the young person to earn a living. This attitude was quite general throughout the country, and Portland felt the need of a trade school for both boys and girls. The city school superintendent of that time, Mr. Frank Ringler, prepared a thorough report on the topic after he had made an inspection trip to the East.

His report of 1908 recommended that such a trade school be built, as it would be a great benefit to the young men and women of Portland and to the state of Oregon.

This new high school had for its purpose "to furnish instruction to the boys of this city in some trade that they may be better situated for their life work".

(15, pp. 263-267)
The school was located in the Atkinson School Building at Eleventh and Davis Streets in Portland. The Federal Office of Education in their report of 1910 gives the following description of the school and courses offered:

The school offers complete trade training in lieu of older apprenticeship system and also offers intermediate or pre-apprentice trade training courses. Training is given in carpentry, cabinet making, machinery, pattern making, electrical construction, plumbing, gas fitting and drawing. (15, p. 248)

Students in this school who were applicants for occupation could not be less than fourteen years of age; it was strongly recommended they should have completed eighth grade grammar school.

The Benson Polytechnic School was one of the foremost schools of the country in the development of a definite course of study for a vocational high school. Benson continued to grow, although the course of study did not change materially from its original beginning until about 1930. At this time more students enrolled in the technical course than in the vocational course, but the two types of work were continued in the school.

A comparison of the two types of courses offered in the school at this time may be seen in the following statement:
The aim of the three-year vocational course is to give the student such intensive training in school as will enable him to enter a trade as an advanced apprentice; but at the same time sufficient academic and related technical work is given to make the student an intelligent workman. In the trade courses particular emphasis is placed upon the acquiring of hand skill and dexterity. (19, p. 12)

According to the statement of aim, the work in the technical department was not so vocational in nature as the terminology of this branch of the school might indicate:

The aim of the four-year technical course is to give the fundamentals of a high school education with special emphasis upon the study of the sciences, and at the same time to enable the student to acquire sufficient technical training to be of immediate assistance to him as a wage earner in a chosen vocation. (19, p. 13)

Various studies and reports concerning the curriculum have been made since 1908 when Benson was established as the Portland School of Trades. All the specialized high schools except Benson have become comprehensive high schools since the reorganization of the Portland School system in 1949. However, the status of Benson is still a problem in Portland as noted in the questions raised in the report of Superintendent Paul A. Rehmus July 1, 1950:

1. Shall Benson become a comprehensive high school?
2. Shall Benson remain primarily a technical and vocational school?
3. Shall apprentice training be given here?
4. Shall Benson become the Apprentice School and shall the present Apprentice School be abandoned?

5. Shall Benson be made into a two-year community college in which terminal courses will be offered?

After this report in 1950, the Portland School Board decided that Benson Polytechnic should continue as a technical school on the high school level. Paul A. Rehmus, city school superintendent, accordingly secured the services of the following three educators, John R. Ludington, specialist in Industrial Arts in the U. S. Office of Education; C. Kenneth Beach, Professor of Industrial Education at New York State School of Industrial and Labor Relations; and Clifford Robinson, Supervisor of Secondary Education in the State Department of Education in Salem, as a committee to conduct a study of the school. Their principal purpose was to provide "clarification of the functions which Benson High School should serve". This study was made March 21-29, 1952, and the report presented to Superintendent Paul A. Rehmus. The school is continuing to operate as the only technical high school in Portland with this report as one of its guides during the 1952-53 school year.
Portland Survey of 1912 Stressed Vocational Education

An early report which influenced vocational education in the Portland Public Schools grew out of a committee appointed at a taxpayers' meeting December 27, 1912. Six educators of national prominence submitted a 317 page report of their survey of the Portland Public School system on November 1, 1913. Many of the recommendations of the report were carried out at that time.

The recommended changes in vocational work of the 1913 report are noted in the following eleven items:

1. Primary manual arts should be introduced into the first four grades, and advanced work made much less formal.

2. The elementary course in sewing should include more garment making and a study of textiles and textile designs.

3. Cooking should begin in the sixth grade. A year of domestic chemistry and a year of household mathematics should be included in the high school course.

4. Every elementary school should have a room fitted for the teaching of music, and a teacher especially prepared for the work.

5. The School Board should employ an efficient supervisor of school gardens, with not less than three assistants.

6. Intermediate, pre-vocational schools should be organized, offering courses in commercial and industrial work, with half-day courses for part time pupils.

7. The mechanical drawing now offered should be done in the grammar grades and the free-hand drawing in those grades should, for the girls, lead into costume designing and home decorating. These two courses should be much more developed than they are in the high schools.
8. A vocational-guidance director should be appointed.

9. The commercial courses in the high schools need to be reorganized. Classes should be organized for young people employed in business.

10. There should be a first-class agricultural high school.

11. A technical high school should be established, retaining the trade courses of the present School of Trades. (30, p. 18)

This early attempt to establish vocational education in all areas materialized more in the direction of trade and industrial education than along the other lines. For example, there was more need for trade training in the industrial area of Portland than there was for a first-class agricultural high school as recommended in the report.

Rapid industrial and trade developments were taking place in Portland at this time. Trade and industrial expansion afforded many job opportunities for young people in the business and industrial establishments. This in turn created a demand for trade and industrial training to be made a part of the public school curriculum of the city.

Girls' Polytechnic School

The year 1913 marked the beginning of the Girls' Polytechnic High School when the girls of the Portland
Trade School were moved to the old Portland High School building on 14th and Morrison Streets.

The purpose of this school was the preparation of young women for home life and home making as well as for happiness and efficiency of the individual. The early course in home making was for a two-year period and included studies of food, marketing, housekeeping, labor saving, family life and personal responsibilities. Departments of sewing were both home making and trade preparatory in scope. A millinery course was established as a trade course in which the students were enrolled in the manner of an apprentice; however, there were no indenture requirements. A unit system by which girls could work at their own rates of speed enabled some to complete the course in less than two years. An elementary diploma was required for entrance.

Portland High School of Commerce

This high school was opened in September, 1915, in the old Shattuck Building, Fifth, Sixth, and Hall and Harrison Streets with pupils coming from Lincoln High School, thirty-one elementary schools of the system, and several out-of-town schools. First term enrollment was 428 and courses were salesmanship, bookkeeping,
stenography and college preparatory. The school actually grew out of the commercial department of Lincoln High School as stated in the report of the Lincoln principal for the year 1916:

The commercial department, which during the last half of the year has been housed in the old Shattuck Building at Sixth and Harrison Streets, will be entirely separate from Lincoln High School and will be organized into a High School of Commerce. The commercial department has done excellent work but it is more than likely that as a separate school of commerce its activities will be more far reaching and its usefulness greatly extended. (62, p. 32)

The purpose of Commerce High School was to concentrate in one school all students taking commercial courses at the time in the several high schools of the city. At first there was a demand for the two-year short course, but gradually the majority of students took the complete four-year course leading to a high school diploma.

This school was in harmony with a survey made in 1913 by Dr. Elwood Cubberley in which he predicted that Portland's future development would be along commercial lines.

Since the reorganization of the Portland School system under Superintendent Paul A. Rehms in 1949, Commerce High has become a general comprehensive high school and the name changed to Cleveland High.
Oregon Accepts Smith-Hughes Act

The Smith-Hughes Act, passed by Congress, February 23, 1917, providing for federal grants in cooperation with states, came just a week and a day after the Oregon legislature of 1917 had adjourned on February 17.

By the terms of the federal act a state whose legislature met in 1917 and failed to accept the provisions of the act could not share in the appropriations. Since the Oregon legislature had already met and adjourned before the act passed, there was no opportunity for the legislature to approve these provisions.

Mr. J. A. Churchill, Superintendent of Public Instruction, who had foreseen the dilemma about to take place should the federal act be adopted, advised that the legislature secure for Oregon an amendment whereby local school boards could meet the federal appropriations until the next session of the state legislature in 1919. The legislature took his advice and authorized Governor Withycombe to accept the provisions of the enabling act so that he might carry on the next phase, that of setting up the state plan as required by the federal act.

The second annual report of the Federal Board for Vocational Education, Washington D. C., 1918, gives this
account of Oregon's acceptance of the act under the original emergency status:

The Federal act was accepted by an executive document dated May 12, 1917, and the good faith of the state was pledged to make available funds sufficient at least to equal the sum allotted from appropriations made by the Federal act and to meet all conditions necessary to entitle the state to benefits of the Federal act. Five persons were appointed by the governor to act as a state board to cooperate with the Federal board. (16, p. 156)

The state board proceeded at once to draw up a set of state plans for establishing and maintaining vocational education under the Smith-Hughes Act; this was approved by the Federal board in Washington.

High schools in Oregon taking advantage of the Smith-Hughes Act the first year of its operation under trades and industries were Eugene, plumbing trade; Bend, gas engine and motor trucks; The Dalles, printing; Benson Polytechnic of Portland, machine shop; Salem, machine shop and carpentry.

Vocational education of less than college grade began an ever widening expansion in Oregon as well as nationally. Within the short span of two years, which was as soon as all the state legislatures met, all states had met the provisions of the Smith-Hughes Act.
Final Approval of Smith-Hughes Act-1919

At the regular session of the legislature in 1919, the action of Governor Withycombe in accepting the federal act became a legislative act under the title of "Acceptance of Provisions of Federal Acts". This section dealing with the legal authority of the state board for vocational education for preparing, adopting, and submitting a state plan for the approval of the United States Commissioner of Education is as follows:

(1) The State of Oregon hereby accepts all of the provisions and benefits of an act passed by the Senate and House of Representatives of the United States of America, in Congress assembled, entitled "An act to provide for the promotion of vocational education; to provide for cooperation with the states in the promotion of such education in agriculture and the trades and industries; to provide for cooperation with the states in the preparation of teachers of vocational subjects; and to appropriate money and regulate its expenditure. (Sec. III-601, Oregon Compiled Laws, Vol. 8) (31, p. 616)

First State Plan for Trade and Industrial Education-1917

Provisions for trade and industrial education set forth in the original state plan give a picture of the early beginning of this work. This cooperative arrangement between the Federal Board and the State Board of
Vocational Education indicated the direction vocational education was to take.

During the intervening thirty-six years, from 1917 to the present time, the state plan has been the instrument by which the State Board of Vocational Education prescribes the kind of schools it proposes to promote with the aid of federal funds. The state plan has been flexible and has continually changed with the times to keep pace with changing needs and economic conditions. During the first five-year period, 1917-1922, the state plan was revised and resubmitted annually. In 1922 the Federal Board changed this policy and asked the state of Oregon, like all other states, to prepare and submit its plan for a five-year period. It was further provided that a state could propose an amendment to its plan at any time and this would be received and accorded the same consideration for approval it would have been given had it been a part of the original plan. Oregon's original plan has remained the basic framework from its beginning in 1917. The state's plan found in Bulletin No. 1, Oregon State Board for Vocational Education, December, 1917, states:

1. All schools in the state of Oregon receiving Federal aid as provided under the Smith-Hughes Act must be under public supervision and control.
2. Funds received under the provisions of the Smith-Hughes Act must be applied to salaries of trades and industrial subjects.

3. Courses must be established and maintained under general regulations prescribed by the state board for Vocational Education with the approval of the federal board.

4. The controlling purpose of all vocational education in schools receiving federal aid as provided in the Smith-Hughes Act must be to fit the pupil for profitable employment.

5. The education offered in schools in the state of Oregon receiving federal aid under the provisions of the Smith-Hughes Act must be of less than college grade.

6. Courses offered in schools receiving federal aid must be designed to meet the needs of persons over fourteen years of age who are preparing for a trade or industrial pursuit or who have entered upon the work of a trade or industry.

7. The local community must provide the minimum plant and equipment prescribed by the state board for vocational education as approved by the federal board.

8. All schools in the state of Oregon receiving federal aid as provided by the Smith-Hughes Act must expend annually for the maintenance of such schools and courses, the minimum amount prescribed by the state board for vocational education as approved by the federal board.

9. Schools or departments offering vocational courses for persons who have not entered upon employment must provide that at least one-half of the time of instruction shall be given to practical work on a useful or productive basis.

10. Each year of the vocational course or courses offered in schools or departments receiving federal aid as provided by the Smith-Hughes Act must provide not less than thirty hours of instruction per week for a period of not less than thirty-six weeks. (32, p. 24)
Inasmuch as local conditions and requirements of the trade and industries program in the state of Oregon are so varied, it has been impossible to name a minimum amount that shall be expended for equipment and maintenance for vocational courses in the trades and industries.

For the above reason the matter of equipment and maintenance is provided for in the following general statement:

The local community shall provide buildings or rooms, laboratories, shops, classrooms, equipment, tools, and supplies deemed necessary by the state board for vocational education and approved by the federal board for successfully carrying out the instruction contemplated in such vocational courses as are offered in these schools.

The local community must expend annually a minimum amount prescribed by the state board for vocational education and approved by the federal board for the purpose of keeping the plant and equipment in repair also the equipment, tools, and apparatus up to a standard deemed necessary for successful work and instruction in the trades and industries classes. (32, p. 24-25)

In a day school or department, the course of study provided for courses in trades or industries of one, two, three, or four years in length. It also provided that not less than one-half of each pupil's time must be devoted to industrial or trade work, the controlling purpose of which is to "fit for useful employment".

The course of study also provided for at least six hours per day or 360 minutes. At least one-half of this
time, 180 minutes, was to be devoted to practical shop work on projects that have a marketable value. The remainder of the time of three hours, 180 minutes, might be devoted to the study of related subjects, such as drawing, design or science.

It was suggested that since one-half of the time was devoted to practical work on a useful or productive basis, thirty to thirty-five per cent of the time be devoted to related subjects and the remainder be devoted to such subjects as English, civics, industrial history, accounting or industrial economics in order to make up a well-balanced course.

All courses of study in day schools, part-time classes or evening classes were to be submitted for approval to the state board for vocational education and were also to comply with the requirements for the federal board.

In part-time trade or industrial classes all courses provided that not less than 144 hours per year of the pupil's time should be devoted to instruction in subject matter complementary to the trade or industry in which the pupil was employed.

In these classes the plan of short unit courses was to be followed in arranging courses of study.

In all evening classes in trade or industrial
subjects the course of study was to be arranged so as to relate to the day employment of the pupil who must be at least sixteen years of age and employed in some gainful occupation.

Related subject matter could be only such subjects as would be accepted by the State Board for Vocational Education as being inherent in the trade or industry taught in the school and which enlarged the trade knowledge of the pupil. For example, in a school in which printing is taught, English for printers, art in printing, such as the layout of a paper, proper margins, title pages, cover pages; science as related to printing; the mathematics of printing; and hygiene of the trade would come within the meaning of the term "related matter".

The first state plan provided that advisory boards be appointed by the State Board of Vocational Education in cooperation with the local school boards. Such a local advisory board would be composed of one school official and an equal number of employees and employers. The members of this board were to serve without pay and their duties were as follows:

1. To visit and inspect classes pursuing the vocational courses which they are authorized to represent.

2. To counsel and advise with the local school board, or board of control, upon the problem of making the courses they represent as practical as possible.
3. To act with the representatives of the state board for vocational education and assist them in their inspection of the management of vocational classes and the methods of instruction pursued therein.

4. To submit annually a written report to the local school board, or board of control, and to the state board for vocational education dealing with the vocational courses maintained in the school, and setting forth their observations and any recommendations that they may desire to make for the future conduct of such courses. (32, p. 27)

Local advisory committees, as they are now called, have become a definite part of the trade and industrial education program of Oregon. They have helped create local interest and interpret the program to their communities. The early provision for these boards in the original state plan was largely of a permissive nature.

State Plans, Bulletins and Reports of the State Board For Vocational Education and Other Administrative Groups 1917-1950

The Smith-Hughes Act of 1917 provided minimum standards for the promotion of trade and industrial education. Each state was required to prepare and submit a plan to the Federal Board of its organization, administration and operation of the vocational programs within the state. A state could not set lower standards than those provided in the act. There were no limits, however, to how far above the minimum standards the state
might choose to set its program. The lack of uniformity has produced many different practices during the thirty-six years of existence. It is presumed that the differences reflect conditions peculiar to each state. This pattern is therefore similar to that of our entire public school system, which is essentially that of a state system handed down to local districts. The federal government's part in vocational education is that of cooperation, promotion and assistance.

A suggestive outline had been prepared by the Federal Board which the state might use as a guide in preparing its own plan. Since the Oregon plan was prepared according to this guide, there was little difficulty experienced in getting it accepted. It was provided in the plan that when once accepted the state was required to operate accordingly. A state was not permitted to change its standards at will even though they might be above those required by the federal act. A state was required first to submit a proposal for a change to the Federal Board for approval. The original Oregon plan was submitted by the state board through J. A. Churchill, Superintendent of Public Instruction, to the Federal Board, and adopted December 18, 1917, together with the local plans for administering the program. Much of
the detail work of preparing plans, outlining policies and preparing a tentative budget was done by Frank H. Shepherd who was then associate professor of industrial arts at Oregon Agriculture College. Mr. Shepherd also served as assistant state director and as state supervisor of trade and industrial education along with his college work.

These general regulations were printed in Bulletin No. 1 under the direction of J. A. Churchill. The succeeding plans, together with revisions and descriptive reports from 1917 to the present time, present a chronological history of the Oregon program. It should be mentioned that the Oregon plan provides for all phases of vocational education in the state and is not limited to consideration of trade and industrial education only. For the purpose of this thesis only those phases of the plan which are general and those parts which specifically deal with trade and industrial education have been used.

Bulletin No. 1, State Board of Vocational Education (published as part of the original plan of Oregon), 1917

This first bulletin provided for the general regulations of the State Board for Vocational Education and for the establishment and maintenance of vocational schools as provided by the Smith-Hughes Act. These
regulations were adopted by the State Board for Vocational Education, December 23, 1917. The bulletin defines vocational education as a means of education, the controlling purpose of which is to fit for profitable employment. Industrial education is defined as a means of all forms of vocational education which fit for the trades, industries, and wage earning pursuits including the occupation of girls and women carried on in stores, factories, work shops, and other establishments.

This bulletin was printed and circulated throughout the state with the purpose and hope that there would be stimulated a wide interest in industrial education which would assist in developing the industries of the state. This early bulletin stressed the fact that this was a state plan which required the state to do certain things where federal money was to be used. The central purpose of the early federal matching money was to stimulate and promote the vocational program of Oregon; the bulletin aimed to carry this message to the local school districts.

Bulletin No. 2, Oregon State Board for Vocational Education-1919

The original plan for the work and administration of the Smith-Hughes Act issued in December, 1917, continued in operation until June, 1919. At this time,
revised plans for the fiscal year beginning July 1, 1919, and ending June 30, 1920, were submitted by the State Board to the Federal Board for approval.

Bulletin No. 2, issued June, 1919, reprinted in detail all the early proceedings, letter of transmittal, and act of acceptance of the Oregon legislature. It included members of the first State Board for Vocational Education and its executive officers for Oregon.

In Bulletin No. 2 the state director of vocational education suggested courses of study and procedures to be followed in the various courses and schools for trade and industrial education. Classes and schools included were evening industrial schools and classes, part-time schools and classes, day trade schools, and general industrial schools for cities and towns of less than 25,000 population.

Bulletin No. 3, State Board for Vocational Education, 1919

The third bulletin was prepared by the new state director, Newton Van Dalsmen, who had been appointed August 22, 1919, to replace Frank H. Shepherd who had served as assistant director under J. A. Churchill, state superintendent of public instruction. This bulletin dealt largely with the Oregon School Law for
1919 which provided for establishing part-time schools in connection with the new compulsory education law. An analysis of the law was given by the state director, Newton Van Dalsmen, and certified by George M. Grown, attorney general. A similar law had recently been put into effect in the state of New York and it was thought that this new law would cause considerable expansion of trade and industrial education in Oregon as a means of meeting the needs for young people who would be required to attend school under the new law. Later, it was discovered that this new compulsory part-time law applied only to pupils who had not completed the eighth grade; consequently, there was no large increase of pupils at the high school level as had been anticipated.

**Bulletin No. 4, State Board of Vocational Education-1920**

This bulletin stressed again the cooperative features in carrying out the Smith-Hughes Act. The plans in this bulletin, issued November 11, 1920, and approved by the Federal Board, December 16, 1920, restated most of the provisions of the earlier plan.

Considerable space was devoted to courses of study in the various vocational fields for each of the four years of high school. The Smith-Hughes Act, known as
Public Law No. 347, Sixty-fourth Congress, S. 703, was presented in detail together with amendment Public Law No. 64, Sixty-fifth Congress, H. R. 5949. These amendments in the Smith-Hughes law provided for a new feature, that of the state treasurer as custodian of the money allotted to the state under this act.

Bulletin No. 5, Oregon State Board of Vocational Education-1922

Printed as the second biennial report to the thirty-second legislative assembly in 1923, this bulletin was prepared in accordance with the requirements of Section 503, Chapter 6, of the Oregon school law. The Oregon law provides for a report of the State Board for Vocational Education biennially to the legislature, the first biennial report having been made in 1919. While this report was published as a separate bulletin, it also incorporated the report of the state superintendent of public instruction. Reports by the state superintendent's office on vocational education are made to the Federal Board annually. The reports of the state superintendent's office for the years 1918 and 1920 were included in the biennial reports issued in those years.

Mr. A. R. Nichols had been appointed in February, 1921, to supervise the work in trade and industrial
education. In these early stages of its development he devoted one half his time to such supervision; the other half was devoted to teacher training in industrial subjects at Oregon State College.

In 1923 Mr. E. E. Elliott, who had been director of the state program since September, 1920, reviewed the history of the program up to that time.

Mr. Elliott has this significant statement to make concerning the over-all progress of the vocational education program in Oregon up to 1923:

In making a resume of the work of the board for the closing biennium it is gratifying to note that substantial progress has been made. There are certain favorable conditions to be mentioned which are fully as significant as any statistical summary. Any new popular movement must pass through a period of experiment and finally secure the approval of those in whose interest it has been organized. The vocational movement has been progressing through such a period of criticism but has now reached a development in which its value and position are fairly recognized. This is evidenced by the requests constantly being made for the establishment of vocational departments and classes in spite of the insufficiency of funds to meet all such requests and by the fact that vocational departments have been installed by school boards without any assurance of financial aid. It is also shown by the recognition granted graduates of agricultural departments of high schools who are offering credits in vocational subjects on applying for entrance to our colleges and universities. As further evidence of approval note should be made of the better understanding and feeling that prevails in educational circles, as well as in the communities where this type of education has been inaugurated. As time
goes on it is reasonable to expect that this condition will continue to improve. It is not too much to expect that the introduction of vocational education is certain to affect profoundly the entire scheme of secondary education by modifying the courses of study pursued and the methods of instruction followed. (35, p. 4-5-6)

This report shows that trade and industrial education under the federally reimbursed plan, especially in the larger centers in Oregon, was being firmly established in the public schools.

Centers conducting day-trade classes during 1921-1922 with departments filled to capacity were as follows:

<table>
<thead>
<tr>
<th>School</th>
<th>Type of School</th>
<th>Length of Course</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eugene</td>
<td>Building Trades</td>
<td>Two years</td>
</tr>
<tr>
<td>Eugene</td>
<td>Building Trades</td>
<td>Two years</td>
</tr>
<tr>
<td>Pendleton</td>
<td>General Industrial</td>
<td>Two years</td>
</tr>
<tr>
<td>Salem</td>
<td>Machine Shop</td>
<td>Three years</td>
</tr>
<tr>
<td>The Dalles</td>
<td>Printing</td>
<td>Three years</td>
</tr>
<tr>
<td>Grants Pass</td>
<td>Auto Mechanics</td>
<td>Two years</td>
</tr>
</tbody>
</table>

(Eugene maintained two separate classes in Building Trades) (35, p. 12)

The report shows classes in industrial subjects designed to meet the requirements of the Oregon part-time law as well as the specifications of the Smith-Hughes Act with enrollments as follows:
<table>
<thead>
<tr>
<th>Place</th>
<th>Subject taught</th>
<th>Enrollment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salem</td>
<td>Trade Millinery</td>
<td>7</td>
</tr>
<tr>
<td>Salem</td>
<td>Auto Mechanics</td>
<td>26</td>
</tr>
<tr>
<td>Dallas</td>
<td>Mechanical Drawing</td>
<td>8</td>
</tr>
<tr>
<td>Portland</td>
<td>Interior Decorating</td>
<td>22</td>
</tr>
<tr>
<td>Portland</td>
<td>Carpentry</td>
<td>97</td>
</tr>
<tr>
<td>West Linn</td>
<td>Carpentry</td>
<td>9</td>
</tr>
<tr>
<td>Corvallis</td>
<td>Roof Framing</td>
<td>8</td>
</tr>
<tr>
<td>Mill City</td>
<td>Auto Mechanics</td>
<td>8</td>
</tr>
<tr>
<td>Mill City</td>
<td>Electricity</td>
<td>10</td>
</tr>
<tr>
<td>Mill City</td>
<td>Acetylene Welding</td>
<td>1</td>
</tr>
<tr>
<td>Roseburg</td>
<td>Auto Mechanics</td>
<td>9</td>
</tr>
<tr>
<td>Astoria</td>
<td>Marine Motors</td>
<td>26</td>
</tr>
<tr>
<td>Ashland</td>
<td>Dressmaking</td>
<td>141</td>
</tr>
<tr>
<td>Ashland</td>
<td>Millinery</td>
<td>126</td>
</tr>
<tr>
<td>Prineville</td>
<td>Millinery</td>
<td>16</td>
</tr>
<tr>
<td>Independence</td>
<td>Millinery</td>
<td>10</td>
</tr>
<tr>
<td>Phoenix</td>
<td>Millinery</td>
<td>7</td>
</tr>
<tr>
<td>Salem</td>
<td>Sewing and Dressmaking</td>
<td>177</td>
</tr>
<tr>
<td>Salem</td>
<td>Millinery</td>
<td>143</td>
</tr>
<tr>
<td>Oregon City</td>
<td>Sewing</td>
<td>61</td>
</tr>
<tr>
<td>Oregon City</td>
<td>Millinery</td>
<td>64</td>
</tr>
<tr>
<td>Oregon City</td>
<td>Nutrition</td>
<td>7</td>
</tr>
<tr>
<td>Salem Heights</td>
<td>Sewing and Millinery</td>
<td>57</td>
</tr>
<tr>
<td>Salem Heights</td>
<td>Nutrition</td>
<td>12</td>
</tr>
</tbody>
</table>

Part-time general continuation schools were conducted as follows:

- **Mill City**: General Continuation Subjects and Auto Mechanics - 20
- **Salem**: Continuation Subjects and Practice - 15
- **Portland**: General Continuation Subjects - 205
- **Astoria**: General Continuation Subjects - 22

**Total Enrollment**: 1052
Evening schools which were intended to give part-time instruction of an advanced character during the year 1921-1922 were the following:

<table>
<thead>
<tr>
<th>Place</th>
<th>Subject Taught</th>
<th>Enrollment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salem</td>
<td>Automotive Ignition</td>
<td>19</td>
</tr>
<tr>
<td>Portland</td>
<td>Mechanical Drawing</td>
<td>90</td>
</tr>
<tr>
<td>Portland</td>
<td>Machine Shop</td>
<td>30</td>
</tr>
<tr>
<td>Portland</td>
<td>Architectural Drawing</td>
<td>35</td>
</tr>
<tr>
<td>Ontario</td>
<td>Garment Making</td>
<td>10</td>
</tr>
<tr>
<td>Enterprise</td>
<td>Sewing</td>
<td>12</td>
</tr>
</tbody>
</table>

The total enrollment in day-trade classes, general continuation classes, and evening schools for 1921-1922 was 1,510.

Third, Fourth and Fifth Biennial Reports Included as Part of the Report of Superintendent of Public Instruction, 1923-1929

The third, fourth and fifth biennial reports of the State Board of Vocational Education covering the six-year period 1923-1929 were included as part of the report of the state superintendent of public instruction. All other reports from 1917 up to 1953 have been printed as separate publications.

The third report for the biennium 1923-1924 entitled "Vocational Education" was included as one page in the twenty-sixth biennial report of the state superintendent
of public instruction to the thirty-third legislative assembly and printed in 1925. This report tells of the cooperative arrangements between the Portland school board, the Association of Building Instruction and the State Board for Vocational Education in establishing the apprenticeship school in Portland for the benefit of apprentice in the building trades.

Both day-time and evening classes were offered to workmen who wished to improve their technical knowledge of their trade.

The fourth biennium report of the State Board for Vocational Education for 1925-1926 was included in the twenty-seventh biennial report of the state superintendent of public instruction to the thirty-fourth legislative assembly. This report was printed in 1927 under the title of "Vocational Education". The section on trade and industrial education in this report tells of the expansion of trade and industrial education during the two years 1925-1926. The largest development during the two-year period was in the city of Portland under the cooperative arrangements worked out between the State Board and the Board of School District No. 1. Under this arrangement Portland School District No. 1 assumed the responsibility for the promotion of the
vocational program in Portland while the State Board gave such assistance as might be required.

The fifth biennium report for 1927-1928 was included in the twenty-eighth biennial report of the state superintendent of public instruction to the thirty-fifth legislative assembly. This report listed the classes which had been conducted in the field of industrial education during each year of the biennium period. In 1926-1927 enrollment in all-day classes was 178. During 1927-1928 enrollment in all-day classes increased to 218. In evening classes in 1926-1927 enrollment was forty-nine. In 1927-1928 enrollment in evening classes was 472. Part-time classes had an especially large increase during the second year of the biennium period. During the 1926-1927 period enrollment in part-time classes was 210. In 1927-1928 enrollment was 638. The total in all classes was 1,328. The report states that many of the larger towns were receiving aid in some type of industrial training. While the largest portion of this work centered around Portland, the amount of reimbursement was about evenly divided between Portland and the rest of the state.
Sixth Biennial Report of the State Board for Vocational Education, 1929-1930

This report tells of the development of trade and industrial education under the Smith-Hughes Act in Oregon from its beginning to June, 1930. While the official date for the beginning of the program is 1917, figures of students trained in the schools could not be reported until 1918, the year after they had taken the year's work.

Under the supervision of E. E. Elliott, state director for vocational education, and A. R. Nichols, state supervisor for trade and industrial education, the program had grown continuously from its beginning. Considerable progress had been made, especially in the development of the program in the apprenticeship school in Portland.

In the fall of 1926, O. D. Adams was appointed state supervisor of trade and industrial education, replacing A. R. Nichols. A year later in July, 1927, upon the resignation of Mr. Elliott, Mr. Adams was appointed state director.

Trade and industrial education classes in 1918 totaled six in Oregon with an enrollment of 208 students. At the close of the fiscal year in June, 1930, there
were 1,960 enrolled in trade and industrial education classes, indicating the growth in yearly enrollment over the twenty-two year period. The total for the state receiving training in the field of trade and industrial education for this twenty-two year period up to 1930 reached a total of 16,683 persons.

