

A SURVEY
OF
VOCATIONAL EDUCATION
IN THE CITY OF PORTLAND, OREGON

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CHAPTER I
INTRODUCTION

In attempting this survey the idea has been not only to discuss the present situation in Portland from a vocational viewpoint but also to give the present situation a proper setting in the general field of education. A short history of the vocational education movement has been included in this report, to give meaning to the historical developments in the various schools of this city. The survey ends with a tentative attempt toward evaluation of the vocational education problems as now found in Portland.

Information for this survey has been gathered from many sources. Superintendents of the city school system, heads of private schools, hospitals, industrial establishments, shops, principals of the city schools have contributed. Pamphlets, courses of study, city school surveys, books on educational topics, and vocational texts, all have been utilized in this report.

Whenever possible, contacts have been made by private interview, as the information received by questionnaire in some cases has been found unreliable. This is probably due to the fact that at present business men are very apathetic toward this informational device.

It will be necessary in the beginning to clarify the following discussion by an explanation of terms.¹ For this paper, vocational education shall be understood to refer to any form of education which can be used in a person's life work, with the exception of such fundamental subjects as are recognized as basic education for all. This is without doubt a broad definition of the word vocational, but as such it will include in its scope extra-curricular activities, commercial courses, trade courses, vestibule schools, apprentice training, and the like.

The above interpretation is somewhat in the nature of the generally accepted definition given by Snedden to a committee on vocational education from the National Education Association. His definition follows:

Vocational education is any form of education, whether given in a school or elsewhere, the purpose of which is to fit an individual to pursue effectively a recognized profitable employment, whether pursued for wages or otherwise.²

One might argue, generally, that all education is, then, vocational; or else, specifically, that very few use the education given them for direct occupational, professional, or vocational purposes. Since such arguments merely prevent approach to the actual problem, it

1. Ricciardi and Kirby. Readings in Vocational Educational Education. The Century Co., New York, 1932, pp. 88-120.

2. Ricciardi, Kirby. Readings in Vocational Education. p. 9.

is best to avoid them and to effect a beginning by considering all educational facilities that attempt to train vocationally.

Vocational training is another term which needs an explanation. In this report, vocational training refers to the processes by which skills are taught; therefore, any training which develops skills must be recognized as a part of the wider field, vocational education.

Historical Background

Vocational education was recognized as a problem in the early days of universally accepted history. Talmud, fundamental code of the Jewish civil and canonical law, states that it was the duty of the early Jewish fathers to teach their sons some trade.

The ancient Jews associated skill of hand and industriousness with good citizenship and the lack of these with social parasitism or something worse.³

Apprenticeship indentures, relating to such trades as weaving, nail making, flute playing, shorthand writing, and hair dressing, were used by the Egyptians as early as 18 B.C. Greece and Rome also coped with the apprentice problem, but it was in the middle ages that trade training received its greatest impetus through the work of the

3. Lee, Edwin A. Objectives and Problems of Vocational Education. McGraw - Hill. New York, 1928, 4.

craft guilds.

One of the most important functions of the craft guilds was the control of admission to the craft and the setting of the period and method of apprenticeship.⁴

With the advent of the industrial revolution, the breaking down of the apprenticeship system was under way. In 1824, to meet the lack of education in the untrained workers, Dr. George Birkbeck established the London Mechanics Institution. Interest in the work became international. Victor della Vos gave to posterity the first instruction shop with his teaching of "elements" in the Imperial Railway School at Moscow. Work on the della Vos plan was exhibited at the Centennial Exposition in Philadelphia in 1876. This exhibition introduced industrial arts work in the United States.

Pestalozzi is credited by Sears with giving to the world the first industrial school.

To Pestalozzi, a school that was not an apprenticeship to a livelihood was an absurdity.⁵

The New York Trade School, established in 1881, was the first of its kind in the United States. Soon, similar schools were founded in the same city and in Philadelphia. The Milwaukee School of Trades was the first school of trades to be supported by a specific tax levied for that purpose.

4. Sears, William P. The Roots of Vocational Education. John Wiley and Sons, New York. 1931. pp. 310.

5. Sears, William P. *Op cit.* p. 85.

The period from 1888 to 1907,⁶ fixed as the beginning of the factory schools, saw the foundation of schools by the following companies: Hoe and Co. Printing Press, New York city; Westinghouse Electric; General Electric; and International Harvester.

The general history of the vocational education movement will be dropped at this point, for the work in Portland, Oregon parallels the general situation closely enough for this report. Any great deviation from the usual procedure will be noted and commented upon in succeeding chapters.

6. Sears, William P. Op. cit., p. 111.

CHAPTER II
VOCATIONAL DEVELOPMENT
WITHIN THE PORTLAND PUBLIC SCHOOLS

An attempt made in Portland during the year 1873 to establish a night school failed. A second attempt in 1890 proved more successful. There was included in this school's curriculum the first vocational class in Portland's history. This initial effort toward vocational training comprised a mechanical drawing class that was reported extremely popular. Individual differences among pupils were even then noticed by local educators. The superintendent of schools stated in 1890, "The successful teacher must recognize widely varying needs and have the power to help each one as he requires."¹

In 1896, O. W. Pratt, then city superintendent of schools, said in a report to his directors and to the patrons of the district:

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 of this branch require no demonstration to 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.²

1. Annual Report Public Schools, Portland Oregon. 1891, p. 27.

2. Superintendent's Annual Report, 1896, p. 57.

However, no such plan was inaugurated, for the superintendent of schools who took over the reins in 1897 decided that manual training was too expensive an innovation. Nothing further was done in the way of vocational education until 1904, when \$15,000 was budgeted for manual training.

From this small beginning, vocational education in Portland has reached the point where three schools are devoted almost entirely to this work. The regular academic schools of the city offer many vocational courses in an attempt to meet the industrial and vocational needs of the city.

Benson Polytechnic School - History.

Benson Polytechnic School is the largest of the three public schools in the city whose names distinguish them at once as vocational institutions. Under the name "Portland School of Trades", this school first opened its doors, to pupils mechanically-minded, in the year 1908, only four years after Portland first appropriated money for definite vocational work. The new school, characterized by its motto "Not alone for the survival of the fittest, but fit to survive," had for its object "to furnish instruction to the boys of this city in some trade, that they may be better fitted for their life work." 3

3. 36th Annual Report Public Schools, Portland, Ore. pp. 263-267.

The school was located in the Atkinson School building, and offered the following courses:

Machinery Trades

Machine Work

Pattern Making

Foundry Work

Electrical Construction

Mechanical Draughting

Building Trades

Plumbing and Gas-fitting

Brick-laying and Plastering

Electrical Wiring

Carpentry

Cabinet-making

Architectural Draughting

The school's circular of information tells much about the school, its purpose, and the idea of that day in regard to such schools:

The school is organized to meet the demand that is felt, in the industrial world, for more skilled mechanics and to give greater opportunity to the young man who wants to learn a trade. Formerly the only way by which a boy could enter the ranks of skilled mechanics was by signing articles of apprenticeship for a term of years to some mechanic or to some corporation employing skilled workmen. The boy in many cases received very little attention and frequently did errands for a year or more. The number of apprentices was limited, and in many ways the opportunities to get a thorough knowledge of the trade were much restricted. * * * There is no doubt but that there will be many trade schools in our public school systems in the near future.⁴

For the first few years the School of Trades enrolled boys only, then for a period of three years both boys and girls. In 1912 the school was divided; the

4. Circular of Information, Portland School of Trades. Portland, Ore., 1909-1910, p. 5.

girls going to the old Lincoln High School building, where was organized what is now the Girls' Polytechnic School. C. E. Cleveland has been principal since 1913, and under his leadership many changes have taken place.

The public became genuinely interested in the work of the school through a large display put on by its students in the year 1913. It was felt by those who viewed the work that the school should be enlarged so that more boys of the city could enjoy the benefits of vocational education. Funds were not available until 1915, when Simon Benson, a public spirited citizen, visited the school and was moved to cooperate towards its success.

His generous gift of \$100,000, which required a like sum from the school board, made possible the present Benson Polytechnic School, which with material equipment cannot be duplicated for \$1,000,000.⁵

In these words one of the school directors of that year described the philanthropist's gift and its result.

