SELECTION, CURRICULUM, AND JOB PLACEMENT OF STUDENTS IN THE TOPEKA, KANSAS, AREA VOCATIONAL-TECHNICAL SCHOOL

by

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INTRODUCTION

In 1961 President John F. Kennedy appointed a panel to study the programs of vocational education in the nation. This panel, in its report to the President, stated that there will be 87,000,000 people assuming full-time employment, of which 3,000,000 will be wives, mothers and widows who will have returned to work between 1960 and 1970; 26,000,000 will be young workers entering the labor market; while 58,000,000 now working will still be employed. The 26,000,000 young workers must possess the skills and education needed to match the demands of a changing economy. Women returning and adults continuing to work will require additional training to keep pace with new jobs, new skills and new challenges.[1]

Congress passed the Vocational Education Act of 1963, also known as the Perkins Act, as a result of the study made by the President's panel.

The Kansas State Legislature passed Senate Bill 438, in 1963, to assist the federal government in the development of vocational education in the state of Kansas.

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[1]Benjamin C. Willis, "Vocational Education in the Years Ahead," American Vocational Journal, February, 1963, p. 34.

Statement of the Problem

It was the purpose of this report to (1) examine the methods used in selecting students for the Topeka, Kansas, Area Vocational-Technical School; (2) to study the curriculum; (3) to investigate the future status of occupations being taught; and (4) to determine job placement after the students graduated.

Importance of the Study

There has been a great deal of discussion for a number of years concerning wasted manpower in the United States, and what can be done to use this potential labor. How can this potential labor be used to benefit individuals, and contribute to the welfare of our society? Many persons think one answer to this question is the area vocational school. Vocational students can contribute talent, production, and tax dollars to our society, which means they would be taxpayers instead of public liabilities.

From the information on the Topeka, Kansas, Area Vocational-Technical School, the public may become aware of the purpose of the school, and the benefits the community will receive as a result of this vocational training.

Limits of Study

This study was concerned with high school students from the participating school districts, and with students referred to the Topeka, Kansas, Area Vocational-Technical School by the Kansas State Employment Office in Topeka, Kansas. Selection, curriculum, and job placement of the students were the three major areas studied, with emphasis on the curriculum. The period of time the study covered was the first semester of 1964, the opening semester for the Topeka, Kansas, Area Vocational-Technical School.

Definitions of Terms Used

> Vocational education program. The term 'area vocational program' means a program consisting of one or more less-than-college-grade courses conducted under public supervision and control and on an organized, systematic class basis, which is designed to fit individuals for useful employment in recognized occupations, and which is made available to residents of the State or an area thereof designated and approved by the State Board for Vocational Education who either have completed junior high school or, regardless of their school credits, are at least sixteen years of age and can reasonably be expected to profit by the instruction offered.[1]

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[1]Research and Publications Committee, American Vocational Association, Inc., "Area Vocational Education Programs," January, 1959, p. 9.

Area Vocational-Technical School. In this report the term had reference to those schools which can be established by the act of Senate Bill No. 438,

> . . .whereby the State of Kansas in co-operation with local communities can provide facilities for training and preparation of students for productive employment as technicians and skilled workers, and to more nearly equalize educational opportunity.[1]

High school student. In this report the term included secondary school juniors and seniors attending the Topeka, Kansas, Area Vocational-Technical School.

Posthigh school student. This term meant all non-high school students who were attending the Topeka, Kansas, Area Vocational-Technical School on a full time basis.

Adult evening student. This term included all non-high school students attending the Topeka, Kansas, Area Vocational-Technical School part-time in order to upgrade themselves in their present jobs or learn new skills.

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[1]Kansas State Legislature, Senate Bill No. 438, 1963, p. 1.

Participating school districts. The following schools made up the Topeka, Kansas, Area Vocational-Technical School district:

Holton High School, Holton, Kansas
Seaman Rural High School, Topeka, Kansas
Washburn Rural High School, Topeka, Kansas
Topeka Public High Schools, Topeka, Kansas
    Topeka High School
    Topeka West High School
    Highland Park High School
Hayden High School, Topeka, Kansas

Legal Basis

Vocational education in the public schools is a relatively modern development. Until the 19th century vocational education, except for the professions, was available only through apprenticeship. Vocational education in the schools of the United States of America received its first great stimulation in 1906, when the National Society for the Promotion of Industrial Education was organized with the idea of extending vocational education throughout the United States. It was active in securing passage of the Smith-Hughes Act, February 23, 1917.[1] The federal government had supported vocational education long before the Smith-Hughes Act was passed. A brief review of vocational legislation will demonstrate

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[1]William Frank Rasche, "Vocational Education - United States," Encyclopaedia Britannica, XXIII, 231.

how active the federal government has been in the field of vocational education.

Morrill Act (1862). This act was the original land grant act and was designated as "An act donating public lands to the several states and territories which may provide colleges for the benefit of agriculture and mechanical arts."[1]

Agricultural Extension Act (1914). This act was also called the Smith-Lever Act. It provided a program of cooperative extension work in agriculture and home economics.[2] The act stipulated that

> . . .cooperative agriculture work shall consist of the giving of instruction and practical demonstration in agriculture and home economics to persons not attending or resident in the colleges in the several communities, and imparting to such persons information on such subjects through field demonstrations, publications, and otherwise.[3]

The Agricultural Extension Act provides continuous annual appropriations to match with a federal dollar every

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[1]J. Chester Swanson (ed.), Development of Federal Legislation for Vocational Education (Chicago: American Technical Society, 1962), p. 21.

[2]J. Chester Swanson (ed.), Development of Federal Legislation for Vocational Education (Chicago: American Technical Society, 1962), p. 22.

[3]See Agricultural Extension Act (1914), J. Chester Swanson (ed.), Development of Education (Chicago: American Technical Society, 1962), p. 21.

state dollar spent for extension training.[1]

Smith-Hughes Act (1917). The Smith-Hughes Act was the basic federal law into which the framers wrote their philosophy of vocational education of less than college grade.

> The act provided federal aid for public schools offering approved trade and industrial, agricultural and homemaking courses of less than college grade to pupils fourteen years of age and older. It also made provisions for teacher training, civilian rehabilitation and vocational research.[2]

Sections 5 and 8 of the Smith-Hughes Act contain the legal basis for a state's participation in the benefits of the national vocational acts. The submission of a state plan is provided for in Section 8, in the following language:

> Section 8. That in order to secure the benefits of the appropriation for any purpose specified in this Act, the state board shall prepare plans, showing the kinds of vocational education for which it is proposed, that the appropriation shall be used; the kinds of schools and equipment; courses of study; methods of instruction; qualifications of supervisors or directors; plans for the training of teachers; and, in the case of agriculture subjects, plans for the supervision of agriculture education, as provided in Section 10. Such plans shall be submitted by the state board

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[1]J. Chester Swanson (ed.), Development of Federal Legislation for Vocational Education (Chicago: American Technical Society, 1962), p. 22.

[2]William Frank Rasche, "Vocational Education - United States," Encyclopaedia Britannica, XXIII, 231.

> to the Federal Board for Vocational Education, and if the Federal Board finds the same to be in conformity with the provisions and purposes of this Act, the same shall be approved.[1]

Federal aids are administered by the U. S. Office of Education through state vocational boards designated by the state legislatures to design and carry out vocational programs that have federal approval.[2]

George-Barden Act (1946). Flexibility was the chief characteristic of this Act. Previous vocational education legislation lacked this flexibility. One major difference between this act and the Smith-Hughes Act was that under the George-Barden Act federal funds could be used for purchasing or renting equipment and supplies for vocational instruction which could not be done under the Smith-Hughes Act of 1917. The Smith-Hughes Act of 1917, allowed for salaries of supervisors of agriculture only, while the George-Barden Act allowed federal funds to be used for maintenance of administration and supervision. The George-Barden Act did not allow for repairs, purchase or

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[1]See Smith-Hughes Act (1917), J. Chester Swanson, (ed.), Development of Federal Legislation for Vocational Education, (Chicago: American Technical Society, 1962), p. 69.

[2]William Frank Rasche, "Vocational Education - United States," Encyclopaedia Britannica, XXIII, 231.

construction of any building or equipment.[1]

National Education Defense Act (1958). Title VIII of this Act amended the Vocational Education Act of 1946, by adding to it a title III. This amendment provided for area vocational education programs to meet national defense needs for highly skilled technicians.[2]

Manpower Development and Training Act (1962). The act is a three year program authorizing Secretary of Labor to evaluate the manpower requirements and resources of the nation and, through the Secretary of Health, Education, and Welfare, to provide training programs for the unemployed and for workers whose skills need up-grading to meet shifting employment needs.

The Department of Health, Education, and Welfare, through its Division of Vocational and Technical Education and the state vocational education agencies, is authorized to provide the vocational training programs prescribed for the individuals selected and referred for training by the

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[1]J. Chester Swanson (ed.), Development of Federal Legislation for Vocational Education (Chicago: American Technical Society, 1962), pp. 90-91.

[2]J. Chester Swanson (ed.), Development of Federal Legislation for Vocational Education (Chicago: American Technical Society, 1962), p. 96.

Labor Department. Where the public schools cannot provide the necessary vocational training, the Secretary of Health, Education, and Welfare is authorized to arrange for appropriate training with private educational or training institutions.

The federal government assumes one hundred percent of the cost of training unemployed workers during the first two years of the program; states are to match the funds, dollar for dollar during the third and terminal year. The Labor Department is to pay certain trainees subsistance allowances for periods of training up to fifty-two weeks in duration.

The Act provided that no training programs were to be authorized until the Secretary of Health, Education, and Welfare, had been satisfied that such programs do not reduce a state's expenditures for vocational training in operation under the Smith-Hughes and George-Barden Acts, if such reduction was related to programs started under the Manpower Act.[1]

Vocational Education Act (1963). Section I stated that it is the purpose of this part to authorize federal

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[1]J. Chester Swanson (ed.), Development of Federal Legislation for Vocational Education (Chicago: American Technical Society, 1962), p. 100.

funds to states to assist them in maintaining, expanding, and improving existing programs of vocational education, to develop new programs of vocational education, and to make available part-time employment for youths who need the wages from employment to continue their vocational education on a full-time basis. Section I also stated that persons of all ages in all communities of the state will have ready access to vocational training or re-training which is of high quality, which is realistic in the light of actual or anticipated opportunities for gainful employment, and which is suited to their needs, interests, and abilities to benefit from such training. Section I includes high school students who have completed or discontinued their formal education and are preparing to enter the labor market, those who have already entered the labor market but need to upgrade their skills or learn new ones, and those with special educational handicaps.[1]

Kansas Senate Bill 438 (1963). To assist in training these persons the Kansas Legislature enacted Senate Bill 438, which stated:

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[1]Lloyd J. Phipps, "The Vocational Education Act of 1963," Handbook on Agricultural Education in Public Schools (Danville, Illinois: The Interstate Printers and Publishers, Inc., 1965), p. 753.

> . . .whereby the State of Kansas in cooperation with local communities can provide facilities for training and preparation of students for productive employment as technicians and skilled workers, and to more nearly equalize educational opportunity.[1]

For many years educators catered to the college bound student and neglected the student who, upon graduation from high school or before, will enter the world of work and will often do so completely unprepared. If the school is to educate a whole population, the school program must meet the needs of the whole population to be served.[2]

The goals of modern education have grown far beyond the simple ideas of a hundred years ago. The nation's school administrators recently restated the goals of modern high schools in the following words:

> The maximum development of all the mental, moral, emotional, and physical powers of the individual, to the end that he may enjoy a rich life through the realization of worthy and desirable personal goals, and the maximum development of the ability and desire in each individual to make the greatest possible contribution to all humanity through responsible

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[1]Kansas State Legislature, Senate Bill 438, 1963, p. 1.

[2]Benjamin C. Willis, "Vocational Education in the Years Ahead," American Vocational Journal, February, 1963, p. 37.

participation in, and benefit from the great privileges of American citizenship.[1]

The reason behind vocational legislation has been to help every student develop to his fullest capacity.

Procedures

Procedures for studying the group selected. In this report the following methods were used to compile the necessary information for studying the Topeka, Kansas, Area Vocational-Technical School: (1) interviews with the school's officials and officials of the state vocational board; and (2) a review of the literature which included books, periodicals, laws, and numerous unpublished materials.

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[1]"The High School in a Changing World," American Association of School Administrators, Washington, D. C., 1958, p. 28.

PRESENTATION OF DATA

High school students seeking admission to the Topeka, Kansas, Area Vocational-Technical School are selected and tested by the individual participating area high schools. The Manpower Development Training Act students are selected and referred by the Kansas State Employment Security Bureau. Adults not considered high school or Manpower Development Training Act students seek admission directly to the school, and are tested and approved by the Kansas State Employment Security Bureau.