Trade and industrial education specifically and vocational education in general had made enormous strides in this twenty-two year period in Oregon, but they were destined to develop even more widely and extensively during the next decade despite the depression years which tended to slow the development. During the depression years of the 1930's there was less need for trained people in industry and the trades; however, in Oregon enrollment in new part-time classes in mining, fruit packing and foremanship training showed a steady increase in the trade and industrial education program.

This report saw the first mention of part-time classes which had been started at Roseburg and Dallas. General trade courses offered in Roseburg included auto mechanics, battery and radio shop, lumber plant, retail sales, farm produce and shop, service station, auto ignition, plumbing, printing and electricity. The first phases of this work had been organized four years before
in Roseburg.

When first organized, the plan of having diversified occupational training in one class did not fit the federal plan. The idea did become accepted, however, as discussed in Chapter IV under a more complete description, and has since spread over the entire United States as one of the outstanding features of the present trade and industrial education programs.

The Seventh Biennial Report of the State Board for Vocational Education 1931-1932

The State Board for Vocational Education in 1932 consisted of the Governor, the Secretary of State, and State Superintendent of Public Instruction as ex-officio members--four other members appointed by the Governor represented agriculture, employers, labor, and home interests, each for a term of four years. The seventh report was transmitted to the legislature by C. A. Howard, Superintendent of Public Instruction, as executive officer of the board.

The report stressed the purposes of the Board as promotion, organization, and supervision of vocational education classes in the fields of agriculture, home economics, and trade and industrial education. The point was made that the work was carried on in cooperation with
the Federal Board for Vocational Education and the secondary school system of the state.

Under the heading, "Accomplishments in Trade and Industrial Education", the following summary of enrollment in the various types of classes gives a picture of the program in the state at this time.

Enrollment in trades and industrial education classes for the two-year period, 1931 and 1932, in high school and post high school programs were:

1139 boys enrolled in high schools.
543 enrolled as apprentices in trades.
2541 enrolled in evening classes.
536 enrolled in teacher-training classes.
295 enrolled in fire training classes.
64 enrolled in forest training classes.

The types of trade and industrial education classes in Oregon in 1930 consisted of the three main types (a) trade preparatory classes held in conjunction with the high schools; (b) trade extension classes carried on in the schools and shop; and (c) the cooperative type, in which half time is spent in school and half time on the job.

The last section of the bulletin contained the report of the State Apprenticeship Commission which consisted of the Senate Bill 192, providing for the training of apprentices, passed by the thirty-sixth legislative assembly. This is a permissive type of legislation
which provides for the schools to cooperate with the State Apprentice Commission, the State Board for Vocational Education and employers of apprentices in providing the necessary training classes for apprentices. This act has continued to the present time in practically the same form since its passage in 1932.

**Eighth Biennial Report of the State Board for Vocational Education 1932-1934**

A new development of importance during the two-year period from 1932 to 1934 in trade and industrial education was the allocation of money in the Federal Six-Point Emergency Relief Program. This program enabled the State Board for Vocational Education to promote additional classes of the trade extension type that would never have materialized because of the low financial situation of the state. A boost in funds by the federal government at this time enabled Oregon to have a continued increase in trade and industrial education enrollment which might otherwise have resulted in a decrease during these depression years.

Other impetus on the trade and industrial education program during these years was the state-wide apprenticeship training program which was reorganized to conform to national apprenticeship training standards. The
New types of classes, indicating the ingenuity of the state supervisors, originated during these times of depression. Classes in placer mining were carried on in three centers of the state at Baker, Grants Pass, and Medford. More training courses for girls and women in industrial pursuits were offered in such courses as costume designing, machine operating, designing, millinery, household service, garment making, and lunch-fountain service.

The trade and industrial section of the vocational education department conducted a number of other schools and classes which met the requirements of the state plan but were not reimbursed from federal funds. These were evening classes in various centers of the state through the use of the federal emergency relief funds. Classes in this area were held in the Benson Polytechnic High School, the Girls’ Polytechnic High School, of Portland, the State Fire Chief School, and the U. S. Forestry Service.

Ninth Biennial Report, State Board for Vocational Education 1934-1936

The growth of industrial education enrollment in Oregon over a period of eighteen years is graphically pictured in the 1934-1936 biennial report. At the end
of the school year in 1918, 414 persons had been trained in the state program. By the end of the 1936 school year this total had reached 19,753 persons—trained during the two-year period of 1934-1936. Of this number trained in all the phases of vocational education in Oregon, almost half, or 8,060, were enrolled in the trade and industrial education classes during this biennium.

A summary of the accomplishments in trade and industrial education is given in the report as follows:

$25,728 additional allocated by Works Progress Administration to a mining school at Grants Pass for training in the mining industry.

127% increase in enrollment of trainees in trade and industrial classes.

1,565 apprentices receiving training in trade and industrial education.

70 different occupations represent and indicate the scope of the training program during the biennium.

14 industrial conferences held for the training of instructors in schools and plants.

$10,000 is the estimated value of equipment obtained from the United States Navy and Army such as seven machine lathes, one shaper, drill press, one milling machine, three sets electric welding equipment, and miscellaneous aviation equipment.

4 complete surveys for vocational education made in Portland, The Dalles, Tillamook, and McMinnville.

5 training classes conducted in cooperation with Public Works Administration at Bonneville dam.

1 training conference for fire chiefs in cooperation with League of Oregon Cities, State Fire Marshal and State Fire Chiefs' Association.

18 publications issued by the trade and industrial service.

8,060 trainees enrolled in trade and industrial classes during the biennium.
2 joint conferences held with instructors of Oregon and Washington cooperating.
1 Salem boy elected National Vice-president of Future Craftsmen of America.
2,957 actual placements on jobs have been made in two years with estimated earnings of $335,270.
7 contacts made with employers for placement have produced four jobs for four Oregon persons, it is estimated. (42, p. 16)

An Overview of Vocational Education in Oregon for the Biennium 1936-1938. (tenth biennial report)

Printed as a pictorial four-page bulletin, the 1936-1938 biennial report gave an interesting picture and summary of vocational education in Oregon over the first twenty years under the Smith-Hughes Act. State wide vocational activities in cooperation with other agencies, and local school districts, the federal authorizations by the Smith-Hughes, George-Ellzey, and George-Deen Acts, and the Federal Rehabilitation Act of 1920 as amended by the Social Security Act were explained. It was noted that during the biennium, 1936-1938, the federal government contributed $4.38 for every dollar expended for vocational education by the state government.

Biennial reports to the state legislature of Oregon by the State Board of Vocational Education, as well as other reports and records, indicate a very high degree of cooperative effort between the various federal,
state, local, school and other agencies in the administration of this program in Oregon.

The success and smooth working relationships in the development of vocational education in general and trade and industrial education in particular may be attributed to the directors and supervisors who have handled the program throughout the years since its inception. One of the most able leaders in the development of the Oregon program during the years from 1927 to 1940 was Mr. O. D. Adams. Besides serving as state director for all phases of vocational education in Oregon, he carried on the teacher training program in trade and industrial education. During the 1936-1938 biennium, strides in the development of all phases of vocational education were made under his direction.

In the trade and industrial education field 7,413 persons were enrolled in the various classes. Public service training under trade and industrial education included enrollments of 511, janitors' schools; 219, finance classes; 145, peace officer courses; 367, firemen's schools. School District No. 1, Portland, alone enrolled 4,096 in trade and industrial education classes. A series of foreman training classes in Portland covered 27 various industries. General continuation and day
trade schools were conducted in Eugene, Salem, and Portland with a combined enrollment of 2,124 boys and girls in three cities. In day trade units in other centers of the state 765 boys were trained in auto mechanics, machine shop, carpentry, printing, plumbing, sheet metal, foundry, cabinet and mill work, and general industrial courses. Modern shop buildings were completed in Salem and Pendleton, and shop improvements were made in other cities. Related instruction in 73 occupations was offered to 798 apprentices throughout the state. Twenty-eight occupational conferences were held, 1,626 persons attending. The Eugene Vocational School, offering training in trade and industry, business, homemaking, and agriculture, was established in its own building February, 1938.

Eleventh Biennial Report of the State Board for Vocational Education in Oregon For the Period June 30, 1938 to July 1, 1940

The foreword of this report, written by O. I. Paulson, acting state director, presented a cross section of the work carried on by the Oregon State Board for Vocational Education. It also clearly indicated how closely vocational education touched the economic life of the individuals and affected industry and the community. It
pointed out that the vocational education program serves both youth and adults in many ways and that it undertakes to promote the civic and vocational welfare of Oregon citizens by providing courses of study and training to fit them for useful employment. In addition to the regular education program it was noted that the state board was cooperating with the federal government in training workers for industries essential or allied to national defense.

Oregon was one of the first states to inaugurate emergency training classes of this type under the supervision of the trade and industrial education department. This was the first report issued under the supervision of O. I. Paulson, acting director, who was soon to become the state director and to be responsible for the war-production training program. Beginning with this report and continuing with each of the biennial reports up to the present time, O. I. Paulson, as state director, in his reports has pointed out the cooperative features which are a part of his philosophy in administering this program in Oregon. During his years of tenure he has been highly successful and has provided services to the state through carefully planned working relationships among the federal, state, and local agencies.
His report shows vocational education services located in seventy-eight centers in Oregon during the 1938-1940 period. This was a seven per cent increase over the 1936-1938 biennium. The increase for the twenty-two year period of 1918 to 1940 was 910 per cent. The trades and industries program, especially, was expanding. New part-time cooperative units were established at Marshfield and Albany. Local apprenticeship commissions had been enlarged to include alternate members. The activities of the Oregon Junior Safety Congress had been increased with boys from fourteen chapters participating.

The Eugene Vocational School, started February, 1938, was well beyond the experimental stage with an enrollment growth over 400. New shops housing automotive, aviation and welding courses were already becoming overcrowded. Oregon had received its first allotment of $20,000 for defense training as its portion of the fifteen millions applied by Congress, June 23, 1940, for defense training. In anticipation of this enactment there were four training centers immediately in readiness with an enrollment of over 400 trainees. Total enrollment for trades and industries in the state was 6,294.
The trades and industries program was designated to become an integral and important part of the vocational education program in the state of Oregon, as most superintendents of local school districts became familiar with it. The section on increased enrollment has the following comment:

The heaviest increase in enrollment was reported in the part-time cooperative courses in the trades and industries program. This may be attributed to two factors; to the general increase in employment conditions, and to the fact that as the program becomes better known, it becomes more popular.

The enrollment figures also include 485 trainees for the emergency courses under the national defense program, which started June 10, 1940, and ran just 21 days during the biennial period accounted for herein. (44, p. 11)

State Plan for Vocational Education for Five-Year Period July 1, 1937 to June 30, 1942

This five-year plan, like those issued previously, set forth the general directions for administration and supervision of the vocational education program for the state of Oregon. This plan provides that the administration of vocational education in Oregon be under the direction of the State Board of Vocational Education and the executive officer of the State Board for Vocational Education. The executive officer is the state superintendent of public instruction who devotes not more than
twenty per cent of his time to this program. The plan provides that the director of vocational education, employed by the state board, will devote not less than twenty per cent of his time to the general direction of the state program.

The salary and necessary travel expense of the state director may be paid in part from the George-Deen funds when properly matched by state or local funds for that portion of his time devoted to the duties as state director.

Qualifications of the state director call for five or more years of full time experience as state supervisor or a combination of experience in both supervision and teacher training in an approved program of vocational education. Technical education is required at least equal to that of a state supervisor in any one of the three major fields of vocational education.

The plan sets forth the general conditions under which a school or class will be approved to receive aid under the Federal Vocational Acts, and the state acts supplementary thereto. (43, p. 5)

Classes authorized under this five-year plan were carried forward from the previous plans. In addition, however, the George-Deen Act, which had become effective
July 1, 1937, made it possible to organize short unit programs. The minimum length of time for these short unit courses under the George-Deen Act was ten hours. The Smith-Hughes Act had provided a minimum length time of 144 hours. One-third of all federal and state money applied was set aside as reimbursement for these part-time courses. There was also additional reimbursement for full-time day programs. The new plan, as before, specified in detail the basic requirements of trade and industrial education for teachers, classes, and general conduct of the program under both the George-Deen and Smith-Hughes Acts.

**Vocational Training for War Production 1940-1945**

Oregon took an early lead in establishing war training programs for workers and did not wait for funds to become available on a national basis. The program was established in four centers in Oregon on June 10, 1940. Funds were not available until July, 1940. The need for training workers for war production was discovered very early, especially by aircraft officials. Over 300 trainees had been enrolled in this craft by June 30 in the four centers of Eugene, Portland, Salem, and Pendleton when federal funds were authorized by Congress.
By September, 1940, classes were started in Astoria, Oregon City, and Bend, enrollment having increased to 1,500. The State Board of Vocational Education administered the program in cooperation with local school districts. Both the state board and the local school districts adopted an all-out assistance policy during the four years and ten months of operation. A total of 266,610 persons received training in 66 different occupations in Oregon. The training was primarily for ship building and aircraft construction with cantonment construction being given emphasis during a period. The program was first known as Vocational Training for National Defense Workers; the name was officially changed to Vocational Training for War Production Workers in July, 1942. (47, p. 24-26)

In order to participate in this program and receive federal funds, it was necessary for the State Board of Vocational Education to submit a separate state plan to the United States Office of Education outlining policies and procedures for its operation. During the early stages of development the program was handled by the regular vocational supervisory staff, and the trainees during the first year were largely for out-of-state
Boeing Aircraft, Seattle, Washington, received 962 trainees in one month in 1941 from Oregon schools. As the tempo of the World War II increased, defense, lend lease, and war production contracts began coming to Oregon with particular emphasis on ship building. With industry expanding rapidly, skilled labor shortage in all the crafts became critical. Job orders were given the State Division of Vocational Education from the United States Employment Service, based upon skilled labor needs of this industry. The state office in turn issued quotas to the various local centers and kept the employment service informed of the progress being made in organizing classes to fill these quotas.

By the early part of 1942 the schools of Oregon through their combined efforts were turning out as many as seventy men per day from the welding classes alone. This was done in spite of certain difficulty experienced in securing welding rods and acetylene gas for their schools.

By April, 1942, the first women welders for shipyards in Oregon were being trained. By July, 1942, the training program had just passed its peak. In that month 8,242 persons were in training in 574 classes in 27
centers of the state—14 per cent of these trainees by this time were women. From July 1, 1942, to June 30, 1944, 144,364 persons had received training, twenty-five per cent women. In the month of July, 1944, 3,645 persons were enrolled in war production training in Oregon. The peak of employment in war industries in the area had been reached. The supply of workers which could be shifted from farm, home, and un-essential activities to war industries had been practically exhausted; training of war workers had become more centralized in and around the large war plants. By this time over eighty per cent of the program was being conducted in the Portland area.

As the supply of workers became scarce, people were hired and paid while training. This was a new method of securing man power in the industrial recruitment program which had first started in the ship building industry for welders in 1943. As activities became more centralized around war plants in the last stages of the training program, emphasis in training shifted from pre-employment to supplemental training. The trend was toward training for persons on their own time (a) to secure better or higher paid war-time jobs (b) to meet the increased demand of their present job as conditions
changed.

The principal source of pre-employment training during the last year of the program was high school students in their last year of school who would be available in industry when they finished school.

Close relationship existed throughout the entire training between the local school administration units and the war production training programs. The thirty-two participating districts provided a total of ninety-five different public schools and local shop facilities during the span of the program.

The school districts usually employed a vocational coordinator to operate the program; however, in ten of the centers the entire responsibility of organizing and supervising the work was assumed by the superintendent of schools. The writer, as superintendent of Forest Grove High School, supervised one of these centers.

The following chart lists the towns and cities of Oregon where the school districts conducted war production training programs under the state and federal plan during 1940-1945:
Twelfth Biennial Report of the State Division of Vocational Education in Oregon

At the end of the first year of the two-year period, 1940-1942, covered in this report, legislative action produced a change in the plan of operation by consolidating the State Board for Vocational Education with the State Board of Education.

State Boards Merged: Administration of the Vocational Education Acts was carried on by the State Board for Vocational Education during the fiscal year 1940-1941. The Board was made up of three ex-officio members; the Governor of the State, the Secretary of State, and the State Superintendent of Public Instruction, and four representative members: one for agriculture, one for home interest, one for employers, and one for employees. This Board had administered vocational education since 1918 when the federally-aided vocational education program was inaugurated in Oregon. On July 1, 1941, the State Board of Vocational Education became the State Board of Education through legislative action. (45, p. 9)

Under the new arrangement the work of the State Board for Vocational Education is carried on by the Division of Vocational Education. This plan has
continued up to the present time. The report, covering the 1940-1942 biennial period, was issued under the direction of O. I. Paulson, who had become state director. During these two years vocational education continued to grow in scope and service. The coming of the war emergency had increased public realization of the need for vocational occupational training. The value of training of skilled workers, former business men, and homemakers had been brought in focus by the headlines of the scarcity of skilled persons.

The additional work of war-production training was developed in cooperation with the United State Office of Education to give training to those entering war industries. The extent of the cooperation with other agencies was evidenced by the large number who actively took part. A paragraph from the foreword written by O. I. Paulson names some of these agencies: State Industrial Accident Commission, State System of Higher Education, Oregon State Police, United States Employment Service, United State Office of Education, State Labor Commission, State Apprenticeship Commission, and the many participating school districts.

Close working relationship which was started on an ever widening scale under O. I. Paulson continued to
expand the trade and industrial education program. The growth of the program for the biennium of 1940-1942 is evidenced by the following:

Trade and industrial education has continued to serve by training individuals in skilled occupations. The national emergency has placed the trade-training program in the spotlight, as the demand for skilled workers is greater than ever before. Requests for high school departments and for classes in new fields have been only partially met due to lack of funds.

Trade and industrial supervisors and instructors have cooperated with the national defense training program and with the new needs of industry. Instructors have assisted in promoting and supervising classes for national defense training in addition to their regular daily school work. Enrollment has continued to grow with a total of 8,583 individuals receiving training during this biennium.

(45, p. 18)

Thirteenth Biennial Report of the State Division of Vocational Education in Oregon, Biennial Period Ending June 30, 1944

During the biennial period from July 1, 1942, to June 30, 1944, war time conditions had considerable influence upon the vocational education program in Oregon. The armed services took quite a number of boys from high school who would normally be enrolled in vocational education classes; war production classes took others. These were factors which resulted in a smaller increase in total enrollment than there would
normally have been.

The war production program received nationwide recognition for outstanding accomplishment. Oregon stood among the highest group of states in total number of persons enrolled in war production training. This was due largely to the ship building industry in the Portland area.

The total program, including both vocational training under the Smith-Hughes and George-Deen Acts and the war production acts, reached a peak in services rendered citizens of the state during the biennium. There was continued active cooperation of the many agencies that helped make possible the goals established by vocational training. The war production training program for the state was under the direction of the supervisor of the trade and industrial education in the Division of Vocational Education office at Salem.

The program of vocational education in Oregon, conducted through local school districts to give training in high school and for adults, is operated on the basis of agreements between the State Board of Education, Division of Vocational Education and local school boards. This method of administration has been closely adhered to during the thirty-six years of the program in
Oregon.

The local school district through its superintendent or principal requests authorization to establish a vocational education class and asks financial aid. When this request has been approved, a specified amount of federal and state aid is allotted to the school district. At the close of the school year the district clerk certifies to the State Division of Vocational Education the amount actually expended. These expenditures are checked for conformity to the standards set forth in the agreement; the state then reimburses the local school district for its portion of the vocational salary and travel expenses which had been agreed upon.

Reimbursement for classes in regional schools is agreed upon in the same manner as that adopted for high schools and adult classes. This same procedure is being carried out for the short-term classes added during the 1951-1952 school year.

Fourteenth Biennial Report, State Division of Vocational Education In Oregon, Biennial Period Ending June, 1946

Oregon's vocational education program for the 1944-1946 biennium continued to be affected by war-time conditions and reconversion.
The first year was under war-time conditions; the second year, reconversion to peacetime. O. I. Paulson's comment portrays activities of this time:

The state Division of Vocational Education cooperated fully with the Federal government in sponsoring and promoting war production training and food production war training in agriculture. Oregon trained boys and girls, men, and women helped to build airplanes, ships, raise crops and livestock to help win the war. Oregon's record, by cooperations of management, labor and agriculture, was outstanding. (47, p. 6)

The cooperative attitude and the extent that the program served the citizens of the state and nation are clearly shown. The war years had stimulated and increased the extent of the program more in Oregon than in many other areas because of the ship building industry. Would the vocational education work continue to grow along post-war lines?

The war years had demonstrated a high degree of cooperation between the state and federally administered program with the local communities of the state. The outstanding development in trade and industrial education during this biennium was the large number of World War II veterans entering both apprenticeship and on-the-job training. By June 30, 1946, 6,257 (47, p. 17) were in training. Five school districts had hired special coordinators; the number of veterans entering training
was steadily increasing.

In apprenticeship training the apprentice, his employer, and the local apprenticeship committee enter into an agreement known as the apprenticeship agreement. This is approved by the apprenticeship council and provides that the apprentice is to receive practical training according to work processes stated in the agreement. The agreement also provides for a progressive wage scale and a provision that not less than 144 hours per year be spent in related instruction in an approved evening or part-time class.

Under the Oregon Apprenticeship Law, coordination is a joint responsibility of state and local vocational training agencies—the public schools. In 1948 the Governor designated the State Apprentice Council to handle the agreements and the Division of Vocational Education to supervise the related instruction. Both the agreements and related instruction are handled by the State Division for other than apprenticeship jobs.

The vocational training memorandum is a training agreement similar to the apprenticeship agreement. It was established under the State Board of Education for on-the-job training other than apprenticeship jobs. It operates in a manner similar to that provided by the
State Apprenticeship Council for the apprenticeship program. Trainees in this program may be high school students, veterans, or others outside of school. The vocational coordinator and the local vocational training memorandum board administer the program similarly to that of the apprenticeship.

Fifteenth Biennial Report of the State Department of Vocational Education in Oregon, for the Biennial Period Ending June 30, 1948

During the biennium July 1, 1946, to June 30, 1948, the vocational education program in Oregon expanded its offerings in all the regular fields and in addition carried on extensive programs in veteran on-the-job training and institutional on-the-farm training for veterans.

The State Division of Vocational Education through the State Board of Education received and converted the Marine Barracks at Klamath Falls, Oregon, into an area vocational school which opened July 14, 1947. Members of the State Board of Education were active and helpful in establishing sound policies for conducting the vocational program in the state, 153 centers being served by the state program during this period. Forty-three were in trade and industrial education; many units were reimbursed in scope. It was evident that the
trade and industrial education program was soon to encompass the entire state in its services to the people.

A new state plan had been developed and approved by the State Board of Education and the United States Office of Education for the period July 1, 1947, to June 30, 1952. This plan revised the vocational education program under the George-Barden Act passed by Congress in August, 1946. It established standards for the state program, use of state funds and the federal vocational funds supplied through the United States Office of Education. This plan is described in more detail in the following section of this thesis.

**State Plan for Vocational Education for Five-Year Period July 1, 1947, to June 30, 1952**

The last state plan prepared in 1947 retained all the previous types of classes and continued with the same reimbursement schedule. The growing apprenticeship program required more supervision on the local level. The trade and industrial education program continued to expand with new departments being added.

Coordinators worked in more than one center for the first time, especially in smaller schools along the coast and in Lincoln County which operates under the
county unit plan. Coordinators also worked over the entire state on the veterans' training program handled in the trade and industrial education field since 1946. The plan provides for the employment of directors and assistants for regional vocational schools, according to the Regional Vocational School Act of 1941. The duties and qualifications stated in the plan are:

a. Duties
   (1) Establishing vocational classes.
   (2) Maintaining enrollment.
   (3) Assisting in the selection and training of teachers within the school.
   (4) Promoting effectiveness of training.
   (5) Maintaining training within the school in conformity with provisions of the State Plan.
   (6) Preparing budgets, reports and other necessary information as required.

b. Qualifications
Directors and assistants shall be at least equal to those of a local supervisor in any one of the vocational education fields.

(50, p. 9)

In this plan the state board could take advantage of the ruling of the United States Office of Education permitting the use of teacher training funds for local supervision in the field of trades and industrial education. It was provided that in such cases reimbursement should not exceed fifty per cent of the total salary, part-time salary to be pro-rated on the same basis. The purpose of local supervision was to promote adequate trade and industrial education and secure effective instruction.
Under provision of the George-Barden Act two new types of training made available for use of school youth are as follows:

1. Training in organized classes for groups of out-of-school youth who may be employed or unemployed, provided that the instruction is planned to increase civic or vocational competency.

2. Work experience training for out-of-school youth employed on jobs approved by the school authorities who provide supervision for the training aspects of the program. Instruction will be given largely on the individual basis.

3. A special type of all-day pre-employment trade training which may be organized for persons over 18 years of age or for those 14 years of age or over who have legally left the full-time school. Such training may be offered for any length of time.

Other new types of the trade and industrial education provided in this plan under the George-Barden Act are foremanship training, employed workers' training, and on-the-job training (for occupations requiring a lesser period of job experience than apprenticeship).

Programs of trade and industrial education, continued from former plans under the Smith-Hughes Act, include all-day trade and industrial classes, evening classes, part-time and general continuation classes. The plan states the provisions for representative local advisory committees for conducting local trade and industrial education programs.
Local advisory committees are composed of an equal number of employers and employees from the local school district in which they serve. Alternate members are provided for on the same basis as the regular members. Provision is made in the Oregon Apprenticeship law for trade and craft committees to serve as sub-committees to the general advisory committee when the volume of business warrants.

The five-year state plan adopted July 1, 1947, continued in effect until June 30, 1952.

Sixteenth Biennial Report of the Oregon State Board of Education, Division of Vocational Education, for the Biennial Period Ending June 30, 1950

Personnel of the State Board of Education, of which the State Division of Vocational Education is a part, included the following for the biennial period ending June, 1950:

Governor Douglas McKay Salem
Secretary of State Earl T. Newbry Salem
State Superintendent Rex Putnam, Salem
Executive Officer Paul H. Spillman-representing Agriculture Powell Butte
Mrs. Paul Patterson-representing Homemaking Hillsboro
Harry C. Boivin-representing Employers Klamath Falls
May Darling-representing Labor Portland

0. I. Paulson, state director of vocational education, in the 1950 report to the state legislature makes
this statement in his foreword:

The State Division of Vocational Education has more requests for services by schools and adult groups in the state than can be served adequately because of the limitations of funds and personnel. (54, p. 6)

During the biennium 1948-1950 the vocational education program in Oregon expanded its offerings in all regular fields and in addition continued an extensive program for veterans and adults. In spite of the expansion of the program and the granting of more state and federal money than previously, the state division for vocational education was unable to grant all the requests from local school districts which it received. With such a large number of fields of service being offered and accepted by the people of the state, the interest and desire for such training are clearly indicated. Trade and industrial education programs, in order to be successful, require cooperation and support of numerous agencies and organizations. Some of these are the State Apprenticeship Council and local apprenticeship committees, the Department of Veterans' Affairs, county service officers, United States Bureau of Apprenticeship, United States Department of Labor, State Employment Service, employer-employee organizations, and veterans' groups.
Mr. Paulson, as state director for the past ten years, has been instrumental in promoting good public relations for the Oregon programs. During this two-year biennium the local public schools in cooperation with the state office have been primarily concerned with providing related instruction for the ever increasing number of apprentices. The problem of attaining even greater coverage of apprentices in related instruction classes remains a challenge to the public schools and the vocational departments of the state.

The total of 3,416 apprentices receiving instruction in related classes during this two-year period shows the vast extent to which the Oregon plan has grown. Portland, for example, during the last school year offered related technical instruction in thirty-one trades and crafts and operated sixty-five different classes with a total enrollment of 1,051. Other centers in the state which provided related instruction classes during the two-year period were: Astoria, Bend, Coos Bay, Corvallis, Eugene, Forest Grove, Grants Pass, Klamath Falls, La Grande, Medford, Newberg, Oregon City, Pendleton, Roseburg, and St. Helens.
This descriptive report of the State Board for Vocational Education for the year ending June 30, 1951, is the first type of report to be mimeographed and sent to schools over the state. It tells of the activities of all the vocational work which is done in the state under the state department.

The first part of the report deals with the work in the state director's office with accomplishments during the past year being listed. The second section tells the accomplishments during the year in agricultural education, home economics, business education, occupational information and guidance, and trade and industrial education.

The trade and industrial education section reveals the work of the staff, including conferences and training of conference leaders. The operation of the various trade and industrial education schools and classes by types is dealt with in considerable detail. These are classified under (a) part-time trade extension and evening classes and apprentice related instruction, (b) employed workers' classes including part-time general continuation type "A" and part-time continuation type
"B", which is the diversified occupations program of the high school, (c) all day trade programs including part-time preparatory, training for women, veterans' training, training for service occupations, training for teachers.

The report also mentions names of the various advisory committees used for special studies, plans for development and expansion of existing programs and work in training of teachers. Special mention is made of the cooperative arrangements with the Portland and Salem public schools and the state office with reference to instructional materials developed for apprentices. These two schools arranged to employ the material writer and provide office space. The state office reimbursed one hundred per cent their salaries then and edited and published the material after it was completed.

During the 1950-1951 school year emphasis was placed on increasing coverage of apprentices in related instruction and the development of more classes for employed workers. Special effort was made during the year and continued during the 1951-1952 year for the operation of small enrollment apprenticeship classes which provide for home study with a minimum of class attendance. These classes operated during the 1950-1951 year in close cooperation with school districts and are
being continued; centers handling these new small enrollment units have been increased. As an illustration of this new feature in trades and industrial education work in small enrollment apprentice classes, the Forest Grove School system is operating seven such classes with an enrollment of about sixty. This type of class arrangement in cooperation with the state and local school districts is a significant development in trade and industrial education in the state. These classes make possible the inclusion and coverage of a wide range of adult training in practically every community of the state which wishes to take advantage of such training. The trade and industries program in Oregon has distinguished itself in becoming a leader in this new type of small enrollment apprenticeship classes.

Seventeenth Biennial Report of the Oregon State Board of Education, Division of Vocational Education for the Biennial Period Ending June 30, 1952

The State Board of Education, which had been merged with the State Board for Vocational Education in 1941, was again reorganized by the Oregon legislature in 1951. The new board consists of seven members appointed by the governor—one member from each congressional district and three members appointed at large. This new State
Board of Education administers the vocational education program.

During the biennium 1950-1952 thirty-one centers provided trade and industrial education programs in Oregon.