The school board purchased six blocks of land centrally located at East 12th and Hoyt streets as a building site. The building, begun in 1916, was designed upon a scale of basic units, so that it could be extended as the school grew.

A new program, including a change of name, was necessary, for the school was no longer a pure trade

5. Tech Pep. Benson Polytechnic School Publication. Portland, Oregon. p. 1.

school. Social and school trends had demanded changes, many of which were inaugurated by 1917, when the main units of the school building were completed. The change in curricula called for a technical branch to include four-year courses as well as the old three-year trade courses. With this change came the demand for a new name--a name more fitting for the new type of school organization. In 1916, in honor of the philanthropist who gave the initial gift and since donated \$1,000 for library books and \$10,000 to be set aside for a student loan fund, the school was designated Benson Polytechnic School.

Geo. B. Thomas, director, took a special interest in this school and, by careful investigation of trade machinery made available under the Federal Caldwell Act, managed to purchase for \$7,000 machinery which to-day would cost \$100,000. The Caldwell Act provided for the sale of accumulated machinery to trade schools for 15 per cent of the pre-war value.

In the spring of 1918 the school was taken over by the Federal Government for training army specialists in mechanical fields. The Benson students were moved to portable buildings near Washington High School. The signing of the Armistice, November 11, 1918, brought about the relinquishment of the school by the Government,

and in January 1919 the regular students, numbering some 220, returned to take possession of their own institution. However, since the close of the war, disables soldiers under the direction of the Federal Board for Vocational Education, to the number of approximately one hundred, have received schooling there. This marked the transition from Government control back to public supervision.

The next important change in the Portland school system that affected Benson Polytechnic School was the moving of the printing department from Jefferson High School, along with all iron working machinery from the other schools of the city, to Benson Polytechnic. This made the polytechnic school complete in its natural field of trade and technical accomplishments.

Benson Polytechnic School at Present

At the present time Benson Polytechnic School has an enrollment of more than ²⁷⁰⁰ 2600 boys, which is approximately 30 per cent of all boys attending high school in the city of Portland. Its equipment and plant are valued at one and one half millions of dollars. It has its own radio station, one of the finest auditoriums in the city, a faculty of eighty or more, and a maintenance and office force of some twelve persons.

The work as first organized has not materially changed. The course of study for the year 1933 states,

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.

One-half of the time is spent in shop work and the rest is divided among drawing, applied science, mathematics, English, and civics. To graduate from the vocational course, a student must earn twenty-five term credits. In this course one credit is given for each two hundred periods of shop work, twenty four hundred periods of shop being the graduation total. The vocational courses are listed below:

Metal Trades

- Blacksmithing
- Machine Shop
- Pattern Making
- Foundry
- Tool Making

Building Trades

- Cabinet-making
- Carpentry
- Plumbing
- Sheet Metal

Vocational Electric

Vocational Gas Engine

Printing

- Composing Room Work
- Press Room Work
- Linotype Operating

The technical course is rapidly becoming the most popular course at Benson Polytechnic School. It is really a general secondary course with two periods of shop per day instead of the usual one hour of language required in the general course. Benson Polytechnic School shows a noticeable tendency to become technical rather than vocational in scope. This trend is apparent in the following tabulation of enrollments for selected years.

<u>Year</u>	<u>Per cent Technical</u>	<u>Per cent vocational</u>
1916	0	100
1923*	54	46
1931**	60	40

The work in the technical department is not nearly so vocational in nature as the following aim of this branch of Benson Polytechnic School seems to 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.⁶

Fundamentally, the work comprises three years of English, three years of science, three years of mathematics, one year of American History, and one year of civics. In the

6. Course of Study. Benson Polytechnic School, Portland, Oregon. 1933. p. 9.

shop work the student takes certain basic homogeneous courses which are essentially try-out, exploratory, and prevocational. The last four terms are given over to specialization in the major shops. Some idea of what is attempted in this course can be gleaned from the following:

The skilled worker of to-day has to face a situation vastly different from that of even a generation ago. Advances in all lines of technical work have been more rapid than ever before known. The application of science, mathematics, physics, chemistry, electricity, applied art, and mechanics to the industries makes it absolutely necessary for the trained worker to possess a broad foundation for his education both in academic and in technical subjects.⁷

Requirements for graduation from the technical course are the successful completion of thirty-four credits including required work and related electives. Graduation credits are given for a full semester's work in subjects requiring the usual forty-five minute periods, five days per week. Laboratory and shop require ninety minutes each day of the school week, the thought being that one period of outside instruction plus one recitation period equal in value a double period.

The following quotation is representative of statements by business men and employers concerning the training given by Benson Polytechnic School:

7. Course of Study. Benson Polytechnic School, Portland, Oregon. p. 10.

One of the finest principles taught at Benson is the nature of theory and practice, laying no more stress on one than on the other, but impressing upon the minds of the boys that to make a success both must be mastered. This aids a young fellow as nothing else can in selecting life work. The students when taught to work with their hands at an early stage, have a tremendous advantage over those understanding theory alone.

The boys I have employed from Benson have given satisfaction. I have found that they understand how to use their heads, for they are not balked at the problems they encounter. I can recall the names of two--they started working for me as common laborers and they are now commercial engineers.⁸

Girls Polytechnic School

As was noted under the history of the Benson Polytechnic School, the girls of the Portland Trade School were given their own building in 1912. Since that time tremendous strides have been made in this the second of the Portland vocational schools to be discussed. The first courses in the Girls Polytechnic School included those which were considered beneficial, in the early part of this century, in preparing young women for their future as housewives. The catalogue of 1912-13, the first year of the separation, states emphatically that the aim of the school is the preparation of young women for home life and home making, in the belief that such preparation results in the happiness and efficiency of the individual as well as in the best interests of the community in general.

⁸. From Superintendent O. B. Coldwell, Portland Railway Light and Power Company.

The course in home making covered two years and included studies of foods, the principles of digestion, marketing, systems of housekeeping, labor saving devices, cooking for the sick and convalescents, family life, and the responsibilities of home makers.

The department of sewing offered a course which was both home making and trade preparatory in its scope. Two years' work was required, but one year was preparatory to the millinery course. This millinery course was a pure trade course in which the student was treated much as an apprentice, although no requirement of indenture was made mandatory. A unit system, which enabled the girls to do the required work in a shorter time than the regular two years allotted for the work, was practiced.

The students were placed on probation until they proved satisfactory by their aptitude and achievements. Students were required to furnish their own tools. The regular routine material of the course was supplemented by drawing, trade and shop work, mathematics, and shop inspection trips.

At present the girls enjoy a new building not far from the plant which houses the boys on the east side of the city, where it is centrally located with regard to population. The enrollment of the girls' school is now well above 700, with only a two-year course being offered. This enrollment would compare with a student body of

eleven or twelve hundred in a four-year institution.

None but a two-year course has been given in the Girls' Polytechnic School. This limitation keeps the school curricula from becoming general in scope. No technical school of the four-year type is at present contemplated. Many students, however, complete their high school work in other Portland high schools, and are given credit for the two years of vocational work. This makes the school approach a junior high school set-up, and it could probably be made into a junior high school without sweeping changes.⁹

Courses now offered in the Girls Polytechnic School are clothing, foods, millinery, and art. To enter any one of these courses the student must have an elementary school diploma.

Nineteen credits are required for graduation, seven academic and the other twelve vocational. Academic credits are earned in English, history, civics, and algebra. Vocational subjects include clothing, foods, home management and social relationships, millinery, industrial art, metal art, and freehand drawing, commercial work, music, Oral English, manners and conduct, and physical training.

Industrial art and metal art are two-period subjects; two terms of which are given. They both include a study of design and its application to the making of articles. The industrial art classes

⁹. See recommendation number nine, last chapter this report.

work with block printing, stitchery, weaving, etc., and the metal art classes work with copper and silver.¹⁰

The oral English comprises work in speech and dramatic art. The manners and conduct course is an innovation in Portland, which brings much favorable comment from the patrons of the school. It is a five-weeks course with daily recitations required.