Selection Procedures

High school students. Tests were administered by the individual cooperating area high schools. No attempt had been made to list every standardized test each cooperating school gave its high school students. Similar tests given to students by all the cooperating schools are listed as follows: Hennon-Nelson Mental Ability Test, Differential Aptitude Test, Strong Vocational Inventory and the General Aptitude Test Battery.

The school counselors of these school districts of the Topeka, Kansas, Area Vocational-Technical School, gave the tests mentioned above, and did all the counseling of the high school students who attended the Topeka, Kansas,

Area Vocational-Technical School in September, 1964. There were 357 high school students who started vocational training in the Topeka, Kansas, Area Vocational-Technical School in September, 1964.

The first group of high school students in cooperative programs will graduate in June, 1965. The first high school graduates of full-time vocational programs will complete their training at the end of the 1965-1966 school year. As this report covered only the first semester, 1964, of the Topeka, Kansas, Area Vocational-Technical School, no follow-up work on the high school students could be done.

Tuition is not paid by high school students from the participating school districts.

Kansas Senate Bill 438, provides for a two-mill levy on property of each school district that is a participating member of an area vocational school.[1] Table I provides a breakdown on the amount of revenue from each cooperating school district of the Topeka, Kansas, Area Vocational-Technical School.[2]

If a school wants to send high school students to

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[1]Kansas State Legislature, Senate Bill 438, 1963, p. 3.

[2]Kansas State Vocational Education Department, Unpublished Materials, Topeka, Kansas: 1963.

the Topeka, Kansas, Area Vocational School, and is not a participating school member, then the county superintendent of the non-participating school must make arrangements to pay the tuition of the students.[1] The tuition fee is one hundred dollars a semester for these students, according to the assistant director of the Topeka, Kansas, Area Vocational-Technical School.

The 1964-1965 budget for the Topeka, Kansas, Area Vocational-Technical School was 594,000 dollars, which included 280,000 dollars for building construction. The highest proportion of funds for the 1964-1965 budget were supplied by local revenues, and amounted to 330,463 dollars. Under the Vocational Education Act of 1963, the federal government paid twenty-five percent of the salaries and fifty percent of equipment costs. The state government provided twenty-five percent of equipment costs. The information on the budget was given in an interview with the assistant director of the Topeka, Kansas, Area Vocational-Technical School.

Participating area schools had an enrollment during 1963-1964 school year of 31,377 students, of which 8,133

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[1]Kansas State Legislature Senate Bill 438, 1963, p. 2.

TABLE I

REVENUE FOR THE TOPEKA, KANSAS, AREA
VOCATIONAL-TECHNICAL SCHOOL FROM
EACH COOPERATING SCHOOL DISTRICT
1963-1964

Districts	Property evaluation	Two-mill levy
District #2, Holton, Kansas	$ 4,744,399	$ 9,488
District #5, Seaman Rural High	18,750,000	37,500
District #3, Washburn Rural	4,987,669	9,975
District #23, Topeka Public Schools: Topeka High Topeka West Highland Park Hayden High (Parochial)	36,750,000	273,500
TOTAL	$165,232,104	$330,463

were high school students. (See Table II).[1]

Potential enrollees of the Topeka, Kansas, Area Vocational-Technical School are expected to increase greatly in the years ahead. In order to provide vocational education for future student growth, new facilities are being planned.

Enrollment in Topeka public and parochial schools is expected to increase greatly in the next ten years. This is also true of schools in communities surrounding Topeka.

Enrollment in the public and parochial schools in Topeka, in 1963, was 25,981 pupils; and the anticipated enrollment for 1970 is 34,500. By 1975, the enrollment is expected to reach approximately 37,000.

The school hopes to begin construction on the new Topeka public vocational school plant sometime in 1965, to meet this expected pupil growth.[2]

The non-high school student. Tests may be administered by the Kansas State Employment Security Bureau to all non-high school students. The Topeka,

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[1]Kansas State Vocational Education Department, Unpublished Materials, Topeka, Kansas: 1963.

[2]Kansas State Vocational Education Department, Unpublished Materials, Topeka, Kansas: 1964.

TABLE II

ENROLLMENT OF EACH COOPERATING SCHOOL DISTRICT IN THE TOPEKA, KANSAS, AREA VOCATIONAL-TECHNICAL SCHOOL, 1963-1964

Districts signed up*	Enrollment	
	1-8	9-12
District #2, Holton, Kansas	491	241
District #5, Seaman Rural High	1,330	670
District #3, Washburn Rural	2,059	605
District #23, Topeka Public Schools: Topeka High, Topeka West, Highland Park	16,016	5,667
Hayden High (Parochial)	3,348	950
TOTAL	23,244	8,133

*Note: District #10, Shawnee Heights High School will be a participating school beginning the 1965-1966 school year. Letters of intent to participate in Topeka, Kansas, Area Vocational-Technical School have also been received from: Burlingame Public Schools, (2) Silver Lake Rural High School, and (3) Valley Falls Public Schools.

Kansas, Area Vocational Technical School encourages all of its potential students to take the General Aptitude Test Battery, given free of charge by any Kansas State Employment Security Bureau. The test is then interpreted by counselors of the bureau, to the persons who took the test. The General Aptitude Test Battery is a requirement of the Kansas State Employment Security Bureau for persons desiring vocational training under the Manpower Development and Training Act. Nine aptitudes are measured by twelve different tests in the General Aptitude Test Battery.

Each Manpower Training and Development Act training course has its own test score requirements. The counselor may allow a person to enter a training program in spite of a slightly below average score on one test, if, in the opinion of the counselor, the man has a chance of succeeding in the program. Information concerning the General Aptitude Test Battery was furnished by the Topeka, Kansas, State Employment Security Bureau, during an interview in March, 1965. See the Appendix for a chart showing the different aptitudes measured by the General Aptitude Test Battery.

Typical trainees in the Manpower Development and Training Act courses are young adults. There were few teenagers or older workers enrolled in these training courses in 1963. Over sixty percent of the trainees were

between the ages of 22-44. (See Table III). This age group was also the largest unemployed group in 1963.

The older worker faces many obstacles when seeking employment. Many employers are reluctant to hire from the older age group, either because they feel that pension and insurance costs will increase, or because they think that older workers are not as efficient as younger workers.[1]

Education, as one might expect, plays a big part in whether a person is employed or unemployed. Education is also important for entry into Manpower Development and Training Act training courses. The more education one has, the better his chances are of being selected for the program. Over fifty percent had, at least, a 12th grade education. (See Table IV).[2]

Tuition for non-high school, and non-Manpower Development and Training Act students is 100 dollars, per semester.[3] Students under the Manpower Development and Training Act programs had their fees paid by the federal

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[1]United States Department of Labor, Manpower Research and Training, (Washington, D. C.: Government Printing Office, 1964), pp. 18-19.

[2]United States Department of Labor, Manpower Research and Training, (Washington, D. C.: Government Printing Office, 1964), p. 21.

[3]Kansas State Vocational Education Department, Unpublished Materials, Topeka, Kansas, 1964.

TABLE III

AGE OF TRAINEES ENROLLED IN MANPOWER DEVELOPMENT AND TRAINING ACT COURSES STARTED IN 1963 AND OF UNEMPLOYED PERSONS IN 1963

(Percent Distribution)

Age	MDTA Trainees (men & women)	Unemployed persons, 1963 Annual Average*
Total	100.0	100.0
Under 19 years	8.6	18.6
19 to 21 years	20.8	12.9
22 to 44 years	60.3	41.5
45 years and over	10.2	27.0

*Monthly report on the Labor Force, Bureau of Labor Statistics.

TABLE IV

EDUCATIONAL ATTAINMENT OF TRAINEES ENROLLED IN MANPOWER DEVELOPMENT AND TRAINING ACT COURSES STARTED IN 1963, AND OF UNEMPLOYED PERSONS IN MARCH, 1962

(Percent Distribution)

Education	MDTA Trainees	Unemployed Persons March, 1962*
Total	100.0	100.0
Less than 8th Grade	2.7	20.2
8th Grade	6.6	16.0
9th to 11th Grade	29.7	26.8
12th Grade	51.2	27.7
Over 12th Grade	9.8	9.3

*Based on data from Special Force Survey 30, Bureau of Labor Statistics

government. In fact, the federal government paid one hundred percent of the cost of training Manpower Development and Training Act students, which included tuition for students, books, teachers' salaries, equipment, etc. Beginning with the fiscal year 1965, the states are expected to match federal funds, dollar for dollar.[1]

Trainee allowances are given to the Manpower Development and Training Act students who are unemployed, head of a family, and with three years of work experience. These qualifications made a trainee eligible for full weekly training allowances. Eligibility of trainees for allowances was determined by the Kansas State Employment Security Bureaus, and weekly payments were made by these bureaus upon receipt of a certification by trainees and their instructors, that they had undergone training during the week.[2]

In Kansas, a head of the family with less than three dependents, receives a starting allowance of 38 dollars per week, and 10 dollars more after ten weeks of training, for a total of 48 dollars per week.

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[1]J. Chester Swanson (ed.), Development of Federal Legislation for Vocational Education (Chicago: American Technical Society, 1962), p. 100.

[2]United States Department of Labor, Manpower Research and Training, (Washington, D. C.: Government Printing Office, 1964), pp. 10-11.

If a head of the family has more than three dependents, he receives 38 dollars per week for the first month. After four weeks he receives an increase of 5 dollars per week, and after the fifth week, he receives another 5 dollars per week, for a total of 48 dollars per week.

There is a special youth allowance payable to youths 19 through 21 years of age, who were not eligible for the regular training allowance. In Kansas, the training allowance for youths was 19 dollars per week.[1]

In an interview with the Kansas State Employment Security Bureau, in Manhattan, Kansas, April, 1965, more recent information concerning training allowances was obtained. If a Manpower Development and Training Act trainee is: the head of a household, with three years of employment and is unemployed, he receives the following benefits: thirty-eight dollars for a training allowance. If a trainee has more than two dependents, he receives a 5 dollar increase after the second week of training, and another 5 dollar increase after the fifth week, for a total training allowance of 48 dollars per week. This trainee may also receive an additional 35 dollars per week for

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[1]United States Department of Labor, Manpower Research and Training, (Washington, D. C.: Government Printing Office, 1964), pp. 10-11.

transportation and subsistance. A trainee with only two dependents receives 38 dollars per week, and a 10 dollar increase after the eleventh week. This trainee may also be eligible for the 35 dollars per week for transportation and subsistance allowance.

If a Manpower Development and Training Act trainee is not eligible for the above mentioned training allowances he may be eligible for all or part of the 35 dollars for transportation and subsistance.

Curriculum

The curriculum of the Topeka, Kansas, Area Vocational-Technical School is presented in two major divisions: courses offered to high school students and others who apply directly to the school for training; and students referred to the school under the Manpower Development and Training Act (1962), by the Kansas State Employment Office. A detailed outline of the curriculum is given, followed by the future growth of selected courses in the curriculum. It is also shown how the school determined which curriculum to offer.

Curriculum offerings and descriptions and outlook for occupations being taught. Courses offered high school students and others applying directly to the school for

training are as follows:

Vocational auto mechanics

Vocational electricity

Vocational machine shop

Vocational photography

Vocational printing

Vocational radio and television

Vocational welding

Cooperative office machines

Cooperative agriculture related

Cooperative retail selling

Cooperative industrial training

Practical nursing

Courses offered to Manpower Development and Training Act (1962) students are as follows:

Auto mechanics

Machine operator - general

Practical nurse

Electrical household appliance

Stenographer

Clerk - general office

Salesperson - general

Vocational auto mechanics is a three hours a day course covering four semesters for juniors in high school, or 1,080 hours for non-high school students. The course

provides a background in automobile mechanics and related fields. Training is provided in the following areas: fuel and exhaust system, electrical system repair and service, clutch overhaul, transmission overhaul, differential overhaul, steering and front end repair, cooling system service, brake repair and lubrication.

Areas of study involving related and technical information consist of: shop safety and procedures, public relations, carburation, gears and levers, ignition, automotive electricity, lubrication bearings, engine construction and brake systems.

Some employment opportunities available to graduates of vocational auto mechanics:[1]

1. General auto mechanic
2. Specialized auto mechanic
3. Salesman (auto and related fields)
4. Auto mechanic adjuster
5. Truck, bus, tractor, diesel mechanic

The employment outlook for auto mechanics is expected to increase rapidly during the remainder of the 1960's, and in the longer run. Auto mechanics was one of our largest occupation groups in 1963, numbering almost

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[1]Kansas State Vocational Education Department, Unpublished materials, Topeka, Kansas, 1964.