Provision of trade and industrial education in surrounding areas outside the regular school district boundaries of the various centers in the state became more widespread during this biennium period.

Besides the three regional vocational schools located at Klamath Falls, Eugene, and Oregon City, other centers provided training for related classes on an area basis. Greatest expansion in trade and industrial education was in this field as stated by O. I. Paulson, state director for Vocational Education in the 1950-1952 biennium report:

Definite progress has been made during the last two-year period toward the goal of providing related instructions for all registered apprentices in Oregon. The school systems in three counties (Columbia, Deschutes, and Washington) provided related instruction for practically all the registered apprentices within their areas the second year of the biennium period. A few other counties also provided instruction for a high percentage of apprentices. (56, p. 19)

Through the cooperative efforts of William Loomis, state supervisor for trade and industrial education, and local school officials a large number of the apprentices in isolated parts of the state were provided with organized
instruction through specially devised small enrollment and individual study courses. These special classes steadily increased in numbers during this biennium as they were indorsed by the schools and trade groups. Apprentice related classes increased from 1,438 during the 1950-1951 school year to 1,466 during the 1951-1952 school year. The enrollment during this biennium period involved thirty-five different trades and crafts. Schools providing apprentice related instruction during this biennium included Albany, Astoria, Baker, Bend, Coos Bay, Corvallis, Eugene, Forest Grove, Grants Pass, Hermiston, Klamath Falls, La Grande, Medford, Ontario, Oregon City, Pendleton, Roseburg, Portland, St. Helens, and The Dalles.
CHAPTER IV

TRADE AND INDUSTRIAL EDUCATION PROGRAMS IN OREGON CITIES AND TOWNS

Since each community varies in its industrial composition and since it is generally conceded that each school should adjust its program to the needs of the community, trade and industrial education programs vary considerably over the state. Data were secured from coordinators and administrators in the different schools wherever possible and from bulletins, records, and reports issued by the State Board of Vocational Education and in the local schools. The data were then checked in the office of the State Division of Vocational Education at Salem for reliability.

In many instances, records of the various centers over the state have been well preserved, while in other centers records are meager, have not been well kept, or have disappeared. Records of the State Board of Vocational Education for Oregon up to 1935 were lost when fire destroyed the state capitol at Salem that year. Each town is considered separately with the material arranged so the towns appear in the order in which the work was first introduced into their school systems.

Table I shows the centers in Oregon in which the
The trade and industrial education program has operated from the beginning of the program in 1917 to June 30, 1951.

### TABLE I

#### TRADE AND INDUSTRIAL EDUCATION PROGRAMS IN OREGON SCHOOL DISTRICTS 1917-1951

<table>
<thead>
<tr>
<th>NAME OF SCHOOL</th>
<th>YEAR STARTED</th>
<th>BEGINNING CLASSES</th>
<th>ENROLLMENT JUNE 1951</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benson (Portland)</td>
<td>1917</td>
<td>162</td>
<td>98</td>
</tr>
<tr>
<td>Pendleton</td>
<td>1917</td>
<td>20</td>
<td>9</td>
</tr>
<tr>
<td>Eugene</td>
<td>1917</td>
<td>12</td>
<td>26</td>
</tr>
<tr>
<td>The Dalles</td>
<td>1917</td>
<td>14 (terminated 1948)</td>
<td></td>
</tr>
<tr>
<td>Oregon Agricultural College</td>
<td>1917</td>
<td>56 (evening classes 1917-1918)</td>
<td></td>
</tr>
<tr>
<td>Salem</td>
<td>1918</td>
<td>18</td>
<td>15</td>
</tr>
<tr>
<td>Corvallis</td>
<td>1920</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>Dallas</td>
<td>1920</td>
<td>8 (no classes since 1945)</td>
<td></td>
</tr>
<tr>
<td>Enterprise</td>
<td>1920</td>
<td>12 (no classes since 1923)</td>
<td></td>
</tr>
<tr>
<td>Grants Pass</td>
<td>1920</td>
<td>10</td>
<td>7</td>
</tr>
<tr>
<td>Oregon City</td>
<td>1920</td>
<td>132</td>
<td>4</td>
</tr>
<tr>
<td>Ontario</td>
<td>1920</td>
<td>10 (no classes since 1945)</td>
<td></td>
</tr>
<tr>
<td>Ashland</td>
<td>1921</td>
<td>267</td>
<td>4</td>
</tr>
<tr>
<td>Astoria</td>
<td>1921</td>
<td>26</td>
<td></td>
</tr>
<tr>
<td>Independence</td>
<td>1921</td>
<td>10 (no classes since 1945)</td>
<td></td>
</tr>
<tr>
<td>Mill City</td>
<td>1921</td>
<td>10 (no classes since 1925)</td>
<td></td>
</tr>
<tr>
<td>Phoenix</td>
<td>1921</td>
<td>7 (no classes since 1922)</td>
<td></td>
</tr>
<tr>
<td>Prineville</td>
<td>1921</td>
<td>16 (no classes since 1923)</td>
<td></td>
</tr>
<tr>
<td>West Linn</td>
<td>1921</td>
<td>9 (no classes since 1945)</td>
<td></td>
</tr>
<tr>
<td>Roseburg</td>
<td>1926</td>
<td>9</td>
<td>6</td>
</tr>
<tr>
<td>Bend</td>
<td>1927</td>
<td>20</td>
<td>7</td>
</tr>
<tr>
<td>La Grande</td>
<td>1928</td>
<td>21</td>
<td>4</td>
</tr>
<tr>
<td>Baker</td>
<td>1930</td>
<td>15</td>
<td>2</td>
</tr>
<tr>
<td>Medford</td>
<td>1930</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td>St. Helens</td>
<td>1936</td>
<td>14</td>
<td>4</td>
</tr>
<tr>
<td>Coos Bay</td>
<td>1938</td>
<td>16</td>
<td>6</td>
</tr>
<tr>
<td>NAME OF SCHOOL</td>
<td>YEAR STARTED</td>
<td>BEGINNING ENROLLMENT</td>
<td>CLASSES JUNE 1951</td>
</tr>
<tr>
<td>----------------</td>
<td>--------------</td>
<td>----------------------</td>
<td>-------------------</td>
</tr>
<tr>
<td>Albany</td>
<td>1939</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>Hood River</td>
<td>1940</td>
<td>70</td>
<td>1</td>
</tr>
<tr>
<td>Klamath Falls</td>
<td>1941</td>
<td>28</td>
<td>5</td>
</tr>
<tr>
<td>Lebanon</td>
<td>1944</td>
<td>29</td>
<td>3</td>
</tr>
<tr>
<td>Forest Grove</td>
<td>1944</td>
<td>20</td>
<td>3</td>
</tr>
<tr>
<td>Toledo</td>
<td>1947</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>Oregon Technical Institute</td>
<td>1947</td>
<td>50</td>
<td>33</td>
</tr>
<tr>
<td>Newport</td>
<td>1948</td>
<td>11</td>
<td>1</td>
</tr>
<tr>
<td>Newberg</td>
<td>1949</td>
<td>12 (no classes since 1950)</td>
<td></td>
</tr>
<tr>
<td>Hermiston</td>
<td>1950</td>
<td>15</td>
<td>3</td>
</tr>
<tr>
<td>Lakeview</td>
<td>1950</td>
<td>13</td>
<td>1</td>
</tr>
</tbody>
</table>

Data in Table I were secured from the Division of Vocational Education, Salem, Oregon, June, 1951.

Portland

Portland, home of more than 373,000 people including 15,000 high school students, is the largest city of Oregon. Portland's location at the crossroads of major highways extending into the natural regions of the state, its port facilities for interstate, coastwise and world wide shipping, and its surroundings of timber and agricultural lands have all contributed to the development of the city.
Benson Polytechnic High School, established as Portland School of Trades in 1908, offered trade and technical training programs since its beginning. Hence, it was only natural that Benson Polytechnic should qualify among the first schools to come under the Smith-Hughes plan in 1917. The machinists' course conducted at Benson Polytechnic during the school year 1917-1918 was the largest class in the five original schools to come under the state plan. The first year Benson enrolled 162 students of the 264 for all schools under the plan. Benson has continued to be the leading technical high school in Portland in offering an industrial curriculum, even though the entire vocational program of the school has not been a part of the Smith-Hughes plan.

Besides establishing day trade classes at Benson, the Portland school board initiated classes in other types of trade and industrial education. During the school year 1919-1920, classes had been established to include all available types of training. Part-time classes were operating in carpentry and interior decorating with 119 persons enrolled; part-time general continuation classes, 205; evening classes in mechanical drawing, machine shop and architectural drawing, 155.
Portland public schools started in 1917 to offer practically as much trade and industrial education in terms of classes and student numbers as the rest of the state; this condition continues to exist. When the apprenticeship school developed in 1926 and became a part of the Portland public schools, a large portion of work in trade and industrial education was conducted at this school.

**Portland Apprentice School**

The apprenticeship school was organized and operated during its early years by a group of men from the building industry who were interested in trade education. In 1926 the apprentice school was taken over as a part of the public school system of Portland. At present the school is operated by the Portland school district in cooperation with the State Division of Vocational Education.

The group which developed the school originally was connected with the Oregon Building Congress—an organization in Portland composed of persons engaged in all phases of the building trade. The interest of this organization has continued to the present as indicated by its active participation in the apprenticeship
commission and sub-commission in each of the trades. Sub-commissions, composed of employees and employers from the various trades in the city, help select apprentices for the school. The city director of vocational education, who is executive secretary for the apprentice commission and for each of the sub-commissions, has an opportunity to supervise training problems in each trade field.

The selection plan has been worked out quite carefully under the state apprenticeship plan of the State Apprenticeship Council of Oregon. Each applicant for apprenticeship appears before the sub-commission of the chosen trade for an interview, at which time his experience, education, and general fitness for the trade are passed upon. If accepted for apprenticeship, the applicant automatically becomes eligible for training in an apprenticeship school. One hundred forty-four hours of instruction of the related type are required each year while he is learning his trade. The course of study in each trade is based upon an analysis of the trade developed largely from the knowledge of the trade instructor and reviewed by the committee of the trade.

These courses of study are revised from time to time to keep up with developments in trade practice and
to facilitate instruction. The qualifications of the instructors in the apprenticeship school rate very high from the standpoints of occupational experience and training for teaching. Teacher training courses necessary to assure teaching ability of high degree have been successfully completed by the instructor in summer training conferences and semi-monthly local conferences dealing with all phases of teacher problems. Frequent contact by teachers with students on the job promotes training under practical conditions, making for efficiency of instruction. Concentration of the apprentice upon training during the fairly short period of time he is in school is necessary if he is to make desirable progress.

The apprenticeship school fosters no outside interests or social activities, nor does it have assembly periods such as might be considered necessary to develop school spirit. One of the greatest advantages of separate apprenticeship training is the relative low cost of equipment as compared to that of trade preparatory courses in a high school. The apprentice learns more of his multiple skills on the job, using the employer's production machines and equipment as well as supplies. The school does not bear the expense of furnishing these items or providing for their upkeep or replacement.
There is practically no problem of placement, as the apprentices are employed when they enroll in the class. However, when work is scarce, instructors may make new placements of apprentices so that they may continue their training. The arrangement whereby the instructor acts as a coordinator of the training on the job and a teacher of related material in the school assures provision for adequate follow-up. This also provides a check to see if the training given in school is actually used on the job.

Under the present state apprenticeship law in Oregon, it is the duty of the public school system to provide the related training classes, while the state apprenticeship council provides the supervision of the apprentice on the job. It is, therefore, necessary that the apprentice and the supervisors work together with the schools and sub-committees in working out training problems of the apprentices. Sufficient funds have not been made available from federal, state, and local sources to make it possible to offer related classes in apprenticeship without a tuition charge to the individual.

During the 1951-1952 school year more state funds were made available than the year before; this made it
possible to reduce tuition charge. The tuition charge in the Portland school during the 1950-1951 school year was approximately $22.50 per year per apprentice, which is as low as most areas in the state.

During the 1950-1951 school year there were forty-six separate classes of evening apprentices in the Portland school enrolling 793 persons. There were thirty-one evening journeymen classes, with 457 enrolled; seventeen part-time trade extension classes, 257; and four sales classes, 272, making a total of ninety-eight different classes with an overall enrollment of 1,579.

Pendleton

Pendleton, one of the larger eastern Oregon towns, has a population of 12,000 with an enrollment of 577 in the high school. Pendleton was one of the first four high schools in Oregon in 1917 to take advantage of the Smith-Hughes Act by establishing a day trade class in the industrial field with twenty students enrolled.

The report of J. A. Churchill, former state superintendent of public instruction, gives an account of this early course at Pendleton:

The course was adopted and then theoretically installed at the opening of the second semester of the school year 1917-1918. Its purpose was
to provide practical vocational education to persons fourteen years or over in the field of farm tractor engineering and repair. Through the courtesy of the E. L. Smith Implement Company, representing the Holt tractors, and of other local dealers and garages, complete outfits of machine and tools were loaned for the benefit of the twenty students enrolled in the course. That these students profited by the training afforded is demonstrated by the fact that many of them spent the summer vacation period operating tractors and doing repair work, for which excellent wages were received.

The housing, equipment, and tools represent an outlay of over $5,000. To the forge shop, erected prior to the adoption of the farm tractor course, was added a machine shop in which were assembled the large machines necessary for iron-working, including lathe, shaper and drill-press. In this shop are benches, locker, tool-closets, and all usual shop accessories sufficient to accommodate a class of twenty students at one time.

The feeling prevails that this form of work as a part of school curricula is well worth while in this locality. There is evident a splendid cooperative spirit on the part of the members of the community. Under the immediate direction of Mr. Fred C. Broer, a thoroughly trained and experienced machinist, it is predicted that this department will contribute no small part to the aggregate educational achievement of the Pendleton school system. (34, p. 15)

The day-trade type of program has continued in Pendleton schools from 1917 to the present time. During World War II an extensive war production training program operated both day and night for civilian and air force personnel stationed there.

The diversified occupations program started in 1948
with Lennis E. Nash as first coordinator; he has remained as head of the program.

Besides the diversified occupations program with twenty-five enrolled during the 1950-1951 school year, the following classes were in operation: one day-trades class in auto mechanics with eleven; two evening apprentice classes, one in automotive with twelve and one in electricity with sixteen; five evening journeymen classes, two sheet metal classes with sixteen and three welding classes with thirty-six, making a total of 116 in the nine classes.

**Eugene**

Eugene, in the upper Willamette Valley, is one of the most rapidly growing cities of Oregon. The population is 35,000 including 1,969 in high school. Located near the head of the Willamette Valley and at the junction of several small valleys, the Mohawk, McKenzie, Middle Fork and Coast Fork of the Willamette, it is the seat of Lane County and the home of the University of Oregon. The transfer of the Southern Pacific Railroad shops from Roseburg to Eugene and the opening of the Odell branch line of the Southern Pacific system aided its industrial growth. The beautiful natural setting enhances the
attractiveness of Eugene as a place to live.

Eugene was one of the first four high schools to take advantage of the Smith-Hughes Act by establishing a day trade class in plumbing in the fall of 1917.

Mr. Fred Chess, then head of the industrial arts department gives this description:

In September 1917, a tentative course in plumbing was started, with periods of one hour. About twenty-five enrolled during the first semester. The object of the above course was to give the student a general knowledge of plumbing, but not to fit him as a journeyman. At the beginning of our second semester, 1917-1918, the plumbing course was rearranged and accepted by the state vocational board and made a vocational subject. Applications by students for entrance into this work were fifteen, eleven of which were accepted. During the semester we lost one and finished the year with ten pupils. During the summer months, six of these pupils worked in different shipyards as helpers on plumbing and, from all reports I could gather, got along very nicely in their work.

Our equipment during the year of 1917-1918 consisted of about $300.00 worth of tools and some $350.00 worth of working supplies.

At the beginning of the 1918-1919 school year, six applications were made from last year's students for entrance into the plumbing work. Two of last year's students were drafted and two did not care to keep up the work. New applications by students were sixteen. We accepted nine of these, giving us a class this year of fifteen students, about all that we can accommodate without the enlargement of our shops. The boys are taking a great interest in the work, especially the ones who have seen, through experience in the shipyards, its value.
Our equipment this semester will be increased by about $500.00. With this amount of money it will give us every facility for carrying on the work at this time, but if things continue to grow as they have been in this department, an increase in the amount of space occupied will be necessary.

During the present epidemic there has been quite a shortage of plumbers in town, and four of our boys were used by city plumbers in helping catch up with their work. I, myself, feel very much elated over the progress that the boys have made, and I know that the students themselves are taking all the interest that they possibly could in the work. (34, p. 13)

Mr. Chess's report received favorable notice in the office of the federal board for vocational education in Washington and prompted the following letter by C. A. Prosser, national director:

November 19, 1918

Hon. J. A. Churchill
Superintendent of Public Instruction
Salem, Oregon

My Dear Mr. Churchill:

Thank you very much for the letters from Superintendent W. R. Rutherford and Mr. Fred Chess, the teacher of plumbing of the Eugene high school.

I am very glad to get this concrete instance of the effectiveness of vocational education in the time of need. We are always glad to hear of these cases.

I am sending copies of these letters to the San Francisco office and calling them to the attention of our staff here in Washington.

Very truly yours,
C. A. Prosser, Director (34, p. 15)
Since first coming under the federal and state plan for vocational education, Eugene public schools have maintained trade and industrial education classes in the schools for both high school youth and adults. With the development of a separate vocational school as the first such regional school of the state in 1938 most of the vocational education work of the trade and industrial type was transferred to this school.

The Eugene Vocational School is operated by the Eugene Public Schools in cooperation with the State Division for Vocational Education of Salem. The school was instituted January, 1938, for the purpose of training young people in vocational fields in the city and surrounding area. The first classes were held February 1, 1938, in the old Geary School Building, Fourth and Madison Street.

The original part of the building, built in 1890, had been idle a number of years before being renovated in the summer of 1938. Students did much of the renovating, equipping, furnishing, and adding to the school, especially in early stages. The carpentry shop was added a few years after the school started, work also being done by students. The radio and machine shop building was moved from Camp Adair under the war surplus program at the end of World War II in 1945.
Before the school was decided upon in 1938, two community surveys were made in the Eugene area under the direction of O. D. Adams, State Director of Vocational Education, in cooperation with the Eugene public schools. The survey showed that (a) a number of young people were out of work in the area and (b) interviews with business men and industrial leaders indicated the young employable people needed training in the fields in which they wanted to work. These two community needs served as the main reasons for starting the school. The school met with community favor from the start and has continued to hold this favor.

Shortly after the early surveys pointed out the need for a vocational school in Eugene, a mutual plan for its organization and operation was worked out by the local school administrators and the state director of vocational education. The purpose of the school is clearly defined in the opening paragraph of this plan:

The controlling purpose of the Eugene Vocational School or classes shall be to prepare persons for advantageous entrance into occupations, to extend the occupational knowledge and skill of employed persons, and/or to increase the civic and vocational intelligence of students, as well as to provide for social and vocational adjustment including placement. (14, p. 1)
While this school is under the direct supervision of the city superintendent of schools and is considered a public school, the financing is under a different plan. When the school was first started, Mr. John T. Cramer was city school superintendent, and the original plan called for the local school district to carry fifty per cent of the cost of operation. The other fifty per cent of the cost was provided by the State Board of Vocational Education. This plan ties in with one of the original purposes of federal funds for vocational education—that of promotion with federal financial aid to local communities.

Mr. O. D. Adams, now assistant superintendent of schools in San Francisco, was State Director of Vocational Education in Oregon at that time and was largely responsible for the promotion and organization of the school. He stated in a letter to the writer September 27, 1951, that this school was "perhaps the first area school in the United States of this type".

Thus the Eugene school was the first of this type in the state of Oregon to be operated by a local school district in cooperation with the State Division of Vocational Education. Indications are that this is one type of vocational school which will likely be expanded
in the state.

The school is not designed to be a competitive institution to the local high school. Younger students entering this school are ones who have either graduated from high school or have dropped out before graduation. However, some students attend high school classes for academic subjects and take vocational classes at the vocational school. The minimum age limit for entrance is sixteen years. Other factors considered in the selection of students for this school are mental ability, sincerity, interest, previous training, and employment possibilities for them.

The school started with a staff of about nine members with Mrs. Wendell Van Loan as coordinator and a first enrollment of 150. For the fall term of September, 1951, there were eighteen full time instructors and 225 daytime students. Besides the day trade classes, the school maintains afternoon and evening home making classes and evening related classes. During the 1950-1951 school year, 1,700 persons were enrolled in all departments of the school.

W. M. Tugman in the Oregonian Magazine Section September 20, 1942, has this to say in a feature article about the school:
This city of 21,000 has a public school which in the last four years has trained and placed 3,938 men and women in useful occupations. Of these, 2,093 men and women have been supplied to war industries and still more are being produced at an average of 47 per week. (72, p. 1)

This school turned its attention to national defense and war production classes during the war years, 1940 to 1945. A vivid account of the operations, contributions and community relations of this period is found in the following comment of the September 20, 1942, Oregonian Magazine Section:

The Eugene Vocational School runs night and day and some departments run four shifts around the clock. There are no tuition fees. On the contrary, those who can qualify for the air corps "mechanic learner" courses are paid $75 per month while in training.

You may see a college professor or a merchant or a doctor at the same workbench with a garage mechanic or a grocery clerk or a farm hand in some of the classes.

Trade training, including instruction in regular civilian occupations, war production training, a program running around the clock, mechanic learner training for the air corps ground forces, and classes in nutrition, child care, hospital attendance and others. An out-of-school youth program in elementary trades and crafts is also given in outlying towns and camps.

During 1941-1942 (school year) 2,438 people were enrolled in the various divisions.

What about the labor relations? How does this school get along with the labor unions? Doesn't it run into some of the objections from labor unions?

The answer is that nearly one-fourth of the instructors carry union cards. The workers carry union cards. The unions are
"sold to the program the way it is being conducted on the shop basis". (72, p. 2)

The course work in the classes is planned to meet individual needs, students being permitted to take up class work at any time. At the completion of the course, a certificate of proficiency is granted the student in his field. Some students who are still in high school use their vocational credits to apply toward regular high school graduation from the Eugene High School.

A description of the course of study plan is found in a pamphlet published by the school:

The Eugene Vocational School is primarily a day-trade school. The school year extends from August 1, to June 30. Training is given on an individual basis and entrance into a class may be at any time during the year.

The day-trade classes are held both mornings and afternoons of three hour sessions, Monday through Friday, and are open to men and women who wish to prepare for a specific trade. Out of every three hours in the shop, one is for group related study and the other two hours are spent in production where the trainee may proceed at his own individual rate. (13, p. 1)

Day-trade classes and their enrollments during the 1950-1951 school year were Auto and Electric Mechanic (35), Auto Mechanic (24), Auto Tune-up (9), Body and Fender (21), Creative Design (21), Photographer (17), Radio Service (28), Radio Station Operator (24),
Woodworking (24), Air Craft Sheet Metal (12), Machinist (24).

Evening trade extension classes, providing instruction in the specific occupation in which the person is already engaged, for the 1950-1951 year were: Carpentry (35), Electrician (42), Meat Cutter (10), Plumber (26), Sheet Metal (14). Two classes in Business Training enrolled 106. Class work, held in the evening, is supplementary to the daily work of the trainee.

The school established its own radio station, KRVM-FM, in 1948 to serve the Eugene public schools and to train people in this field of work in the vocational school. Now in operation in its fifteenth year, it is continuing to make new and valuable contributions in the field of trade and industrial training.

The Dalles

The historic city of The Dalles, located where the Columbia River Highway and The Dalles-California Highway come together, is the oldest city between the Rocky Mountains and the Cascades, dating from about 1850 when a trading post was established there. The Dalles of 1953 is a fast growing city of more than 8,000 and a high school enrollment of 447. Power
resources are continuing to be developed and inland water transportation on the Columbia is being improved and extended.

The Dalles High School was one of the original five centers to establish a class in the trade and industrial education program in 1917 with a class in printing. During the years 1928 to 1932 The Dalles offered trade preparatory classes in carpentry and machine shop. From 1920 to 1932 evening classes were offered in locomotive appurtenance. The Union Pacific railroad shops were located in The Dalles during this time.

The printing class continued to operate as a day trade class until the diversified occupations program became a part of the curriculum in 1934-1935. Mr. Hugh Davey, first coordinator, was a printer as well as a teacher and conducted the printing class under the diversified occupation program rather than the day trades type of class. This plan continued on a full-time basis until 1935 when Mr. Glenn Ely took over the coordinator's task on a half-time basis, teaching mechanical drawing the other half-day. When Mr. Ely left in the spring of 1941, Mr. Davey was again given the task of coordinating the program. The Dalles High School main building burned in 1939, and the
printing department was not reestablished in the new building but was set up in the old Junior High building on a limited basis.

In 1948 the printing course ceased to operate under federal subsidy but has continued under the school district. The Dalles holds the distinction of having had the only printing course outside of Portland conducted under the Smith-Hughes Act. As World War II came on and Mr. Davey's work became confined to war training programs, Mr. Wesley Walters took over the diversified occupations course during the 1945-1946 school year. He served for three years until the program ceased to operate as part of the state-federally reimbursed program.

The writer, who was principal of The Dalles High School during the four years 1937-1941, was chairman of the apprentice committee. This committee, composed of equal membership of employee and employer members, acted as a local advisory group to the trade and industrial program.

Oregon Agricultural College, Corvallis, Oregon (Evening trade and industrial classes 1917-1918)

During the school year 1917-1918, evening trade and industrial classes were conducted on the Oregon
State College campus (then known as Oregon Agricultural College) under the federal-state plan authorized by the Smith-Hughes Act. In order to present the statistics of beginning classes in 1917 of the first classes in the trade and industrial education program, the writer, through the help of Mr. O. I. Paulson, state director, obtained a copy of the original report sent to the office of education by Superintendent J. A. Churchill at the end of the school year, 1918. This information Mr. Paulson derived from Dr. Joseph R. Strobel, Assistant Commissioner for Vocational Education in the Office of Education, Washington, D. C. Dr. Strobel's report from the official records in Washington D. C. shows fifty-six students enrolled in evening trade and industrial classes of less than college grade for 1917-1918. The types of courses were not given. The original state plan for the administration, supervision, and operation of the trade and education program was prepared by Mr. Frank H. Shepherd, professor of Industrial Arts at Oregon Agricultural College, who also served as assistant state director during the first year of the program and helped establish these evening classes. The evening industrial education classes at the state college operated only during the school year
1917-1918.

No other types of federally aided trade and industrial education classes of less than college grade have been conducted under supervision of the state college.

Salem

The city of Salem, located in the heart of the Willamette Valley in Marion County, has been the state capital since 1855. The city has a population of around 43,000 persons. The senior high school has an enrollment of 2,770 and has had industrial arts courses since its beginning.

Salem in 1918 was one of the schools to take advantage of the Smith-Hughes Act to establish a day trade program in the trade and industrial education field. Not until 1934, however, did Salem High School establish the diversified occupation part-time program which has been continuous.

Mr. C. A. Guderian, who, according to available information, was one of the first coordinators at Salem, was the organizer of the club idea for students in the diversified occupations program. His machine shop club was the forerunner for the trades and industries club which functioned on a state wide basis from 1934
to 1940, when it was discontinued.

Mr. T. K. Pierson, who at this writing is coordinator for the Distributive Education (retail selling) program of Salem, acted as coordinator for both the diversified occupations and distributive education programs during 1946 to 1948.

Mr. W. J. Bender, coordinator from 1948 to the present, has made available a leaflet of information concerning the Salem program; this was printed in the Graphic Arts shop of the school. (13) This pamphlet sets forth the entrance requirements for the part-time training program, under the heading, "School Is First-Then the Job". What vocational education offers the high school student in school and after graduation is explained in a simple, understandable manner for pupils of that age. Because of its suggestive value for other centers and its explanation of the relationship to the curriculum of the school, the information is given here:

Salem High School—Salem, Oregon—1951
The Cooperative Part-Time Program

The Cooperative Part-Time Training Program has been introduced into public schools in all parts of the United States and acts as a supplement to the regular high school curriculum. This program is especially beneficial to students who do not plan on going
to college and who plan to go into employment immediately upon graduation. It bridges the gap between school and everyday employment after graduation. This is a form of vocational education in that a student works in the vocation or trade which he or she intends to follow as a career. The program also makes it possible for those who because of financial reasons may have to leave school to earn enough to continue with their class and obtain a regular high school diploma.

The business man acts as a member of the faculty while the student is under his supervision. All work must be satisfactory on the job and in school in order to receive full credit. Grades and a report card are given by the employer on the student's caliber of work.

Following is a sample of Salem students' schedule:

<table>
<thead>
<tr>
<th>Periods</th>
<th>General Program</th>
<th>Credits per Semester</th>
<th>Part-Time Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Required English</td>
<td>( \frac{1}{2} )</td>
<td>Apprentice-ship or Required</td>
</tr>
<tr>
<td>2.</td>
<td>Required American Problems</td>
<td>( \frac{1}{2} )</td>
<td>Retail Selling or Required</td>
</tr>
<tr>
<td>3.</td>
<td>Required Physical Education</td>
<td>( \frac{1}{2} )</td>
<td>Retail Selling or Required</td>
</tr>
</tbody>
</table>

NOON HOUR (Students on the Part-Time Program go to work on their jobs)

<table>
<thead>
<tr>
<th></th>
<th>Elective</th>
<th>( \frac{1}{3} )</th>
<th>Job</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.</td>
<td>Elective</td>
<td>( \frac{1}{3} )</td>
<td>Job</td>
</tr>
<tr>
<td>6.</td>
<td>Study</td>
<td>0</td>
<td>Job</td>
</tr>
</tbody>
</table>

Total Credits \( 2\frac{1}{2} \) each semester or 5 per year

As many hours are to be spent on the job per week as are spent in school. Therefore, 15 hours in school requires a job to employ a student at least 15 hours a week.
More than 15 hours and up to 40 or 44 hours can be spent weekly in school and on the job depending upon the demands of the job. All jobs must conform, however, to the State Labor Laws. (7, p. 1)

Salem has been one of the schools that has operated the federally aided trade and industrial education program since its inception in 1918, when there were thirty enrolled in two classes, one in machine shop and one in auto mechanics. Since then classes have been established in the various trades whenever the need arose. Enrollments in six classes of evening apprentices during 1950-1951 were as follows: auto mechanics, four; appliance repair, four; inside electricians, eighteen; outside-electrician, fifteen; mill-cabinet, three; and plumbers, eighteen. Evening journeymen classes enrollments were as follows: outside-electrician, twelve; paper hanging, eleven; two classes in practical nursing, thirty-six; and sheet metal, twenty-four. Three evening sales classes were held, enrolling twenty-three, making a total of fifteen classes and 198 enrolled in the Salem program.