Some of the unusual features of this school should prove interesting:

A practice apartment modestly and tastefully furnished is used for practice work in home furnishings, home management, meal serving, entertainment, etc., for the purpose of developing skill and interest in the care and use of the home.

The laundry is a classroom where methods of cleaning and pressing clothing and the various household fabrics are taught. This instruction is part of the clothing course.

The dress design department provides instruction for every girl in the clothing course regarding such matters as color, line, style, and the suitability of clothing to the individual and the occasion.

A student loan fund makes it possible for the student to have her materials and supplies on time.

A cooperative arrangement between the foods department and the cafeteria makes it unnecessary for the students in the foods classes to pay fees or to bring supplies from home.¹¹

Certainly the Girls' Polytechnic School offers a varied program of vocational work.

10. Course of Study, Girls Polytechnic School. (No year given.) Portland, Oregon. pp. 1-4.

11. Questions Often Asked. Girls Polytechnic School, Portland, Ore. pp. 2, 3.

Portland High School of Commerce

The Portland High School of Commerce grew out of the commercial department of Lincoln High School. The Lincoln principal reported in the year 1916 that

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.¹²

As indicated above, the school was opened in September, 1916. Pupils came from Lincoln High School, thirty-one grammar schools of the city, and from several out of town schools. The first-term enrollment was 428. The courses then offered were as follows:

Salesmanship

Stenography

Bookkeeping

College Preparatory

It is noted that the forty-fourth Annual Report of the Public Schools of Portland states that 75 per cent of the graduating class of June 1916 were placed in business.

The 1923 Survey of Portland Public Schools, made by the local Department of Education, contains among other things a recommendation that the Girls' Polytechnic School and the High School of Commerce be abandoned. The school board, however, has seen fit to keep these schools

¹². Annual Report Public Schools, Number 43. Portland, Oregon, 1916, p. 32.

in the Portland school system.

At the present time, two courses of four-year duration are offered in the Portland High School of Commerce--the stenographic and the bookkeeping courses. In the first year of the stenographic course, English, commercial arithmetic, occupations, and writing are compulsory, while art, Spanish, and algebra are elective. In the second year, English, filing, bookkeeping, shorthand, business knowledge, and typing are required; while art, Spanish, and world history are elective. The junior year course is made up of English, office machines, American History, shorthand, and typing as regular work, with commercial law and economics optional. No electives are permitted in the senior year, which requires English, office training, civics, and sociology, shorthand, and transcript typing.

The bookkeeping course is the same as the one above outlined, except that bookkeeping is given here for the last three years in place of the shorthand of the stenographic course.

At the present time the Portland High School of Commerce employs fifty-five teachers for its student body of some two thousand students who are preparing themselves for business careers.

Vocational Courses
in the General High Schools

In the regular or traditional high school, besides work in home economics and manual training, courses are offered in typing, penmanship, bookkeeping, shorthand, and commercial law. In the year 1931-32, the last year statistical data were published, 7364 students were enrolled in courses of this kind. No figures concerning the per cent of these students going directly into the vocational life of the city are available. However, interviews with school principals and with employers bring out the fact that few graduates from commercial courses in cosmopolitan high schools go immediately into work directly related to the school courses. Later, however, many of these students attend business colleges and commercial departments of regular colleges. Thus, the high school commercial courses may indirectly influence the choosing of vocations.

Extra-Curricular Activities

Extra-curricular activities that suggest themselves as being of a vocational nature include the following: orchestra, band, athletics, dramatics, and designing. Orchestra and band work in the high school consists of training from a professional band leader, in

most instances, actual practice in band rooms, and the fruition--actual concert playing at school assemblies and elsewhere throughout the city. One or two of the high schools enter participants in state music contests as a means of motivation. Choral work, when attempted, is similar to the above and in all this work the student usually receives outside training, paid for by his family.

High school athletics can lead to a life work in sports as coach, physical education director, scout or Y.M.C.A. leader, etc. Therefore, we can recognize this extra-curricular activity as a vocational possibility.

Dramatics have but little to offer in the way of actual placement, although this activity develops skill or technique in school through the medium of plays, oratory, and the like. However, isolated cases of its usefulness in this regard show that the speech arts should be included in our search for vocational agencies.

4-H Club Work

In both the high schools and the elementary schools there is found one more extra-curricular activity which is probably more avocational than vocational in nature. It is the 4-H Club work sponsored by the United States Department of Agriculture, the Oregon State Agricultural College, and the State Department of Education. The

project method is here used to the fullest degree, for the 4-H policy is "learning by doing." The following projects are listed in Portland:¹³

Bee Keeping	Handiwork	Room Improvement
Canning	Sewing	Vegetable Gardening
Camp Cookery	Health	Poultry
Home Making	Forestry	Rabbits
Cooking	Livestock	

In order to show quickly the work and influence of this quasi-vocational program, the following table is useful:

TABLE I

4-H CLUB STATISTICS IN PORTLAND FOR THE YEAR 1933¹⁴

Number of 4-H Clubs	209
Boys enrolled	552
Girls enrolled	1366
Members completing	1749
Per cent completing	91.1
Number of 100 per cent clubs	160
Number of local volunteer leaders	191
Number of P.T.A. 4-H chairmen	35
Number winning scholarship	
O.S.C. 4-H summer school	14
Number attending 4-H summer school	72
Elementary and high schools reached	52

14. The School Bulletin. Authority of Board of Directors. Vol. 20, Number 18, Portland, Ore. Mar. 13, 1933, pp. 1, 4.

Ragsdale stresses the value of the extra-curricular form of activity when he says, "This recognition of the educational value of extra-curricular activities is being forced by the discovery that later occupational success is determined as much by participation in them as by good standing in academic work."¹⁵

Elementary Vocational Attempts

Manual training is to-day regarded as a general subject.¹⁶ It is highly cultural in that it answers the demands of at least one of the seven cardinal aims of education--that dealing with the proper use of leisure time. But, of course, like extra-curricular subjects, it can be recognized as partially vocational. It is a skill accomplishment, and the carrying of this skill into such a school as Benson Polytechnic could result in a real vocational lift.

Manual training was given its initial impetus with Portland's World Fair exhibit of 1905, when manual training had its first birthday. To-day we find this training occupying the attention of nearly all of the seventh and eighth grade boys of the city. Fifty-six school shops are utilized in this interesting work. The instruction, under the leadership of F. M. Gushong, attempts to in-

15. Ragsdale, Clarence E. Modern Psychologies and Education. The Macmillan Company. New York, 1932, p. 300.

16. Lee, Edwin A. Objectives and Problems of Vocational Education. McGraw-Hill. New York, 1928, p. 35.

aspire spiritual values as well as manual skills. The following quotation shows the correlation of some of the grade school work with manual training and vice versa:

The Evolution of the Book, put on at Glencoe School, was one of the outstanding projects coming from the school shop through the principals' office to several other departments of the school. The library was organized so that the necessary reference material would be available for preparation. The home room gave out the instructions to the pupils for writing the play. The art department was called upon for designing costumes and scenery, while the boys of the manual training department built and painted some very elaborate stage settings. The auditorium teacher trained the boys and girls in the act of staging the play which was put on during open house week at the close of the school year.¹⁷

This type of correlation is typical of the work attempted by the supervisor: he uses his manual training work to build vital, dynamic forces in the lives of his boys through actual constructive achievement. His aim is not only to fit the boys to become productive workers in the world but also to prepare them to enjoy life as individuals and to understand that long centuries of civilization and culture lie behind our simplest mechanical processes.

The girls of the city's elementary schools have equal opportunities with the boys for vocational training. Such work is made available to them in the seventh and eighth grades through the Department of Home Economics.

17. Annual Report of Public Schools, Portland, Oregon 58th Annual Report, p. 41.

The girls of Portland are taught to think scientifically on the fundamental needs of man in a course dealing with food, clothing, and shelter. Opportunity to practice the "theory" they learn in this course is given in cooking and sewing classes, which comprise the major activity of the department. Those pupils who cannot afford to buy materials sew for the Albertina Kerr Nursery and kindred institutions, whereas the other girls make simple cotton dresses, pajamas, and so on, for themselves. As for cooking, the girls do actual work in preparing food and in managing the cafeterias in the various schools.