700,000 in that year.[1] Classified under the industry group called services and miscellaneous, this industry group will, by 1975, become the largest group of workers as indicated by the Occupational Outlook Handbook, 1963-64 edition. Figures 1 and 2 show the size of each major industry group in 1962, and the proposed percentage of growth expected between 1960-1975.[2]

Vocational electricity is designed to prepare students for the numerous electrical fields. The training in this course is three hours a day, covering four semesters for juniors in high school, or 1,080 hours for non-high school students.[3] The course covers safety, blueprint reading, light and power equipment, study of national electrical code, wiring, motor winding, motor repair, transformer construction, fundamentals of welding, engine lathe operation, appliance repair, operation and use of common electronic tubes, panel lighting, high frequency heating, operation of electrical equipment,

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[1]United States Bureau of Labor Statistics, Occupational Outlook Handbook, (Washington, D. C.: Government Printing Office, 1963), pp. 405-408.

[2]United States Bureau of Labor Statistics, Occupational Outlook Handbook, (Washington, D. C.: Government Printing Office, 1963), p. 15.

[3]Kansas State Vocational Education Department, Unpublished Materials, Topeka, Kansas, 1964.

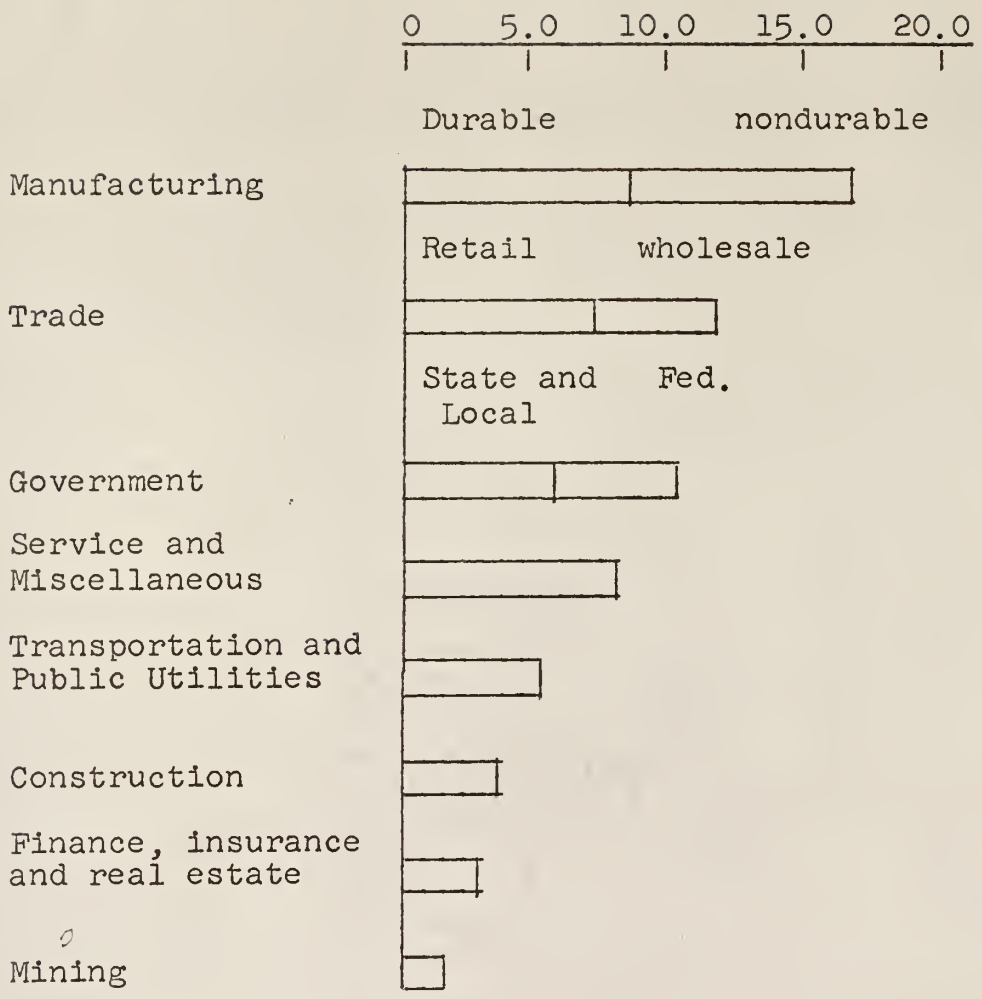

FIGURE 1

EMPLOYMENT IN EIGHT MAJOR INDUSTRY GROUPS, 1962.
(UNITED STATES DEPARTMENT OF LABOR,
BUREAU OF LABOR STATISTICS,
OCCUPATIONAL 1963-1964)

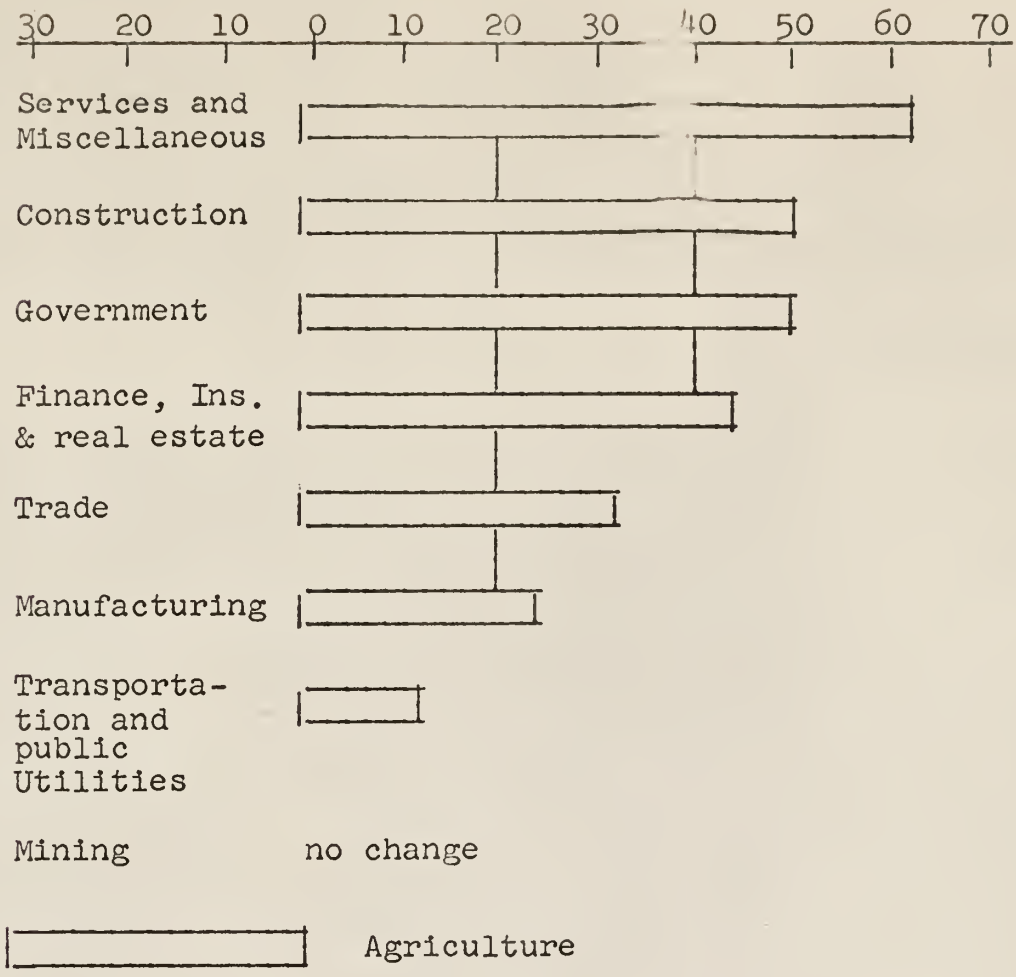

FIGURE 2

PROJECTED PERCENT CHANGE IN EMPLOYMENT
BY MAJOR INDUSTRY GROUPS, 1960-1975
(U.S. DEPT. OF LABOR STATISTICS
1963-1964)

methods of handling electrical power, and test equipment.

Various projects are undertaken in class including the construction of transformers, growlers, arc welders, rotary converters, motor generator sets, etc.

Some possible employment opportunities for vocational electricity students are:[1]

1. Power construction
2. Motor repair and winding
3. Communications
4. Electrical and electronics salesmen
5. Business machine repair (electronic)

(Note: Apprenticeship training is required in some of the above areas).

In 1962, there were an estimated 900,000 workers (three and one-half times the workers in 1950), in the electrical fields. Many thousands of new job opportunities will occur in electronics during the 1960's, and the longer run.[2]

Students studying electricity can see, by Figure 3 where the greatest opportunities are in electronics, at

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[1]Kansas State Vocational Education Department, Unpublished Materials, Topeka, Kansas, 1964.

[2]United States Department of Labor, Bureau of Labor Statistics, Occupational Outlook Handbook, (Washington, D. C.: Government Printing Office, 1963-1964), p. 587.

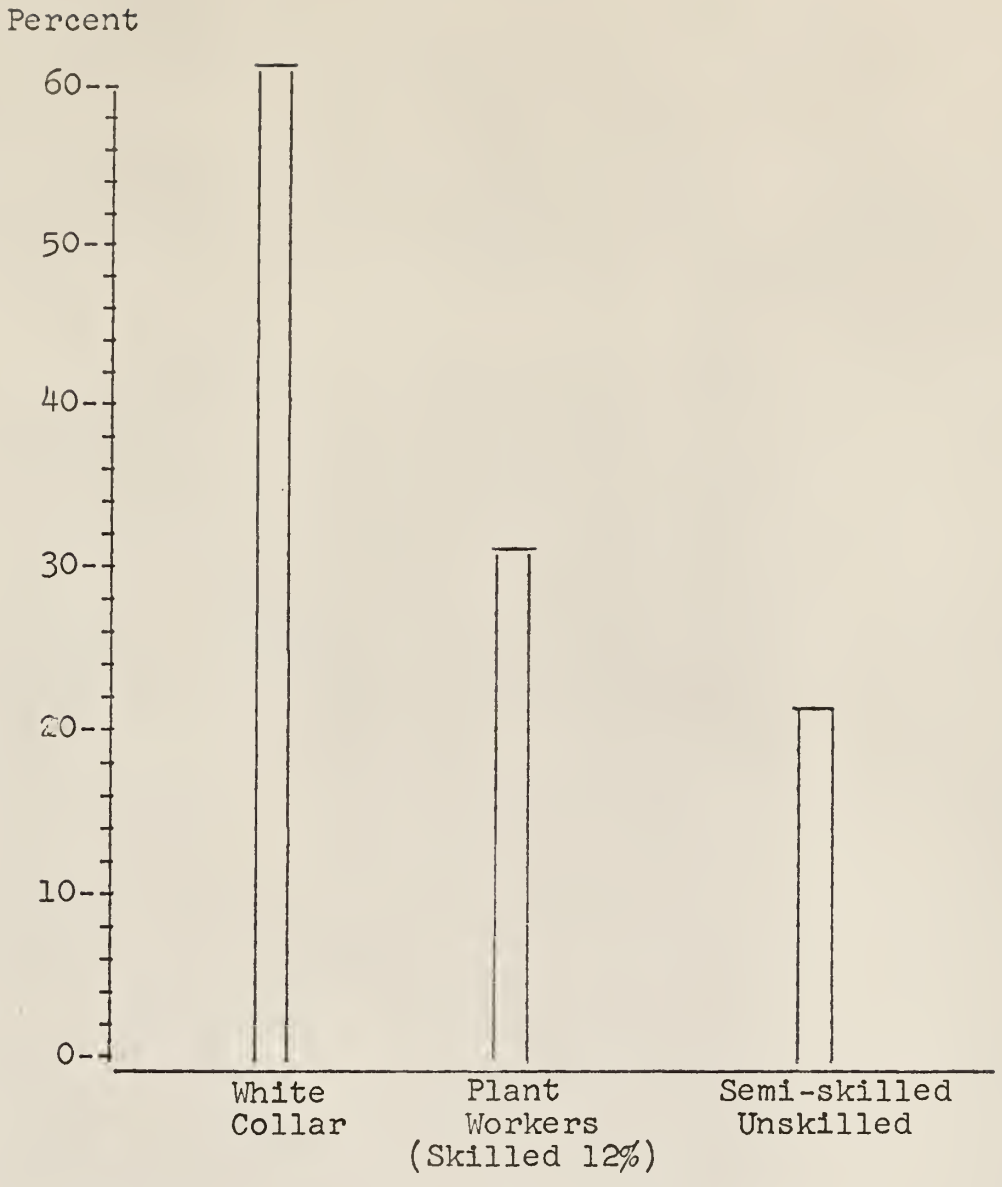

FIGURE 3

DISTRIBUTION OF WORKERS IN ELECTRONICS ACCORDING TO TYPES, 1960 CENSUS (FROM UNITED STATES DEPARTMENT OF LABOR STATISTICS, 1963-1964)

least through 1960.[1]

Vocational machine shop courses are three hours a day, covering four semesters, and open to juniors in high school. The same number of hours (1,080), to be completed by non-high-school students in less than one-half year.