Corvallis

Corvallis is the home of Oregon State College, which provides a liberal and practical education for
approximately 5,000 young men and women each year. The population is about 16,000 with 935 students in the high school.

During the school year 1920-1921, the Corvallis public schools established a class, under the Smith-Hughes plan of part-time instruction, in roof framing with eight persons enrolled. The original Smith-Hughes Act specified that one-third of the allotment for trades and industry was to be spent for part-time instruction as provided in the state plan. Corvallis, along with several other schools, established the part-time program and continued to operate it during the years when a need arose. In 1946 the diversified occupations program began in Corvallis High School with an enrollment of eleven. Enrollment in the class for the 1950-1951 school year was twenty-two.

During the last several years the Corvallis schools have also maintained evening classes in automotive work, auto mechanics, carpentry, foremanship, heavy duty mechanics, mill and cabinet work, and painting. There were eighty-two adults enrolled in these seven adult classes during the year ending June 30, 1951.

The school maintains a separate distributive education class, and during the 1950-1951 school year there
were forty-three enrolled in this division.

The fact that Corvallis is not an industrial town is reflected in the greater numbers enrolled in the distributive education classes which involve selling, as compared to the diversified occupations class which is concerned with industry.

**Dallas**

Dallas, the center of a rich farming district, is the county seat of Polk County. Population is 4,700 and the high school has 450 students.

The first program established by the Dallas public schools in the trade and industrial education field under the Smith-Hughes Act was a part-time class of eight in mechanical drawing in the fall of 1920.

Dallas public schools established a class in co-operative part-time work in machine shop in cooperation with the local Dallas Iron Works. No record of enrollment is shown for the program which operated under the state plan for a number of years beginning in 1928.

This co-operative part-time class, composed of high school boys, operated on a week-about basis whereby the students attended school a week and then worked on the job a week. Dallas was perhaps the only school in
Oregon to use this plan of the co-operative program, the diversified type of class coming into use instead.

Besides part-time and co-operative classes, Dallas offered evening classes from time to time as the need existed. A war training program was carried on in Dallas schools during the years 1940-1945. While Dallas has not developed the diversified occupations type program, the community continues to be served by other types of trade and industrial education.

**Enterprise**

Enterprise, the county seat of Wallowa County, is in the most northeastern county of Oregon. The town has a population of 1,700; the high school, 140. Enterprise was one of the smaller towns of Oregon to set up an evening class under the Smith-Hughes plan during the 1921-1922 school year. The class in sewing enrolled twelve. Records in vocational education reports do not show continuation of trade and industrial educational classes.

**Grants Pass**

Grants Pass, county seat of Josephine County, has a population of 8,100 including 1,224 in high school.
The Grants Pass part-time cooperative program, starting in 1930, was one of the first programs to have a period for related training in the daily schedule. Walter W. Morse, first coordinator, served until 1936, when he transferred to Oregon City, later becoming state supervisor and serving until 1945.

The Grants Pass program, highly developed, was one of the outstanding ones in the state during the early 1930's. There was a high degree of participation and interest by local businessmen.

The Future Craftsmen of America, an organization composed of students in the diversified occupations program, became state wide in scope. Much of the inspiration and promotional work in the early stages of this program came from the efforts of Mr. Morse. Among the innovations originated by his group in the early 1930's was the Industrial Fair. The boys and girls of the high school trade classes demonstrated their ability to put merchandise and equipment on display. Other activities were open-house programs, visitations, and attendance at banquets in other schools.

The Grants Pass group was very active in state Future Craftsmen activities and during the 1936 meeting in Portland won the following awards as listed in the
Two cups, ten ribbons and a fourth prize were brought home by members of the local Future Craftsmen of America who attended the state convention in Portland last week-end. (18, p. 4)

One of the innovations in trades and industries classes during the 1930's was the class in gold panning which grew out of the new placer mining project at Grants Pass. Raw gold had doubled in value with the advent of the Roosevelt administration. These were the depression years with manufacturing and trade at a low ebb in Oregon. Many persons took advantage of these gold mining classes in the Grants Pass and Medford areas in the hope that they might derive some income from mining activities. Classes enrolled thirty to forty persons at a time and operated over a period of two or three years.

It is of interest to note that W. D. Purvine, director of Oregon Technical Institute, gained his early experience in the trade and industrial education field as an enrollee in a Grants Pass mining class. Later he became an instructor of a mining class, first advancing to state supervisor and then director of Oregon Technical Institute at Klamath Falls.

The diversified occupations program has operated
continuously since its start in Grants Pass. It is a full time program and during the 1950-1951 school year had a total of fifty high school students.

The Grants Pass center has continued to hold evening apprentice and evening journeymen classes to meet community needs as they arise. During the school year ending June, 1951, evening journeymen classes were held for the following trades: industrial sketch, nine; painting, ten; teletype setting, ten; and two classes for waitresses, forty-three.

**Oregon City**

Oregon City, in the lower Willamette Valley, is one of Oregon's pioneer cities. It is a beautiful city located on the banks of the Willamette near large waterfalls which early gave Oregon City a definite place in the industrial life of the state. Population of Oregon City is over 7,600 with 766 in the senior high school.

Vocational work in the field of trade and industrial education under the federally aided plan commenced in the Oregon City schools with a part-time type class in 1920. Early reports of the State Board for Vocational Education issued in December, 1922, show part-time classes for adults in sewing, millinery, and nutrition,
with enrollment of 132 for the 1920-1921 school year.

These part-time classes for adults served the needs of the Oregon City school district satisfactorily until 1937 with the introduction of the diversified occupations program. Walter E. Morse, who later became state supervisor of trade and industrial education, was first coordinator of the part-time program with enrollment of twenty-one. This plan was used until the war years in 1941 when the Oregon City Program developed into a large war production training type. After the war the regional school idea gradually developed as a part of the public school program and took the place of the diversified occupations program.

The school conducted in Oregon City at the present time is the Oregon City Vocational School and is the second regional vocational school to be developed in a public school system in the state. Operated by the local school district in cooperation with the State Division of Vocational Education in Salem, the school is on a full-time basis of the day trade program of trade and industrial education.

This all day trade school is primarily designed for post high school students or students who have dropped out of high school. A few high school students
are enrolled on a half day basis, spending the other half day in the regular high school program. During the 1950-1951 school year, the enrollment in the Oregon City Vocational School totaled seventy-seven persons, a slight gain over the previous year. Classes conducted during the 1950-1951 school year were in the fields of auto mechanics, body and fender work, carpentry, and mechanics.

Ontario

Ontario, located in Malheur County, is in the heart of an important beef producing region of the state. The town has a population of 4,400 persons with 500 in the high school. The first class under the Smith-Hughes plan, established by the Ontario public schools in 1921-1922, was the evening type—garment making with ten enrolled.

In 1941 the part-time cooperative program designed for the small community to offer opportunity for training in various occupations was installed in Ontario High School. During 1940-1945 a war production training program was instituted to train persons for war industries.
Ashland

Ashland, in Jackson County, is the trading center of a fruit and diversified farming area. Here is located the Southern Oregon College of Education, and near by to the southwest is the Siskiyou Mountain range. The town has a population of some 7,700 persons with 525 in the high school.

Ashland public schools established classes in 1921-1922 for the first time in the trade and education field. Two classes of the part-time type gained tremendous interest in the Ashland area, for a class in commercial dressmaking enrolled 141 persons, and a class in commercial millinery enrolled 126 during the 1921-1922 school year. Trade and industrial education classes have continued in Ashland since the beginning in the various types of trade training as the need existed. An extensive program for training war production workers was carried on during the years 1940-1945. The diversified occupations program has never been established, as other phases of trade and industrial educational education have met the community needs.
Astoria

Astoria, county seat of Clatsop County, is located at the mouth of the mighty Columbia River. Astoria is noted as the home of the Royal Chinook salmon because of the number of these fish caught in the Columbia River. The population is around 12,000 with 575 students in the high school.

The Astoria school system has long conducted an extensive youth and adult program in trade and industrial education. In 1920-1921 the first class in marine motors was established in the part-time division, and a part-time class in general continuation subjects had twenty-two enrolled. Classes in this field have continued since that time with the program serving the people of the area in industries of fishing, lumbering, transportation, marine engineering and repair, and some phases of training connected with the naval training station.

Astoria was one of the first schools to establish a "pilot class" in practical nurse training in 1947-1948 which since then has spread to other areas. The diversified occupations program was established as part of the high school program in 1934; however, it was discontinued as part of the program under the state plan
in 1951.

Carl Bourne, coordinator, gives some reasons for this in his descriptive report of June, 1951.

a. Diversified Occupations: The program had been functioning very well until the last two years. It has been accepted by the community as an important part of our school curriculum. Coordinator's opinions as to reasons for discontinuance:
   1. School administrative changes with resultant changes in philosophy.
   2. Assignments of other duties to coordinator which have limited his time devoted to diversified occupations program.
   3. Lack of school space for related instruction class and guidance.
   4. High beginning wages in a highly organized community.

b. Trade Extension: It is in this area of vocational education that a great deal of work can and should be done in development of apprentice related classes, part-time trade extension class, short unit courses, etc. (9, p. 2)

The diversified occupations class enrolled twenty high school students during the 1950-1951 school year. In the day trade program one class in auto mechanics enrolled sixteen; one class for machinists, fifteen. A class in the evening journeyman division enrolled fifteen carpenters, making a total of sixty-six persons in the four classes at Astoria for 1950-1951.
Independence

Independence, located in Polk County, is known as an important hop raising area. Population of the town is about 1,900 persons. High schools of Independence and Monmouth now have consolidated and enroll some 340 students.

A class in millinery began in the part-time phase of trade and industrial education with ten students during the 1921-1922 school year. Since that time, courses have been provided as need arose. During the period from 1940 to 1945, a war training program was conducted in the school, but there has been no trade and industrial education program since then.

Mill City

Mill City is located in Linn County on the Santiam River and Santiam Highway to Bend, in the heart of a vast forest of virgin timber. The population is around 1,700 persons with the high school enrollment 125. Mill City had one of the most ambitious trade and industrial education programs in the state, outside Portland, in the early stages of the program.

During the school year 1921-1922, Mill City operated four separate classes in this field. Classes were the
part-time type in fields of auto mechanics with eight students; electricity, ten; acetylene welding, one. A part-time general continuation type class in general continuation subjects and auto mechanics enrolled twenty.

Biennial reports of the state superintendent of public instruction show that classes continued for several years in Mill City; then they ceased to operate except occasionally when a need arose.

**Phoenix**

Phoenix, located a few miles south of Medford in Jackson County, has a population listed as 746 including 185 students in the high school. Phoenix was perhaps the smallest town in the state to establish trade and industrial education classes. During the 1921-1922 school year, when millinery was the most popular part-time course in Oregon, Phoenix had one class of seven. Interest lessened and the course ceased; there is no information on other courses established.

**Prineville**

Prineville, located in Crook County, is the only town with a high school in the county. While Prineville has a population of 3,200 within the city, the high
school enrolls 500 students who attend from the entire county. During the school year 1921-1922, Prineville public schools established a part-time class, under the Smith-Hughes plan, in millinery with sixteen enrolled. These classes continued for a few years, but no record is found of other classes in Prineville after these early classes ceased in the early 1920's.

**West Linn**

West Linn is located on the west bank of the Willamette River opposite Oregon City. Paper mills furnish employment for many of the 2,900 persons within the city.

The high school enrolls 450 students. West Linn public schools established a part-time type class under the Smith-Hughes program during the school year 1921-1922, with one class of nine in carpentry.

There have been various classes from time to time and a war production training program carried on in the trade and industrial education field during 1940-1945.
Roseburg

Roseburg, largest city of the Umpqua Valley, is located near the western slopes of the Coast Range and has recently become a boom town because of the lumber industry. Total population of the town is approximately 8,300 with 1,253 in high school.

Roseburg was one of the early schools to begin work in the trade and industrial education field under the state plan of part-time instruction. The first industrial part-time class began in 1920-1921 in auto mechanics with nine persons. This type of program continued to meet the needs of the community until certain industrial and employment situations confronting the high school part-time class produced a new type of program in the trade and industrial education field. The new program, known as diversified occupations, originated in Roseburg in 1926 under the direction of Professor A. R. Nichols of Oregon State Agricultural College and the State Department of Vocational Education at Salem, Mr. Tom McKenzie being first coordinator.

The program resulted from a high school class established to receive training in mechanics in the Southern Pacific Railroad Company's round house. About the time the class was established, the railroad company moved its
division headquarters to Eugene, making it necessary to place these students in various other occupations.

The question then arose whether this plan would qualify for reimbursement under the federal plan of trade and industry as heretofore part-time classes in high school were composed of students of only one occupation. Representatives from the national office of education visited Roseburg to view the program at work. Their report being highly favorable, the class was given federal approval to operate under the state plan.

Because of the historic significance of the diversified occupations program, the writer has obtained the following record of Mr. McKenzie's appointment, from the original school board records at Roseburg, February 2, 1926:

On motion duly made, seconded and carried, it was decided to install a course of Industrial Art Training for Boys in the new high school under the Smith-Hughes Act. Each pupil would be taking three hours actual employment in connection with their class work.

No further business appearing the meeting was duly adjourned... V. J. Micelli, Clerk
S. DeLapp, Chairman

Minutes under date of June 15, 1926, state:

On motion Thomas T. McKenzie was employed as instructor in the Industrial Art Department of the Senior High School at a salary of $1,800 per year. (Minutes unsigned) (12, p. 1)
C. K. Beach, nationally known in this field, who went to Roseburg as coordinator in 1930, gives more data on the beginning of the diversified occupations program at Roseburg:

Around 1925 Mr. A. R. Nichols, who at that time was state supervisor of trade and industrial education in Oregon, worked with the local school officials in Roseburg relative to developing a part-time cooperative program that would be diversified in nature. The program was established in 1926 and Mr. T. T. McKenzie was employed as coordinator. Mr. McKenzie handled the program until 1930 when I accepted the position as coordinator for that year. Mr. McKenzie accepted the position as local director of vocational education in Salem.

During that first year there were fifteen or twenty senior high school students in the part-time cooperative program. The students attended school in the mornings and worked in the various local businesses or industries in the afternoons. As I recall, I taught two classes in industrial arts in the junior high school in the mornings and one in the afternoon. This made it possible for me to have the activity period at the senior high school free to confer with my students on a more or less individual instruction basis. During these conferences with the individual students, my primary responsibility was to give them related instruction that would help them on their various jobs. Part of my afternoon was devoted to going around calling on the students and their employers.

During the school year, 1930-1931, Mr. O. D. Adams, then state director of vocational education, came to Roseburg and brought with him Mr. James Coxen, who was then trade and industrial education regional agent for the United States Office of Education. Mr. Coxen spent a full day looking over the program and checking on its various aspects. I very vividly remember his selecting at random from my list of part-time
students those whom he wished to call on while they were employed. His objective, of course, was to keep me from showing him only the better programs.

At a meeting of the Federal Board for Vocational Education in the spring of 1931 Mr. Coxen reported on the Roseburg program. It is my understanding at that meeting the Federal Board modified the regulations so that smaller communities could operate diversified part-time cooperative programs similar to the one in Roseburg. As a result of these new regulations, the one change in our Roseburg plan was that I met with the students regularly in class. I taught them, as a group, subjects which were of general value and interest, including employer-employee relations, labor laws, etc. I also devoted part of the time to giving each student instruction directly related to the particular field in which he was working.

During my first year, I also organized my students into a club which I called Future Craftsmen, or shortly thereafter, a state organization was formed, called the Future Craftsmen of America. Annual conventions were held in Portland at which time the students visited several industries. Contests were also held, including parliamentary procedure, public speaking, first aid, etc. The activities I carried on with my students during the four year period when I was in Roseburg included a basketball team, radio programs over KOAC, a vocational fair which was worked out in cooperation with the agriculture and home economics departments, and talks by my students at local service clubs where they told what they were doing in their part-time program.

I left Roseburg in July, 1934, to accept a position as state supervisor of adult education. At that time Mr. William Wymer succeeded me. (4, p. 1,2,3.)

C. E. Rakestraw, consultant on employer-employee relations, Federal Office of Education, gives the following information on the beginning of the diversified
occupations program in Oregon in relationship to the beginning of the program in the South:

The beginning, in 1926, of the classes in Oregon which you mentioned was somewhat earlier than those started in the South. Of course, we had had over the nation for years prior to that time, cooperative part-time classes where the students alternated between school and work on a week-about basis, and in some of the communities such programs were operated on a shorter alternate basis. Students in most of the classes received training for specific occupational fields. It was not possible to conduct such cooperative part-time classes in the smaller communities, especially in the South, because the need for training in specific trades was not sufficient to justify such programs, enrolling 24 to 30 trainees for one trade.

Because of this condition, we turned our efforts to the development of the diversified occupations type of program. In this way, as you know, we were not training more than could be absorbed into any field of work. It was not until around 1933 that the twelve state supervisors and myself began developing diversified programs in the smaller communities in the South. (65, p. 1)

This data from Mr. Rakestraw established the Roseburg program as the first of the diversified type of cooperative programs where students in the class represent a number of different trades and occupations. This type of program has developed the most rapidly of the various types in the trade and industrial education field in Oregon and in the United States.

Jack E. Brookings became coordinator of the Roseburg
program in 1950 and has served to this writing. He took over the supervision of the program from Frank France who had operated it since 1945. Harry Wilson was in charge of the program during the school year 1944-1945.

The Roseburg diversified occupations program has operated continuously since its beginning in 1926. The program developed rapidly and was soon on a full-time basis. Over 1,000 high school students have taken this course during the twenty-two years of the program's existence. Mr. William Loomis, state supervisor of trade and industrial education at the present time, was enrolled in the program when in Roseburg High. Many of these young people have remained in the area and have continued in the trades and occupations which they began in their high school course. During the school year ending June, 1951, there were forty-five enrolled in the diversified occupations classes. Besides the diversified occupations program, evening apprentice and evening journeyman classes in carpentry, electricity, and plumbing began, as well as public service training in the field of trade and industrial education. During the 1950-1951 school year, 147 persons enrolled. (66, p. 36)
Bend

Bend, with a population of 11,409 and high school enrollment of 700, is located on the Deschutes River in Central Oregon. The Bend area is noted for its geological formations and its scenic wonders. As the surrounding areas are heavily covered with great pine forests, cutting these pine trees and sawing the logs into lumber developed into the main industry of the city.

Bend was among the early schools of the state to establish classes in the trade and industrial education field as a part of the public school program. The first classes were day-trade classes in machine shop in 1927-1928 under the supervision of C. A. Gudarian. A year or so later, the day trade program broadened to include automobile mechanics. These classes have continued to operate.

In 1940, the diversified occupations classes were added to the program with an enrollment of twenty; Al Nelson, present grade-school principal at Bend, was first coordinator. Mr. Nelson was followed by Wilfred Burgess, present principal of Prineville high school, who was followed by J. Wilson Bilyeu, present coordinator. Enrollment in the diversified occupations class during the school year which ended June, 1951, was twenty-nine.
Besides the day trades and diversified occupations classes, the Bend public schools operate evening apprentice classes and evening journeyman classes in various trades for which there is sufficient need. During the 1950-1951 school year, evening apprentice classes in auto mechanics had eleven enrolled; electricians' class, nine; and plumbers', seven. Evening journeyman classes for electricians had twenty enrolled and a carpenter class, eighteen. Altogether there were seven trade and industrial education classes with 113 enrolled in the three classes.

An example of the accomplishment of the Bend trade and industrial education department is illustrated in the program of the Industrial Education state-wide meeting held at Klamath Falls, June, 1952. At this meeting, Allister C. Dallas, who graduated from Bend High School in 1931 and who took the machine shop course, was honored. After graduation, Mr. Dallas immediately entered the machine shop trade, being employed by the Bend Iron Works. Since then, except during a brief period during the war when he was engaged in defense work, he has worked at this same plant. Now he is machine shop foreman.
La Grande, located in Eastern Oregon, is a town of 8,635 population with 589 enrolled in the high school. La Grande public schools established the trade extension type of trade and industrial education with an evening class in railroad trades with thirty-one enrolled during the school year, 1928-1929. Classes in this field were continued under the evening and part-time phase until the diversified occupations program provided a coordinator to supervise the program.

The program of diversified occupations has been in existence there since 1935. As in most college towns, competition for jobs is keen among the high school and college students. The coordinator of the high school program must sell the local business firms and industries on the training value of the program to the young people. A certain amount of favor is often given to college athletes and other college students for the part-time jobs which would otherwise make desirable training situations for the high school students.

In areas like La Grande where there are few industries outside of lumbering, it is also difficult to secure training situations. The success of the program in communities of this type is more than ever dependent
upon the coordinator who works in it. Enrollment in the high school classes in diversified occupations was twenty during the school year ending June, 1951.

Evening apprentice and evening journeymen classes were held in La Grande public schools for the first time during the 1951-1952 school year. Classes were held for carpenters and electricians with five persons enrolled in each of these classes. Thirteen persons were enrolled in an evening journeymen class for carpenters. Robert M. Foster, who transferred to Albany High School as coordinator in July, 1951, was coordinator at La Grande High School from July, 1949, to June, 1951.

Baker

Baker is a town of some 9,400 people in Baker County, Eastern Oregon, with a high school enrollment of 576. The Baker area is largely one of dry land farming, typically characteristic of the Eastern Oregon country, wheat and cattle raising being the most important enterprises. Some industries in Baker connected with the agricultural development are the manufacture of butter, cheese, and condensed milk. A stand of pine timber in the nearby Blue Mountains provides logs for the pine lumber industry.

While these small industrial developments have
evidently not created sufficient interest for the establishment of the diversified occupations program in the high school, there existed a day-trade program in carpentry, with around fifteen students, in the public schools during 1930 to 1933. During 1937 and 1938 the Baker area staged a revival of gold mining, which had flourished there seventy-five years earlier, because of the doubling of the price of raw gold under the Roosevelt administration. This condition gave rise to a number of placer mining classes in the trade and industrial education field similar to ones established in the Grants Pass area about the same time.

**Medford**

Medford, one of the largest towns in southern Oregon, located in the heart of the Rogue River Valley, has a population of 17,305 and a high school enrollment of 1,296.

The diversified occupations program started in 1931 with five enrolled. In 1932 a trade preparatory class in carpentry started with twelve. Since the discontinuance of the diversified occupations program in 1945, the school district has maintained the related training classes and has worked in conjunction with the Medford
Apprenticeship Council.

Mr. D. D. Becken, assistant superintendent of city schools, gave the following pertinent reasons why the program was discontinued:

As you may recollect, the program was started here in 1931 and was terminated in 1945. During that entire period Mr. Mentzer served as the coordinator. In 1945 the co-op program was dropped for several reasons. For one thing the hourly wage paid to the trades and industries and Vocational Training Memorandum students was at such an amount that certain employers tended to be sure that they received their money's worth in unskilled labor and did little to actually train the students. Of course such a situation as this was not the common thing but was occurring frequently enough so that the value of the program was questioned. Secondly, the "red tape" required, the making of reports, etc., were such that Mr. Mentzer had little time to supervise his students properly. The former reason as given was obtained from Mr. Hedrick himself, the latter reason came from Mr. Mentzer. (6, p. 1)

He believes that they are operating a very good related training program in the three trade groups which are mentioned above. He states that fundamentally Superintendent E. H. Hedrick is not unfavorable to this type of program when it is carefully handled at all times. Mr. Hedrick has a feeling that it might be possible to operate such a program wherein the students would not be paid; this is one of the points he is thoroughly investigating. This might place a stronger obligation for
training on the employer, but it would immediately involve a new problem with labor unions.

While the Medford school board has discontinued the diversified occupations program, other types of trade and industrial education classes have been maintained over the years. During the school year 1950-1951, the only year for which complete records are available in the state office, three classes were held in the day trade program—carpenters, seventeen enrolled; machinist, twenty-six; metal work, seven. Classes in evening apprentices were carpenter, twenty-six; electrician, thirteen; plumber, ten. In one part-time preparatory section 100 pear packers trained, making a total of seven classes totaling 199.

St. Helens

St. Helens, located on the lower Columbia River, has a population of 4,711 and a high school of 458. Part-time trade preparatory classes were first offered in the St. Helens public schools in 1932.

The diversified occupations program at St. Helens, one of the early programs of this type in the state, began in 1936 with an enrollment of fourteen. The program was discontinued in 1942 during World War II because of lack of personnel. It started again in 1945 and has
continued to the present. Paul F. Wilmeth, present coordinator, commented on diversified occupations as follows:

I believe the co-op class has served a definite need in the past three years since I have been here. This year, twelve seniors were graduated, who were in trades and industry class, who are now in full time jobs, earning their own living and contributing something to the community. Each of them is pretty well established in the particular line of work.

We have had space in our annual for the past two years showing the students on the job and a brief history of each training situation. Newspaper has carried a story and history also of each training situation for the past two years. We have newspaper coverage for all our committee meetings at which the trainee appears. Generally, any completion certificates which are issued are published in the newspaper along with pictures of the presentation. (77, p. 2)

The fact that the program was installed the second time as soon as capable personnel was available indicates that the program meets a need in the community. Twenty-two high school students were enrolled in the diversified occupations program during the 1951-1952 school year. Besides the diversified occupations program, evening classes for journeymen have been conducted for some time. During the 1951-1952 school year, two electricians' classes enrolled seventeen and one foremen's class enrolled sixteen.
Coos Bay

Coos Bay, formerly known as Marshfield, is located on Coos Bay and has a population of about 6,200 with about 658 in the high school. Some of the factors in the development of the Coos Bay area are these: a well protected bay large enough to accommodate sea-going vessels; plain-like stretches of land along the Coquille River that provide fertile soil for farming; forests and some coal deposits within the immediate vicinity; mild summers and open winters, which favor the steady growth of the dairy industry.

The diversified occupations program started in Coos Bay in the fall of 1938 with an enrollment of sixteen. The program ran until 1943 when it was discontinued during the war years but renewed in the fall of school year 1949-1950.

The Coos Bay city schools have recently become known as Consolidated District 9, and the trade and industrial education program covers a much larger area than formerly because of the inclusion of several outlying school districts.

During the 1951 school year, there were twenty-one students in the diversified occupations program. The program is on a half time basis with the coordinator
supervising an extensive adult education program, according to the bulletin published by the Coos Bay Public Schools for the school year 1950-1951. There has been no day-trade program in the Coos Bay schools since the war production training program closed in 1944.

Close coordination in the trade and industrial education program for adults exists between the two cities of Coos Bay and North Bend. Duplicate classes are not operated unless there is sufficient demand to warrant them. When one school does not provide the adult course, the student is advised to attend the class in the other city, since the city limits of these two towns join.

A unique feature in the adult program is a definite schedule date for beginning classes on a term basis. The fall term starts the first week in September; winter term, first week in December; and spring term, first week in March. During the 1950-1951 school year, classes were held in general metal work and welding, general woodwork, carpenter apprentice and related information, electrician apprentice and related information, art metal craft, general bookkeeping, typing and office practice, general sewing, tailoring, and banking. Minimum enrollment of the classes was fifteen and in a few instances fewer numbers were acceptable.
The Board of Education of Coos Bay Public Schools in adopting the following policies regarding the use of school facilities has assisted in the promotion of vocational education classes:

The Buildings and Facilities of the Coos Bay Public Schools are available for use by all ages at any time and in any way so long as such use does not interfere with the regular Elementary and Secondary School programs. (11, p. 2)

Besides the diversified occupations class of nineteen high school students, adult trade and industrial education classes in Coos Bay Public Schools had the following enrollments: evening apprentice classes for carpenters, fifteen; electricians, twenty-seven; evening journeymen classes—two classes for electricians, thirty-four, and one class for plumbers, eleven. Total was 106 persons in the six trade and industrial education classes for the year ending June 30, 1951.

The following comment from the June, 1951, report of the Coos Bay Public Schools indicates the continued community interest and support for adult vocational education:

The outlook for continued adult courses is good. Our aim is to increase the service to the community in every field of demand. It is our intention to increase the courses offered to the general public. We have in mind such courses as public speaking, commercial or business law, salesmanship, and parent education courses. (11, p. 2)
Albany

Albany, a town of 10,115 population with a high school enrollment of 920, is located in the center of the Willamette Valley and is surrounded by excellent agricultural farm land. Large areas of marketable timber abound in the adjacent area with various industries making up the industrial life of the city.

The Albany diversified occupations program started in 1939 with a beginning enrollment of only five students and Mr. Art Palmer as first coordinator. The enrollment has grown to seventy-three during the 1950-1951 school year. The Albany program, on the full time programs in the state, had a large growth under Mr. Leo F. Walker, coordinator from 1941 to 1951.

During the past year there were no trade extension day-trade or evening classes in operation at the center. A follow-up study of a number of the students in this program, made during the 1950 school year by Mr. Walker, indicated the value of this type of program in Albany. It is an example of how the local high schools can help supply the needed training for a large number of the pupils who do not go to college or take up professional work. Mr. Foster became coordinator here in 1951-1952.
Hood River

Hood River, chief town of the Hood River Valley, situated on the river of the same name that joins the Columbia, ranks high among the smaller trading centers of Oregon. Specialized fruit farming is outstanding in the irrigated valley--famous for its apples, pears, cherries and strawberries. Hood River has a population of about 3,700 with high school enrollment of about 300.

Hood River High School has operated a part-time preparatory type trade and industrial education class for fruit packing. This class has been provided as a part of the public school program each year since it started in 1940 with seventy persons enrolled. During the 1950-1951 school year, there were 111 enrolled in this course.

Klamath Falls

Klamath Falls is one of the largest towns in southern Oregon with a population of 15,875 and a high school enrollment of 1,336. The city has had a large and expansive industrial development during a ten-year period.

Klamath Union High School has maintained a full
time diversified occupations class in the trade and industrial education field program since the fall of 1941. The first coordinator was Clem Clark, who later transferred to the state office and worked in the war production training program. From a beginning enrollment of twenty-eight it has increased during the ten-year period to an enrollment of fifty-four in 1951.

Klamath Falls Union High School has maintained evening apprenticeship and journeymen classes in the fields of plumber-steam fitting, blueprint reading, and carpentry, with thirty-seven persons enrolled in these three fields.

Lebanon

Lebanon is a Willamette Valley town of 5,873 persons and a high school enrollment of 771 students. It is principally an agricultural and farming area with diversified industrial and business enterprises resulting from these occupations.

Lebanon High School established a trades and industries program during the war year of 1944. The Lebanon program and Forest Grove program were the only two to be established until the end of the war period. The first coordinator was Frank L. France, who started the
program on a part-time basis with a beginning enrollment of twenty-nine; it has continued on this same basis with about the same enrollment.