In all courses in home economics it is required that students keep notebooks for general class instructions and for recipes.

Pre-Vocational or Opportunity Schools

Pre-vocational or opportunity schools, the newest innovation in Portland, provide continuation work of a vocational nature for elementary school graduates who must qualify quickly for their places in industry. These schools are utilized also by those who, being delinquent in certain basic requirements, are denied graduation. Two pre-vocational schools, one for boys and one for girls, have been built, adjoining the polytechnic schools. Their curricula include basic subjects of elementary nature and from two to four hours a day of shop work. The girls' school has two teachers; the boys', five. A demand is

created that is many times the capacity of the schools and would thus exceed the funds available for this work, because of increased instruction costs.

All candidates are certified for admission to pre-vocational classes by the Department of Research. A boy or girl is eligible for admission to pre-vocational classes only if his IQ is above 75 as determined by mental examinations. The applicant must also be over fifteen years of age and if qualified is allowed two years' work in the school, when necessary. If the student satisfies the requirements of the regular elementary school diploma, he is given such a diploma; thus he becomes entitled to enter high school.

Shop work has an appeal in this type of school, primarily because it is different from the routine work of the regular elementary school. This type of school is meeting with general favor from the public, although some few parents do not quite grasp the significance of the work and regard their children as being placed in classes for deficient.

The Department of Vocational Education

The city of Portland has felt, also, that it devolves upon the department of public education to provide vocational training for adults who, through chance or lack of opportunity, have not been able to follow

their natural inclinations in regard to specific trades.

Portland's answer to this problem is the Department of Vocational Education. Since the training for adults must be such as to be quickly turned to account, the work given is limited to that which shows a direct relationship to the student's chosen vocation. The effectiveness of this work is dependent upon this relationship between training and practical application.

One of the significant phases of the work is the apprentice school. The apprentice school requires an indenture, the form of which has been approved by the State Apprenticeship Commission of Oregon, Oregon Building Congress, and by the local school board.

The main agreement in the indenture is as follows:

That the employer take the apprentice for the purpose of enabling said apprentice to learn and acquire the trade or occupation of (name of trade).

That the apprentice agrees to serve the employer diligently throughout the period of this indenture and regularly attend the classes established by the apprentice school. 18

It is further agreed that the apprentice is to be hired, worked, trained, and paid as a learner, and that the provisions and regulations printed in the following and/or attached sheets, together with the rules and regulations promulgated from time to time by the State Apprenticeship Commission, are hereby made a part of this indenture with full force and effect. 18

Certain percentages of mechanics wages are paid apprentices dependent upon the results of tests conducted

18. Oregon Building Congress, Uniform Apprentice Indenture, July 1, 1931. p. 1.

for that purpose. Twelve of these tests are provided, with the percentage of wages ranging from zero when the apprentice is calculated as lower than 20 per cent in mechanical ability to full wages paid when the apprentice is 75 per cent or higher in mechanical ability.

Work in the apprentice school is at present confined to the building trades and when, upon the completion of five years of the instructional work, the apprentice "graduates", he is recognized as a master craftsman by the Oregon Building Congress and by related organizations. Of course, during the depression the work of the building trades in Portland has been noticeably diminished, and this retardation has affected the apprentice school. The enrollment follows.

TABLE II

 APPRENTICE SCHOOL STATISTICS FOR 1933 ¹⁹

Carpentry Trade	9
Electric Workers Trade	20
Painting Trade	42
Plastering Trade	11
Plumbing Trade	18
Sheet Metal Trade	35
Steam and Operating Engineers Trade	33
Total Registration	168

19. Brigham, L. E. Annual Report to Superintendent Rice and the Board of Education, Portland Public Schools 1932-33, p. 2.

Department of Vocational
Education--Placement and Guidance Bureau

Another feature of the Department of Vocational Education is the Placement and Guidance Bureau, which is cared for by a paid half-time secretary selected from industry, who works in the dual capacity of placement and guidance officer. Moreover, he is assisted by the Chamber of Commerce educational committee and by many other individual and civic organizations. The following table is elucidating:

TABLE III

PLACEMENT AND GUIDANCE STATISTICS 1933 ²⁰	
Number of placements, boys	95
Number of placements, girls	435
Total number of placements	530
Number of calls from employers for help wanted	832
Number interviews with employers, parents, students, etc.	4,634
Number of new applicants	848

Department of Vocational
Education--Women's Vocational School

The division of the Department of Vocational Education known as the Women's Vocational School has

²⁰. Annual Report to Superintendent Rice. Op. cit. p. 1.

as its place of meeting the old Atkinson school, where work in power machinery operating, millinery, pattern drafting, and allied subjects is given. The work is not only for training operators but for teaching housewives to become acquainted with the phases of home-making listed on page two.* The enrollment for 1932-33 was as follows: trade and industrial students, eighty; home economics students, twelve.

Department of Vocational
Education--Trade and Industrial Short
Courses

The assistance of adult workers is the main objective and aim of the Trade and Industrial Short Courses. They are maintained for the benefit of adults who wish to become more proficient in their present work or wish to train for work in related fields. This class has also felt the results of the depression and its enrollment has decreased, in comparison with enrollments of other years, because people have been unable to pay tuition, carfare, etc. The enrollment in 1933, according to Mr. Brigham's report to Superintendent Rice, was 119. Four trade classes were conducted and fourteen short courses offered.

*Brigham, L. E. Report to Superintendent Rice, p. 2.

Department of Vocational
Education--Home Makers' Short Course

A home makers' short course was patronized by 1,163 women in 1933, seventeen training centers being utilized. Work was given in child nutrition, dress-making, interior decorating, and art craft. The work is, of course, designed to be an aid to home makers, and assists them materially in solving their several problems. As work is carried on in the home economics departments of the schools, these courses are available in each community. This gives the advantage of nearness, which is essential in this type of work. Local Parent-Teacher Associations and allied groups have assisted in this important phase of community vocational education

Department of Vocational
Education--Opportunity Classes

The newest member of the short course division is the Opportunity Class Work section, which is designed to meet the occupational training needs of the unemployed. These classes are entirely free. The following tabulation shows where they are conducted and the number attending.

TABLE IV

<u>SHORT COURSE STATISTICS 1933--TRADE AND INDUSTRIAL</u>			21
Sheet Metal, Acetylene Welding	Stephens School		34
Boiler Makers Acetylene Welding	Stephens School		19
Work Application	Administration Building		117
Blueprint Reading	Stephens School		15
Blueprint Reading	Peninsula School		16
Fountain and Lunch Service	Westend Dairy		75
Practical Mechanics	Stephens School		22
Architectural Problems	Stephens School		13
Heating and Ventilating Problems	Stephens School		18
Total			329
<u>SHORT COURSE STATISTICS 1933--HOME MAKERS</u>			
Household Service	Public Service Bldg.		53
Clothing Alteration and repair	Tente School		33
Clothing Alteration and Repair	St. Johns National Bank		24
Clothing Alteration and Repair	Joseph Lane School		36
Clothing Alteration and Repair	Capital Hill and Multnomah Schools		46
Total			192
Total Trade, Industrial, and Home Makers			521

Summary

The work as explained here is all a form of Smith Hughes trade extension and has been made possible through that beneficial legislation. This activity is under the

supervision of both the Federal and State Boards for Vocational Education. The work is just beginning, but from the numbers shown in the summary below, it appears certain that a great future is in store for this vocationalizing agency in the public schools of Portland, Oregon.

TABLE V

DEPARTMENT OF VOCATIONAL EDUCATION TOTALS 1933 ²¹

Division	No. of Courses	No. of Occupations	Enrol- ments
Placement Bureau	--	--	848
Apprentice School	7	7	168
Women's Voc. School	3	3	92
T. and I. Short Courses	14	4	119
Home Makers Short Course	44	4	1,183
Opportunity Classes	<u>14</u>	<u>10</u>	<u>821</u>
Total	82	28	2,931

²¹ Brigham, L. E. Annual Report to Superintendent Rice, Op. cit. p. 5.