This course provides training in the operation of machine tools including the following: engine lathe, shaper, milling machine, surface grinder, universal grinder, internal and external cylinderical grinding, cutter grinder, Rockwell hardness tester, drill press, punch press, hydraulic controlled tracer machines and optical comparator. In addition technical and related information which includes metallurgy, heat treating, blue print reading, sektching, micrometers, angles, tapers, gearing, fractions, and decimals.

Employment opportunities for machine shop students:[2]

1. General machinist
2. Construction machinist
3. Machine operator
4. Industrial machinist

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[1]United States Department of Labor, Bureau of Labor Statistics, Occupational Outlook Handbook, (Washington D. C.: Government Printing Office, 1963-1964), p. 589.

[2]Kansas State Vocational Education Department, Unpublished Materials, Topeka, Kansas, 1964.

5. Salesman (machinery supplies and equipment)

6. Automobile and/or diesel machinist

7. Machinist repairman

8. Bench machinist

(Note: Apprenticeship training is required in some of the above areas).

In 1963, there were approximately 570,000 machinists in the United States. It is estimated this occupation will experience a moderate increase in jobs during the 1960's, and in the longer run.[1]

Vocational photography courses are three hours a day, covering four semesters, and are open to juniors and non-high school students who must complete approximately 1,080 hours of course work.

Course training includes shooting pictures, mixing chemicals, developing contact printing, finishing, tinting, enlarging and special effects, cameras and accessories, optics, illumination, photo sensitive materials, the chemistry and mechanics of processing and printing, display and ethics, color photography, and sixteen mm. motion pictures.

Employment opportunities that exist for

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[1]United States Department of Labor, Bureau of Labor Statistics, Occupational Outlook Handbook, (Washington D. C.: Government Printing Office, 1963-1964), p. 434.

photographers include:[1]

1. Salesman (photo supplies and equipment)
2. Portrait studio operator
3. T. V. cameraman
4. Commercial photographer
5. Medical photographer (X-ray)
6. Photo lab technician
7. Photo offset printing
8. News photographer
9. Industrial photographer
10. Public relations photographer
11. Free lance photographer

Photography workers numbered 55,000 in 1962; a moderate increase in growth is expected in the long run.[2]

Vocational printing is a three hours a day course, covering four semesters for juniors in high school; non-high school students are required to complete equivalent training (1,080 hours). Experience includes hand composition, tabular composition, lock up, feeding open platen presses, paper cutting, paper drilling, stitching

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[1]Kansas State Vocational Education Department, Unpublished Materials, Topeka, Kansas, 1964.

[2]United States Department of Labor, Bureau of Labor Statistics, Occupational Outlook Handbook, (Washington D. C.: Government Printing Office, 1963-1964), p. 249.

and stapling, layout and design, and operation of offset printing equipment. Experience in production printing is acquired by producing forms, tickets, programs and school papers for various schools.

Employment opportunities in printing:[1]

1. Offset printing pressman, plate maker, cameraman
2. Salesman, (paper and printing supplies and equipment
3. Paper cutter
4. Composer
5. Book binder
6. Linotype operator
7. Pressman
8. Layout man
9. Advertising trades
10. Sterotypers
11. Engravers
12. Printing equipment repairman

The printing industry employed almost 900,000 workers in 1963. The industry will experience a moderate increase in growth during the 1960's, and in the longer run with many thousands of opportunities opening up in

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[1]Kansas State Vocational Education Department, Unpublished Materials, Topeka, Kansas, 1964.

printing.[1]

Vocational radio and television course is three hours a day, four semesters and is open to juniors in high school; non-students will complete 1,080 hours of instruction.

Course of instruction includes construction, maintenance and repair of black and white and color television; construction and repair of hi-fi and stereo record players, wire and tape recorders and other communications systems; construction and repair of FM, AM and transistor radio receivers. Related theory study includes the study of electrical theory and its application to the construction, maintenance and repair of radio, TV and similar devices.

Employment opportunities:[2]

1. Radio repair (auto, home, portable and transistor)
2. Television repair (black and white and color)
3. Phonograph repair (hi-fi and stereo)
4. Inter communications (installation and repair)
5. Public address systems (installation and repair)
6. Electrical designing
7. Broadcasting (TV and radio)
8. Business machines (repair & operate)
9. Auto electrical system repair

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[1]United States Department of Labor, Bureau of Labor Statistics, Occupational Outlook Handbook, (Washington D. C.: Government Printing Office, 1963-1964), pp. 381-384.

[2]Kansas State Vocational Education Department, Unpublished Materials, Topeka, Kansas, 1964.

10. Electronic equipment repair including business machines
11. Electrical musical instrument repair
12. Communication equipment repair
13. Antenna installation and repair
14. Armed Forces (electronic and electrical)
15. Industrial electronics
16. Rocketry field (electronics)
17. Radar and sonar (operate and repair)
18. Electronic parts manufactor

Approximately 110,000 were employed in radio and television repair in 1963. There are many related fields that offer opportunities for radio and television graduates. A moderate increase in growth is expected during the 1960's.[1]

Vocational welding courses are three hours a day, covering four semesters and are open to juniors and non-high school students who must complete approximately 1,080 hours of course work.

The welding course includes training in the following areas: oxy-acetylene welding in the flat, vertical and overhead positions, manual flame cutting, machine flame cutting and brazing of the common ferrous and non-ferrous metals, arc welding of ferrous metals in the flat, vertical and overhead position and the cutting of cast iron and steel. Heliwelding of aluminum and stainless

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[1]United States Department of Labor, Bureau of Labor Statistics, Occupational Outlook Handbook, (Washington D. C.: Government Printing Office, 1963-1964), p. 427.

steel in the flat and vertical positions.

Related information includes: metallurgy, tempering, heat treating, blue print reading, identification of metals, expansion and contraction of metals, principles of oxy-acetylene processes and general principles of electrical welding processes.

Some employment opportunities for welders are:[1]

1. Job shop welder
2. Sales and demonstration (welding)
3. Structural fabrication and erection
4. Pipe line welder
5. Steam fitter
6. Welding machine operator
7. Production welder
8. Millwright (apprenticeship required)

Welding provided employment for more than 370,000 in 1960. Welding jobs are expected to increase moderately through the 1960's and 1970's.[2]

Cooperative office machines courses provide training in secretarial and general clerical fields under school and

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[1]Kansas State Vocational Education Department, Unpublished Materials, Topeka, Kansas, 1964.

[2]United States Department of Labor, Bureau of Labor Statistics, Occupational Outlook Handbook, (Washington, D. C.: Government Printing Office, 1963-1964), p. 502.

business supervision. Co-op students are enrolled in class work for two hours, and work in approved business firms for three hours per day, at the prevailing beginners' wage. Students receive a minimum of three credits per semester in Co-op Office Practice.

Machines studied in the course include comptometer, Burroughs, Monroe, and Marchant calculators, bookkeeping machine, mimeographing, ditto, adding listing machines both ten-key and full-keyboard, stenorett dictating-transcribing machine, and printing calculator. The other units covered in the course are advanced production typing, banking transactions and cash, filing, handling of mail, abbreviations, vocabulary, payrolls, job finding and interviewing, and success on the job.

Employment opportunities:[1]

1. Recognized by State Civil Service
   a. Steno II rating
   b. Clerk-typist II rating
   c. Key punch operator
   d. Private secretary
2. Stenographers in private business
3. General office work
4. Bookkeeping

In 1960 this occupation employed over 300,000. Many

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[1]Kansas State Vocational Education Department, Unpublished Materials, Topeka, Kansas, 1964.

thousands of jobs will open up in the clerical field, a substantial growth will occur for some time, but eventually a leveling off is expected as automation replaces workers.[1]

See Figure 4, for the consistent growth in the clerical field.[2]

Cooperative agriculture related courses provide training in areas of agriculture that offer some job opportunities other than as a farm laborer, inasmuch as farm labor jobs have declined substantially since 1910, as shown by Figure 5. In addition to class work, which is two hours per day, students work with an employer a minimum of fifteen hours per week at the existing beginners' wage.

Students study related work in class such as job application, employer-employee relations, personality as it affects job success, money management, income tax, insurance, and letters of application.

Students may choose one of the following fields of study. (These are also possible job opportunities to

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[1]United States Department of Labor, Bureau of Labor Statistics, Occupational Outlook Handbook, (Washington, D. C.: Government Printing Office, 1963-1964), p. 280.

[2]United States Department of Labor, Bureau of Labor Statistics, Occupational Outlook Handbook, (Washington, D. C.: Government Printing Office, 1963-1964), p. 21.