The present coordinator is A. A. Dodds. In his comments about the diversified occupations program, he reported that the present enrollment seems to be about what the community can support— that the employers in the area are in favor of the theory and practices of this type of education. He mentioned that there was some disfavor from persons concerned with reports and book work. He brought out a point which is perhaps a general one concerning the trades and industries program in high schools— that of the school permitting students to work a part of the school day without being on the diversified occupations program. When this is done, it is difficult for the employers to see why they should have to comply with regulations while other employers have students working for them on school time who do not have to comply.

In 1950-1951 the Lebanon school system established a class in day trade for machinists with an enrollment of sixteen. The day trade class at Lebanon has continued with increased enrollment each year. Trade extension classes in the area have been very limited because most of the workers are operators in mills and plants
where limited numbers are needed and little related training is required for the jobs. The most successful trade extension classes in Lebanon have been in welding and commercial subjects. During the 1950 year a class was maintained in welding with an enrollment of nine.

Forest Grove

Forest Grove, located in the heart of the Tualatin Valley in Washington County, has a population of 4,343 and 540 in high school. There are some one hundred and forty small business concerns which provide the work opportunities for the program. The surrounding area of Forest Grove is largely of an agricultural nature with lumbering the second community enterprise of importance.

The diversified occupations program, which provides cooperative part-time vocational education for high school students, was begun in Forest Grove Union High School in the fall term of 1944 with twenty students enrolled. This class, one type of vocational trade and industrial education, was initiated in cooperation with the State Division of Vocational Education. Mr. R. J. Haas was selected as coordinator to initiate the program in this community and has continued in that capacity up to this writing. For the most part the
classes are carried on in the local high school building. In addition to this program, adult apprentice classes have been conducted in cooperation with the high school along with on-the-job training for veterans. These programs have broadened the offerings in trade and industrial education in Forest Grove and the surrounding area since the initial instituting of the diversified occupations program in 1944.

Since the Forest Grove trades and industries department is the only one in the schools of Washington County, Mr. Haas has acted as a supervisor for that part of the entire county program which deals with adults. He has served as secretary of the local apprenticeship committee for the adult apprentices for the county and student apprentices who are on the part-time diversified occupations program of the high school in Forest Grove.

Up to this time the Forest Grove trade and industries department has conducted part-time classes, evening classes, and diversified occupations class. The related class in the school is composed of high school boys and girls who work half time at various trades down town and who carry regular high school subjects the other half day.

This group of students which has numbered fifty-one
at its highest point of any one year, has maintained an average of about twenty-seven over the nine year period. This is a good proportion for a small community since there is considerable competition for jobs in a school work program in a small college town like Forest Grove.

In many cases repeated job placements are made in the same establishment even where the first person has remained with the firm. The first person, having advanced in the business, leaves a place for a beginner.

The apprentice committee of Forest Grove, which is composed of an equal number of employee and employer members, has been in existence since the beginning of the program nine years ago. The high school principal acts as chairman and the coordinator as secretary of this group. This committee provided a means for local control of problems of apprentice training.

**Toledo**

Toledo is a small sawmill coastal town of 2,323 persons with 239 in the high school.

The Toledo diversified occupations program, now administered in conjunction with Newport, started in 1947, the year before the Newport program, with Carl
Dunlap as first coordinator. The program was on a part-time basis with ten students beginning. Enrollment has increased to twenty-three, indicating the development and interest in this type of program in the coastal area. The program has been well received in the community with support from both the school system and businesses.

It has been the plan to increase the program gradually, a plan generally proved to be wise in most communities. No day-trade program has yet been instituted in this system. The plan of having one coordinator work a half day each in two communities when close together seems to be one of the ways in which the Oregon program can be extended to numerous other small communities of the state.

Oregon Technical Institute

In 1947 Oregon legislature under the provisions of House Bill 546 provided for the acquisition and maintenance of the former Marine barracks three miles from Klamath Falls for a state education institution. Section 1 of the 1947 law gives a description of the site:

The state board of control hereby is authorized and directed to immediately proceed to acquire, in the name of the state of Oregon, title to that certain real property
consisting of approximately 734 acres of land which is the present site of the United States Marine barracks facilities at Klamath Falls, Oregon, together with personal property consisting of the equipment in and for such buildings. (49, p. 39)

Subsequent sections of the act provide that the jurisdiction and control shall be vested in the State Board of Education and that this board is further charged with the duty of operating the premises for the state.

The state board was further authorized to proceed to establish a state vocational school. This was the first vocational school of less than college grade to be established on a state wide basis. There have been no additional schools of this type established up to this time in Oregon. In order to take advantage of the buildings, land, and other valuable federal materials, the act passed in 1947 was of an emergency character and became effective immediately upon its passage. Various other laws of the state pertaining to vocational education were made applicable to this school; one permitted the use of federal matching funds under the federal and state cooperative plan. The state legislature also made an original appropriation of $620,000 for operating the school until June 30, 1949. This has been supplemented since by legislative appropriations of the
1949 session which approved the budget to June 30, 1951. This was again approved for two years by the 1951 session, extending state funds to June 30, 1953.

The act did not specify a name for the school, which was first called Oregon Vocational School. The Oregon State Board of Education changed the name to Oregon Technical Institute which is more in keeping with the present trend in the titles of similar types of schools throughout the country. From a small opening enrollment of fifty students in a few classes this school increased to thirty-three classes and 1,051 students in 1951.

A paragraph from the foreword in the OREGON TECHNICAL INSTITUTE BULLETIN of April, 1950, states the purpose of the school:

Oregon Tech was designed to supply terminal education in an area where educational opportunity has been strictly limited. The high school graduate, or other individual, who finds that college training does not include vocational and technical pursuits in his field of choice, has had little opportunity to secure training in his chosen field. This school was organized to help supply that type of training. (57, p. 6)

The curriculum includes a large number of courses in three main fields of occupational training, business education, trade and industrial occupational training, and technical pursuits in semi-professional fields.
Additional courses in certain fields may be established when fifteen or more persons are interested.

Oregon Technical Institute is designed primarily for Oregon people to prepare them for employment and to secure advancement. Any citizens of the United States, both men and women, may attend. Persons outside the state pay a slightly higher tuition than the Oregon residents. Winston D. Furvine has been the director from the beginning of the school to the present.

**Newport**

In Newport, located in Lincoln County along the coast, there are 3,241 people, and the high school has an enrollment of 272.

The Newport trade and industrial education program of diversified occupations started during the fall term of 1948 on a half day basis with Mark Brooke as coordinator. Beginning enrollment was eleven high school students.

The diversified occupations enrollment during the school year ending June, 1951, was nineteen. Since the school systems of Lincoln County are all under the county unit plan, it is possible to have Newport and Toledo supervised by the same coordinator. The
diversified occupations program is the only trade and industries program established in the Newport school system up to 1952.

Newberg

Newberg, home of Pacific College, is located in Yamhill County in the upper Willamette Valley. Its industrial life centers around the growing of nuts and berries, a cannery, and dairying. Population is 3,946 and high school enrollment 510.

Newberg public schools conducted a war training program under trade and industrial education during 1940 to 1945. In October, 1949, a part-time evening class for carpenters began with Vernon J. Warren as instructor; twelve persons enrolled. The class operated to June 30, 1950. While this class was under the supervision of the Newberg school district, those taking the class came from other towns in Yamhill County. Provisions of the regional school law passed in 1941 make possible the serving of persons outside a particular school district in trade and industrial education as well as those in the district sponsoring the class.
Hermiston

Hermiston in Umatilla County with a population of 3,804 and a high school enrollment of 498 is one of the smaller towns having the diversified occupations program. It is also one of the newest of the state programs, having been started in the fall of 1950 with Grant Hutchins as part-time coordinator.

The beginning enrollment was fifteen high school students the first year. Besides the diversified occupations program, evening classes were held for carpenters, both apprentices and journeymen.

As a descriptive report is sent to the State Department from centers throughout the state, the complete report of the Hermiston program describes its first year of operation and the extent of the local program:

Descriptive Report of Trade and Industrial Education in Hermiston, Oregon

Beginning July, 1950, the Part-time Cooperative Diversified Occupations Program began to be put into operation. During the summer, effort was made to contact all businesses in the community which might afford legitimate training opportunities. Although it is apparent now that much of the effort could have been better directed, nevertheless, it was not without some success. Or, at least, such is the opinion of the community.

With the opening of school, some two or three trainees were placed, and during the first month or so this number expanded to twelve. The
scope of the program was somewhat limited, embracing two apprenticeable occupations. Essentially, Hermiston is still a small community, based upon construction, agriculture, and livestock. It lacks any industrial development as such.

During the course of the year, there were three terminations and two additions. Out of all the businesses which have cooperated in the operation of the training program, only one has been irrevocably lost, while the others have expressed varying degrees of approval and intended participation.

From this overview of the past year's activities, it may be seen that the initial impact of trade and industrial education in this community has been favorable. It is proving to be a valuable link between school and community and needs only to organize and increase the area of its influence.

Grant Hutchins, Coordinator
Trade & Industrial Education
Hermiston High School
(23, p. 1-2)

Lakeview

Lakeview, the largest trading center in Lake County, is an interesting part of Oregon. The surrounding area is dotted with lakes, many of which are dry much of the time.

The town has a population of 2,831 and the high school has an enrollment of 311. The diversified occupations program is one of the newest in the state, having been started in the fall of 1950 with Robert Toner as part-time coordinator. Beginning enrollment was
thirteen students; enrollment increased to fifteen the second year.

The present coordinator commented on the program as follows:

We have had a very successful first year with the places of business; students, parents and school feel that is has filled a need of the community. (71, p. 2)
CHAPTER V

TYPES OF TRADE AND INDUSTRIAL EDUCATION CLASSES IN OREGON

The State Division of Vocational Education has, since 1917, found it necessary to modify its state plan from time to time in order to meet changing conditions.

The three main types of schools and classes in each division in the trade and industrial education program in Oregon include those available for federal reimbursement.

Table II shows the enrollment in the three main types of trade and industrial education classes in Oregon from 1918 to 1952. Enrollment for the supervised correspondence study classes, sometimes considered as a fourth classification which operated from 1946 to 1949 during heavy veteran enrollment, is included under the part-time classes in Table II and in the outline of types of classes.

Table III shows the amount of money provided by local school districts in Oregon by the state legislature and by the federal government for the trade and industrial education program from 1918 to 1952.

The following outline lists the available types of
trade and industrial education classes which are pro-
vided under the federal and state plan.

1. All-Day Trade Classes
   a. Type A
   b. Type B
   c. Type C
   d. Out-of-School Youth Work Experience Training.

2. Evening Classes
   a. Evening Apprentice
   b. Evening Journeymen

3. Part-Time Classes
   a. Trade Extension
   b. Trade Preparatory
   c. General Continuation
      (1) Type A.
      (2) Type B
          (Diversified Occupations)
   d. Public Service Training
   e. Foremanship Training
   f. Employed Workers' Training
   g. Supervised Correspondence Study

These three types of trade and industrial education classes— all-day trade, evening classes, and part-time classes— have operated in various centers of Oregon during the thirty-six year period since the beginning of federal reimbursement for the program. However, all the various classes outlined under the three main types have not usually operated in any one given year.

Federal enactments during the years have provided for changes in types of classes. For example, changes in the state plan provided for more kinds of classes in
1951 than were possible in 1946 before the George-Barden Act became effective or in 1936 before the George-Deen Act was put into operation.

**TABLE II**

<table>
<thead>
<tr>
<th>Year</th>
<th>All-day</th>
<th>Evening</th>
<th>Part-time</th>
<th>Total</th>
</tr>
</thead>
<tbody>
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<td>1918</td>
<td>208</td>
<td>56</td>
<td>-</td>
<td>264</td>
</tr>
<tr>
<td>1919</td>
<td>63</td>
<td>-</td>
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<td>63</td>
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<tr>
<td>1920</td>
<td>173</td>
<td>1,247</td>
<td>450</td>
<td>1,870</td>
</tr>
<tr>
<td>1921</td>
<td>100</td>
<td>400</td>
<td>301</td>
<td>787</td>
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<tr>
<td>1922</td>
<td>187</td>
<td>174</td>
<td>467</td>
<td>828</td>
</tr>
<tr>
<td>1923</td>
<td>131</td>
<td>683</td>
<td>971</td>
<td>1,825</td>
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<tr>
<td>1924</td>
<td>171</td>
<td>481</td>
<td>568</td>
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<td>225</td>
<td>1,127</td>
<td>1,225</td>
<td>2,612</td>
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<tr>
<td>1926</td>
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<td>422</td>
<td>485</td>
<td>1,103</td>
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<tr>
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<td>196</td>
<td>1,002</td>
<td>608</td>
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<tr>
<td>1928</td>
<td>212</td>
<td>953</td>
<td>639</td>
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<td>234</td>
<td>1,240</td>
<td>546</td>
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<tr>
<td>1930</td>
<td>179</td>
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<td>356</td>
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<tr>
<td>1931</td>
<td>171</td>
<td>1,173</td>
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<tr>
<td>1932</td>
<td>334</td>
<td>348</td>
<td>2,221</td>
<td>2,903</td>
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<tr>
<td>1933</td>
<td>262</td>
<td>262</td>
<td>1,162</td>
<td>1,686</td>
</tr>
<tr>
<td>1934</td>
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<td>737</td>
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<tr>
<td>1937</td>
<td>533</td>
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<td>1938</td>
<td>1,117</td>
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<td>809</td>
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<tr>
<td>1940</td>
<td>820</td>
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<td>683</td>
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<td>1942</td>
<td>622</td>
<td>202</td>
<td>7,095</td>
<td>7,919</td>
</tr>
<tr>
<td>1943</td>
<td>334</td>
<td>394</td>
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<td>6,654</td>
</tr>
<tr>
<td>1944</td>
<td>628</td>
<td>311</td>
<td>3,292</td>
<td>4,231</td>
</tr>
<tr>
<td>1945</td>
<td>643</td>
<td>-</td>
<td>4,297</td>
<td>4,940</td>
</tr>
<tr>
<td>1946</td>
<td>433</td>
<td>-</td>
<td>4,599</td>
<td>5,032</td>
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</table>
TABLE II
cont.

<table>
<thead>
<tr>
<th>Year</th>
<th>All-day</th>
<th>Evening</th>
<th>Part-time</th>
<th>Total</th>
</tr>
</thead>
<tbody>
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<tr>
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<td>1,495</td>
<td>3,609</td>
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<tr>
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<tr>
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<td>5,596</td>
<td>2,122</td>
<td>9,232</td>
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<tr>
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<td>1,589</td>
<td>5,892</td>
<td>1,462</td>
<td>8,943</td>
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</table>

Data in table II were secured from United States Office of Education Division of Vocational Education, Washington D.C. January 1952.

TABLE III

<table>
<thead>
<tr>
<th>YEAR</th>
<th>LOCAL</th>
<th>STATE</th>
<th>FEDERAL</th>
<th>TOTAL</th>
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<td>$0.00</td>
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**TABLE III cont.**

**EXPENDITURES FOR FEDERALLY AIDED VOCATIONAL TRADES AND INDUSTRY EDUCATION IN OREGON, BY YEAR, 1919-1952**

<table>
<thead>
<tr>
<th>YEAR</th>
<th>LOCAL</th>
<th>STATE</th>
<th>FEDERAL</th>
<th>TOTAL</th>
</tr>
</thead>
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<td>$62,035.23</td>
<td>$524,162.58</td>
</tr>
<tr>
<td>1951</td>
<td>$119,127.97</td>
<td>$341,895.67</td>
<td>$64,181.28</td>
<td>$525,204.92</td>
</tr>
<tr>
<td>1952</td>
<td>$167,982.35</td>
<td>$297,601.08</td>
<td>$64,256.27</td>
<td>$529,839.70</td>
</tr>
<tr>
<td>1953</td>
<td>$112,000.00</td>
<td>$300,000.00</td>
<td>$64,256.27</td>
<td>$516,256.27</td>
</tr>
</tbody>
</table>

Data in table III were secured from United States Office of Education, Division of Vocational Education, Washington, D.C. December 11, 1952.
All Day Trade Classes

All day trade training is designed for persons enrolled in a full-time school who wish to be prepared for employment in a trade or industrial occupation which they have selected. Training includes instruction in technical and manipulative processes and other related subjects which are required of a skilled and competent worker. There are four types of all day trade training with three being offered in Oregon.

Type A, as classified by the federal act, is one in which the student devotes one-half day of not less than three consecutive hours to practical and useful work or work on a productive basis with additional technical and related class instruction. The latter must have a direct functional value in the occupation in which the training is being given. This training is given only in schools which offer instruction extending over at least nine months per year and thirty hours per week. The three regional schools—Oregon Technical Institute, Oregon City Regional Vocational School, and Eugene Vocational School—offer this instruction in Oregon.

Type B of this training differs from Type A only in provisions of the instruction in the related subject. The related instruction is given by the shop teacher.
in segregated classes along with the shop work. The half day is not necessarily divided into definite periods for teaching related subjects; instruction is given as the need arises in shop work. Shop classes must be in session thirty hours per week and nine months per year. Five centers offering the day trade courses are Lebanon, Bend, Medford, Astoria and Pendleton. Coos Bay, Forest Grove, and one or two other centers are considering these classes for the future.

Type C is a special type of all day pre-employment trade training which is organized for persons over eighteen years of age or for those fourteen years of age or over who have legally left the full-time school. This training may be offered for any length of time. The George-Barden Act specifically states that such classes may be operated for less than nine months a year or less than thirty hours per week and without the minimum requirement of half the school time for shop work or productive work. Type C training may be reimbursed from George-Barden funds only. Provisions of this act make it possible to provide for training in the following situations:

1. A demand for training single-purpose operators. Intensive training can be given to equip learners with the basic skills, technical knowledge, and related
industrial information which will enable them to get a job, hold it, and advance in the industrial occupation without regard to attendance 30 hours per week during a 9 months' school year.

2. Training opportunity to meet the special needs of persons over 18 years of age who wish brief intensive preparation for entrance at the beginning level in industrial employment. Such training will be less comprehensive and complete than that given in all-day trade preparatory courses.

3. Intensive courses operated 6 to 8 hours per day for relatively short periods of time and organized to prepare trainees for entrance into employment where the special job requirements are of such nature that the equivalent of such training would enable those trained to enter industry and meet definitely explicit job requirements. Preparation for specific jobs that require special testing or inspectional skills, as well as production skills, could be included when justified by local employment opportunities. (17, p. 70)

During the past year Type C classes were operated only in two centers: Hood River, for apple packing; Medford, for pear packing.

Type D, which is a work experience program for out-of-school youth, has never been put into operation in Oregon up to this time.

Related instruction in day trade classes may be taught in the shop period or outside the shop period. Length of the class is determined by the needs of the trainees and the length of the total training program
for each trade or occupation involved. The advisory committee gives recommendations concerning length of the class.

Minimum reimbursements up to thirty-five per cent of the instructor's salary are provided from the state and federal vocational funds for all of the programs in the day trade centers with the exception of the Oregon Technical Institute. Financing of Oregon Technical Institute is provided by state legislative appropriations in the same manner as other state educational institutions at regular biennial sessions.

The curriculum for technical education of the Oregon Technical Institute is designed to train persons for occupational status in technical and semi-professional fields. Courses offered in the laboratories and shops of the school are set up to parallel closely those of industry. Besides the shop and laboratory work the student is required to study the technical data which are closely allied to actual shop and laboratory practices. (58, p. 20)

The largest number of day trade classes for one center in the state is in the Oregon Technical Institute. During the 1950-1951 school year there were twenty-nine classes enrolling 1002 students.
Table IV shows the number of day trade classes, enrollment in each class, and various occupations in which classes were held in all Oregon centers for the school year 1950-1951. This is the first year that this information was made available on a state wide basis by the State Division for Vocational Education.

**TABLE IV**

<p>| ENROLLMENT IN DAY TRADE CLASSES IN OREGON FOR 1950-1951 |
|----------------------------------|------------------|</p>
<table>
<thead>
<tr>
<th><strong>CLASSES</strong></th>
<th><strong>NUMBER OF CLASSES</strong></th>
<th><strong>ENROLLMENT</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Air Craft Sheet Metal</td>
<td>1</td>
<td>12</td>
</tr>
<tr>
<td>Auto and Electric Mechanics</td>
<td>1</td>
<td>35</td>
</tr>
<tr>
<td>Auto Electricity</td>
<td>1</td>
<td>41</td>
</tr>
<tr>
<td>Auto Machinist</td>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>Auto Mechanics</td>
<td>5</td>
<td>154</td>
</tr>
<tr>
<td>Auto Painter</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Auto Radiator Repair</td>
<td>1</td>
<td>19</td>
</tr>
<tr>
<td>Auto Tune-up</td>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>Baker</td>
<td>1</td>
<td>28</td>
</tr>
<tr>
<td>Body and Fender</td>
<td>3</td>
<td>129</td>
</tr>
<tr>
<td>Cabinet Maker</td>
<td>1</td>
<td>31</td>
</tr>
<tr>
<td>Carpenter</td>
<td>2</td>
<td>45</td>
</tr>
<tr>
<td>Combin. Welder</td>
<td>1</td>
<td>13</td>
</tr>
<tr>
<td>Commercial Art</td>
<td>1</td>
<td>25</td>
</tr>
<tr>
<td>Creative Design</td>
<td>1</td>
<td>21</td>
</tr>
<tr>
<td>Diesel Mechanic</td>
<td>2</td>
<td>147</td>
</tr>
<tr>
<td>Dressmaker and Tailorer</td>
<td>1</td>
<td>18</td>
</tr>
<tr>
<td>Dry Cleaning</td>
<td>1</td>
<td>42</td>
</tr>
<tr>
<td>Electric Repair</td>
<td>2</td>
<td>61</td>
</tr>
<tr>
<td>Engineer Aide (GD)</td>
<td>1</td>
<td>14</td>
</tr>
<tr>
<td>Engineer Aide (Surv.)</td>
<td>1</td>
<td>43</td>
</tr>
<tr>
<td>Farm Mechanic</td>
<td>1</td>
<td>12</td>
</tr>
<tr>
<td>Gunsmithing</td>
<td>1</td>
<td>88</td>
</tr>
<tr>
<td>Machine Shop</td>
<td>1</td>
<td>19</td>
</tr>
<tr>
<td>Classes</td>
<td>Number of Classes</td>
<td>Enrollment</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>-------------------</td>
<td>------------</td>
</tr>
<tr>
<td>Machinist</td>
<td>6</td>
<td>119</td>
</tr>
<tr>
<td>Medical Dental Tech.</td>
<td>1</td>
<td>14</td>
</tr>
<tr>
<td>Medical Tech.</td>
<td>1</td>
<td>40</td>
</tr>
<tr>
<td>Metal Work (adv.)</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>Office Equip. Repair</td>
<td>1</td>
<td>45</td>
</tr>
<tr>
<td>Photographer</td>
<td>1</td>
<td>17</td>
</tr>
<tr>
<td>Radio Communication</td>
<td>1</td>
<td>24</td>
</tr>
<tr>
<td>Radio Service</td>
<td>2</td>
<td>32</td>
</tr>
<tr>
<td>Radio Station Operator</td>
<td>1</td>
<td>24</td>
</tr>
<tr>
<td>Refrigeration Service</td>
<td>1</td>
<td>38</td>
</tr>
<tr>
<td>Sewage Plant Oper.</td>
<td>1</td>
<td>18</td>
</tr>
<tr>
<td>Silk Screen Proc.</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>Sports Equip. Repair</td>
<td>1</td>
<td>31</td>
</tr>
<tr>
<td>Watch Repair</td>
<td>1</td>
<td>52</td>
</tr>
<tr>
<td>Woodworking</td>
<td>1</td>
<td>24</td>
</tr>
<tr>
<td><strong>Total Classes</strong></td>
<td><strong>54</strong></td>
<td><strong>1,514</strong></td>
</tr>
</tbody>
</table>

Total of all day trade classes for 1950-1951 was 1,514 in the fifty-four classes in Oregon. In this table each day trade occupation is considered a "class". In some instances there may have been two or more actual classes.
Types of Part-Time Instruction

Part-time classes include several types of instruction plans. These are named in the outline at the beginning of this chapter. Of all the instruction in the trade and industrial field, part-time instruction has by far the largest number of different types. The federal acts providing aid for promoting and maintaining trade and industrial education recognize different types from time to time as need is shown by various communities. Oregon has been one of the leading states in devising newer means for providing part-time instruction.

Chief characteristic of part-time instruction is an alternation of study in school with practical work in an occupation. In order to be successful, part-time education must contain three essential features. First, there must be a gradual progression of steps in the tasks and skills on the job. This plan of work should stress continuous progression with greater demands upon the skill and intelligence of the learner. Second, the progression of job experiences must be clearly understood by both the learner and the teacher of the part-time pupil in the school so that the teaching can be specifically related to the learner's experience. The teaching must be timely in order to be effective. This
suggests the third essential; namely, that the coordinator is always needed in the part-time program. It is his task to bring about integration of what is taught in school with what is experienced on the job.

**Part-Time Trade Preparatory Classes**

This type of instruction is designed for persons who wish to fit themselves for useful employment in trades, occupations, or fields of industry, other than those in which they have been employed. This is an occupational "changing" type of part-time instruction which aims to prepare workers for a new occupation. Trade preparatory instruction is given to various groups in different trade and industrial occupations. However, federal regulations require that the instruction given to a particular group be confined to a single occupation. An example of this type of instruction was the class for 100 pear packers given at Medford during 1950-1951.

**General Continuation Classes**

There are two types of general continuation classes. Type A is given to extend the civic or vocational knowledge of young workers who lacked opportunity to complete this phase of their education before employment.
Type B is the cooperative diversified occupations program found in the high schools of the country. The objective is to provide regular substantial training-on-the-job supplementary to school instruction through cooperation of the school, industry, and business for youth sixteen years of age or over. Such instruction is widely used to provide training opportunities for high school boys and girls. Oregon has the largest program of this kind of the eleven western states.

Such instruction was originally intended to meet educational needs and requirements in order to satisfy state compulsory education laws for out-of-school youth who could not meet the part-time trade extension or preparatory classes, but it is now used for workers above the compulsory school age who are employed in a large range of occupations. Training is offered in segregated classes to workers who return to the school during their usual working hours.

**Part-Time Trade Extension Classes**

Trade extension training is that which is given to employed workers for the purpose of increasing or extending their skill or knowledge in the trade or occupation in which they have or are engaged.

Examples of trade extension type classes are those
in related instruction for apprentices, part-time classes for persons in skilled and semi-skilled occupations, and other classes designed to increase the skill or knowledge of workers in trade and industrial pursuits.

One special form of part-time trade extension is found in cooperative classes. These classes may be organized to provide alternate periods of work on-the-job and attendance at school. The members in any given class or group are employed in the same trade or industrial occupation. Work or attendance may be alternated half days or weeks or longer periods. In all cases the hours at work must equal or exceed the hours spent at school and it shall not be less than an average of fifteen hours per week.

Classes in part-time instruction for year 1950-1951 are given in table V and table VI. Data were secured from the office of State Division of Vocational Education June 1952.
**TABLE V**

**ENROLLMENT IN PART-TIME PREPARATORY AND PART-TIME GENERAL CONTINUATION CLASSES ALSO CLASSES NOT INCLUDED IN FEDERAL REPORT FOR 1950-1951**

<table>
<thead>
<tr>
<th>TOWNS</th>
<th>CLASSES</th>
<th>NUMBER OF CLASSES</th>
<th>ENROLLMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eugene</td>
<td>Business Training (evening)</td>
<td>1</td>
<td>34</td>
</tr>
<tr>
<td></td>
<td>(evening) not included in Federal Report</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eugene</td>
<td>Business Training (part-time)</td>
<td>1</td>
<td>72</td>
</tr>
<tr>
<td></td>
<td>(part-time) not included in Federal Report</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hood River</td>
<td>Fruit Packer (part-time)</td>
<td>1</td>
<td>111</td>
</tr>
<tr>
<td></td>
<td>General Continuation type</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medford</td>
<td>Pear Packer (part-time)</td>
<td>1</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>preparatory</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Portland</td>
<td>Sales (evening)</td>
<td>4</td>
<td>72</td>
</tr>
<tr>
<td></td>
<td>not included in Federal Report</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Salem</td>
<td>Sales (evening)</td>
<td>3</td>
<td>23</td>
</tr>
<tr>
<td></td>
<td>not included in Federal Report</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table V shows enrollments in three sub-types of part-time classes. Eleven classes enrolled 412 persons in five centers (Eugene had two types of classes in one center).
### TABLE VI

**ENROLLMENT IN PART-TIME TRADE EXTENSION CLASSES IN OREGON FOR 1950-1951**

<table>
<thead>
<tr>
<th>CLASSES</th>
<th>NUMBER OF CLASSES</th>
<th>ENROLLMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bricklayer</td>
<td>4</td>
<td>55</td>
</tr>
<tr>
<td>Carman (Union Pacific)</td>
<td>1</td>
<td>14</td>
</tr>
<tr>
<td>Diversified (Union Pacific)</td>
<td>1</td>
<td>15</td>
</tr>
<tr>
<td>Lather</td>
<td>1</td>
<td>16</td>
</tr>
<tr>
<td>Machinist (Union Pacific)</td>
<td>1</td>
<td>16</td>
</tr>
<tr>
<td>Painter</td>
<td>4</td>
<td>46</td>
</tr>
<tr>
<td>Plasterer</td>
<td>4</td>
<td>50</td>
</tr>
<tr>
<td>Practical Nurse</td>
<td>4</td>
<td>45</td>
</tr>
</tbody>
</table>

Twenty classes in part-time trade extension enrolled 257 during 1950-1951. Trade extension classes represent one of the sub-types of classes under the general classification part-time classes.
Diversified Occupations Program

Although similar to other cooperative programs already described, courses of this type have steadily developed under the Oregon state plan since they were first established in 1926. Since this has become one of the most important phases of the trade and industrial education program, the following description is given from the State Plan issued July 1947:

1. To provide vocational training through cooperation of the school and industrial and business establishments for groups of young people whose individual occupational objectives differ and whose cooperative agreement provides for legal employment, systematic training on the job, and supplemental training in school.

(a) Hours
Not less than 144 clock hours per year of related training given in one school period per day, equal in length to other regular school periods. These pupils will be handled in a segregated class with the coordinator in charge.

Division of Time

Time spent in employment will be equal to or exceed the time spent in school each week of the school year and will be not less than 15 hours of legal employment per week; such employment shall be in conformity with Federal, State, and local employment regulations.

(b) Character and content of course of study.
1. A uniform course of study will be
provided from which content related to the employment of the pupils will be utilized to meet individual needs.

The work given to the members of this group will be such as will help to prepare them for employment and may include instruction in industrial relations and problems of employment, occupational instruction given to individuals or to occupational groups, supervised occupational study, and individual conferences.