CHAPTER III

PRIVATE VOCATIONAL SCHOOLS AND AGENCIES

Technical training in private vocational schools is better organized than in the public school system, at least in regard to vocational aims, for it is only by placing trained workers in jobs as quickly and as inexpensively as possible that the private vocational school can flourish.

Oregon Institute of Technology

With a student body numbering from 800 to 1000, the Oregon Institute of Technology offers an interesting study. The sundry schools of activity are as follows: automotive and aviation, radio and telegraph, engineering trade, college of engineering, business, and preparatory. The last two schools are co-educational.

The student body is composed of men and women of all ages, of all degrees of education; being a mixture of clerks, stenographers, bookkeepers, bank tellers, sign writers, foremen, typographers, managers, adjusters, leaders, public accountants, engineers, contractors, correspondents, salesmen, buyers, purchasing agents, mechanics, and so on. These are all bent upon bettering their social and economic positions through vocational training.

The Oregon Institute of Technology is the name used for corporate purposes by the various Y.M.C.A. schools of the city of Portland. The first educational work, consisting of evening classes, began in 1891. The real work, on a tuition basis, was started in 1897. In the succeeding years, many courses and departments were added. In 1908 the Day College Preparatory School was organized. The college of Engineering followed in 1910, and a school of accounting in 1912. This process continued until all of the six basic schools enumerated above were established.

Placement is handled by contacts through the faculty, by letters sent to some 300 employers, and through the graduates of the school. The special feature of this school is its radio department, which trains technicians for that broad field for which the public education system has neither school nor course. The employment service of the Y.M.C.A. is paid for in the tuition cost of the school courses.

The facilities of the Y.M.C.A., of which this school is an integral part, permit some social activity.

Government work is the ultimate goal for many of the students of the Oregon Institute of Technology, as indicated by the following citation from the school literature:

In but eight months training the complete radio operating course will have prepared the student for three different Government licenses: first, an amateur license, non commercial; second, the radiotelephone license, first class; and third, the radiotelegraph license, second class. The high grades obtained by Oregon Tech students is positive proof of the thoroughness of the training for all these examinations.¹

The cost of tuition in the Oregon Institute of Technology ranges from \$20 for a seventeen weeks' course given one night a week to \$300 for a fifty weeks course in the mechanical trades school.

Adecox School

Another large school that has a pronounced specialty is the Adecox School, famed for its Diesel Engineering course, another field which the public schools do not enter.

This school has been established for twenty-five years and counts upward of 10,000 graduates. At present about 75 per cent of the students come from outside of the city. At the beginning of a course of instruction, all students receive twenty days of theory work, which may be accomplished at home by the home-study course plan. A diploma is granted in Diesel Engineering when the student can pass an examination with a grade of seventy-five or higher.

1. Advertising Folder, Oregon Institute of Technology. Portland Oregon, 1933.

Men connected with such organizations as the Detroit Packard Factory are brought from outside the city to give lectures to the students. As soon as Diesel engines invade a new field, such as motor busses, etc., the representative of the company making the change is obtained, if possible, to lecture on the new motor set-up. Besides this, the students are taken on trips of observation to the Diesel plants at McMinnville and Forest Grove, and occasionally they are able to inspect marine installations such as that in the Diesel-operated Hawaiian tug, Mamo.

Besides the Diesel Engineering division courses, courses are given in an Automobile division. This work comprises auto electrics, general shop and auto repair, and a course in body and fender repair. During 1933-34, four hundred and eighty-five students were enrolled and graduated. Cost of the courses ranged from \$80 for a two and one-half months auto course to \$335 for a complete Diesel Engineering course of six months or longer. Students may stay as long as they wish, or after placement can return for additional training without expense. Placement is accomplished by advertisements printed in Diesel Power, a magazine of nation-wide distribution. Here again the graduates are helpful in placing other graduates as assistants.

Behnke-Walker Business College

The next line of vocational training found in the city is that of business, as trained for by the business colleges.

Established in 1902 in a small way, Behnke-Walker now has four floors in its own building, not far from the business center of Portland. Courses are given as follows: general business, secretarial, business and accounting, stenography, and civil service. A night school course is offered as well as a summer course for teachers of commercial subjects. The enrollment was 814 from August 1933 to June 1934.

The staff consists of fourteen regular teachers. Part-time instructors are called upon as the enrollment demands. A certificate is given for the completion of any work, and a diploma marks the end of any full course. Placement is attempted through the advertising blotter distributed to business firms, through calendars of the same nature, and by a "contact man", who interviews employers. The cost of instruction varies from twenty dollars for the first month to 185 dollars for twelve months day-training. Placement is not guaranteed, but most graduates are eventually placed. The employment service is free to both graduates and employers.

Northwestern School of Commerce

The second large institution of this kind in the city is the Northwestern School of Commerce, unique from the point of personal service. Here, training is given in the fields of business, bookkeeping, accounting, secretarial training, and stenography.

An idea of the personality training in this school is illustrated by the following:

In the selection of its premises, of the equipment of each department and of those factors upon which its service depends, it aims constantly to serve the need of modern business training. A school, however is never made up of material facilities; rather it is a "force" affecting the spirit and personality of the student. Equipment without that "force" is never a school. That "force" where existing always produces the equipment essential to a school. Schools in reality can be neither defined nor measured.*

One of the requirements of the school is that each applicant be businesslike and agree to do an honest day's work. The cost of tuition runs from \$20 per month to \$192 for a twelve months term. A night school is also an integral part of this business college.

Pacific Business College

The newest business school in Portland is the Pacific Business College, which offers work in the usual courses. There are now forty-five pupils in attendance. Advertising blotters, etc., are used for placement. A

*Northwestern School of Commerce Catalogue. Fifth Edition. Portland, Oregon.

strong emphasis is placed upon personal instruction. Portland thus seems well supplied with schools of this type.

Nurses Training

The field of nurses' training, once the province of private institutions, is being interwoven with higher education in Oregon. The highly vocational program of nurses' training as presented by the Good Samaritan Hospital, the St. Vincent's Hospital, Multnomah County Hospital, Emanuel Hospital, and the Portland Sanitarium has resulted.

The Good Samaritan Hospital and School of Nursing were the first to be established in Portland, and are under the Episcopal Church of Oregon. There is an active medical staff, and the hospital is fully approved by the American College of Surgeons and the American Hospital Association.

In September, 1930, this nursing school affiliated with the University of Oregon. Since then, the Department of Nursing has become a department within the University of Oregon Medical School. Two courses are offered which are directed by the hospital school faculty and the department of nursing at the medical school. The first two years of the five year course are conducted on the

campus of the University of Oregon at Eugene or at the Oregon State Agricultural College at Corvallis; the third and fourth years are devoted to training in the hospital; the fifth year is one of specialization, which may take the form of public health nursing, some phase of teaching, or even administration. When the above work is completed, the student receives a Bachelor of Science degree in nursing.

The Junior Certificate Course, or three-year course, requires a pre-nursing term at the University of Oregon Medical School prior to entering the School of Nursing. Fifteen credit hours must be earned at the University in chemistry, anatomy and physiology, drugs and solutions, and personal hygiene. This three-year and three months course is evaluated by the Oregon State System of Higher Education as equivalent to three years college work, and entitles the student nurse to junior standing in the state college or the state university.

A committee on admission selects the candidates from those applying, strict emphasis being placed upon health, morals, and personal appearance. At any time during the course the Director of Nursing may dismiss a student for lack of theoretical knowledge or for disregard of professional ethics. Neither divorced nor married women are admitted, and marriage during the course of training terminates connection with the school.

The pre-nursing term at the University of Oregon Medical School costs in tuition alone seventy dollars, and the first term at the hospital, eighty dollars. After the first term, no tuition is charged at the hospital, as the nursing done by the student is considered equal to the training cost. In cases of illness students receive expert medical attention.

A cooperative student-faculty government, which greatly stimulates the social, recreational, and educational programs, is maintained. The nurses participate in glee club and orchestra work, basketball, ping-pong, and other activities. School dances and Sunday afternoon teas furnish additional recreation. House mothers are provided for supervision of the nurses' living quarters. At the present time, eighty-nine girls are taking work in one or the other of the two courses outlined above.