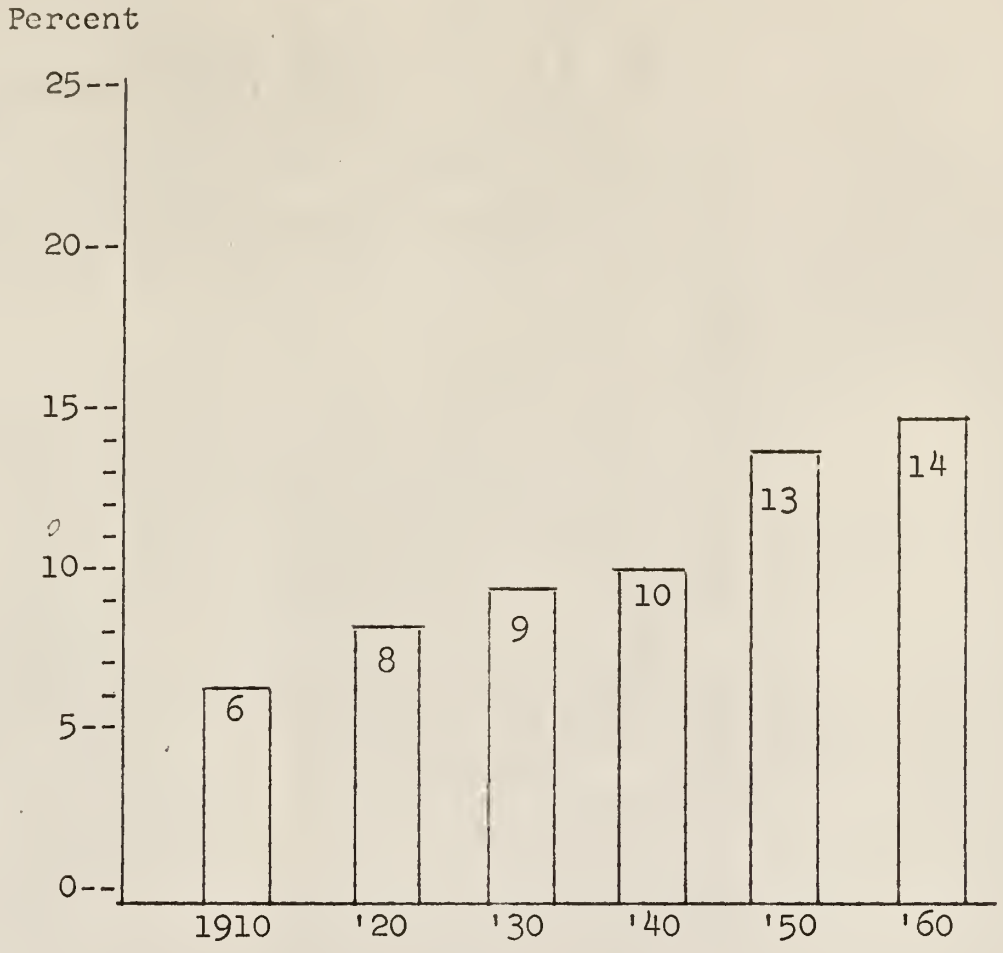

FIGURE 4

GROWTH IN PER CENT OF
CLERICAL WORKERS
1910-1960

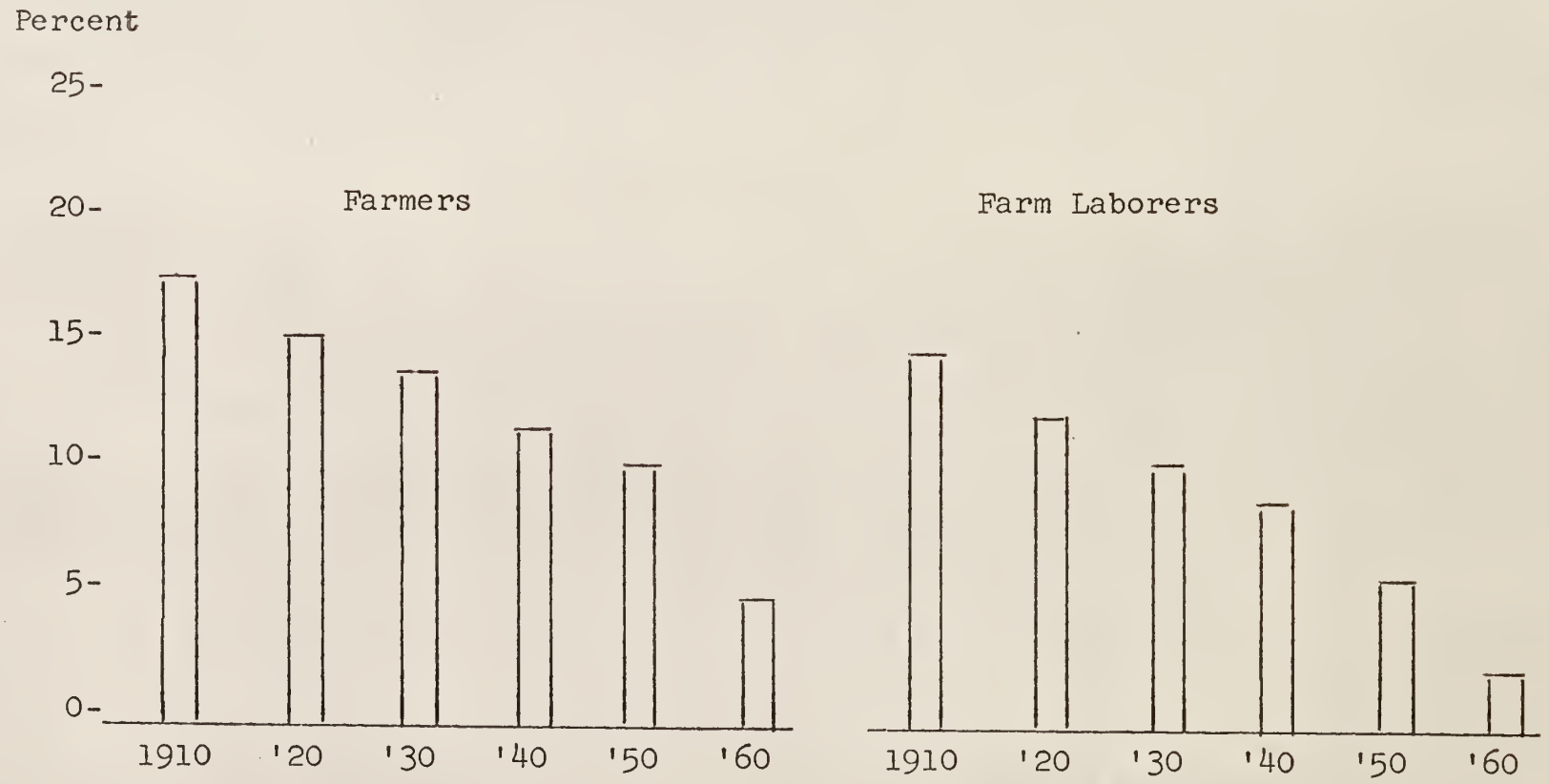

FIGURE 5

PER CENT OF DECLINE IN
FARM OCCUPATIONS
1910-1960

students of agriculture related courses).[1]

1. Meat cutting
2. Veterinarian assistant
3. Feeders
4. Nurseryman
5. Greenhouse worker
6. Florist
7. Landscaper
8. Garden produce
9. Feed and farm supplies
10. Farm machinery service
11. Elevator workers
12. Feed manufactures and dairy processors

The largest growth in agriculture will be in the professional and technical jobs connected with agriculture, such as those of agriculture research specialist, soil scientist, and soil conservationist. Most of the fore-mentioned jobs require college training or its equivalent.[2] During the 1960's an estimated 227,000 farm operators are expected to leave the occupation. Comparing farmers with

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[1]Kansas State Vocational Education Department, Unpublished Materials, Topeka, Kansas, 1964.

[2]United States Department of Labor, Bureau of Labor Statistics, Occupational Outlook Handbook, (Washington, D. C.: Government Printing Office, 1963-1964), p. 738.

workers in business and industry shows the continual decline in farmers, while non-farm occupations have risen sharply. (See Figure 6).

Cooperative retail selling courses provide students with two hours per day class work and three hours per day in approved businesses at the prevailing beginners' wage. The following training is part of the course: operation of cash registers, making change, store system, ethics, selling techniques, merchandise information, window and counter display, color harmony, non-selling duties, store organization, store management and ownership, buying and advertising.

Possible employment opportunities for students of retail sales:[1]

1. Salespeople
2. Department head
3. Section head
4. Receiving
5. Advertising
6. Display
7. With potential in:
   a. Assistant manager
   b. Personnel manager

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[1]Kansas State Vocational Education Department, Unpublished Materials, Topeka, Kansas, 1964.

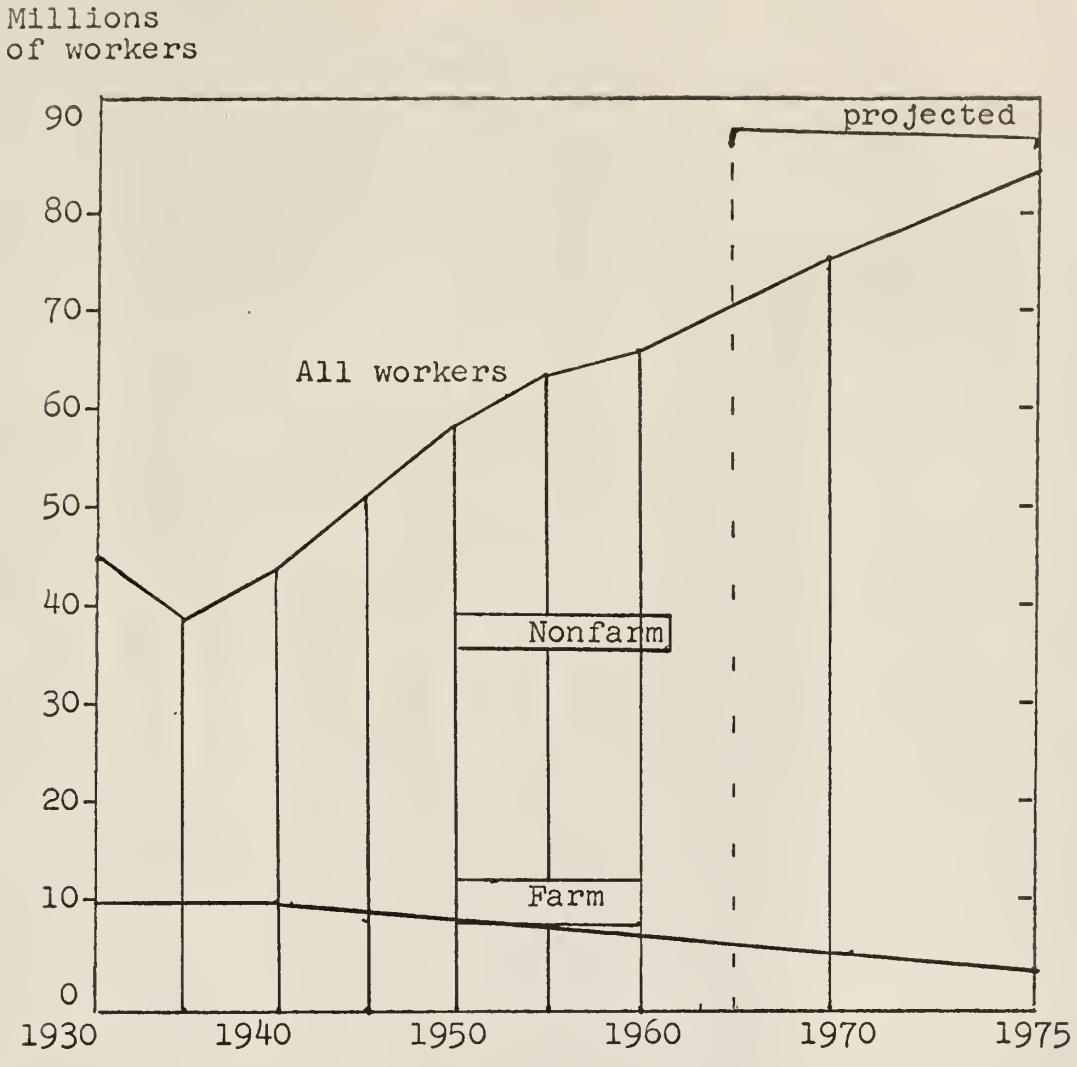

FIGURE 6

NUMBERS OF WORKERS IN BUSINESS AND INDUSTRY
COMPARED WITH WORKERS ON FARMS
1930-1975

c. store manager
d. owner

Employment in sales occupations is expected to increase fairly rapidly during the 1960-1970 period. In 1960, there were 4.5 million workers engaged in selling, with more than half in retail selling. By 1970, the total number of sales workers may reach 5.5 million. Growth in this occupation has constantly increased or at least held its own since 1910. Many of the new sales workers entering the occupation during the 1960-1970 period, will be part-time workers; full-time sales positions are expected to increase only moderately during this ten year period.[1] (See Figure 7).

Cooperative industrial training courses are designed to serve areas where the labor demand is small. Instruction includes two hours per day of classroom instruction, plus a minimum of fifteen hours per week in a business firm at the prevailing beginners' wage. Classes are instituted whenever a need is shown and a sufficient number of students enroll. The minimum number is twelve.

In addition to course work pertaining directly to a particular course, related work may also be studied in order to broaden the student's understanding of his

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[1]United States Department of Labor, Bureau of Labor Statistics, Occupational Outlook Handbook, (Washington, D. C.: Government Printing Office, 1963-1964), p. 21.

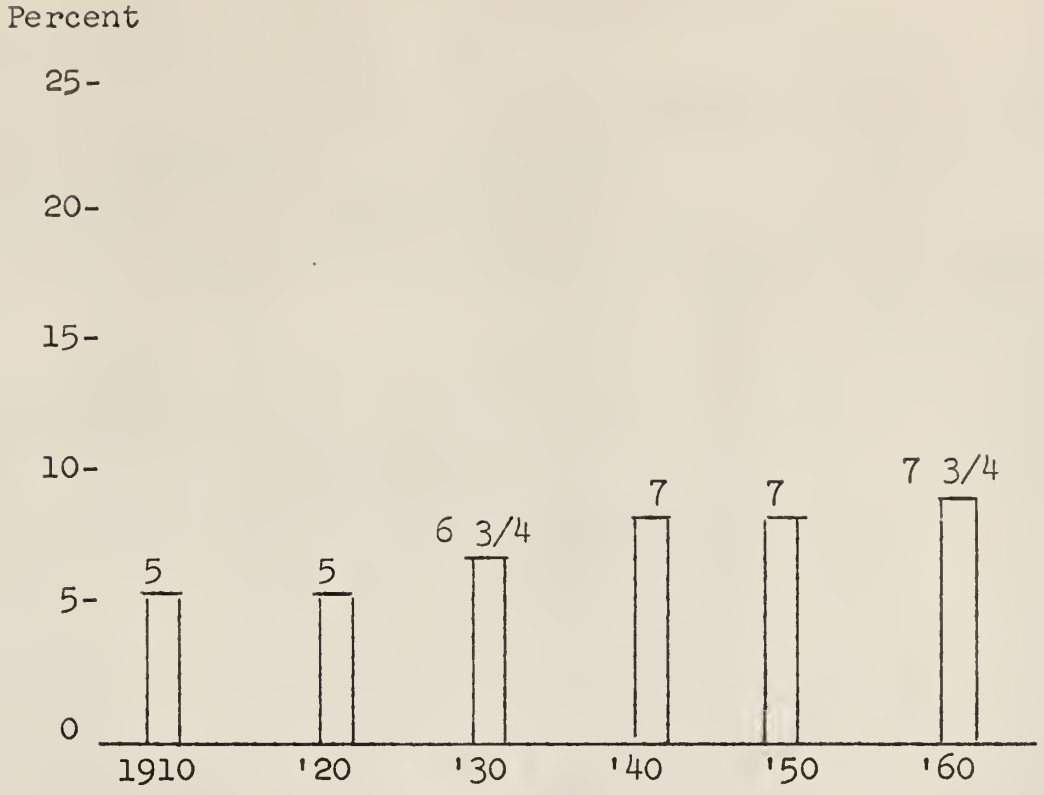

FIGURE 7

GROWTH IN PER CENT
OF SALES WORKERS
1910-1960[1]

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[1]United States Department of Labor, Bureau of Labor Statistics, Occupational Outlook Handbook, 1963-1964, p. 21.

occupational area.