2. In addition to the one period each day given to the segregated group, occupational instruction equivalent to at least one regular school period per day will be provided for each pupil. This instruction, to be arranged for by the coordinator, will be provided through special segregated classes, through available high school classes, or on the job.

3. For each student an outline or analysis of his present and future needs for occupational training will be prepared by the coordinator working with the employer, and this will be used as the basis for the training to be given.

4. An agreement, made at the time the pupils enter the class, will be made whereby the employer agrees to make the work educational as far as possible under the conditions of employment. (50, p. 91)

The diversified occupations program has shown a steady increase in enrollment and participation by additional school districts during the last few years. This increase has taken place in the face of higher beginning wages and higher on-the-job standards.
Enrollment for the 1950-1951 school year as shown in table VII totals 484, an increase of 102 over the previous year. Hermiston and Lakeview were two schools adding the diversified occupations program during the 1950-1951 school year.

Programs throughout the state have provided a location for the employment of trained trade and industrial educational personnel who usually spend part of their time organizing and operating adult apprentice and journeyman classes. This provision for local vocational coordinators and supervisors has made it possible to operate these adult classes on a cooperative basis.

Table VII shows the enrollment in the diversified occupations program in the various centers of Oregon during 1950-1951. Table VIII shows the enrollment in the Forest Grove center over an eight year period from 1944 to 1952.
<table>
<thead>
<tr>
<th>CENTER</th>
<th>NUMBER OF CLASSES</th>
<th>ENROLLMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Albany</td>
<td>2</td>
<td>51</td>
</tr>
<tr>
<td>Astoria</td>
<td>1</td>
<td>20</td>
</tr>
<tr>
<td>Bend</td>
<td>1</td>
<td>29</td>
</tr>
<tr>
<td>Coos Bay</td>
<td>1</td>
<td>19</td>
</tr>
<tr>
<td>Corvallis</td>
<td>1</td>
<td>28</td>
</tr>
<tr>
<td>Forest Grove</td>
<td>2</td>
<td>24</td>
</tr>
<tr>
<td>Grants Pass</td>
<td>2</td>
<td>50</td>
</tr>
<tr>
<td>Hermiston</td>
<td>1</td>
<td>15</td>
</tr>
<tr>
<td>Klamath Falls</td>
<td>2</td>
<td>42</td>
</tr>
<tr>
<td>La Grande</td>
<td>1</td>
<td>20</td>
</tr>
<tr>
<td>Lakeview</td>
<td>1</td>
<td>13</td>
</tr>
<tr>
<td>Lebanon</td>
<td>1</td>
<td>13</td>
</tr>
<tr>
<td>Newport</td>
<td>1</td>
<td>19</td>
</tr>
<tr>
<td>Pendleton</td>
<td>1</td>
<td>15</td>
</tr>
<tr>
<td>Roseburg</td>
<td>2</td>
<td>51</td>
</tr>
<tr>
<td>St. Helens</td>
<td>1</td>
<td>22</td>
</tr>
<tr>
<td>Salem</td>
<td>1</td>
<td>30</td>
</tr>
<tr>
<td>Toledo</td>
<td>1</td>
<td>23</td>
</tr>
</tbody>
</table>

A total of eighteen centers in Oregon enrolled 484 high school students in 22 classes in the Diversified Occupations program during the 1950-1951 school year.
<table>
<thead>
<tr>
<th>YEAR</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>1944-1945</td>
<td>23</td>
</tr>
<tr>
<td>1945-1946</td>
<td>16</td>
</tr>
<tr>
<td>1946-1947</td>
<td>12</td>
</tr>
<tr>
<td>1947-1948</td>
<td>11</td>
</tr>
<tr>
<td>1948-1949</td>
<td>12</td>
</tr>
<tr>
<td>1949-1950</td>
<td>12</td>
</tr>
<tr>
<td>1950-1951</td>
<td>14</td>
</tr>
<tr>
<td>1951-1952</td>
<td>13</td>
</tr>
<tr>
<td>TOTALS</td>
<td>113</td>
</tr>
</tbody>
</table>

During the first year of the program, 1944-1945, when the enrollment reached a total of 51, a plan was being tried under which students attended the related class only once per week and were not required to spend as much time on the job as in school. This plan did not prove satisfactory and was discontinued. Since the second year, 1945-1946, students are required to attend related class a full period daily and to spend as much time training on the job as they do in their school subjects.
The Place of Diversified Occupations Course in High School

Diversified occupations, which has become a valuable and integral part of the present day secondary school program, is designed to operate in the eleventh and twelfth grades or on a post high school level for those youths who are to live and work in the community in business, industry, and service occupations.

In order for this program to be effective, it must be closely coordinated with other offerings of the school, especially practical arts and vocational education. There must be a vocational guidance service in the high school program which will assist the students to make the best choices along the lines of their occupational interests.

The diversified occupations student usually receives one or two units of high school credit for his supervised work on the job each year he is enrolled and one unit of credit for related instruction, making a total of two or three units, depending upon the type of program. The student, as well as being given credit for what he learns, is paid for work on the job, according to the wage standards set by the local advisory committee.
Public Service Training

Training in the public service occupations with federally aided funds started with the passage of the George-Deen Act in 1937 and was extended under the George-Barden Act of 1946. Under provisions of these federal acts, training is given in service occupations in the trade and industrial field in such fields as (a) fire prevention and fire fighting (b) plant maintenance (c) water supply and sewage disposal (d) construction and repair of streets and highways (e) inspection in the interest of health and safety and (f) domestic and personal service occupations for wages in home service establishments. This type of trade and industrial education has expanded rapidly during the past few years in Oregon.

Short unit instruction in keeping with occupational interests and needs is of variable duration. The course of study deals with occupational processes and related information; content is based upon sound occupational pursuits and upon an analysis of current problems and needs. A course outline is required for each training program.

Most of the enrollment in service occupations in Oregon for the 1950-1951 school year comprised classes
for improvement of waitresses and practical nurses and related instruction for veterans taking on-the-job training. Some enrollees in the diversified occupations program were in jobs of this type. During the 1950-1951 school year, the State Division of Vocational Education provided a special state supervisor for public service and service occupations, work being done under the immediate supervision of the state supervisor of trades and industries. The state supervisor of public service training provided general supervision of instruction in ninety fire departments' training programs, directed the work of four full time and four part time itinerant supervisors for fire training, assisted in planning the curriculum for four police schools and three janitor schools, and supervised instructors in these fields.

The supervisor conducted four 48-hour pre-service instructor training courses and one 30-hour course for forty-three firemen instructors and one 12-hour course for nine police instructors. Receiving in-service training were ninety-eight firemen instructors, seven police instructors, two janitor instructors and one Rural Electrical Administration instructor.
Employed Workers' Training

Short unit instruction in this field is of variable duration. The course of study is based upon a job outline or analysis which may include related information for improving trade technical knowledge.

When the type of training in this area is on-the-job training for occupations requiring a lesser period of job experience than in apprenticeship, the instruction is organized for five hours per week unless the advisory committee recommends other acceptable arrangements. The number of months of training will vary, as recommended by an advisory committee, according to the needs of the occupation. The course of study deals principally with related instruction but may include training and work processes if advisable.

Foremanship Training

In this field, short unit courses of variable duration are given with courses of study providing for related information in the actual practices of foremanship work. Provision is made for conference outline materials for foremanship problems and their solution.

Foreman and supervisory training is given in either part-time or evening classes for administrative, supervisory and foreman personnel in trade and industrial
pursuits. In the Oregon program this type, usually given in the part-time class program is given to assist such persons in special phases of their work including training of workers, job organization and improvement, human behavior, the development of skills and knowledges and judgment, provisions for safety and safe working practices, and the study of federal and state regulations affecting workers. Training is done either in class organization or in group conference methods. Training of conference leaders for industrial or service organizations is an important aspect of foremanship training. Leaders, when trained, are expected to operate in their own organization and extend training to others who need to analyze and think through their own industrial or service organization problems.

**Evening Classes**

Evening classes in the trade and industrial education program are conducted for workers during their non-working hours but may be held at any convenient time for the enrollees. The federal acts provide a minimum entrance age of sixteen years, instruction being confined to that supplementary to the regular daily employment to increase the skill or knowledge of the worker.
in his trade.

Evening apprenticeship training classes when reimbursed from Smith-Hughes funds, are required to be conducted for a minimum of 144 clock hours per year and deal principally with related technical information but may include trade work processes if desired. The content material is based upon trade analysis of each occupation.

A second type of training in this classification is cooperative out-of-school youth training, aided by George-Barden funds only.

Under this program two types of training are made available for out-of-school youth:

(1) Training is organized classes for groups of out-of-school youth who may be employed or unemployed, provided that the instruction is planned to increase civic or vocational competency.

(2) Work experience training for out-of-school youth employed on jobs approved by the school authorities who provide supervision for the training aspects of the program. Instruction will be given largely on the individual basis. (50, p. 83)

The course of study deals with related trade technical information, work orientation, and other subjects directly related to the work experience and needs of the learner. Instruction is required on a group basis when it is best adapted to the purpose of the course.
Whether the out-of-school youth is in group meetings or individual conferences, instruction is provided largely on an individual basis.

Sufficient funds have not been available from federal, state, and local sources to offer related classes without a tuition charge. During the 1950-1951 school year, however, more funds were made available than the year before; this made it possible to reduce the tuition charge. Providing related instruction for apprentices in areas where a sufficient number of apprentices does not exist to make it feasible to operate a conventional class still presents a problem and a challenge in Oregon. The State Division of Vocational Education has given consideration and study to this problem and during 1951-1952 established a few small enrollment trial classes which combine classroom and home study work. This may provide a partial solution. A number of these pilot classes have been organized at Forest Grove during the 1951-1952 school year under the direction of R. J. Haas, trades and industries coordinator. Another plan being considered by the state office provides for less classroom work and a greater amount of home study. The cost of operation per individual apprentice is being given consideration in these proposed plans.

During 1950-1951 evening classes were held in
twenty-one centers with seventy-eight classes for evening apprentices and seventy-seven classes for evening journeymen.

Table IX shows the variety of evening apprentice classes and table X the journeymen classes in Oregon on June 30, 1951, the first year complete reports were available in the office of the State Division for Vocational Education. Table XI of the Forest Grove center shows the kinds of classes that have been in operation over a period of eight years and shows how a class may be held in a given year to meet the particular needs of that time. When needs have been met, the class may cease to operate until needed again.
### TABLE IX

**ENROLLMENT IN EVENING APPRENTICE CLASSES IN OREGON DURING THE SCHOOL YEAR 1950-1951**

<table>
<thead>
<tr>
<th>CLASS</th>
<th>NUMBER OF CLASSES</th>
<th>ENROLLMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appliance Repair</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Automotive</td>
<td>1</td>
<td>12</td>
</tr>
<tr>
<td>Auto Mechanic</td>
<td>3</td>
<td>62</td>
</tr>
<tr>
<td>Auto Mechanic (body &amp; fender)</td>
<td>1</td>
<td>11</td>
</tr>
<tr>
<td>Body and Fender</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Boilermaker</td>
<td>1</td>
<td>14</td>
</tr>
<tr>
<td>Bridge and Iron</td>
<td>1</td>
<td>12</td>
</tr>
<tr>
<td>Carpenter</td>
<td>15</td>
<td>267</td>
</tr>
<tr>
<td>Clock and Watch</td>
<td>1</td>
<td>13</td>
</tr>
<tr>
<td>Dental Technician</td>
<td>2</td>
<td>19</td>
</tr>
<tr>
<td>Electricity</td>
<td>1</td>
<td>13</td>
</tr>
<tr>
<td>Electrician</td>
<td>7</td>
<td>111</td>
</tr>
<tr>
<td>Electrician (inside)</td>
<td>6</td>
<td>107</td>
</tr>
<tr>
<td>Electrician (outside)</td>
<td>4</td>
<td>69</td>
</tr>
<tr>
<td>Glazier</td>
<td>1</td>
<td>14</td>
</tr>
<tr>
<td>Home Electrical Appliance</td>
<td>1</td>
<td>16</td>
</tr>
<tr>
<td>Jeweler</td>
<td>1</td>
<td>11</td>
</tr>
<tr>
<td>Linoleum Layer</td>
<td>1</td>
<td>18</td>
</tr>
<tr>
<td>Machinist</td>
<td>2</td>
<td>45</td>
</tr>
<tr>
<td>Meat Cutter</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>Mill-Cabinet</td>
<td>2</td>
<td>21</td>
</tr>
<tr>
<td>Motor Winder</td>
<td>1</td>
<td>13</td>
</tr>
<tr>
<td>Operator Engineer</td>
<td>1</td>
<td>32</td>
</tr>
<tr>
<td>Optical Technician</td>
<td>1</td>
<td>19</td>
</tr>
<tr>
<td>Plumber</td>
<td>1</td>
<td>150</td>
</tr>
<tr>
<td>Plumber Steamfitter</td>
<td>1</td>
<td>11</td>
</tr>
<tr>
<td>Refrigeration</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Radio Service</td>
<td>1</td>
<td>11</td>
</tr>
<tr>
<td>Sign and Picture Art</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>Sheet Metal</td>
<td>5</td>
<td>94</td>
</tr>
<tr>
<td>Steamfitter</td>
<td>2</td>
<td>31</td>
</tr>
</tbody>
</table>

Evening apprentice classes enrolled 1,227 persons in seventy-eight classes in thirty-one different occupations during the school year ending June 30, 1951.
TABLE X

ENROLLMENT IN EVENING JOURNEYMEN CLASSES IN OREGON
DURING THE SCHOOL YEAR 1950-1951

<table>
<thead>
<tr>
<th>CLASS</th>
<th>NUMBER OF CLASSES</th>
<th>ENROLLMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Automotive</td>
<td>1</td>
<td>13</td>
</tr>
<tr>
<td>Auto Mechanics</td>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>Auto-mechanics welding</td>
<td>1</td>
<td>14</td>
</tr>
<tr>
<td>Auto electric</td>
<td>1</td>
<td>17</td>
</tr>
<tr>
<td>Blue-printing &amp; Carpentry</td>
<td>1</td>
<td>18</td>
</tr>
<tr>
<td>Blue-print reading</td>
<td>1</td>
<td>14</td>
</tr>
<tr>
<td>Boilermaker-welding</td>
<td>3</td>
<td>35</td>
</tr>
<tr>
<td>Cabinet-making</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>Carpenter</td>
<td>8</td>
<td>113</td>
</tr>
<tr>
<td>Diesel</td>
<td>1</td>
<td>11</td>
</tr>
<tr>
<td>Electrician</td>
<td>6</td>
<td>77</td>
</tr>
<tr>
<td>Electrical code</td>
<td>4</td>
<td>68</td>
</tr>
<tr>
<td>Electrical-outside</td>
<td>1</td>
<td>12</td>
</tr>
<tr>
<td>Foreman</td>
<td>4</td>
<td>68</td>
</tr>
<tr>
<td>Heavy Duty Mechanic</td>
<td>1</td>
<td>77</td>
</tr>
<tr>
<td>Industrial Sketch</td>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>Machinist</td>
<td>3</td>
<td>44</td>
</tr>
<tr>
<td>Machine Shop</td>
<td>1</td>
<td>11</td>
</tr>
<tr>
<td>Machine Welding</td>
<td>3</td>
<td>45</td>
</tr>
<tr>
<td>Meat Wrapping</td>
<td>1</td>
<td>21</td>
</tr>
<tr>
<td>Mill and Cabinet</td>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>Millwright-Welding</td>
<td>2</td>
<td>28</td>
</tr>
<tr>
<td>Painter</td>
<td>3</td>
<td>32</td>
</tr>
<tr>
<td>Paper Hanging</td>
<td>1</td>
<td>11</td>
</tr>
<tr>
<td>Plasterer</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>Plumber</td>
<td>1</td>
<td>11</td>
</tr>
<tr>
<td>Practical Nurse</td>
<td>2</td>
<td>36</td>
</tr>
<tr>
<td>Sheet Metal</td>
<td>11</td>
<td>157</td>
</tr>
<tr>
<td>Steamfitter Welding</td>
<td>1</td>
<td>16</td>
</tr>
<tr>
<td>Teletype-setter</td>
<td>4</td>
<td>55</td>
</tr>
<tr>
<td>Waitress</td>
<td>2</td>
<td>43</td>
</tr>
<tr>
<td>Welding</td>
<td>4</td>
<td>45</td>
</tr>
</tbody>
</table>

Evening journeymen classes enrolled a total of 1,069 persons in seventy-seven classes representing thirty-two
different trades during the school year ending June 30, 1951.

### TABLE XI

**ENROLLMENTS IN EVENING AND PART-TIME CLASSES OF ADULTS FOR EIGHT-YEAR PERIOD IN FOREST GROVE UNION HIGH SCHOOL**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Show card writing (trade extension)</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Auto Mechanics</td>
<td>17</td>
<td>14</td>
<td>9</td>
<td>10</td>
<td>8</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carpenters</td>
<td>8</td>
<td></td>
<td>11</td>
<td>10</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Retail Salesmanship</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>18</td>
</tr>
<tr>
<td>Segregated Related (Correspondence)</td>
<td>33</td>
<td>55</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Meat Cutters</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Printers</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Telephone Linemen</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>12</td>
</tr>
<tr>
<td>Totals</td>
<td>10</td>
<td>0</td>
<td>25</td>
<td>65</td>
<td>64</td>
<td>27</td>
<td>10</td>
<td>42</td>
<td></td>
</tr>
</tbody>
</table>

Total adults taking training for eight year period was 243 in the twelve different kinds of classes in Forest Grove center.
Supervised Correspondence Study

This is a program of supervised study in which the materials of the International Correspondence School are used in class groups under supervision and checking of a trades and industries instructor. Several classes of this type were conducted at Forest Grove during the heavy years of veteran enrollment. The cost of the course materials and lessons sent to the enrollees by the International Correspondence School were paid for by the local school district but were later reimbursed through the State Division of Vocational Education and the Veterans Administration. These classes were composed of bank trainees, accountants, embalmers, and others in fields in which materials were scarce at that time; enrollees were few in number. Later when separate courses were provided for bank employed trainees, the number of special field trainees decreased and the demand did not warrant continuance of this class. The development of course materials, provision of small enrollment classes and the home study advisory plan have taken the place of supervised correspondence study classes.
Instructional Materials Program

The development of instruction materials by material specialists has been carried on quite extensively during the past three or four years by the state supervisor of trades and industries. During the 1950-1951 school year, three materials specialists, plus one instructional materials specialist, have worked on apprentice course materials, completing sixteen courses and preparing two additional courses. The materials provide coverage for nearly 62 per cent of all registered apprentices in Oregon. Materials available from other states provide coverage for an additional sixteen per cent of registered apprentices. Another seven per cent of registered apprentices have materials available in special fields such as printing and embalming; this leaves some seventy occupations representing fifteen per cent of registered apprentices for which material is needed.

Materials developed for this remaining fifteen per cent represent such a diversity of occupations that it probably will be on a limited basis, but the development places Oregon among the foremost states. Two public school systems in Oregon, Portland and Salem, cooperated with the state office by employing material writers; the State Division of Vocational Education later edited
the material, published it, and reimbursed the two schools one hundred per cent on salaries of these two writers.

Use of Advisory Committees

State and local apprenticeship committees, special advisory groups, trade committees, and individuals are dealt with extensively in the trade and industrial education program in Oregon. Local committees are provided by state law for adult apprentice classes in Oregon. These advisory committees, representing labor, management and the public, are utilized in the various phases of the trade and industrial education programs. For example, the local diversified occupation programs use local advisory committees to establish standards, approve each individual's training program, and recommend certificates of completion.

As in all school programs, responsibility for the formation of policies concerning the diversified occupation program rests with the school administration and board of education. Nevertheless, the advisory committee is a practical device by which the school administrator can keep in contact with groups in the community which the school is serving.

A committee which meets regularly in an advisory
capacity in the operation of the diversified occupations program, the adult apprenticeship program is an essential part of the trade and industrial education program on the local level. The committee consists of five to eight members representing employers, employees, and interested public and civic groups in the community. Public confidence and participation are increased when people know that experienced and respected laymen are helping to operate local vocational education programs.

The three types of apprenticeship committees in Oregon reported by the state apprenticeship council February 27, 1953 were as follows: (a) Local apprenticeship committees, twenty-nine. (b) Trade apprenticeship committees which serve a single trade on the local level, ninety-seven. (c) State trade apprenticeship committees which serve a specific trade on an area basis, eighteen.
CHAPTER VI

TEACHER TRAINING FOR TRADE AND INDUSTRIAL EDUCATION

Besides a study of the scope of the vocational education training program in Oregon, the Holy report recommended that teacher training in the vocational field be given consideration. This chapter presents the chronological history of the teacher training program which concerns trade and industrial education in Oregon from the Smith-Hughes Act in 1917 up to the present.

Thirty-six years ago when the Smith-Hughes Act encouraged local school boards to start vocational classes in high schools and establish separate vocational departments, teachers for the trade subjects were drawn largely from industry. Most of these men teachers were given short in-service training courses to qualify them to pass requirements for special teaching certificates. Having had a thorough apprenticeship training, they brought with them into the school shops their practical training and experience as journeymen. This is in accordance with Federal Bulletin No. 1, which states the policies and recommendations for the administration of vocation education programs under the Federal Vocation Acts:

Teachers should be selected primarily
on the basis of trade or occupational knowledge and experience plus their potential ability to teach. Teachers meeting these qualifications will, of necessity, be selected from the trade or occupational field for which they are employed to teach. Both pre-service and in-service teacher training are necessary for effective teaching. (17, p. 62)

In order to meet federal recommendations, classes were devised to give training in the teaching processes to persons in industry.

A journeyman worker with three or more years of experience was usually well established in his trade. It seemed doubtful that the best craftsmen could be encouraged to leave their trade to attend normal school or college with the hope of employment as trade instructors; therefore, the plan of setting up special short courses whereby journeymen might become fully qualified to conduct classes and make the transition from working at a trade to teaching was more desirable.

Trade and industrial education teachers in Oregon are employed by local school districts upon recommendation of the State Division for Vocational Education. Besides persons from industry industrial arts teachers who can meet federal qualifications are often secured for trade and industrial education positions in Oregon. In addition to meeting educational they must have had at least partial apprenticeship training and a year or
two of practical experience in the teaching field. Teachers in this field must spend time at summer conferences and in-service training during the school year once they have taken a position.

Requirements for Vocational Teacher Training of the Smith-Hughes Act

The Smith-Hughes Act of 1917 provided for the establishment of certain minimum teacher requirements. In order for the state of Oregon to receive money for teacher training under this act, teacher training programs must be carried out under the supervision of the State Board for Vocation Education. Teacher training schools or classes are under supervision and control of the State Board which works in cooperation with local school districts. The act provides that trade training be offered only to persons who have had adequate vocational experience and who are preparing to teach vocational subjects.

While the act provides that the State Board establish the requirements for teacher training, the federal board reserves the right to approve the teacher training plans to insure that the state will meet the minimum requirements.
Prepared Teacher Training Plan

The basic plan for training vocational teachers in Oregon was submitted by the state board to the federal board in the original plan for the organization and administration of the Smith-Hughes Act and was adopted December 18, 1917. These first requirements pertaining to training of trade and industries teachers are listed from the original 1917 plan:

TEACHERS OF TRADES: (a) Not less than two years' practical experience in the trade beyond the period required to learn such trades as he proposes to teach; (b) graduate of at least an elementary school or the equivalent; (c) possessed of good health and habits; (d) good personality; (e) interest in boys and ability to deal with people; (f) not less than one semester (eighteen weeks) in teacher-training class in study of method of teaching, practice teaching, etc., or its equivalent, in summer school or other short courses.

NOTE: The above qualifications shall be determined by personal interviews and documentary evidence, rather than by written examinations.

NOTE: The requirement of eighteen weeks' teacher training becomes operative on and after September 1, 1918.

Minimum salary of teachers of trades and industries shall be $1,200.

TEACHERS OF TECHNICAL SUBJECTS: (a) Technical training equal to graduation from a four-year's course in a technical school of secondary rank; (b) sufficient trade experience to enable them to make their instruction practical; (c), (d), (e), same as for trade teachers; (f) not less than two semesters (thirty-six weeks) in teacher-training classes, etc., as for
teachers of trades.

NOTE: The requirement of thirty-six weeks' teacher training may be inoperative until September 1, 1919, if teachers of technical subjects can not be secured who have this training.

Teachers of vocational subjects shall meet the requirements of the Oregon school law governing the certification of teachers. In cities and towns of less than 25,000 inhabitants, the work will be carried on in a department of the school as now organized and modifications as to length of course and hours of instruction shall be made to meet the requirements of the state board and the approval of the federal board, i.e. (32, p. 12-13)

Because of the historical significance, the requirements relative to teacher training institutions are stated from the 1917 plan:

All teacher-training courses shall be given under the supervision of state board.

Teacher-training courses will be offered by the Oregon State Agricultural College for persons who have had at least two years' practical experience in the trade or who are acquiring that experience.

Teacher training will be done by employees of the Oregon State Agricultural College under the supervision of the State Board for Vocational Education.

This teacher training will be done in two or more centers and will be carried on in regular class work in the Oregon Agricultural College and in evening schools and part-time schools in the city of Portland.

Course of study requirements from this original 1917 plan include:

The course of study must include methods of teaching, practice teaching, general principles of education, study of vocational education, and an analysis of the trades to be taught. Under the general heads of methods of teaching and practice teaching,
instruction must be given in class organization, constructing a course of study, making a program for the year, semester, day, etc.

A minimum requirement for graduation shall be not less than eighteen (18) weeks in teacher-training work, and not less than two (2) years beyond apprenticeship at practical work in the trade or industry.

The original state plan of 1917 gives the provisions for methods of securing teachers, advisory committees and teachers' meetings:

The vocational director and the instructor in teacher training shall endeavor to select promising workers from the various trades and recommend them for positions as teachers.

The State Board for Vocational Education proposes to name a local advisory board of three or five members in each city, locality or district where it is proposed to organize a vocational school under the provisions of the Smith-Hughes Act. The aim in appointing said advisory board is to secure the cooperation of the local interests in advancing the work of vocational education in trades and industries, agriculture and home economics.

Under the direction of the State Board for Vocational Education there shall be held teachers' meetings and other educational gatherings where the teachers of industries and related subjects will meet for instruction and discussion of topics of interest to them in their work.

The 1917 teacher training program was developed under a cooperative plan between the Oregon Agricultural College and the State Board for Vocational Education. Besides meeting requirements of the Smith-Hughes Act for preparing trade and industrial education teachers, teachers had to meet the requirements of the 1917 Oregon
State school law, Section 39, which reads as follows:

The superintendent of public instruction may at his discretion issue a certificate, without examination, to teach in any one or more of the following subjects: Library, music, agriculture, art, manual training, penmanship, kindergarten, domestic science and domestic art, typewriting, stenography, bookkeeping, physical culture, Latin and German, which certificate entitles the holder thereof to teach the subject therein named in any school in this state, unless revoked for cause. The superintendent of public instruction before issuing the same shall receive satisfactory evidence of the applicant's fitness to teach the subject named in the certificate. (32, p. 14)

Revised Plans for Teacher Training Under the Smith-Hughes Law Approved July, 1919

The State Board for Vocational Education in Bulletin No. 2, June, 1919, issued revised plans for the organization and administration of vocational education and included a more extensive plan for training trade and industrial education teachers than in the original plan of 1917. The revised plan issued in 1919 proposed that federal and state funds allotted for training vocational teachers in Oregon be divided as follows: trade and industrial subjects, twenty-five per cent; agricultural subjects, thirty per cent; and home economics, forty-five per cent.

The plan specifically provided that teacher training should be conducted in Corvallis by the Oregon
Agricultural College and in Portland by the School of Vocational Education of Oregon Agricultural College.

The 1919 plan was to cover the following phases of teacher training work:

Shop teachers: (1) Entrance requirements. Courses for shop teachers will be limited to those persons who have had at least two years of practical experience in the trade or who are acquiring that experience; (2) length of course: one-half year, 17 weeks, fifteen semester hours, forty-five clock hours; (3) provisions for observation and practice teaching are offered in connection with vocational courses of Oregon Agricultural College, the high schools, and technical schools of Portland; (5) graduation requirements include the completion of 15 and at least two years of practical experience in trade in which the student proposes to teach; (6) persons filling the above requirements will be given special certificates as shop teachers. (b)

Related subjects teacher: (1) Entrance requirements. Must be a graduate of at least a four-year technical school of secondary rank, and have successful contact with one or more trades; (2) length of course; (a) one year of four years, (b) thirty to 140 semester hours. (Courses vary from one year of education given to graduates of colleges or technical secondary schools to four years of professional training). (3) Course of study attached as Exhibit F; (4) provisions for observation and practice teaching afforded in vocational courses offered in Oregon Agricultural College and high schools of Corvallis and Portland; (5) graduation requirements vary with course taken but must include successful contact with one or more trades, and at least two semesters (36 weeks) of education, including practice teaching; (6) graduates of above-named courses will receive special certificates as vocational related subjects.
teachers.
(c) General continuation part-time school teachers. No special provision made for training such teachers at present. As soon as possible plan will be submitted.
(d) Training of teachers who have entered service: (1) a follow-up method of visitation of teachers will be conducted by the state director, the different supervisors and the representatives of the school of vocational education. Oregon Agricultural College, under the direction of the state board; (2) teachers in service will be required to send in regular written reports regarding the professional phases of their work; (3) outlined courses in reading will be furnished teachers in service by the school of vocational education, Oregon Agricultural College, and written reports on same requested; (4) teachers in service will be called together at the discretion of the State Board for Vocational Education and the directors and supervisors for conferences and instruction in their work; (5) printed suggestions, courses and outline prepared by the director and supervisors will be used to aid the teachers in service. (33, p. 24)

This plan is given in detail as it indicates the trend which Oregon was to follow—that of placing the training of vocational education teachers under the State Agricultural College. While this program was to be modified from time to time and a more definite program put into operation at a later date, the general over-all pattern used was the one established at this early period.
Teachers' Training Suggestions in Bulletin No. 3, for the State Board for Vocational Education, December, 1919

This third report issued as Bulletin No. 3, December, 1919, by the State Board for Vocational Education gave further rules and regulations for the training of teachers. The bulletin stressed the point that the duty of training teachers for vocational schools and classes belonged to the State Board for Vocational Education. It was during 1919 that the compulsory part-time school law for Oregon had come into effect.

It was emphasized that since a considerable number of part-time schools had already been established, teachers would in many cases be employed who had never been trained to teach. This was especially true of shop and related subject matter teachers.