Similar work is being done in the St. Vincent's Hospital School of Nursing, in which 120 are enrolled. A four-year course in nursing is offered, for the first time in the history of the state, with two years' college residence and two years' nursing as requirements. Two summer school terms of ten and eleven weeks, respectively, are also required in this course, which gives the Bachelor of Science or the Bachelor of Arts degree. The college work may be obtained at the University of Oregon, Oregon State Agricultural College, Mt. Angel

College, or Marylhurst College. Requirements for the old three-year and three months course are the same as listed under the Good Samaritan Hospital report, above. Tuition fees also are comparable. The average cost to the student nurse for the four-year course is estimated at \$1135. This includes board, clothing, tuition, etc.

Multnomah County Hospital has medical school work, but the other hospitals listed in the beginning of this report on nurses' training are not at the present time affiliated with the University of Oregon Medical School. Their theory work is given in the school of nursing. No degree work is attempted, but the institutions have credited ratings.

Graduate nurses have many fields of endeavor besides general duty hospital work. They may go into public health nursing, Red Cross nursing, or specialized fields of nursing--surgical cases, communicable diseases, administering of anaesthetics, etc.

Other Vocational Agencies

Passing mention will suffice for Hill Military Academy, Reed College, Columbia University, schools of aviation, and schools of optometry, which must be numbered among Portland's vocational institutions, for their work is so similar to that of the University of Oregon Medical School and the Portland Extension Center of the same in-

stitution that it is well understood, or else it is so insignificant that it deserves no explanation.

Industrial Schools

The great industrial establishments of the city do not apparently deem it necessary to have vestibule schools,² or else their replacements are so few that the necessary instructions can be given without their conducting private industrial schools. The only major attempt at such a school of instruction is that of the Pacific Telephone and Telegraph Company. Its operators, now 457 in number, all have been required to take a two to five weeks course in the groundwork of telephone operating. This work consists of voice training, methods of handling and placing local calls, long distance work, switchboard maintenance, and customer courtesy. Applicants must have finished the elementary school, but high school graduates are preferred. After the preliminary courses of training, the young operators are trained specifically at the central office for the types of work which they are to follow.

² Prosser and Allen. Vocational Education in a Democracy. Century Co. New York, 1925, p. 385.

CHAPTER IV
TRENDS IN VOCATIONAL EDUCATION

General

History and experience have taught us that coming events cast their shadows before them. It is then our duty to study the statistics of the past and present in order to deal effectively with the projected problems of the future. Mays brings the problem before us with force:

To-day every thinking person is keenly aware of new movements, new conditioning factors and impending changes which promise to modify every vital aspect of contemporary life; and all are earnestly trying to penetrate the mists which envelop the scene ahead to know how best to prepare for the new day which seems both inevitable and imminent.

With the limitations of vision which handicap us, the only means available for perceiving probable future conditions is to relate present day life to that of comparable periods of the past.³

The following tables are statistics of the past which, when properly modified, should prove reliable in dealing with present and future vocational problems of the city of Portland.

Table VI deals with the number of pupils in vocational education per 10,000 of population. It will be compared with Table VII in an attempt to prove a national and international trend in vocational education.

3. N. E. A. Report, 1933. Washington, p. 799.

Material from Tables VI and VII is also used in Table XI, Comparative International Vocational Trends, which is composed mostly of central tendencies.*

While it is realized that there is danger of fallability in comparing results of other nations with those of the United States, because of various differences of the national industrial problems, it is believed that these tabular results summarized in Table VIII are sufficiently alike to prove the following characteristic trends:

International Vocational Trends.

1. The trend is toward larger enrollments in both general and vocational education.
2. The vocational education enrollment has increased roughly from 17.0 per cent to 22.5 per cent of the general education enrollment, thus indicating a general increase of enrollment in the future.

Certain national trends shown in Table VIII are, of course, more nearly related to the local problem of Portland, Oregon, than are the international trends. These are combined with the vocational trends as defined by authorities on vocational problems, and will be explained in the following pages.

National Vocational Trends.

1. In Table VIII it is demonstrated that vocational enrollment is progressing at a more rapid rate than in general education. This information is obtained from a

*(Central tendencies found by averages.)

TABLE VI
 THE NUMBER OF PUPILS IN GENERAL
 SECONDARY SCHOOLS PER 10,000 POPULATION IN
 15 SELECTED COUNTRIES

Country	1914	1920	1925	1930
Austria	56*	60	67	78
Belgium	28	35	37	33
Czechoslovakia	--	74	74	64
Denmark	100	113	137	140
France	35	39	43	45
Germany	97	125	134**	140***
Holland	32	37	43	54
Italy	21	24	25	36
Norway	100	102	109	90
Poland	--	74	75	66
Russia	38	43	52	25
Sweden	87	120	121	119
Switzerland	68	66	77	82
Great Britain	123	146	172	205
United States	141	298	349	424

* Refers to 1913
 ** Refers to 1926
 *** Calculated result

TABLE VII
THE NUMBER OF PUPILS IN
VOCATIONAL EDUCATION PER 10,000 POPULATION IN
15 SELECTED COUNTRIES

Country	1914	1920	1925	1930
Austria	110*	110	175	160
Belgium	91	124	155	188
Czechoslovakia	--	169	182	178
Denmark	95	110	125	140
France	5	9	33	57
Germany	310	372	421**	480***
Holland	82	107	146	184
Italy	44	50	48	51
Norway	41	49	51	71
Poland	--	20	26	65
Russia	16	20	33	95
Sweden	61	101	230	314
Switzerland	311	337	430	460
Great Britain	129	146	158	187
United States	20	66	87	103

* Refers to 1918
** Refers to 1926
*** Calculated result.

2

TABLE VIII
COMPARATIVE INTERNATIONAL VOCATIONAL TRENDS
AS INDICATED BY ENROLLMENT

	1914	1920	1925	1930 ³
Voc. Enrol. Totals*	1295	1724	2213	2630
Voc. Enrol. Average	108	123	158	188
U.S. Voc. Enrol	20	66	87	103
Gen. Enrol. Totals*	785	1058	1166	1177
Gen. Enrol. Average	65	76	83	84
U.S. Gen. Enrol.	141	298	349	424

* U.S. not included.

3. From Tables VI and VII with further calculations.

study of the vocational enrollment average and the general enrollment average as calculated from information developed in Tables VI and VII.

2. Vocational education is going forward at a rapid rate, which indicates the trend in this respect. Table IX, also, supplies this information.

3. There will be no repeal of the vocational education act. This insures Portland's vocational education department work for the future.

4. There will be a special national grant for the education of home makers. Home-making is not often thought of as a vocational agency, but it is so defined

TABLE IX
 ENROLLMENT IN VOCATIONAL SUBJECTS IN SCHOOLS
 AND CLASSES FEDERALLY AIDED 1918-1930 FOR U.S.

Year	Enrollment	Year	Enrollment *
1918	164,186	1926	753,418
1920	265,258	1928	858,456
1922	475,828	1930	981,862
1924	652,594		

*Fifteenth Annual Report, Federal Board
 for Vocational Education, 1931.

under the Smith Hughes Law.

5. Evening School service for women will be developed. One of the great errors of our present system is this failure to provide satisfactory adult vocational classes for women.

6. Part-time and evening extension training in commercial subjects will be given. Up to July, 1934, no provision had been made by the Federal Board for Vocational Education to rectify the Smith-Hughes law to allow commerce to have the same status as the other branches of education defined by that law.

7. Vocational guidance of some sort is inevitable. This will be discussed further under needs.

8. The period of specialization for the vocations selected by the young people of the United States is

moving definitely toward an older age, in fact it is now thought to be a period related to beginning adulthood.

While knowledge of the above trends is useful to one attempting to make recommendations for the future, they are not as pertinent to our problem as are the local trends. An attempt has been made here to point out certain basic trends which the writer of this report considers especially valuable in making recommendations for procedure in the future. An effort will be made to prove each statement.