Some of the listings below are also possible fields of employment for industrial training students. Of the employment fields listed only those with twenty-five thousand or more employees, according to the 1963-1964 Occupational Outlook Handbook, will have comments regarding size and growth.[1 & 2]

1. Upholstery
2. Florist
3. Meat cutting
4. Dental and doctor assistant
5. Dry cleaning
6. Laundryman
7. Movie projectionist
8. Landscaping
9. Building maintenance
10. Optical technician
11. Commercial artist: 60,000 employed in 1963, and employment opportunities are expected to be good throughout the 1960's, with a moderate increase in the long run.

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[1]Kansas State Vocational Education Department, Unpublished Materials, Topeka, Kansas, 1964.

[2]United States Department of Labor, Bureau of Labor Statistics, Occupational Outlook Handbook, (Washington, D. C.: Government Printing Office, 1963-1964), pp. 71, 72, 74, 158 and pp. 220, 221, 364, 538-542, 705.

12. Baking: there were 260,000 employed in this field in 1962, with thousands of new jobs opening up throughout the 1960's and 1970's.

13. Dietary aide: in 1962 there were 26,000 workers in this occupation and employment opportunities are expected to be excellent through the 1960's, and in the long run.

14. Food services: in 1960 over 2,000,000 persons were employed in this field, and substantial growth is expected for some time in the future.

15. Dental lab technician: in 1963 there were 25,000 employed in this field and the outlook is very good through the 1960's, with a moderate increase over the long run.

16. Draftsman: 260,000 persons were employed in 1962, and the outlook for this occupation is favorable throughout the 1960's, with a continued growth in the longer run.

17. Floor coverer: there were 30,000 workers in this occupation in 1963, and a moderate growth is expected through the 1960's and 1970's.

Practical nursing is offered to students eighteen years of age with a high school education, or students over twenty-five years of age with at least an eighth grade education. The first four months of training are in the classroom followed by eight months in local hospitals or other health facilities. Class work also continues during

this eight-month training period.

The practical nurse is qualified to give skilled but uncomplicated care to the convalescent, chronically ill and aging under the supervision of a licensed physician, dentist, or registered nurse. The practical nurse may assist the registered nurse in the care of acutely ill patients, new mothers, new born infants, and children.

The practical nurse may work for a:[1]

1. Hospital
2. Private home
3. Clinic
4. Doctor
5. Convalescent home

Excellent employment opportunities are expected to exist throughout the 1960's. In 1962 there were 225,000 practical nurses, yet the supply has not kept pace with the demand.[2]

Practical nursing is also listed, in this report, under the curriculum for Manpower Training and Development, where a detailed description of the course may be found on

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[1]Kansas State Vocational Education Department, Unpublished Materials, Topeka, Kansas, 1964.

[2]United States Department of Labor, Bureau of Labor Statistics, Occupational Outlook Handbook, (Washington, D. C.: Government Printing Office, 1963-1964), p. 321.

page 69. All courses offered under the auspices of Manpower Training and Development in the Topeka, Kansas, Area Vocational-Technical School for the period covered by this report are described in the listing which follows.

Automobile mechanics is an eight hour a day course open to makes, age 18-45, with at least two years of high school. Married men are preferred and priority is given to heads of families with three or more years of work experience who have demonstrated mechanical aptitudes, job stability, social acceptance, acceptance of work direction and etc., by means of tests and counseling techniques.

Auto mechanic course training consists of disassembling and overhauling engines, transmissions, clutches, rear ends, and other assemblies on automobiles, replacing worn or broken parts, grinding valves, adjusting brakes, tightening body bolts, and aligning wheels. The student uses hoists, wrenches, gages, drills, grinding wheels, and other general or specialized machines, gages and tools.

The training objective is to develop ability to locate automotive malfunction through tests, checks and other diagnostic procedures. The student is trained to a level of skill which will qualify him for employment as an entry mechanic performing under supervision of a lead mechanic the various repair jobs in a garage. Subsequent

on-the-job training is used to develop him into an accomplished mechanic.

Performance requirements consist of the ability to analyze, adjust, repair and/or replace worn or defective parts, and to perform various duties related to occupation under the general supervision or direction of lead mechanic. He also learns to use various tools and test equipment incident to the trade.

The general economic outlook for this area points to continued expansion. Higher employment levels are anticipated, especially in the non-manufacturing industries. The expanding need for automotive service would seem assured with the economic growth. Automation does not appear to be threatening the need for auto mechanics.[1]

In 1963, there were 700,000 auto mechanics. This occupation is expected to increase rapidly through the 1960's, and in the longer run, according to the Occupational Outlook Handbook.[2]

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[1]Kansas State Employment Security Agency Administration, Unpublished Material, Topeka, Kansas, 1962.

[2]United States Department of Labor, Bureau of Labor Statistics, Occupational Outlook Handbook, (Washington, D. C.: Government Printing Office, 1963), pp. 405-408.

Machine operator general course is open to qualified adults who meet the requirements of the Kansas State Employment Security Bureau. The course description is as follows:[1]

UNIT A - BENCHWORK - 220 hours

Operations: What the Worker Should Be Able to Do	Related Information: What The Worker Should Know
1. Measure with rule or tap	Recognize shapes and approximate sizes
	Recognize graduations, fractions, and decimals
2. Layout	Use of blueprints, sketches, measuring instruments and dye
3. Center punch and prick punch	How a punch is made and ground How to hold and strike a punch
4. Hand file	Methods of holding file
a. Rough b. Finish	Shapes and cuts of files
5. Hacksaw	Position and speed in sawing
a. Hand b. Power	Types and kinds of blades
	Care and oiling of the machine
6. Bandsaw	Speeds, feeds, types and sizes of blades

[1]Kansas State Employment Security Agency Administration, Unpublished Material, Topeka, Kansas, 1962.

7.	Bandsaw blade welding	Preparation, holding, welding and annealing the weld
8.	Scrape surfaces	Advantages and disadvantages of scraped surfaces
		Methods of making and using a scraper
9.	Cut threads with hand taps and dies	Methods of starting, lubricating, and removing taps and dies
		When to use taper, plug, and bottom taps
10.	Ream with hand reamer	Types and kinds of hand reamers, methods used in reaming
11.	Hand polish	Types and grades of abrasives
12.	Sharpen hand tools	Principles of sharpening hand tools
13.	Stamps with steel stamps	Methods of aligning and striking stamps
14.	Rivot	Methods used in riveting, sizes, types of heads
15.	Drill with a drill gun	Correct drill shanks, types of drill guns
16.	Hand lap	Types of lapping compounds, lapping plates
17.	Bonding and forming	Methods of hot and cold bending
		Calculation of ben allowances
18.	Straighten by use of a press	Press operation and methods used in straightening

19. Press metal-to-metal fits	Press operation, tolerance, and allowance
20. Expand by upsetting	Method of expanding material
21. Shrink by drawing	Methods of shrinking material
22. Fit mating parts	Methods used in precision fitting, tolerance and allowance
23. Form to a template	Methods used in forming metal
	Materials used in template-making
24. Make bills of material	Reasons for, and methods of, making a bill of material
25. Use sine bar	Advantages of using sine bar
	How to read sine bar tables and make calculations
26. Use hardness testers	Knowledge of hardness testers and their working principles
27. Broach with a press broach	Methods used in broaching
	Types of broaches and their application
28. Use dowel pins	Advantage and disadvantage of doweling
	Methods used in doweling

UNIT B - DRILL PRESS - 120 Hours

1. Clean, oil and care of the drill press	Kind of oil used
	When and how to clean the machine
	Safety precautions
2. Drill in press	Speeds and feeds, correct drills, coolants used
	Work-holding devices
3. Ream	Correct types of reamers and correct speeds
4. Countersink	Types, kinds, and sizes of countersinks and how to sharpen them.
5. Spot face	Methods used in spot facing and selection of cutters
6. Counterbore	Methods used in counter-boring
7. Hone	Methods and abrasives used in honing
8. Lap	Methods and abrasives used in lapping
	How to change a lap
9. Tap	Knowledge of machine taps and lubricants
10. Polish	Methods and abrasives used in polishing
11. Center drill	How to use the center drill and step drill
12. Sharpen drills	Determination of the included angle and clearance angle of a drill
	Techniques in sharpening by hand or machine

UNIT C - LATHE - 450 Hours

1. Care and use of the lathe	Origin and purpose of the lathe
	Safety precautions
2. Oil and clean the lathe	Types of lubricants used
	When and how to clean the machine
3. Grind cutter bits for the lathe	How to sharpen cutter bits
	Types of steel used
	Meaning of clearance and rake angles
4. Plain turning	How to lay out and drill center holes
	How to align centers
	Methods and tools used in holding work
	Knowledge of feeds and speeds
5. Facing	Facing ends of a shaft
	Facing work on a mandrel
	Facing work in a chuck
6. Parting	Locating shoulders
	Cutting parts to length
	Cutting thread reliefs
7. Taper turning	Taper turning internally with compound rest and taper attachment

a. Internal b. External	Taper turning externally with compound rest, taper attachment, and tailstock setover
8. Boring	Methods used in setup
	Grinding and boring tools
9. Thread cutting	Types and shapes of threads
	Nomenclature of standard threads
	Procedure in cutting: a. Right & left hand threads b. Internal & external threads c. Single and multiple threads d. National, acme, square, and tapered threads
	Classes of thread fits
	Use of threading dial
	Use of pitch gauge
10. Drilling and reaming	How to hold drills, reamers, and the work
	Correct speeds and feeds
11. Knurling	Grades of knurling
	Correct adjustment and lubrication of knurls
	Correct speeds and feeds
12. Eccentric turning	Laying out of multiple centers
13. Toolpost grinding	Precautions to take before grinding
	Angular and taper grinding

14. Use steady rest	Necessities and methods of setting up steady rest
15. Use follower rest	Necessities and methods of setting up follower rest
16. File in lathe	File nomenclature
	Correct filing methods
17. Polish in lathe	Abrasives used in polishing
	Correct methods and speeds
18. True lathe centers	Methods used in truing soft and hard lathe centers
19. Radius turning	Methods used in turning concave and convex radii
a. Concave b. Convex	Use of radius gauge
20. Indexing	Methods used in indexing: Blocking, slipping, dividing head
21. Mount chucks	How to mount and remove screw, cam-lock, and collect chucks
22. Broaching	Methods of broaching in the lathe
	How to sharpen a broaching tool
23. Use of the turret lathe	Origin and principles of the turret lathe
24. Use of special tools and attachments for the turret lathe	Methods of setup and use of boring tools, box tools, roller cutters, collapsible taps & self-releasing dies

UNIT D - MILLING MACHINE - 382 Hours

1. Care and use of the milling machine	Origin and principles of the machine
2. Oil and clean the milling machine	Types of lubricants and coolants used
	When and how to clean the machine
3. Plain milling	Types of machines, types of plain milling cutters
	Speeds and feeds
	Milling arbors and spacers
	Direction of cutter and feed
	Attachments and holding devices
4. End milling	The vertical milling attachment
	Types of end milling cutters
	Load limit to prevent breakage
5. Index milling	Dividing head and its uses
	Rapid, plain, differential, compound, and angular indexing
	Use of indexing tables
6. Straddle milling	Types of sid milling cutters
	Direction of feed
	Load limit
	Gang milling

7. Slitting	How to set up a slitting saw
	Holding devices
8. Milling key-ways	Methods of setting up work and cutters
9. Drilling in milling machine	How to set up a milling machine for drilling
10. Fly cutting	How to make and set up a fly cutter
11. Cut a spur gear	Spur gear nomenclature
	Knowledge of gear formular calculation
12. Cut a bevel gear	Bevel gear nomenclature
	Knowledge of gear formula calculations
13. Cut a helical gear	Helical gear nomenclature
	Knowledge of gear formula calculations

UNIT E - SHAPER - 180 hours

1. Care and use of the shaper	Origin and principles of the machine
2. Oil and clean the shaper	Types of lubricants used
	When and how to clean the machine
3. Machine plain surfaces	How to calculate speeds and feeds
	Methods of set up
4. Check table and align vise	Knowledge of dial indicators, squares and levels
5. Grind cutting tools	Knowledge of correct clearance angles for shaper tools

6. Machine irregular surfaces	Knowledge of clamping and setup
7. Machine parallel surfaces	Methods of laying out and setting up parallel surfaces
8. Machine vertical surfaces	Methods of setup for machining vertical surfaces
9. Machine square surfaces	Knowledge of dial indicators, master square and level
10. Machine angular surfaces	Understanding of compound angles
	Setting up for angular cuts
11. Cut keyways	Method of setting up and cutting keyways
12. Cut T-slots	Methods and tools used in cutting T-slots
13. Cut a rack	Methods and tools used in cutting a rack
	Knowledge of mathematics and layout
14. Machine dovetails	Methods and tools used in cutting dovetails
	Methods of measuring and laying out dovetails
15. Use hold-downs	Methods of clamping with hold-downs
16. Cut serrations	Methods and tools used in cutting serrations