It was explained that after June 30, 1920, a new program for teacher training would be put into operation in addition to the one which was then operating under the direction of the Oregon Agricultural College at Corvallis and in Portland. This new plan provided that representatives of the State Board for Vocational Education would give all possible assistance to teachers through personal interviews in their
representative towns.

This is the first instance found where this type of teacher training work was put into effect in the trades and industrial education program in the state. The plan has proved satisfactory and has been continued as part of the teacher training work by the state supervisors. The main purpose of this supervisory work is to aid teachers on the job who are new to this type of vocational work and new to the school system.

Considerable space in this report was devoted to an outline of shop courses in woodwork and carpentry, building instruction, automobile work, automobile construction, automobile repair, machine shop, plumbing, electrical repair work, telegraphy, trade millinery and manicuring and hair dressing. Other outlines for courses in related subjects were in free-hand shop sketching, shop drawing for machinists, shop mathematics for machinists, blueprint reading for machinists and physics of electricity. Outlines for these courses gave the number of years of the suggested course, number of hours per day, number of classes per week, number of weeks per year and the total hours per year.

It was felt at this time in Oregon that the
compulsory school law which had just been passed would give considerable emphasis to the vocational education program and that practically every community would be adding vocational courses in order to comply with this compulsory part-time law. The law provided that children between the ages of nine and fifteen should be required to spend time in school equal to the number of months of school held annually in the district. This was a detailed law with numerous other provisions concerning teachers, truant officers, district boundary boards and the relationship to other laws, especially the child labor law. As time went on, this law did not work out in actual practice. It did not cause a large increase or sudden development in the trade and industrial education program because the courts ruled that the law applied only to the elementary grades.

Teacher Training in Revised Plans for Organization and Administration Printed as Bulletin No. 4, December, 1920

Bulletin No. 4 published by the State Board for Vocational Education at Salem and approved by the Federal Board, December 16, 1920, mentioned for the first time the teacher training qualifications and duties of the supervisor of trade and industrial education.
Qualifications of the supervisor concerned with teacher training included the following: (a) he shall have had teaching experience in some form of trade education (b) he shall have qualifications for leadership and organization (c) he shall have had experience in directing and aiding teachers in conducting their work and in improving their teaching power.

His duties relative to teacher training charge him with the responsibility of aiding in the selection of proper persons to receive training to become teachers in trade and industrial education and to assist in that teacher training work.

The details of the teacher training program continued much the same as first set up in 1919. Three classifications for new teachers to be trained in this field were listed along with entrance requirements for each division. They were (a) shop teachers, (b) related subject teachers (c) general continuation part-time teachers. For teachers already in service a follow-up method of visitation was provided in the plan. Teachers in service were required to send in written reports at regular intervals to the state office regarding the professional phases of their work. Provision was made for calling teachers together for conferences and for
instructions by the state director and state supervisor as the occasion might require. Classes for training trade and industrial education teachers were conducted in Corvallis and in Portland under the direction of the Oregon Agricultural College.

Teacher Training Report of Bulletin No. 5, 1922

The second biennium report to the thirty-second legislative assembly, regular session, 1923, by the Oregon State Board for Vocational Education contained a brief summary of teacher training of vocational subjects up to that time. The arrangement, established with the Oregon Agricultural College for training vocational teachers, had continued during the previous biennium. The appropriation had enabled the college to maintain an excellent corps of instructors in the school of education under the leadership of Dean E. E. Ressler.

It had been the plan to provide some time of the teacher trainers for supervisory purposes. Practice teaching had been conducted in connection with Corvallis High School under the different instructors employed. According to the Oregon plan, the director for the state board is charged with the duty of seeing that teacher training work is conducted in accordance with
the requirements of the Federal Board for Vocational Education.

The report commented on the cooperation which existed between the State Board for Vocational Education and Oregon State College in carrying out the dual responsibility of teacher training in this field.

It was noted in this report that a gradual expansion of the trade and industrial education program had absorbed the output of all newly trained teachers.

Teacher Training Report in the Twenty-Seventh Biennial Report of State Superintendent of Public Instruction, 1927

Appropriations made by the federal government under the Smith-Hughes Act reached their maximum in 1926. Beginning July 1, 1926, and extending to 1930 when new appropriations were made, the amount received by the state from the government remained stationary. As a consequence, any new development or expansion in the teacher training or trade and industrial education program in Oregon must come from increased amounts from the state legislature and local school districts. In one sense this was the important test of the usefulness and permanency of the program. Would the state legislature and local school districts supply this additional
money no longer forthcoming from the federal government needed to expand and carry on the program?

In Oregon this situation arose as the State Board for Vocational Education had set out to encourage the expansion of schools and classes of vocational work in order to reach a greater number of citizens in as many occupations as possible. During the years from 1917 up to this time the department of vocational education of Oregon Agricultural College had furnished the greater part of the training given to prospective teachers of vocational subjects and consequently had been granted most of the federal funds. It was decided that since the state legislature and local school districts would furnish a greater part of the funds for the program in the future, it was advisable for the state board to assume a larger share of the teacher training program. The work was to be conducted more directly by supervisors under the state board. The report stated: "This will undoubtedly result in increased economy as well as efficiency". (37, p. 10) Mr. O. D. Adams had come into the State Department of Vocational Education in 1926 as state supervisor and director of teacher training for trades and industrial education.

After serving in the state office for a year as a state supervisor and director of teacher training,
Mr. Adams had the following to report on teacher training for the year 1927-1928:

The teacher training work is carried on in conjunction with the School of Vocational Education at the Oregon Agricultural College. From here have been recruited the greater part of our vocational instructors, and, therefore, in the past, a large portion of the federal teacher training fund has been set aside for the use of the Oregon State Agricultural College. Teacher training cooperative measures have been worked out between the State Board for Vocational Education and this institution that will tend to centralize the teacher training activities, which will not only be more effective to the program but will result in increased economy to the state as a whole. (38, p. 17)

Teacher Training in the Sixth Biennial Report of the State Board for Vocational Education, July 1, 1928, to June 30, 1930

The teacher training program for trade and industrial education continued to expand through the cooperative agreement between the Oregon Agricultural College and the State Board for Vocational Education. Under Mr. Adams as state director of vocational education, teacher training work received considerable attention. He worked closely with Oregon Agricultural College in providing for a wider range of courses in this field on the campus during the regular college year and summer sessions.
Courses offered on the campus and during summer sessions at Corvallis included:

Trade Analysis
Foreman Conference Leading
Teaching the Supplementary Subjects
The Part-Time School and Its Problems
Organization and Administration of Evening Schools
The Teaching of Industrial Subjects
Vocational Guidance as Applied to Industrial Education
Social Problems of the Industrial Teacher
Civic and Employment Relationships of Vocational Teachers
Current Problems in Vocational Education

(39, p. 31)

Probably the greatest expansion of the teacher training work during the 1928-1930 biennium was the number of classes established off the campus in other cities, especially Portland. The purpose of these nonresident classes was to obtain persons from industrial organizations and give them a course in teaching processes. Of the 616 students enrolled in trade and industrial education teacher training classes, the largest number was a nonresident group.

The largest single enrollment from any one
classification in the nonresident type training came from the Portland Fire Department; 197 captains and junior captains were trained.

This period also marked the beginning of a new plan for correspondence teacher-training in trade and industrial education. This training started on a small scale and was destined to expand into wider use. The purpose of the correspondence type teacher training was to provide for individual teachers of evening classes. Heretofore, no plan had been devised for giving them training, especially in the scattered and more remote areas over the state where evening classes were being offered in trade and industrial education.

Teacher Training in the Seventh Biennium Report July 1, 1930, to June 30, 1932

The training of teachers in the field of trade and industrial education continued as a cooperative arrangement with the Oregon State Agricultural College as in the past. A considerable portion of the training, however, was carried on in the field, industrial plants, trade school and among industrial groups where the training of teachers for trade work was an essential part of the procedure. Courses during 1930-1932 biennium conducted on the campus for college credit
were those in (a) the administration of vocational education, (b) the supervision of vocational education and (c) the part-time school and its problems.

During the summer of 1931 and 1932 courses on the campus were conducted on (a) the conference method, (b) the supervision of vocational education and (c) the part-time school.

In addition to these courses, conducted on the campus by members of the vocational staff of Oregon Agricultural College in cooperation with the State Office for Vocational Education, extensive teacher training work was carried on off the campus by the State Board for Vocational Education.

Short courses of non-college credit type were provided by the State Board for Vocational Education for teacher training in a number of fields which included the following:

Courses for training teachers for the United States Forestry Service in the teaching processes were given to the Benson Polytechnic High School teachers in Portland with sixty-four being enrolled.

Short courses for the various fire departments were organized in cooperation with the State Fire Chief's Association with 295 enrolled.
Short unit teacher training courses were also provided for the instructors of the Chemawa Indian School to assist them in development and improvement of trade and industrial education teachers. In all the classes both on the campus at Corvallis and the nonresident class conducted off the campus there were 536 enrolled in trade and industrial education teacher training classes during 1930-1932.

Teacher Training of the Eighth Biennial Report July 1, 1932, to June 30, 1934

During this biennium period, the state-wide apprenticeship training plan had been reorganized to conform to the national apprenticeship training standards and there had developed a closer cooperation between schools and industries than was possible under previous arrangements. Through the use of federal emergency relief funds which had become available during this depression period, a noticeable increase in enrollments had developed in trade and industrial education classes throughout the state. New classes were provided to meet new needs and increased enrollment. Many of these were of a special nature, reaching from arts and crafts and interior decorating to classes in placer
mining, first aid, and safety.

In order to meet the demand for teachers for these classes, interstate and district conferences were held to improve teachers in service as well as to train teachers in their particular types of work. The trade and industrial education instructors of Oregon and Washington met once each year during August for five days for improvement in service. These joint conferences were held for the three years—the first at Birch Bay, Washington in 1931; the second, Seaside, Oregon in 1932; and the third, Birch Bay, Washington, in 1933.

Federal leaders in industrial education conducted the conferences with the aid of the respective directors of vocational education for the two states. About one hundred instructors attended each of these conferences. Besides this, the State Board for Vocational Education continued to conduct classes in cooperation with Oregon Agricultural College each year during the summer session and during the regular term. College credit courses were offered in organization and administration of industrial education and the part-time school and conference method procedures for the preparation and improvement of teachers in service.

Non-college credit classes for the improvement of
teachers in service were again held at the Chemawa Indian School near Salem and Benson Polytechnic School in Portland. Classes for firemen were held in Salem, Corvallis, and Portland, and assistance was given to the United States Forestry Service in setting up a training program for use in connection with the Civilian Conservation Corps.

Change in the Plan for Reporting Teacher Training

Following the Ninth Biennial Report, the State Board for Vocational Education changed its policy of reporting teacher training activities. From 1917 to 1935 it had been the plan of the state board to print the teacher training reports in the biennial publications. Beginning with 1935 and extending to June 30, 1946, teacher training activities for trade and industrial education are not mentioned in the biennial reports.

Teacher training during this ten year period was reported in the two five-year state plans and in special reports of teacher training conferences held at various times. Beginning with the biennium 1946 to 1948, brief reports of the teacher training for trade and industrial education are given briefly, but main
reports continued to be issued in special bulletins at the time teacher training conferences were held.

The reason for changing the plan of reporting the teacher training activities came with the introduction of the conference method introduced by W. W. Morse when he was assistant state supervisor of trade and industrial education. One of the major responsibilities of trade and industrial education service is to conduct conferences for instructors, coordinators and skilled tradesmen who wish to qualify as shop instructors.

The material combined in bulletin form was a summary of the discussional work carried on at the conference and continued to be used on the job as a reference manual and guide for teachers in the field. For example, the report of the conference for trade and industrial education, coordinators and instructors at Salem, August 3-7, 1942, contained 120 mimeographed pages of this type of outline. At this session the teacher training section met each day of the five-day period for lectures, demonstrations, discussion, organization and summarization of teacher-training materials for group benefit.
Teacher Training in Five-Year State Plan 1937-1942

The state plan for vocational education for the five-year period July, 1937, to June, 1942, devotes a considerable amount of space to the teacher training phase of trade and industrial education. The procedures outlined in this plan have been followed as a basic guide up to this time. The plan explains the use of federal funds under the Smith-Hughes allotment of salaries. Federal Smith-Hughes teacher training funds to be expended for the reimbursement of salaries of teachers in all-day schools and classes were required to be matched by state and local funds. Not more than fifty per cent of the total Smith-Hughes funds for salaries of teachers in trade and industrial education was to be used for teacher training purposes. Federal funds to be expended for reimbursement of teachers in part-time schools or classes were to be matched by state and local funds or both. Not less than thirty-three and one-third per cent of the total Smith-Hughes funds for salaries of teachers in trade and industrial education was to be used for this purpose. In evening schools not more than fifty per cent of the total Smith-Hughes funds was to be used for
salaries of trade and industrial education teachers when these were properly matched by state and local funds.

Federal funds expended for reimbursement of salaries of state and local supervisors of trade and industrial education were to be matched in accordance with provisions of federal policies and in keeping with the Oregon state plan for vocational education. Under the George-Deen fund allotment, federal moneys were available for salaries and travel of trade and industrial education personnel.

Since then, however, the George-Barden Act of 1946 has broadened the use of federal funds. The qualifications of supervisors and directors set forth in the five-year state plan for 1947-1952 are similar to those adopted previously. Also the general plan of state and local supervision by the state office for 1947-1952 five-year period is similar to that previously established.

William G. Loomis, who came into the state office as state supervisor of trade and industrial education and director of teacher training in the fall of 1942, continued to use the conference method of teacher training for both experienced teachers and for new teachers. Mr. Loomis brought into the state
department some new ideas and changes in teacher training procedures which he obtained as a member of the first inter-regional conference in the field of trade and industrial education held April, 1946, in New York City.

Some of the changes in teacher training instituted by Mr. Loomis as a result of the conference were: (a) the workshop type of conference for the purpose of studying what has been developed for the various trade and industrial education programs; (b) unification of course titles; (c) content within courses; and (d) expansion and improvement of teacher training work.

Since the first regional conference in 1946 a number of regional meetings have been held which have contributed to the Oregon teacher training program. The materials and discussions were published and represented the thinking of members of the group who represented a cross-section of several states. Principal topic discussed at the western regional meeting in March, 1951 was the apprenticeship training program in relation to teacher training. (25) In March, 1952, the topic considered was that of establishing and maintaining standards for the diversified occupations phase of trade and industrial education. (26)
Teacher Training Report in Fifteenth Biennial Report of the State Department of Vocational Education for the Period July 1, 1946, to June 30, 1948

Under the trade and industrial education section of this report brief mention is made of teacher training work:

As a result of consulting with representatives from other states regarding their teacher training programs, the following program is being developed.

A revision of present courses now offered for full-time personnel in terms of course titles and content is being made. The teacher certification program tentatively developed will provide for a minimum of required teacher training courses prior to the issuance of a long-time teaching certificate. The development of a self-study teacher training manual for use primarily in connection with the part-time employed teachers is in process. (48, p. 22)

Sixteenth Biennial Report of the Oregon State Board of Education, Division of Vocational Education for period July 1, 1948, to June 30, 1950

Only a brief statement of teacher training is given in this biennial report as in the previous biennial report. Aside from revisions in the course offering, the same general cooperative plan of teacher training between the State Division of Vocational Education and Oregon State College for trade and industrial education has continued from the original plan in
A revision of course offerings for full-time trade and industrial personnel has been provided for in cooperation with Oregon State College. Courses have been offered the last two summers at the college and during the winter months through the Extension Division. In addition, the staff of this department has conducted special training conferences during the two-year period for various local school personnel.

The training of teachers who instruct on a part-time basis presents one of the greatest challenges to local schools and the Division of Vocational Education. During the last two years, provisions have been made in cooperation with the local public schools to implement this program.

(48, p. 22)

Present Teacher Training Program Outlined By The State Division of Vocational Education

The State Board for Vocational Education is responsible for the maintenance and supervision of teacher training in vocational education. Specific responsibility for the supervision of teacher training is vested in the supervisors of the respective fields through the state director.

1. All teacher training will be in schools or classes under public supervision or control.
2. Training will be given only to persons who have had adequate vocational experience in the line of work for which they are preparing themselves as teachers, supervisors or directors, or who are
acquiring such experience as a part of their training. (50, p. 18)

One of the essential features of a good program of trade and vocational industrial education is an adequate supply of competent teachers. This was recognized in the Smith-Hughes Act, which provided specific funds for the training of teachers and required that in order to use the money provided for the salaries of vocational teachers, a state must expend a specified amount for the training of teachers. The George-Barden Act does not make a separate authorization of funds for this purpose, but it does state that the funds made available for the several vocational fields may be used for assisting the states and territories in maintaining adequate programs of teacher training.

Teacher training as used in this thesis includes those activities needed for assisting teachers or prospective teachers in securing the professional knowledge, abilities, understandings, and appreciations which will enable them to qualify for professional employment or advancement in teaching trade and industrial vocational subjects.

In the following paragraphs most of the provisions of the federal acts, as they relate to the training of vocational teachers, and some of the basic considerations
for such training have been outlined.

A complete program for training vocational teachers should include administrative arrangements for six functions which should:

1. Provide facilities for the recruitment, counseling, selection, and preemployment training of vocational teachers.
2. Develop instructional aids for teachers in service.
3. Provide continuing educational opportunities for teachers in service.
4. Follow up resident teacher training through field contacts for the purpose of checking the effectiveness of all units of instruction, thus leading to the improvement of the teacher-training program.
5. Improve college teaching (professional and technical) based upon the objectives for vocational education in the state and upon the abilities needed by teachers of vocational courses.
6. Conduct research and studies making direct contributions to the development of the program of vocational education in the state. (17, p. 24)

The cost of maintaining the program of teacher training for trade and industrial education in Oregon includes the salaries and necessary travel expense of teacher trainers and other members of the teacher-training staff, both professional and clerical, communications, supplies and printing.

Funds for the teacher-training program are derived from the Smith-Hughes Act which makes the basic provision for teacher training funds and the George-Barden
Act which broadens the use of these funds. When these federal funds of Smith-Hughes teacher training or George-Barden are used for the cost of maintenance of the programs, the state plan indicates its responsibilities for supervising and working with the teacher training institutions. The state plan of Oregon also shows how it will use the funds and gives full information as to the duties and qualifications of the teacher trainers and other members of the teaching staff.

The teacher training staff includes the following persons as suggested in Federal Bulletin No. 1, 1948, Statement of Policies for Administration of Vocational Education:

1. Teaching reimbursable educational courses which are organized to provide preemployment training for persons preparing to teach vocational subjects.
2. Supervising student teachers.
3. Providing in-service training in the professional field to improve the work of employed vocational teachers.
4. Conducting follow-up on the work done in teacher-training courses.
5. Developing instructional material and aids for the use of vocational teachers.
6. Conducting studies and research dealing with the selection, training, and work of vocational teachers, and work done in vocational courses.
7. Conducting short, intensive technical courses for qualified teachers and supervisors.
8. Coordinating the work of the members of the teacher-training staff. (17, p. 25-26)
Federal Bulletin No. 1, 1948, Statement of Policies, further states that it is not permissible to reimburse from federal funds for the cost of instruction of teachers or prospective teachers in any of the following courses:

1. Technical subject-matter course. Exception—short intensive courses planned for qualified teachers or supervisors.
2. Courses conducted to supply occupational experience or contact needed by prospective teachers.
3. Professional education courses which are nonvocational in nature and are generally required for the certification of teachers in the state.
4. Elective professional education courses which are nonvocational in nature and are planned to meet the needs of nonvocational teachers. (17, p. 26)

The following basis for reimbursement of salaries of teacher trainers is used by the Smith-Hughes and George-Barden teacher training funds. The state plan set forth the following basic factors which are used in computing reimbursement allowed on salaries of teachers: (a) The recognized load in hours per week of a faculty member giving full time to teaching in the institution; (b) teacher-training courses which may be reimbursed; and (c) assignments in vocational education, other than classroom instruction, such as research in vocational education, itinerant teacher training, preparation of teaching material, follow-up beginning
teachers, and supervising student teachers.

Certification for Trades and Industries Teachers

Teaching certificates for trade and industries teachers in Oregon may be either of one year or five years' duration. Oregon school law provides that the superintendent of public instruction issue special vocational certificates for teachers of adult and vocational classes. The basic provision for the issuance of special certificates comes from the early Oregon Basic School Law which empowers the superintendent of public instruction to issue special certificates and other certificates not provided for by the law.

In 1946 provisions were made for adult education certificates valid in adult education programs as authorized by Chapter 34, Oregon School Law, 1946. An applicant for this certificate must have the recommendation of the superintendent of the local schools stating that the applicant is qualified by education and by technical training and experience to give instruction in his special field. He must also have a position as an instructor in an adult education program as prescribed in accordance with the Oregon law.

Vocational certificates for trade and industrial education valid in high schools are provided for in
Oregon rules and regulations governing the certification of teaching as follows:

When a school board, in cooperation with the Division of Vocational Education, wishes to employ a person to teach a vocational course, a certificate is granted to such person on the recommendation of the State Director of Vocational Education. The State Director of Vocational Education must be assured that such person is fully qualified to teach the vocation for which he asks to be certified.

Application for vocational certificates should be made through the State Director of Vocational Education and only after employment has been secured. (55, p. 36)

Provision permitting holders of vocational certificates to teach academic subjects may be issued upon the recommendation of the employing district and the director of vocational education permitting such person to teach in not more than two fields of academic subject material in addition to his special vocational field. Such certificates are valid for one year and may be granted for three consecutive years.

Oregon Law requires that any applicant for a teacher’s certificate in Oregon:

1. Must have attained the age of 18 years.
2. Shall furnish satisfactory evidence of proper educational training.
3. Shall furnish satisfactory evidence of United States citizenship (except for foreign teachers teaching on an exchange basis.)
4. Shall, if the Superintendent of Public Instruction requires such, furnish satisfactory evidence of good moral character,
mental and physical health, and such other evidence as may be deemed necessary to establish the fitness of such applicant to serve as a teacher. (53, p. 1)

Two main types of vocational certificates issued by the Superintendent of Public Instruction are valid in high schools:

1. **Regular Vocational Certificates:** When a school board, in cooperation with the Division of Vocational Education, wishes to employ a person to teach a vocational course, a certificate is granted to such person on the recommendation of the State Director of Vocational Education. The State Director of Vocational Education must be assured that such person is fully qualified to teach the vocation for which he asks to be certified. Application for vocational certificates should be made through the State Director of Vocational Education, and only after employment has been secured.

2. **Special Certificates Permitting Holders of Vocational Certificates to Teach Academic Subjects:** The Superintendent of Public Instruction, upon the recommendation of the employing district and the Director of Vocational Education, may issue a special certificate to anyone holding a valid vocational certificate, permitting him to teach in not more than two fields of subject matter in addition to those specified in his vocational certificate. Such certificate is valid for one year and may be granted for three consecutive years. (55, p. 36)
Certification for Part-Time Trade and Industrial Education Teachers

A large amount of work has been done by the trade and industrial education supervisor on certification requirements for part-time trade and industrial education teachers in Oregon. Mr. Loomis of the State Department has been a leader and has developed an extensive teacher training program. The part-time provisions discussed in this part of the thesis were approved by the State Board of Education in December, 1950, effective July 1, 1951, and distributed in a sixteen-page mimeographed booklet as a guide for local districts, teachers and others throughout the state. The outline includes the local trade and industrial education programs which are reimbursed from state or federal funds and which are required to meet the standards prescribed by the State Board of Education.

The requirements for the part-time trade and industrial education program have been intended as the minimum qualifications that will be accepted for certification. Such part-time teachers are those employed in evening industrial, part-time trade extension, apprenticeship training, part-time trade preparatory, and Type C trade preparatory program. In
addition to the general requirements which all teachers must meet as specified in Oregon law, the qualifications which part-time instructors must meet concerning trade experience and technical training according to the type of program follow:

**Evening Industrial Classes**

Shop and trade practice instructors

Trade experience required will be not less than three years of experience in that trade, beyond the learning period. The trade experience must have been sufficiently varied to include all the processes required by the class.

No specific trade technical training will be required, but preference will be given well qualified instructors having technical training applicable to the field of instruction.

One-year trade experience or two years of work experience in a job providing close contact with the occupation for teaching special subjects related to an occupation is required.

His technical training requires two years with application to the subject to be taught.

**Part-Time Classes**

**Trade Extension--Apprentice Classes**

Shop and trade practice instructors

Trade experience will be not less than three years of experience in that trade, beyond the learning period. The trade experience must have been
sufficiently varied to include all the processes required by that class.

No specific trade technical training will be required, but preference will be given well qualified instructors having technical training applicable to the field of instruction.

Trade experience or contact in one year trade experience or two years of work experiences in a job providing close contact with the occupation for teaching special subjects related to an occupation.

Technical training requires two years of technical training with application to the subject to be taught.

Cooperative out-of-school youth work experience training.

Shop and trade practice instructors.

Trade experience will be not less than three years of experience in trade or industrial occupations beyond the learning period.

No specific trade technical training will be required, but preference will be given well qualified instructors having technical training applicable to the field of instruction.

Related technical teachers.

Trade experience or contact in one year trade experience or two years of work experience in a job providing close contact with the occupation for teaching special subjects related to an occupation.

Two years of technical training with application to the subject to be taught.
Employed workers' training.

Shop and trade and practice instructors.

Trade experience will be not less than three years of experience in that trade, beyond the learning period. The trade experience must have been sufficiently varied to include all the processes required by the class.

No specific trade technical training will be required, but preference will be given well qualified instructors having technical training applicable to the field of instruction.

Related technical teachers

One year trade experience or two years of work experience in a job providing close contact with the occupation for teaching special subjects related to an occupation.

Two years of technical training with application to the subject to be taught.

On-the-job training (other than apprenticeable occupations)

Shop and trade practice instructors

Occupational experience will not be less than three years of experience in that work, beyond the learner period. The work experience must have been sufficiently varied to include all the processes required by the class.

No specific trade technical training will be required, but preference will be given well qualified instructors having technical training applicable to the field of instruction.
Related technical teachers

One year trade experience or two years of work experience in a job providing close contact with the occupation for teaching special subjects related to an occupation.

Two years of technical training with application to the subject to be taught.

Trade preparatory classes

Shop and trade practice instructors

Trade experience will be not less than three years of experience in that trade, beyond the learning period. His trade experience must have been sufficiently varied to include all the processes required by the class.

No specific trade technical training will be required, but preference will be given well qualified instructors having technical training applicable to the field of instruction.

(53, p. 3-7)

The certification plan for vocational teachers in Oregon adopted by the State Board of Education, December, 1950, which became effective July 1, 1951, provides that pre-service and in-service teacher training for evening and part-time teachers be given by qualified local officials. During the school year July 1, 1951, to June 30, 1952, however, members of the state staff of trade and industrial education conducted pre-service and in-service teacher training programs for
evening and part-time teachers in areas where local supervision was not available. These teacher training sessions consisted of both formal and informal type meetings with local trade and industrial education instructors. Plans have been made in the office of the State Division for Vocational Education for a full-time teacher trainer in trade and industrial education in Oregon. Tentative arrangements have been worked out for this position on a cooperative basis with Oregon State College.

Issuance of Certificates

Requests for trade and industrial education certificates in classes listed in this section are submitted through the local school districts to the state supervisor. Each request is then processed by the State Division of Vocational Education office and upon recommendation of the state supervisor and approval of the state director, a certificate is issued. Each applicant must file his request on a state form and in addition must submit (a) a record of his employment and (b) a report of pre-service teacher training completed. Initial one-year certificates may be submitted before the pre-service teacher training in which case tentative approval may be given, but the certificate is not
issued until the pre-service training is completed.
Part-time trade and industrial education teachers are
certified to teach only the specific trades, occupations
or subjects in classes established under the certifi-
cation requirements approved by the State Board of
CHAPTER VII

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

During the nineteenth century the gradual shifting from an agricultural to an urban industrial society created a need for new methods of educational training in the United States.

The earliest attempts to meet conditions created by specialization in industry and the consequent breakdown of the old apprenticeship system of training were made by private evening schools where adults obtained advanced technical training.

As early as the beginning of the nineteenth century, Congress received requests for financial aid to colleges for land grants which could be sold, proceeds then to be used to help support education. The first in a series of acts appropriating funds to the states for agricultural and mechanical arts colleges was the Morrill Act, adopted July 2, 1862. This act, named for Senator Justin A. Morrill of Vermont, was the original land-grant act and the first aid granted on a national basis for vocational education. In 1887 the Hatch Act, granting $15,000 annually to each state to establish an agricultural experiment station, was passed by Congress.
In 1890 the Second Morrill Act, authorizing the use of a portion of the proceeds from the sale of public lands, granted more extensive support and endowment of the land-grant colleges.

The Adams act in 1906 and the Nelson Amendment in 1907 granted additional funds from the national treasury on an annual basis to each state for further support of the land-grant colleges.

In 1905 the Douglas Commission in Massachusetts made a thorough study of industrial education by investigating the needs for industrial education of the pupils in the different grades of school. This study made a definite contribution to the development of vocational education of less than college grade in the United States. In 1906 the National Society for the Promotion of Vocational Education was organized in the state of New York, bringing before the country in vivid form the need for vocational industrial training for the youth of the land. The purpose of vocational education was stated as preparing potential workers for useful occupations by enabling them to acquire practical skills, secure general and related knowledge, and develop such personal qualifications, interests, and attitudes as would assure their success in the
work they might seek to enter. The Society felt that every individual who could do so was obligated to make an economic or social contribution to society and to be able to sustain himself and those dependent upon him. To do so efficiently, he must be prepared vocationally.

In 1912 the City Club of Chicago published a complete report showing the need for commercial and industrial training in that city. They recommended that vocational training be introduced into the public schools as a definite part of the curriculum. The report furnished additional information in favor of national aid for vocational training in the public schools.

An important force in the national movement for public vocational education was the Committee on National Aid to Vocational Education, created by Act of Congress and approved January 28, 1914. The nine-member committee, appointed by President Wilson, issued a report which first outlined the need for vocational education on a national basis; secondly, it pointed out the need for federal grants to the states.

The recommendations of this commission led directly to the adoption of the Vocational Education Act passed by Congress and approved February 23, 1917. This is the well-known Smith-Hughes Act.
With the passage of the Smith-Hughes Act in 1917, certain phases of vocational industrial education passed from a period of local origins and support to a period of federal aid and standardization. Before 1917 there was no generally accepted pattern in the United States as to what constituted publicly controlled trade and industrial education of less than college grade. The standards set up by the Smith-Hughes Act defined the kinds of trade and industrial education work which was to qualify for federal subsidy.

Since the passage of the Smith-Hughes Act, there have been four subsequent vocational education acts all supplementing the original act of 1917. The George-Reed Act, approved February 5, 1929, increased federal aid to vocational education during the period of depression. It provided additional money in two fields, agriculture and home economics, for a period of five years. Participating states were required to match the federal money one hundred per cent.