Local Trends.*

1. More vocational schools will be established. This information is obtained from Table X, which gives vocational enrollments in Portland by schools and courses. Under Benson Total Enrollment, it is noted that the last column shows 2347 boys enrolled for that year. The figure for 1933-34 is practically the same. This building is overcrowded, as it is designed to accommodate only about 1800 students, and the use of twenty-four portables attempts to meet the housing need of this institution. One of the pressing needs in the vocational set-up in Portland is new buildings at this plant, or else an entire new school to take care of the heavy enrollment.

*For additional trends see page 13, this report.

TABLE X
SECONDARY VOCATIONAL ENROLLMENTS
IN PORTLAND BY SCHOOLS AND COURSES

	'22-'23	'27-'28	'30-'31*
Benson Total Enrol.	1782	2160	2347
Commerce Total Enrol.	982	1726	2178
Girls' Poly. Tot. Enrol.	714	619	689
Voc. Course Enrol. in all Other High Schools	<u>4079</u>	<u>8148</u>	<u>10076</u>
Totals	7557	12553	15290

*This is the last published report
that gives these statistics. 58th
Annual Report of Public Schools, Port-
land, Oregon.

2. The increase of enrollment in vocational courses and schools, with the exception of the Girls' Polytechnic School, is also evidenced by the material in Table X.

3. Guidance and counseling needs will be cared for. At present the vocational schools have no more counselors than have the general high schools of the city. The Dean usually takes care of this work and in this city he or she becomes merely another disciplinary officer to take care of routine office work.

4. More industrial establishments will be founded, especially now that the Bonneville Dam is to be completed. According to government engineers, more than

twenty million horse power is available in the Columbia River, even at low water mark; this is two-fifths of the potential horse power of the United States. Even the most pessimistic observer would admit this as a proof that the completion of the dam will lead to more industrial establishments in Portland. The normal trend of this increase is shown in the Rand McNally Atlas, where eight hundred and seventy-nine industrial establishments are reported in the 1929 edition and one thousand eighty-four in the 1934 edition.

5. Opportunity schools will be created to take care of the surplus demands of the opportunity classes. Such a school was recommended by the Research Department in 1932; however, owing to financial stress, the project has not been realized.

6. An assistant superintendent as Vocational Director will be found necessary. This is one of the findings of the Chicago Survey;⁴ and with the amount of vocational work attempted in Portland it is an important prediction.

4. Report of the Survey of the Schools of Chicago, Illinois. Teachers College, 1932, pp. 203-226.

CHAPTER V
THE VOCATIONAL EDUCATION NEEDS
OF THE CITY OF PORTLAND, WITH RECOMMENDATIONS

The vocational preparation needs of the city of Portland are many when contrasted with ideal vocational set-ups, but the realization of the modifying limits placed by a program of economy must ever be apparent. If the problem of to-day and of tomorrow is to be the problem of dealing with ever increasing numbers in our schools, and statistics point definitely in that direction, as Tables VIII, IX, and X demonstrate, then it becomes mandatory that those in control of education and industry provide the necessary variety of institutions that such a tendency demands.

In order to determine, in a small measure at least, the needs of industrial and business establishments of Portland, questionnaires⁵ were sent to fifty of the leading firms of the city. Forty per cent of these questionnaires were returned, but the results will not be tabulated, as the purpose was merely to determine the pressing needs of local firms in the way of vocational education.

Findings of Questionnaires

1. The twenty firms reported that they employ two

5. Appendices I, II, and III.

thousand one hundred and eighteen workers, and five firms stated that they employ apprentices.

2. One company reported a pre-employment course; three, industrial class work on the job; and five, varying sorts of job training.

3. No vestibule schools were reported.

4. Replacements were made at random by those not having apprentices.

5. Public schools meet the needs of these firms better than do private institutions.

6. While many companies feel the need of vocational schools, they do not believe in changing Benson Polytechnic school into a trade-apprentice school.

7. These business places do not believe it possible to develop a school that will meet their requirements.

It is realized that this is a rather small sample of industrial establishments, but the writer found from personal contacts with the same type of businesses that the above findings represent the views of the general employers of the city of Portland.

By interpreting the above findings, personal interviews, and other research, an attempt was made to analyse the needs of the city in the field of vocational education.

Recommendations

1. All vocational education in the public school

system should be centralized in a Department of Vocational Education.

2. An opportunity school should be established as a separate unit.

3. Classes in Occupations should be given in all secondary schools. If junior high schools are placed throughout the city the Occupations classes can be handled there.

4. Guidance counsellors and employment committees should be employed in all vocational schools.

5. Vocational night schools, with special emphasis on the needs of adult women, should be established when finances permit.

6. Provision should be made for the teaching of Diesel and Radio Engineering in the public school system.

7. More social activities should be introduced in the private schools.

8. An attempt should be made to bring industry and vocational education closer together through the medium of school-employer contact men.

9. Girls' Polytechnic should be used as a girls' junior high school in day time and for adult vocational education at night.

10. Benson Polytechnic School should run from 8 A.M. to 2:30 P.M. in its present form; from 2:30 P.M. to 4:30 P.M. in connection with a boys' junior high school;

and from 7 P.M. to 9 P.M. for adult vocational education.

Development of Recommendations

1. The centralization of all vocational education in a Department of Vocational Education would demand the services of one of the present assistant superintendents or it would necessitate adding a trained educator in vocational guidance to the present supervisory staff.

Competent leadership is essential in the development of efficient industrial and technical education. The work requires the services of a person who, because of his training and experience, is able to deal with the general problems of school administration, to make special industrial and technical education programs in the high schools, continuation, and evening schools, and be able to secure the cooperation of community organizations in the development of the work. The character and the efficiency of the program in any city will depend to a large extent upon the leadership provided.⁶

2. The Research Department of the Portland City Schools states that there is a greater demand for opportunity classes than the makeshift opportunity program of the present can care for. It is important to establish a school that can serve two specific classes of "opportunists": (a) those mentally deficient; and (b) those who have been deprived, through circumstances, of equal opportunity with their fellows.

Seattle has a school that takes care of the class a by giving work in basketry, simple woodwork, caning, ratan

6. Report of the Survey of the Schools of Chicago, Illinois. Op. cit., pp. 207-208.

work and toy making. The Denver Opportunity School takes care of both classes, and is perhaps the best example of the true opportunity school.

The reputation of this school is widespread, and its impress on educational theory and practice has been deep. * * * It is a difficult school to describe, because there is so little static about it. It is a school which runs from 8 o'clock in the morning to 9:15 at night, has no entrance requirements, no age limits, no required number of hours of attendance, no specified time for completion of a course. Even the curriculum is variable. * * * Essentially it is a re-training school.⁷

The school has an enrollment of 9,500, with an average daily attendance of 3,750.

3. The following table from the White House Report shows the tendency of cities to incorporate occupations classes in their school curricula. These are questionnaire data.

TABLE XI
COURSES IN OCCUPATIONS⁸

	Large Cities	Medium Cities	Total
Yes	29	30	59
No	8	5	13
Total	37	35	72

Little work has been done along this line in Portland city schools. The national trend is to offer this work in junior high schools. Because of the tendency to

7. Peffer, Educational Experiments in Industry. Macmillan, New York, 1932, p. 164.

8. White House Report, p. 140.

vocationalize nearer to adulthood, the secondary school is perhaps the proper place for such courses.

Vocational guidance of some sort is inevitable. No one can avoid the need for making occupational decisions. Adequate guidance should be provided under supervision to offset the unwise and false guidance of untrustworthy advertisements, suggestions, selfishness, ignorance, and other prejudiced or unreliable sources.⁹

This department should be under the supervision of the Director of Vocational Education referred to under (1) above. The cost of this guidance and counsellor service is small compared with the good that would result.

The annual cost of the guidance and employment service in the Milwaukee Vocational School is approximately one dollar per pupil enrolled. If only the employment service is considered, the cost is approximately six dollars per individual placed. However, the scope of the work of the department for the pupils is much broader than placement and must be evaluated in terms of the numerous services rendered, ranging from incidental guidance to individual diagnosis, remedial treatment, and placement.¹⁰

5. Educators unanimously recognize the pressing need for adult education. As this is a definite trend which the Portland school system has met when finances were available, and because certain phases of the problem will be dealt with under sections 9 and 10, below, the problem will be dismissed for the moment. Detailed information on this point may be found in the Report of

9. The White House Report, p. 5.

10. "Programs of Guidance". Bul. 1932, No. 17, Monograph No. 14, Department of Interior, Bureau of Education. Washington, D. C., p. 103.

the Survey of the Schools of Chicago, Illinois, the White House Report, Objectives and Problems of Vocational Education by Edwin A. Lee, and The Roots of Vocational Education by William P. Sears, in the sections dealing with adult education.