UNIT F - PLANER - 160 hours

1. Care and use of planer	Origin and development of the machine
	How to measure capacities of planers
2. Oil and clean the planer	Lubricants and lubrication systems used
	When and how to clean machine
3. Check rail and bed for alignment	Knowledge of dial indicators, squares, and level
4. Machine plain surfaces	How to calculate speeds and feeds
	Correct setup methods
5. Grind cutting tools	Knowledge of forged tool shapes and clearance angles on cutter bits
6. Machine vertical surfaces	Methods of setup for machining vertical surfaces
7. Machine parallel surfaces	Methods of laying out and setting up parallel surfaces
8. Machine angular surfaces	Understanding of compound angles
	Setting up for angular cuts
9. Cut keyways	Methods of setting up and cutting keyways
10. Machine a tapered surface	Knowledge of calculating tapers
	Methods of setting up and cutting tapers
11. Adjust machine stroke	Function of trip dogs and safety stops

12. Hold work in a planer vise	Types of planer vises
13. Mount work on parallels	Methods and advantages of mounting work on parallels
14. Slot metal	Methods and setups used in slotting and parting stock

UNIT G - GRINDERS - 180 hours

1. Care and use of the surface grinder	Origin and purpose of machine
2. Oil and clean the machine	Correct lubricants and coolants for the surface grinder
3. Mount a grinding wheel	Knowledge of type, abrasive, grit, structure and bond
	Safety practices
	Methods of balancing and dressing
4. Set up work	Method of holding work
	Knowledge of magnetism
	Proper amount of metal to remove
	Speeds and feeds
5. Parallel grinding	Methods of grinding parallel surfaces
6. Square grinding	Methods used for grinding square surfaces
7. Angular grinding	Methods used for grinding angular surfaces

8. Cylindrical grinding	Methods of setup for external cylinder grinding
	Methods of setup for internal cylinder grinding
	Directions of rotation of grinding wheels and work
9. Relief grinding	Methods and setups used for relief grinding
10. Chamfer grinding	Methods and setups used for chamfer grinding
	Advantages of chamfering
	Knowledge of angles
11. Radius grinding	Methods and setups used in grinding convex and concave radii
12. Shoulder grinding	How to grind to a shoulder
13. Slab cutter grinding	Knowledge of proper width and angles of cutting edges
14. End mill grinding	Knowledge of proper width and angles of cutting edges
15. Formed cutter grinding	Knowledge of the principles of formed cutters
16. Reamer grinding	Knowledge of straight and tapered reamers
	Knowledge of types of flutes on reamers

UNIT H - METALLURGY - 180 hours

1.	Care and use of the heat treating furnace	Knowledge of the different types of furnaces
2.	Spark testing	Knowledge of the spark testing chart
3.	Identification of metals	Knowledge of refining and smelting operations
		Knowledge of ferrous and non-ferrous metals
		Knowledge of the S.A.E. system of steel marking
4.	Heat treatment	Knowledge of tempering, stress relieving, annealing, carburizing and hardening
		Knowledge of different types of quenching mediums
5.	Forging	Melting points of metals
		Effects of hammering hot metal
6.	Hardness testing	Knowledge of Rockwell, Brinell, scleroscope, Knoop, Charpy, and Izod testing machines

In 1963, there were over 570,000 machinists in the United States. It is estimated this occupation will experience a moderate increase in jobs during the 1960's, and in the longer run.[1]

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[1]United States Department of Labor, Bureau of Labor Statistics, Occupational Outlook Handbook, (Washington, D. C.: Government Printing Office, 1963), p. 434.

Practical nurse curriculum is open to qualified persons who meet the necessary requirements of the Kansas State Employment Bureau. Students attend classes eight hours per day, five days a week.[1]

		Hours
Unit I -	Personal and Vocational Relationships	32
Unit II -	Personal and Community Health 1. Family Relationships 2. Diversional Activities	70
Unit III -	Body Structure 1. Anatomy 2. Functions of the Human Body	48
Unit IV -	Nursing Principles and Skills 1. Nursing skills 2. Nursing of convalescent, sub-acute and chronically ill medical and surgical patients 3. Care of the aged 4. Meeting the nutritional needs of patients	230
Unit V -	Home Management, Food and Nutrition	60
Unit VI -	Mothers and Babies	20
Unit VII -	Children in Health and Disease	20
Unit VIII -	First Aid and Disaster Nursing	10
Unit IX -	Mental Health	20

Explanation:

The student spends the first 16 weeks of the training program in classroom instruction. Following this

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[1]Kansas State Employment Bureau, Unpublished Materials, Topeka, Kansas, 1962.

period, the student is assigned to the clinical area for practice experience in the following areas:

1. Medical and surgical Nursing	16-20 weeks
2. Care of obstetrical patients and newborn infants	6-8 weeks
3. Pediatrics	4-6 weeks
4. Geriatrics	Optional
5. Mental Health	Optional

During the eight month clinical practice period, the student continues with classes in relation to the clinical assignments or development of nursing skills and is under the direct supervision of a professional nurse clinical instructor.

In 1962, there were 225,000 practical nurses, but the supply has not been able to meet the demand. The outlook is excellent through the 1960's.[1]

Electrical household appliance is open to persons meeting Kansas State Employment Bureau requirements. The course is eight hours per day, five days per week. It is designed to teach students to service, repair and install home electrical appliances.[2]

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[1]United States Department of Labor, Bureau of Labor Statistics, Occupational Outlook Handbook, (Washington, D. C.: Government Printing Office, 1963), p. 321.

[2]Kansas State Employment Bureau, Unpublished Materials, Topeka, Kansas, 1962-1965.

Units	Hours	Skills to be developed and knowledge to be acquired	Evaluative Methods	Instructional Materials Teaching aids, etc.
1	250	Basic Electrical Principles Ohms Law and Watts Law Parallel and series circuits D.C. and A.C. Circuits Conductors and Insulators Grounding Magnet and electro magnet Symbols and Schematics	Progress Charts Daily Attendance Records Performance Tests Written tests	Films Models Blackboards
2	50	Test instruments: Series test lamps Appliance Tester Volt meter Ammeter Ohm-meter	Observation of work Question and answer Shop practice	Textbooks Actual units
3	50	Tools and wiring problems: Attachment cords Receptacles and plugs Soldering and securing connections		

Electrical Household Appliance (Cont.)

Units	Hours	Skills to be developed and knowledge to be acquired	Evaluative Methods	Instructional Materials Teaching aids, etc.
4	140	Heating element appliances: Electric irons - repair - maintenance Toasters - repair - maintenance Hot plates - repair - maintenance Heating element appliances Roasters - repair - maintenance Hot pads - repair - maintenance Coffee makers - repair - maintenance Other heating element appliance repair		
5	175	Home air-conditioner (window units) installation - maintenance		
6	150	Refrigerators - repair - maintenance		

Electrical Household Appliance (Cont.)

Units	Hours	Skills to be developed and knowledge to be acquired	Evaluative Methods	Instructional Materials Teaching aids, etc.
7	50	Appliance motors - repair - maintenance Food mixers - repair - maintenance Vacuum cleaners and fans - repair - maintenance		
8	250	Washing machines - repair - maintenance		
9	100	Clothes dryers - repair - maintenance		
10	75	Electric Dishwashers - repairs - maintenance		
11	50	Fluorescent lamps - repair - maintenance		
12	40	Refinishing methods, cleaning, painting and polishing and general reconditioning of electric appliances		
13	50	Indirectly related A. Complete serviceman's forms and records		Serviceman's Forms and Records

Electrical Household Appliance (Cont.)

Units	Hours	Skills to be developed and knowledge to be acquired	Evaluative Methods	Instructional Materials Teaching aids, etc.
		B. Personality and job success C. Employer - Employee Relations 1. Receive and follow directions of supervisors 2. Work for best interest of his employer 3. Follow company policy and system 4. Accept criticism wisely 5. Understand some of the problems of employers dealing with employees 6. Analyze his relationship with his employer 7. Air his grievances intelligently		

Electrical Household Appliance (Cont.)

Units	Hours	Skills to be developed and knowledge to be acquired	Evaluative Methods	Instructional Materials Teaching aids, etc.
		8. Terminate employment properly		
		9. See relationship between job success and a satisfactory relationship with his employer		
		D. Co-Worker Relations		
		1. Recognize the importance of good co-worker relations		
		2. Know and be able to apply certain fundamentals for good co-worker relations		
		3. Understand that competition is involved in co-worker relations		

Electrical Household Appliance (Cont.)

Units	Hours	Skills to be developed and knowledge to be acquired	Evaluative Methods	Instructional Materials Teaching aids, etc.
		4. Know some of the needs and desires of his co-workers E. Progress on the job 1. Realize the value of setting up goals which will guide him in his employment 2. Formulate tentative goals for his occupational career 3. Understand the usual paths of advancement in his occupation 4. Understand the need for continued training for job progress 5. Plan for the training needed to obtain his goals		

Electrical Household Appliance (Cont.)

Units	Hours	Skills to be developed and knowledge to be acquired	Evaluative Methods	Instructional Materials Teaching aids, etc.
		6. Know the available sources of training opportunities 7. Understand the responsibilities and obligations he will have to assume as a result of advancement F. How money management affects the worker 1. Appreciate the importance of living within his means 2. Know how to plan and maintain a personal and family budget 3. Be able to use credit wisely 4. Understand the process of saving and investing and its importance to the worker		

Electrical Household Appliance (Cont.)

Units	Hours	Skills to be developed and knowledge to be acquired	Evaluative Methods	Instructional Materials Teaching aids, etc.
		5. Understand the components and purposes of the American banking system and its implications to the worker		
		G. Taxes and the worker		
		1. Be able to complete his own income tax return		
		2. Understand why tax deductions are made from his wages		
		3. Understand the method used to compute his salary and how		
		4. Understand the withholding tax law so as to realize how the employer gets his authority to make tax deductions		

Electrical Household Appliance (Cont.)

Units	Hours	Skills to be developed and knowledge to be acquired	Evaluative Methods	Instructional Materials Teaching aids, etc.
		5. Understand the necessity of taxes 6. Understand the employers role in collecting taxes 7. Understand the basic principles behind taxation H. Social Security 1. Understand what deductions are withheld for social security 2. Know if his anticipated employment is covered by the Social Security Act 3. Understand what the nine programs of Social Security are and how they may affect him as a worker		

Electrical Household Appliance (Cont.)

Units	Hours	Skills to be developed and knowledge to be acquired	Evaluative Methods	Instructional Materials Teaching aids, etc.
		4. Understand where free counsel pertaining to Social Security accounts may be obtained 5. Appreciate the need for Social Security legislation I. Workers and Unions 1. Be able to make an intelligent decision regarding whether or not he should join a union 2. Understand the purposes and aims of labor unions 3. Know and understand the common terms of labor-management relations		

Electrical Household Appliance (Cont.)

Units	Hours	Skills to be developed and knowledge to be acquired	Evaluative Methods	Instructional Materials Teaching aids, etc.
		4. Be aware of how labor and management function in their bargaining activities 5. Understand why labor laws were enacted, and why these laws govern both labor and management 6. Have a concept of how unions have developed and grown in importance over the years 7. Be familiar with labor laws presently in effect and their major provisions		

Electrical Household Appliance (Cont.)

Units	Hours	Skills to be developed and knowledge to be acquired	Evaluative Methods	Instructional Materials Teaching aids, etc.
		8. Realize the impact of organized labor and collective bargaining on workers themselves, on management, and on the society as a whole		
		9. Become familiar with other labor legislation which affects workers		
		J. Legal Problems of the Worker		
		1. Recognize a legal problem in a business relationship		
		2. Know where legal assistance is available		
		3. Understand the importance of contracts in business		

Electrical Household Appliance (Cont.)

Units	Hours	Skills to be developed and knowledge to be acquired	Evaluative Methods	Instructional Materials Teaching aids, etc.
		4. Understand his legal capacity in acting for his employer 5. Understand his rights and duties as a citizens in business relationships 6. Understand his rights and duties as a citizen in business relationships K. Insurance and the worker 1. Have a better understanding of the nature and purpose of insurance 2. Have a better understanding of the specific kinds of insurance and their purpose		

Electrical Household Appliance (Cont.)

Units	Hours	Skills to be developed and knowledge to be acquired	Evaluative Methods	Instructional Materials Teaching aids, etc.
		3. Be better able to plan his own insurance needs 4. Understand the services which are offered by an insurance agent L. Understanding Business Management 1. Understand the principles and philosophy of the private enterprise system 2. Understand the basic operation of our economic system 3. Understand the role of his employer in our economic system 4. Have an understanding of the basic organizations of business		

Electrical Household Appliance (Cont.)