The George-Ellzey Act, adopted May 21, 1934, provided for a three-year period an annual appropriation of three million dollars for agriculture, home economics, and trade and industry. The states were again required to match the funds one hundred per cent.

Two years later on June 8, 1936, the George-Deen
Act authorized $14,200,000 annually for an indefinite period for agriculture, home economics, trade and industry, and teacher training. Beginning in 1938, the program of occupational information and guidance was started on a cooperative basis between the states and the federal government.

The Vocational Education Act of 1946, commonly known as the George-Barden Act is more flexible than previous vocational education legislation. Specific limitations on the use of funds were omitted from this act and provision was made to allow money allocated to the four services to be utilized for occupational information and guidance services.

The provision for federal aid for this phase of vocational education was again discontinued on a national level by direction of the United States Commissioner of Education, July 1, 1952.

The program of vocational education in the United States as developed is purposefully flexible so that it can be readily adjusted to economic and employment conditions on a local or state level. Federal funds are made available through the United States Office of Education which in turn distributes these funds to the states on a population basis. The state offices then reimburse the local communities for expenditures made
subject to certain standards set up by the states which have had prior approval by the United States Office of Education.

**Development in Oregon**

The development of trade and industrial education in other sections of the United States gradually found its way into the western state of Oregon. Since Oregon was largely an agricultural area, its early trade and industrial education development was slow.

The earliest of the trade schools are to be found in Portland where the center of industry and manufacturing first developed. One of the first and most significant vocational schools of the private type was the Y.M.C.A. night school which has continued to operate since its origin in 1884 and is now known as Multnomah College.

In 1896 Superintendent O. W. Pratt of Portland recommended that manual training be included in the curriculum of the public schools. It was not until 1904, however, that the school board made the first appropriation of $15,000 to start manual training. Next year, in 1905, five schools in Portland were offering classes in this subject.

The first public vocational school in Portland was
the Portland School of Trades, now known as Benson Polytechnic, established as a trade school for boys in 1908. This school grew rapidly at a time when Portland experienced rapid industrial development. Benson Polytechnic continued to operate with a trade school curriculum for boys, gradually adding technical courses until 1930, when enrollment in the technical courses exceeded those of vocational subjects. In 1949, Benson was classified as a technical high school under the reorganization of the Portland school system by Superintendent Paul A. Rehmus.

In 1912 a survey of the Portland school system was made by a committee composed of six nationally prominent educators. They recommended that vocational work be more extensive in the Portland system. This report, along with the rapid industrial development, was influential in establishing the Girls' Polytechnic High School in 1913 and the Commerce High School in 1915.

In 1917, upon the recommendation of J. A. Churchill, Superintendent of Public Instruction, the Oregon legislature accepted the standards for establishing vocational education as defined in the Smith-Hughes Act. Mr. Churchill worked with Governor Withycombe to help create a state board for vocational education, November 1, 1917. This state board, composed of five members,
proceeded at once to draw up a set of plans for promoting, establishing, and maintaining vocational education under the Smith-Hughes Act. Known as the state plan, it was modeled from an outline supplied by the federal board. Only minor changes were made to meet conditions of the state, and the Oregon plan was accepted by the federal board December 18, 1917. During the first school year in 1917-1918 under Oregon's plan for vocational education, five high schools were approved in the trade and industrial education field.

The State Board for Vocational Education made its first descriptive reports to the federal board at the end of the school year June 30, 1918; in 1919 it made the first biennial report to the State legislature as required by Oregon law. Both these reports have continued to be made up to the present time.

The biennial report of the state board covering the period from July 1, 1921, to June 30, 1923, indicated the growth being made by the trade and industrial program in Oregon. Day trade classes were conducted in thirteen centers with an enrollment of 1052. Part-time classes were conducted in four centers with 262 enrolled; 205 of this number were in the Portland center. Evening schools were conducted in six centers and enrolled 196. The total for this two year period
was 1510 as compared to 264 in 1917.

In 1926, Mr. E. E. Elliott, who had been state director since 1918, resigned from this office and was succeeded by Mr. O. D. Adams who served until 1940. Then Mr. O. I. Paulson became state director; he has held the position to the present.

At the close of the fiscal year June 30, 1930, there were 1960 persons enrolled in all the trade and industrial education classes in Oregon for that year.

The total number of persons enrolled in all trade and industrial classes during the thirteen year period from September, 1917, to June 30, 1930, was 16,683. In 1932 Oregon trade and industrial education classes cooperated with the federal government and admitted unemployed adults to regular classes. A number of special type classes such as placer mining foremanship, police and forestry service developed during this depression period. Additional funds had been appropriated by the federal government for these classes.

During the 1936-1938 biennium, 7,413 persons were enrolled in the various trade and industrial education classes in Oregon, 4,096 being enrolled in Portland.

From 1940 to 1945 the trade and industrial education phase of vocational education in Oregon carried
out a war training program which developed from classes in four centers in July, 1940, with 300 trainees to an enrollment of 1,500 in a dozen centers by September, 1940. During the four years and ten months' operation of the war training program in Oregon, 266,610 persons received training in sixty-six different occupations in thirty-two towns and cities. During this time the thirty-two school districts of the various towns and cities in Oregon cooperated to provided ninety-five different schools and shop facilities in the all-out war effort under the joint local, state, and federal plan.

J. A. Churchill, State Superintendent of Public Instruction, served as first state director for Vocational Education in 1917. Frank H. Shepherd, associate professor of Industrial Arts at Oregon Agricultural College, served as assistant director from 1917 to August 22, 1919, when Newton VanDalsmen was appointed first state director under J. A. Churchill. He served for one year. In September, 1920, E. E. Elliott became state director and served to July, 1927. O. D. Adams next held the position until September, 1940, when he was granted a six months' leave of absence. O. I. Paulson, who had been appointed acting state
director, became state director when Mr. Adams remained
with the U. S. Navy. Mr. Paulson is still serving at
the present time.

Frank H. Shepherd, who served as assistant state
director from 1917 to August 22, 1920, also served as
first state supervisor of trade and industrial educa-
tion. Newton VanDalsmen, who was appointed August 22,
1919, served as both state director and state super-
visor of trade and industrial education until February
1921, when A. R. Nichols was appointed to supervise the
trade and industrial education program. Mr. Nichols
served until the fall of 1926 when O. D. Adams became
state supervisor. When Mr. Adams became state director
a year later, in 1927, he retained the state super-
visor's post along with that of state director.

W. W. Morse became assistant state supervisor in
the fall of 1936. In 1942, he advanced to state
supervisor and served to March 31, 1945. He was suc-
ceeded by W. D. Purvine, who served from April 1, 1945,
to May 15, 1947. William G. Loomis, present state
supervisor, has held the position from June 30, 1947
to the present time.
Programs in Oregon Centers

Prior to the passage of the Smith-Hughes Act in 1917, a few high schools in Oregon were offering training of a trade and industrial nature. There were, however, no generally accepted standards as to what constituted a satisfactory type of program. With the acceptance of the Smith-Hughes Act and the establishing of the state plan, definite standards were provided for the schools. These standards as defined in the Smith-Hughes Act and the state plan narrowed down the number of schools which were able to qualify for federal reimbursement in Oregon.

During the first year of the program in 1917 to 1918, five high schools with a total of six day-trade classes and two evening classes enrolled 264 students. In 1952, thirty cities were operating Smith-Hughes classes in trade and industrial education, enrolling 8,943 persons.

The course had expanded from four day-trade classes in 1917 to more than seventy courses in all types of trade and industrial education in 1952. In February, 1938, the first area vocational school in Oregon opened in Eugene. This school grew from 150 students and nine instructors to 225 full-time day students and
eighteen instructors in 1952. During the school year 1951-1952 more than 1,700 persons enrolled in some type of work in this school. The school is operated by the Eugene Public School System in cooperation with the State Division for Vocational Education.

On July 14, 1947, the Oregon Technical Institute at Klamath Falls opened under the name of Oregon Vocational School with an enrollment of thirty-three, growing to 780 in March, 1953.

In 1949, the Oregon City Vocational School became the third trades and industrial institution of the regional type vocational school in Oregon. The school, beginning with about twenty students, increased to an enrollment of seventy-seven in 1951. The Oregon City Vocational School is under joint supervision of the local school district and State Division for Vocational Education at Salem.

Changes in the original state plan during the thirty-six years since the Smith-Hughes Act was enacted have been made from time to time to meet changing conditions. Changes have also been reflected in local school districts. Some schools which started with day trade programs in 1917 no longer maintain the original program. The Dalles High School conducted Smith-Hughes
printing until 1948; then it discontinued the program. Trade and industrial education programs have reflected changing concepts of general education as well as new experiences gained in industrial education.

**Types of Trade and Industrial Education Programs**

The content of trade and industrial education courses has been varied to meet the different needs of young people preparing to enter occupations and of adults desiring to up-grade themselves in their jobs. Included under each of the three main types—the all-day trade classes, evening classes, and part-time classes—are a number of sub-types. All the various kinds of sub-types of classes except type D (out-of-school youth work experience under all-day trades) have been in operation during the thirty-six year period.

The enrollment and the number of different courses offered in the all-day trade schools increased from 208 in 1917 in five classes to 1,514 in fifty-four classes on June 30, 1951. The number of centers offering this work has increased from five to thirty schools. Day trade schools make it possible for practically every post-high school young person to have an opportunity to attend such classes in Oregon.
The largest number of different types of trade and industrial education classes are to be found under the part-time division. There have been nine different kinds of sub-type classes which have operated in part-time classification in Oregon over the thirty-six year period.

Since 1951, the supervised correspondence study program has not operated in Oregon. The main reason for the large variety of part-time instruction in the trade and industry education fields is that it may be alternated between practical work in an occupation and study in school. While the part-time type of classes was the last of the three kinds of the main types to come into the Oregon program in 1920, it has had the largest coverage as to the number of various kinds of occupations served. Reasons for this are that the diversified occupations program, composed of the high school students, comes under this program and the variety of occupations in the diversified classes make possible a larger number of occupations to be served. This program has grown from an enrollment of 450 in 1920, in a few occupations, to 1,462 in more than seventy occupations in 1952.

About seventy per cent of the persons who received trade and industrial education in part-time
classes are employed. Part-time classes in the foreman-ship and public service training fields have developed considerably during the past few years.

Evening classes in the Oregon trade and industrial education field are conducted under two sub-types classifications only, the evening apprenticeship classes and evening journeymen classes. The evening type of class enrolls the largest number of the three main types.

Evening classes have grown from two classes in 1917-1918 enrolling fifty-six persons to 155 classes enrolling 5,596 in 1951. During this year twenty-one centers operated these evening classes with seventy-eight evening apprenticeship classes and seventy-seven evening journeymen classes. Thirty-one different occupations were reported in the evening apprenticeship classes, and thirty-two different trades and occupations were reported in the evening journeymen classes.

Teacher Training

The Smith-Hughes Act of 1917 provides that the State Board for Vocational Education establish certain requirements for teacher training. The Federal Board reserves the right to approve the teacher training plans of the State Board in so far as to insure meeting
the minimum federal requirements.

The basic plan for training vocational teachers in Oregon was submitted to the federal office by the state board as a part of the original plan for organization and administration of the Smith-Hughes Act. This plan, which included teacher training for trade and industrial education, was approved by the federal board December 18, 1917.

The original plan of 1917 stipulated that all teacher training courses be given under the supervision of the state board and that courses were to be offered by Oregon Agricultural College for persons who had had at least two years' practical experience in the trade or who were then acquiring that experience. The plan provided that teacher training be done in two or more centers, either in regular class work at Oregon State College or in evening schools and part-time schools in Portland.

In 1917, in compliance with this plan, the State Board for Vocational Education worked out a cooperative arrangement with Oregon State College for training vocational education teachers.

Changes approved by the federal board in the Oregon teacher training plan have been made from time to time
to meet changing conditions. College courses offered by Oregon State College in the trade and industrial education field have been consistent with the changes in requirements set up by the federal and state boards. Since 1917 Oregon State College has, in cooperation with the state board, offered courses on the campus during the regular school term and during summer sessions. During the thirty-six year period, this institution has furnished the greater part of the training of prospective teachers in the field of trade and industrial education.

In 1926, Mr. O. D. Adams assumed the duties of state supervisor and teacher trainer of trade and industrial education. This was the year appropriations under the Smith-Hughes Act reached their maximums, remaining stationary until 1930. This came at a time when the state board of vocational education had set out on a program of expansion for this phase of education in Oregon. Additional funds to increase teacher trainers would have to come from the state appropriations or local school districts.

In 1927 when Mr. Adams advanced to State Supervisor for Vocational Education in Oregon, he worked out a plan of teacher training with Oregon State College whereby members of the state board for vocational
education might conduct classes on campus for college credit.

Mr. Adams worked diligently on the teacher training program during his term of office, 1926 to 1940, and cooperated closely with Oregon State College to expand and improve the work. He prepared outlines for courses to be used in teacher training and personally taught a number of college courses at Oregon State College.

The greatest expansion in the teacher training program for trade and industrial education came during the two-year period, 1928-1930, when 616 persons enrolled in teacher training classes.

This period also marked the beginning of the correspondence type of teacher training in trade and industrial education designed for teachers of evening classes.

During the two-year period, 1932-1934, the statewide apprenticeship plan came under the national standards. Federal emergency relief funds also became available during this period under the trade and industrial education program. The George-Reed and George-Ellzey Act had liberalized the expenditure of federal funds for use of teacher training under the
trade and industrial education program. Classes of special nature developed, placer mining being an example. In order to meet the demand for teachers for the various new types of classes, interstate and district conferences were organized to train new teachers and to improve those already employed. There were non-credit short curation courses taught by members of the state division for vocational education and professional personnel whom they engaged.

Mr. W. W. Morse became state supervisor of trade and industrial education in 1936. He continued the conference method for teacher training of trade and industrial education instructors, coordinators, and supervisors. He also changed the method of reporting teacher training from the biennial plan to the five year plan which was used during the ten year term when he served as state supervisor.

Mr. William Loomis became state supervisor and teacher trainer for trade and industrial education in 1942. As a member of the first inter-regional conference in the field of trade and industrial education held in New York in April, 1946, Mr. Loomis brought new ideas into the state department. He instituted the workshop type of conference, developed procedures for the unification of teacher training courses,
improved the content within courses, and devised a self-study training manual for teachers.

Funds for teacher training under the Oregon plan are derived from the Smith-Hughes Act which made the basic provision in 1917. The George-Barden Act of 1946 extends the provisions for the use of these funds.

Teaching certificates for trade and industrial education teachers in Oregon are issued either for a period of one year or for a period of five years, depending upon the qualifications of the applicant. One year special vocational certificates may be issued by the local school board upon approval of the state department of education. In 1946 provisions were made in Oregon for issuance of one-year adult education certificates by the state department of education, valid in vocational education programs. These also may be issued by local school boards upon approval of the state board of education.

In 1950 provisions were made for issuance of part-time vocational certificates for teachers engaged in the trade and industrial education program in evening and part-time classes. Teachers possessing these certificates are required to comply with certain
in-service requirements to maintain state certification. Members of state staff and local supervisors provide certain in-service training for these teachers by the conference method.

Under the 1950 law, the State Board of Education also placed the primary responsibility for the teacher training of the part-time trade-extension and evening school instructors on the local trade and industrial education supervisors and coordinators.
CONCLUSIONS

1. This study is a record of the development and growth of trade and industrial education as one phase of federally aided vocational education in the public schools of Oregon on the high school level.

2. The trade and industrial education program in Oregon during the thirty-six year period from 1917 to 1953 represents an achievement of cooperative vocational education by the federal government, the state, and local school districts.

3. Trade and industrial education in the public schools received its first big boost with the enactment of the federal Smith-Hughes Act in 1917. Prior to that time only a few towns in Oregon had programs in this field, and these were meager. With the provision of federal money growth started at once. Today Oregon has a state-wide program with centers in all sections of the state offering occupational training.

4. In 1917 trade and industrial education classes provided training for a limited number of trades and occupations. Carpentry, cabinetmaking, plumbing, machine-shop practice, and auto-mechanics made up the
offerings for boys. The range of offerings for girls was even more limited. Today in Oregon trade and industrial education classes on the high school level offer training in nearly 100 occupations.

5. From 1917 to the present time the federal government has paid to the State of Oregon a total of over four million dollars to aid public education in the trade and industrial education field.

6. During the first eighteen years, from 1917 to 1935, the amount furnished by the federal government was about the same as the amount furnished by the state and local centers together. During the last eighteen years, or since 1935, the amount furnished by the state and local centers has been more than twice the amount furnished by the federal government.

7. Day trade programs were first established in public schools in the fall of 1917; these were followed by part-time classes in the winter of that year. Evening classes were established a year later in 1918. Since that time the largest percentage of enrollment in trade and industrial education classes has been in evening classes. During the school year ending 1952 evening classes enrolled sixty-six per
cent, all-day trade classes eighteen per cent, and part-time classes sixteen per cent of the total enrollment in trade and industrial education classes.

8. In both the day trade classes and diversified occupation classes provision is made for granting high school credit so that high school students in these classes can meet graduation requirements. Evening classes and programs in Oregon are largely designed to meet the needs of adults and out-of-school youth. They do not grant high school credits.

9. The diversified occupations program originally developed in Oregon in 1926 has grown from one center to twenty-two centers in the state. This program provides a means of occupational training for students in small high schools that would not otherwise be possible because of the cost of equipment and facilities which are provided by the employer.

10. During the years 1940-1945 the war training program developed from four classes in four centers to ninety-five classes in thirty-two centers. During the four years and ten months period of operation 266,610 persons were trained in sixty-six different occupations.
11. During World War II the trade and industrial education program suffered a slight setback of enrollment in regular classes because of factors such as (a) loss of coordinators to the armed forces (b) loss of students in the sixteen and seventeen-year age group to full time employment (c) loss of students seventeen and eighteen years of age to armed services.

12. In Oregon most of the trade and industrial education programs are conducted in comprehensive high schools as a part of the regular school program. Exceptions are Benson Polytechnic, operated as a technical high school, and the three regional vocational schools—Eugene Vocational School, Oregon City Vocational School, and Oregon Technical Institute.

13. Trade and industrial education programs conducted by the public schools serve a large variety of groups of persons in the state. For example, skilled workers in service and industry are able to increase their occupational and technical knowledge, apprentices in industrial occupations are given supplementary training, single-skill operators are able to increase their abilities, student learners are given training in skill and technical knowledge, workers in skill or
service trades are able to improve their vocational knowledge, foremen and supervisors are provided administrative training.

14. Some special developments of a pioneering nature in the trade and industrial education field accomplished during the thirty-six year period covered in the history of the program in Oregon include: (a) classes in practical nursing (b) classes in placer mining (c) classes in foremanship and leadership training.

15. Advisory committees composed of employers and employees have become an important part of the trade and industrial education program at the local level by establishing policies, determining wage rates, approving agreements, and recommending completion certificates. In February, 1953, there were 144 apprenticeship advisory committees in Oregon.

16. During the thirty-six year period the teacher training program has been carried out as a joint enterprise between Oregon State College and the Division for Vocational Education. Classes for teacher training have been conducted yearly during regular sessions and during summer sessions on the Oregon State College.
campus at Corvallis.

17. Since 1948 instructional materials have been developed by the State Division for Vocational Education for sixty-two per cent of apprenticeship related classes. Materials from other states are available for another fifteen per cent of related classes, seven per cent of the classes have materials available in special fields, but sixteen per cent of the classes still need material in a variety of fields.

18. During the fiscal year 1945-1946 an outstanding development was the large number of World War II veterans entering the apprenticeship training. On June 30, 1946, there were 6,257 veterans in training.

19. Since the passage of regional school law in 1941 and the establishment of the three regional vocational schools, there has been almost complete state-wide coverage for trade and industrial education.

20. Trade and industrial education programs once established in local communities have tended to become a permanent part of the public school systems.
Recommendations For Meeting Future Needs

The Oregon program of trade and industrial education has made encouraging advancement during its existence from 1917 to the present time.

Definite need for greater public support and interest and more widespread availability of the program to youth and adults for this training still exists. In developing future trade and industrial education programs which will meet these needs in Oregon the following recommendations are offered:

1. That school administrators and school boards in Oregon become more familiar with the needs of the trade and industrial education program; (a) by establishing advisory committees of laymen, school board members, and administrators to survey vocational needs in their local communities, (b) by attendance of school administrators at vocational education meetings and trade and industrial educational conferences and workshops, (c) by the establishment of required undergraduate and graduate courses in vocational education as a requirement for administrative credentials, (d) by the establishment of a public relations program by the State Division of Education for vocational education designed to reach school administrators as well
as the public.

2. That school administrators and school boards make wider use of the regional school law passed in 1947 which provides for trade and industrial education on an area basis: (a) by utilizing services of the state personnel in vocational education to aid in promoting new programs in areas which do not have them at the present, (b) by establishing new trade and industrial education programs with state and federal support on a five-year basis after which time local communities would agree to finance the program without state or federal aid, (c) by extending such programs to include a large proportion of adults who could up-grade themselves in their present jobs or receive instruction in new occupations, (d) by hiring competent personnel to head up the programs on an area basis under supervision of the local school district.

3. That state and local school officials be encouraged to keep complete records on the trade and industrial education program: (a) by having local coordinators keep a permanent record of all enrollments in day-trade classes, evening, and part-time classes in their communities, (b) by having local coordinators make complete yearly reports on enrollments, local budget amounts for vocational education,
and expenditure of vocational funds, (c) by having the state department personnel compile reports of local coordinators each year for future reference.

4. That local programs of trade and industrial education be strengthened to provide maximum services to youth and adults of the state: (a) by a sound program of occupational information and guidance service coordinated with the guidance program of the school system, (b) by the continual development of the vocational course materials suitable to the needs of different occupational goals and different levels of ability, (c) by developing a follow-up program for high school graduates and early school leavers, (d) by providing job placement service for graduates and drop-outs, as well as for students seeking part-time jobs.

5. That the State Board for Education, Division for Vocational Education, extend its activities: (a) by making industrial surveys and studies, (b) by gathering and compiling data to be used in long range planning, (c) by continuing to make recommendations for the improvement of the trade and industrial education program at the local level.
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APPENDIX A

QUESTIONNAIRE
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<th>Does coordinator work in more than one school district? in diversified occupations program? trade extension?</th>
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<th>Has diversified occupations program ever been discontinued, then started again?</th>
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<th>I should like any mimeographed or printed materials which you may have on your program?</th>
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<th>Has any thesis, term papers, history in local paper, school annual or other writings been done which I might be able to obtain?</th>
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I should like you to write a few paragraphs of your own impression of the program in your community.

a. Diversified Occupations:

b. Trade Extension:

c. Day Trade
APPENDIX B

CORRESPONDENCE
March 23, 1951

Mr. Paul A. Menegat, Principal
Forest Grove Union High School
Forest Grove, Oregon

Dear Paul:

It was indeed nice to hear from you. During the past week I have heard from two of the folks who were in my class at Corvallis. It certainly brings back fond memories. I sincerely hope that it will not be too many years before I can return to Oregon, teaching a little, socializing, fishing, and eating cherries.

Enclosed you will find my statement relative to the Roseburg plan. I have not taken the trouble to polish it off, but have merely dictated it assuming that you will put it in final order and make it sound professional.

Relative to your P. S., I do not have any bibliography or list of new materials of a historical nature.

Best of luck on your thesis, and I hope everything is going well for you.

Sincerely yours,

C. Kenneth Beach
Professor, Industrial Education

CKB:lr

Enc.
Around 1925 Mr. A. R. Nichols, who at that time was state supervisor of trade and industrial education in Oregon, worked with the local school officials in Roseburg relative to developing a part-time cooperative program that would be diversified in nature. The program was established in 1926 and Mr. T. T. McKenzie was employed as coordinator. Mr. McKenzie handled the program until 1930 when I accepted the position as coordinator for that year. Mr. McKenzie accepted the position as local director of vocational education in Salem.

During the first year there were fifteen or twenty senior high school students in the part-time cooperative program. The students attended school in the mornings and worked in the various local businesses or industries in the afternoons. As I recall, I taught two classes in industrial arts in the junior high school in the mornings and one in the afternoons. This made it possible for me to have the activity period at the senior high school free to confer with my students on a more or less individual instruction basis.
During these conferences with the individual students, my primary responsibility was to give them related instruction that would help them on their various jobs. Part of my afternoons was devoted to going around calling on the students and their employers.

During the school year, 1930-1931, Mr. O. D. Adams, then state director of vocational education and state supervisor of trade and industrial education, came to Roseburg and brought with him Mr. James Coxen who was then trade and industrial education regional agent for the United States Office of Education. Mr. Coxen spent a full day looking over the program and checking on its various aspects. I very vividly remember him selecting at random from my list of part-time students those whom he wished to call on while they were employed. His objective, of course, was to keep me from showing him only the better programs.

When Mr. Coxen and Mr. Adams left, I felt I had done a fairly good job of selling Mr. Coxen the program. However, some weeks later Mr. Adams sent me a copy of a letter which Mr. Coxen had written him pointing out in considerable detail all of the reasons why the part-time cooperative program in Roseburg did not meet the Smith-Hughes requirements and, therefore, was
not eligible to receive federal aid. Naturally, I was very much disturbed since this was my first job in teaching. However, the one encouraging note was a comment from O. D. saying, don't worry Ken, this will come out alright. I, of course, did not know what was in the background and could only hope that things came out alright.

At a meeting of the Federal Board for Vocational Education in the spring of 1931 Mr. Coxen reported on the Roseburg program. It is my understanding at that meeting the Federal Board modified the regulations so that smaller communities could operate diversified part-time cooperative programs similar to the one in Roseburg. As a result of these new regulations, the one change in our Roseburg plan was that I met with the students regularly in class. I taught the, as a group, subjects which were of general value and interest, including employee-employer relations, labor laws, etc. I also devoted part of the time to giving each student instruction directly related to the particular field in which he was working.

During my first year, I also organized my students into a club which I called, Future Craftsmen, or shortly thereafter, a state organization was formed,
called the Future Craftsmen of America. Annual conventions were held in Portland at which time the students visited several industries. Contests were also held, including parliamentary procedure, public speaking, first aid, etc. The activities I carried on with my students during the four year period when I was in Roseburg included a basketball team, radio programs over KOAC, a vocational fair which was worked out in cooperation with the agriculture and home economics departments, and talks by my students at local service clubs where they told what they were doing in their part-time program.

I left Roseburg in July 1934 to accept a position as state supervisor of adult education. At that time Mr. William Wymer succeeded me.
Mr. Paul A. Menegat, Principal  
Forest Grove Union High School  
Forest Grove, Oregon  

Dear Paul,  

I received your letter of June 5 with the inclosed materials relative to a trades and industries program here in Medford. Your D. O. program history form has been filled out at the best of my ability through information received from Mr. Mentzer and Mr. Hedrick.

As you may recollect, the program was started here in 1931 and was terminated in 1945. During that entire period Mr. Mentzer served as the coordinator. In 1945 the coop program was dropped for several reasons. For one thing the hourly wage paid to the trades and industries and VTM students was at such an amount that certain employers tended to be sure that they received their money's worth in unskilled labor and did little to actually train the students. Of course such a situation as this was not the common thing but was occurring frequently enough so that the value of the program was questioned. Secondly, the "red tape" required, the making of reports, etc., were such that Mr. Mentzer had little time to supervise his students properly. The former reason as given above was obtained from Mr. Hedrick himself, the latter reason came from Mr. Mentzer.

Fundamentally Mr. Hedrick is not unfavorable to such a program carefully handled at all times. It is his belief that if we go back to the program we would do so under a provision whereby the students would not be paid. In this way we could then expect a desirable training program from the employer. However, we are immediately confronted with the attitude of the local labor unions to such a development. As you can see, we have been thinking about the possibility of reinstating the program in part, but have not thoroughly investigated all the angles.

I believe that we do operate a good related training program for our three trade groups as indicated on the completed form. Also our day trade program is operating quite effectively.
I am sorry that I am not able to inclose some of the materials which you have requested. Mr. Mentzer has indicted that a considerable amount of the old records of a publicity nature have been destroyed since the program was terminated here in 1945.

If there is further information that we can supply, please feel free to call upon us. Whatever I have said here has been obtained from others in as much as I am just now completing my third year in the Medford City School System.

Sincerely yours,

E. D. Becken
Ass't Supt. City Schools

June 11, 1951
EDB:ld
July 23, 1951

Paul A. Menegat  
Forest Grove Union High School  
Forest Grove, Oregon

Dear Paul,

The following are copies from the minutes book of School District #4 Roseburg.

Roseburg Oregon  February 2nd 1926

"On motion duly made seconded and carried it was decided to install a course of Industrial Art Training for Boys in the new high School, under the Smith-Hughes Act. Each pupil taking three hours actual employment in connection with their class work."

No further business appearing the meeting was duly adjourned.

V. J. Micelli  
S. DeLapp  
Clerk  
chairman

Under date of June 15th 1926

On motion Thos. T. McKenzie was employed as instructor in the Industrial Art Dept. of the Senior High School at a salary of $1300.00 per year.  
(Minutes unsigned)

Hope this will help you out. Sorry to be so late.

Sincerely yours

Paul S. Elliott
July 12, 1951

Mr. Paul A. Menegat
Principal, Forest Grove Union
High School
District No. 5
Forest Grove, Oregon

Dear Mr. Menegat:

Your letter of June 16th came to my attention upon my return to the Office Monday from a recent field trip. Am sorry that I did not, while in Salem, have an opportunity to meet and talk with you in person, regarding the development of the D. O. programs.

We do not have in this Office, much background material on the history of this type of training. In going through our files, however, I cam across the enclosed pamphlets and other publications, which may be of help to you in writing your thesis.

The beginning, in 1926, of the classes in Oregon which you mentioned was somewhat earlier than those started in the South. Of course, we had had over the nation for years prior to that time, cooperative part-time classes where the students alternated between school and work on a week-about basis, and in some of the communities such programs were operated on a shorter alternate basis. Students in most of the classes received training for specific occupational fields. It was not possible to conduct such cooperative part-time classes in the smaller communities, especially in the South, because the need for training in specific trades was not sufficient to justify such programs, enrolling 24 to 30 trainees for one trade.

Because of this condition, we turned our efforts to the development of the diversified occupations type of program. In this way, as you know, we were not training more than could be absorbed into any field of work. It was not until around 1933 that the twelve State supervisors and myself began developing diversified programs in the smaller communities in the South.
Mr. Paul A. Menegat—7/12/51

Trusting that the enclosed material will be of some help, and with kind regards, I am

Sincerely yours,

C. E. Rakestraw, Consultant
Employer-Employee Relations

ENC: (6)