6. It would seem to the writer that the field of Diesel and Radio Engineering should be covered in our existing Portland city schools, not because the private institutions are not giving training in these subjects, but because there are individuals who cannot afford even the small tuition fees that the private schools demand. If education is for the good of society, then the democratic idea of equal opportunity for all should prevail. This work would be largely for adults and thus would be related to 5 above. Let us see what Judd says about the rights involved in this discussion:

Public interest in efficiency seems to dictate some measure of public control of the agencies which provide education for adults. * * * Adult education cannot be left to those who promote it for private gain. Adult education is demanded for the good of all; it needs large resources in order to secure suitable material and in order to make this material available to the public in attractive form. Adult education is rapidly becoming a public obligation.¹¹

7. Investigation of the various private schools listed under Chapter III of this report shows that the heads of these institutions see the need of more social and extra-

11. Judd. Problems of Education in the United States. McGraw Hill. New York, 1933. pp. 176-177.

curricular activities. At present very little time is devoted to these activities in comparison with that spent in work. The supervisors try to remedy this shortcoming and attempt, by the aid of their own personalities, to instil in the students that broad training the public school student obtains from social contacts. The problem of extra-curricular activities remains unsolved, but it is one worthy of solution.

8. Contacts which may lead to employment are essentially the problem of the committee on guidance, mentioned under 5 above. The Milwaukee system employs men called coordinators, who "keep in touch with the industries of the city by making surveys of the opportunities for placement and by collecting facts regarding occupational changes and developments. * * * The coordinator also looks after pupil placement in his respective occupational field and makes follow-up studies of pupils previously placed. Contacts with the instructors in the coordinator's field are direct, and every effort is made to articulate the work of the school with the employment of the pupils."¹² The private schools of Portland have capitalized the fruits of the contact system, and it should prove equally beneficial in the

12. Programs of Guidance. Bulletin 1932. Number 17, Monograph Number 14, Department of Interior, Bureau of Education. Washington, D. C., p. 97.

public vocational field.

9. As the Girls' Polytechnic School does not go into the technical field, nor attempt more than two years of secondary courses, it could be utilized very nicely as a girls' junior high school. The location of the building and its trade equipment facilities would also be assets in junior high school exploratory work. Sufficient space is available for the erection of more buildings to house the larger academic department that would of necessity be created by the change. When funds are available, the regular night school work should again be attempted, as scarcity of such schools is the weak point in our national scheme of vocational education. More classes for women in the work peculiar to their trades is necessary if this field is to keep abreast of all other vocational agencies.

10. The present set-up at Benson Polytechnic School requires the time from 8:30 in the morning until 3:00 in the afternoon. If the time of opening were set ahead one-half hour the work would terminate at 2:30 P.M. From 2:30 until 4:30 would be ample time for boys' vocational try-out, and exploratory courses. With the present grades-to-high school set-up, this would necessitate the transporting of the boys from the grade schools of the city, which perhaps would be a rather inconvenient plan, replete with many administrative difficulties.

The writer's plan would be to erect the boys' junior high school adjacent to Benson Polytechnic School and provide for separate supervision and staff. It should be noted at this time that the present faculty of Benson Polytechnic School would not have time, in either shop or academic departments, to handle the extra teaching work, as they are now overloaded. Also, the solution of junior high school problems demands specially trained teachers. An alternate plan might be to have the junior high school students work in the Benson shops before the regular day's program of that school should start. This plan is not so feasible as it would bring the youngest boys out before eight o'clock in the morning and would necessitate the older boys being in school until 4:30. This would not be a good proposal because of the evening athletic work of the polytechnic school, and because many Benson boys are self-supporting and need the afternoon period for their work.

The night school recommendation is here stated as in 10 above. Many interesting courses are possible, the only disturbing feature is at present the problem of depleted sources of revenue.

CONCLUSION

With the above recommendations the survey ends, and it is hoped that this effort will bring about certain educational changes. Through education we must progress--ever remembering the words of Plato, who stated some 2300 years ago for the benefit of a multitudinous posterity, "to stand still is to retreat."

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APPENDIX

APPENDIX I
LETTER ACCOMPANYING QUESTIONNAIRE

Sir:

In making a survey of Vocational Education in the City of Portland, I am in need of some statistics on various related vocational problems. I would appreciate very much your courtesy in filling out the enclosed questionnaire.

Also if you have any printed material available that in your opinion would be of use in this survey, I would be glad to pay the postage on it. I sincerely feel that the time you spend on this report will be well repaid by advanced educational opportunities that will be pointed out and developed from your answers and remarks. All answers are of course confidential.

Yours very truly,

Robert W. Hamill

APPENDIX II

VOCATIONAL QUESTIONNAIRE

1. Type of business: _____ 2. Number men employed _____
 3. Number apprentices employed () _____
 4. Indenture required? Yes _____
 5. Do you have a pre-employment course? No _____

Remarks:

6. Do you conduct a vestibule school?

Remarks:

7. Do you give any industrial classwork on job?

Remarks:

8. What kind of job training do you give?

Remarks:

9. If apprentices are not used, how do you get replacements?

10. Check any of the following schools from which you have obtained graduates and number from each:

- | | |
|------------------------------------|-----------------------|
| (a) Benson Polytechnic | (f) Automotive School |
| (b) Girls' Polytechnic | (g) Business Colleges |
| (c) High School of Commerce | (h) Law schools |
| (d) Other high schools | (i) Apprentice School |
| (e) Oregon Institute of Technology | (Ed. Dept.) |

Remarks:

11. In your opinion which type school meets your needs best: Public () Private ()

12. Which type of high school is more necessary in Portland: Vocational () Technical () Academic ()

13. What type of school not now existing in Portland would you recommend?

14. Should Benson Polytechnic School be used more as a trade-apprentice school and less as a Technical High School?

15. Do you believe it possible to work out through research and investigation a school that would meet your needs?

APPENDIX III

FIRMS TO WHOM QUESTIONNAIRES WERE MAILED

1. Title and Trust Co.
2. Accounting Car Service
3. Alexander Berry & Associates
4. Marchant Calculating Machine Co.
5. Burroughs Adding Machine Co.
6. Addressograph Sales Agency
7. Pacific Coast Adjustment Bureau
8. Pacific Telephone & Telegraph Co.
9. Irwin Hodson Co.
10. West Coast Sign Co.
11. Mitchell Lewis & Stover
12. Clyde Equipment Co.
13. United Air Lines
14. Monarch Forge & Machine Works
15. Davidson Bakery Co.
16. Greyhound Lines
17. Libby McNeil and Libby
18. Sealy Dresser Co.
19. General Electric Supply Co.
20. Portland Ice and Cold Storage Co.
21. Pacific Bridge Co.
22. Western Cooperage Co.
23. Portland Damascus Milk Co.
24. Portland Messenger Service
25. Meier & Frank
26. Willamette Iron & Steele Co.
27. Albers Milling Co.
28. Tommy Luke Floral Shop
29. W. D. Fuller Co.
30. Pacific Fruit Co.
31. Holland Furnace Co.
32. General Livery Co.
33. Honeyman Hardware Co.
34. Metropolitan Life Insurance Co.
35. Portland Laundry
36. Portland Library Association.
37. Portland Linotyping Co.
38. Baldwin Locomotive Works
39. Jantzen Knitting Mills
40. Swift & Co.
41. The Oregon Journal
42. Shell Oil Co.
43. Zillerback Paper Co.
44. Marshal Wells Co.
45. Sears Roebuck Co.

46. Frank McGuire Co.
47. Goodyear Rubber Co.
48. American Sheet Metal, Inc.
49. Oregon Neon Sign Co.
50. McCormick Steamship Co.

The questionnaire being confidential, no information regarding the names of the firms who returned answers may be given.