Units	Hours	Skills to be developed and knowledge to be acquired	Evaluative Methods	Instructional Materials Teaching aids, etc.
		5. See the relationship between his work and the various functions of management 6. Appreciate the importance of small business in the United States		

In 1963, there were 165,000 employed in this occupation. Rapid growth is expected throughout the 1960's, and in the longer run.[1]

Stenographer course is a six hour per day, five days per week course, and is open to persons who meet the requirements according to the Kansas State Employment Bureau. The stenographer training program includes 600 clock hours of instruction for each trainee as follows:[2]

Shorthand	100 hours
Transcription	100 hours
English	80 hours
Math	40 hours
Business machines	80 hours
Production typing	100 hours
General clerk (payroll, filing, etc.)	100 hours

In 1960, there were approximately 2,000,000 stenographers, ninety-five percent of whom were women. This occupation is expected to have good growth through the 1960's, and 1970's.[3]

Clerk general office is open to all qualified MDTA persons. The course is six hours per day, five days per

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[1]United States Department of Labor, Bureau of Labor Statistics, Occupational Outlook Handbook, (Washington, D. C.: Government Printing Office, 1963-1964), p. 403.

[2]Kansas State Employment Bureau, Unpublished Materials, Topeka, Kansas, 1962.

[3]United States Department of Labor, Bureau of Labor Statistics, Occupational Outlook Handbook, (Washington, D. C.: Government Printing Office, 1963-1964), p. 269.

week, and the training program includes 540 clock hours of instruction for each trainee as follows:[1]

Beginning typing	120 hours
Bookkeeping	140 hours
General office practice	90 hours
Machines	60 hours
Production typing	90 hours
Business English	40 hours

In 1963, there were 10,000,000 persons engaged in clerical or closely related work.[2] See Figure 8.[3]

Salesperson general course is opened to qualified MDTA students. The course is six hours per day, five days per week. The training program includes 180 hours of instruction for each trainee as follows:[4]

Introduction and orientation	1 hour
Business Math, incl. sales tickets	30 hours
Business terminology	30 hours
Emergency situations	2 hours
Store layout, design and location	2 hours
The selling job	2 hours
Cash register operation & change mak.	30 hours
Store system Rules and regulations	4 hours
Types of customers	2 hours

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[1]Kansas State Employment Bureau, Unpublished Materials, Topeka, Kansas, 1962.

[2]Kansas State Employment Bureau, Unpublished Materials, Topeka, Kansas, 1962.

[3]United States Department of Labor, Bureau of Labor Statistics, Occupational Outlook Handbook, (Washington, D. C.: Government Printing Office, 1963-1964), p. 267.

[4]Kansas State Employment Bureau, Unpublished Materials, Topeka, Kansas, 1962.

Approaching customers	2 hours
Opening the sale	2 hours
Presenting the merchandise	2 hours
Merchandise facts	2 hours
Suggestion selling	2 hours
Closing the sale	2 hours
Customer services Credit	2 hours
Packaging and wrapping	2 hours
Telephone selling	2 hours
Merchandising Profit and loss Overhead Mark-up Mark-down Shrinkage	10 hours
Sales promotion Store display Newspaper advertising Radio TV National advertising Direct mail Dealer aids	20 hours
Ethics	2 hours
Job hunting, application blanks, application tests, interviewing, followup	
Employment information	4 hours
Marking machine, scale operation, yard goods pricer-computer, show-cards	17 hours

Curriculum offerings based upon Kansas labor market needs. The curriculum offered by the Topeka, Kansas, Area Vocational-Technical School was based primarily upon the labor needs of Shawnee County, the surrounding counties of Kansas and the United States.

An examination of the major occupations according to the 1960 United States census report on Shawnee County and adjacent counties pointed out which occupations employed

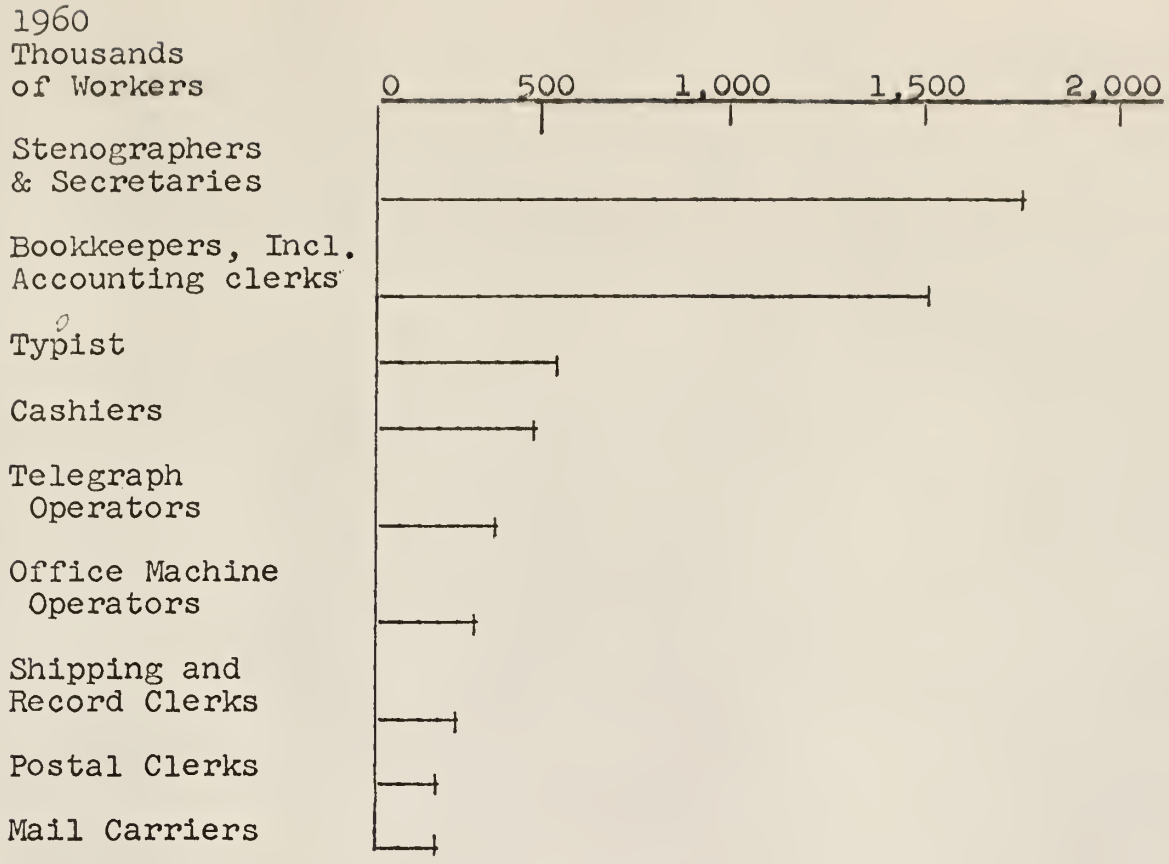

FIGURE 8

OCCUPATIONS EMPLOYING FIFTY PERCENT
OF ALL CLERICAL WORKERS

the greatest number of workers. See the Appendix for the census report.

The curriculum of the Topeka, Kansas, Area Vocational-Technical School seemed to be adequate to fulfill the labor needs of the Topeka area and the state of Kansas. All occupations taught by the school increased throughout the state between October, 1962, and October, 1963, with the exception of printing.[1] (See Table V).

According to the 1963 Occupational Outlook Handbook, all courses taught at the Topeka, Kansas, Area Vocational-Technical School, including printing, are expected to experience at least a moderate increase in growth.

With the anticipated increase in enrollment and expansion of the curriculum, the school could use the services of a guidance counselor. The school does not have a full nor a part-time counselor.

The number of teachers seem to be adequate for teaching the curriculum. Classes average between fifteen and twenty-five students.

Expansion of Topeka, Kansas, Area Vocational-Technical School. In order to better meet the labor needs of the Topeka area, an expansion of the curriculum has

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[1]Kansas State Employment Security Division, Kansas Labor Market, (Topeka, Kansas, November, 1963), p. 7.

TABLE V

CHANGE IN PER CENT OF THE CIVILIAN WORKFORCE
IN KANSAS, OCTOBER, 1962, TO OCTOBER, 1963

	Number of jobs		Per Cent
	Oct. 1962	Oct. 1963	of change
Manufacturing			
Durable Goods Electrical Machinery Welding	66,100	66,300	+ 0.3
Nondurable Goods Printing	50,700	49,600	- 2.2
Service	75,600	79,300	+ 4.9
Auto Mechanics Photography Radio & Television Office Machine Practical Nursing Clerical			
Retail Selling	103,100	104,600	+ 1.4
Agricultural Related	670,800	680,200	+ 1.4

been proposed for the school's new plant facilities. Earlier in this report mention was made of the construction of the new school plant planned for sometime in 1965.

Listed below are some of the possible future course selections that will be available to the students:

Proposed short courses

1. Hospital ward clerks
2. Maintenance training (hospitals, schools, etc.)

Other possibilities:

1. Technical drafting
2. Electronics
3. Heavy appliance repair
4. Food occupations
5. Medical library technician
6. Chemical technology
7. Metullurgic technician
8. Cosmotology
9. Auto body repair

By expanding the curriculum the school could be meeting the interests of more students, and may better serve the demands of the labor market.

Placement Procedures

Topeka, Kansas, Area Vocational-Technical School. The school does not have a guidance counselor or any other personnel to help students find jobs upon graduation. The state employment security offices and private employment agencies have the task of finding positions for graduates, or the students may find employment for themselves.

On occasion employers have called the school to make inquiry about potential employees, but, for the most part, students are on their own in finding jobs, according to the assistant director of the school, during an interview.

Kansas State Employment Security Bureau. Topeka, Kansas, State Employment Security Bureau has been successful in finding employment for all of its graduates who wanted employment. (See Table VI).[1] In an interview with a counselor in this agency it was learned that some students, upon completion of their course of study, decide, for reasons of their own, not to seek employment.

Throughout the United States, during 1963, 65,000 individuals were enrolled in Manpower Development and Training Act courses, and about 27,500 completed the

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[1]Kansas State Employment Security Bureau, Unpublished Materials, Topeka, Kansas, 1963-1965.

TABLE VI

STUDENTS ENTERING MDTA COURSES, COMPLETING COURSES AND THEIR PLACEMENT ON JOBS, 1963-1965

Course	Students Enrolled Male	Female	Graduates	Graduates Placed on Jobs
Automobile Mechanic	19 17		8	7
Electrical Household Appliance	17			
Practical Nurse		31	20	20
Machine Operator	21		16	15
Salesperson General	2	16	18	14
Clerk General Office		16	14	14
Stenographer		11	7	7

Note: Classes that show enrollments but no graduates are still in training at the time of this report.

courses. About 20,000 graduate trainees were placed in jobs, most of them in occupations related to their training.[1]

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[1]United States Department of Labor, Manpower Research and Training, (Washington, D. C.: Government Printing Office, 1964), p. 5.

SUMMARY AND CONCLUSIONS

Selection of high school students for the Topeka, Kansas, Area Vocational-Technical School was handled exclusively by the counselors of the participating high schools. Testing of non-high school students and selection of Manpower Development and Training Act students was handled, primarily, by the Kansas State Employment Security Bureau.

An enrollment of six hundred and forty-one students started vocational training in the Topeka, Kansas, Area Vocational-Technical School in September, 1964. Upon investigation, it was found that while the faculty was adequate for the number of students, a guidance counselor was not available at the school. A school of this size should have its own full-time, state qualified counselor, who understands the school situation and is readily available to the students. With the anticipated growth, a counselor would be of considerable value for services he could offer the students.

Unskilled jobs are fast disappearing, and with technology creating new jobs and eliminating older jobs, the vocational school takes on the task of preparing our young workers for the world of work. The vocational school provides the young, future worker with saleable job

skills. It supplements the regular public high school but neither school will replace the other. The high school helps students become enlightened citizens and will continue to prepare college-bound students for the professions. The vocational school is providing the additional training needed by persons desiring to enter employment which does not require professional training in institutions of higher learning.

A follow-up-study is recommended as soon as it is practical to evaluate the curriculum, the training procedures, and placement of students in jobs for which they were trained. Other valuable information concerning the Topeka, Kansas, Area Vocational-Technical School, can also be obtained from a follow-up-study for the benefit of the school and its students.

The curriculum studied in this report seemed to be a worthy curriculum since students were training for jobs that would be in demand for some time to come. To keep the curriculum current with job needs, a curriculum study is suggested every two to three years.

The State of Kansas should invest in its youth by providing both generous scholarships and an ample number of scholarships for persons interested in vocational training.

Many students are attending the Topeka, Kansas, Area

Vocational-Technical School as part-time students because it is necessary for them to hold a job for a livelihood. Students who need financial assistance to up-grade themselves, or to learn a new skill, should not be restricted because they lack the necessary funds for training.

Graduates of vocational schools who showed considerable promise in training, should also receive further financial assistance from the state for advanced vocational training.

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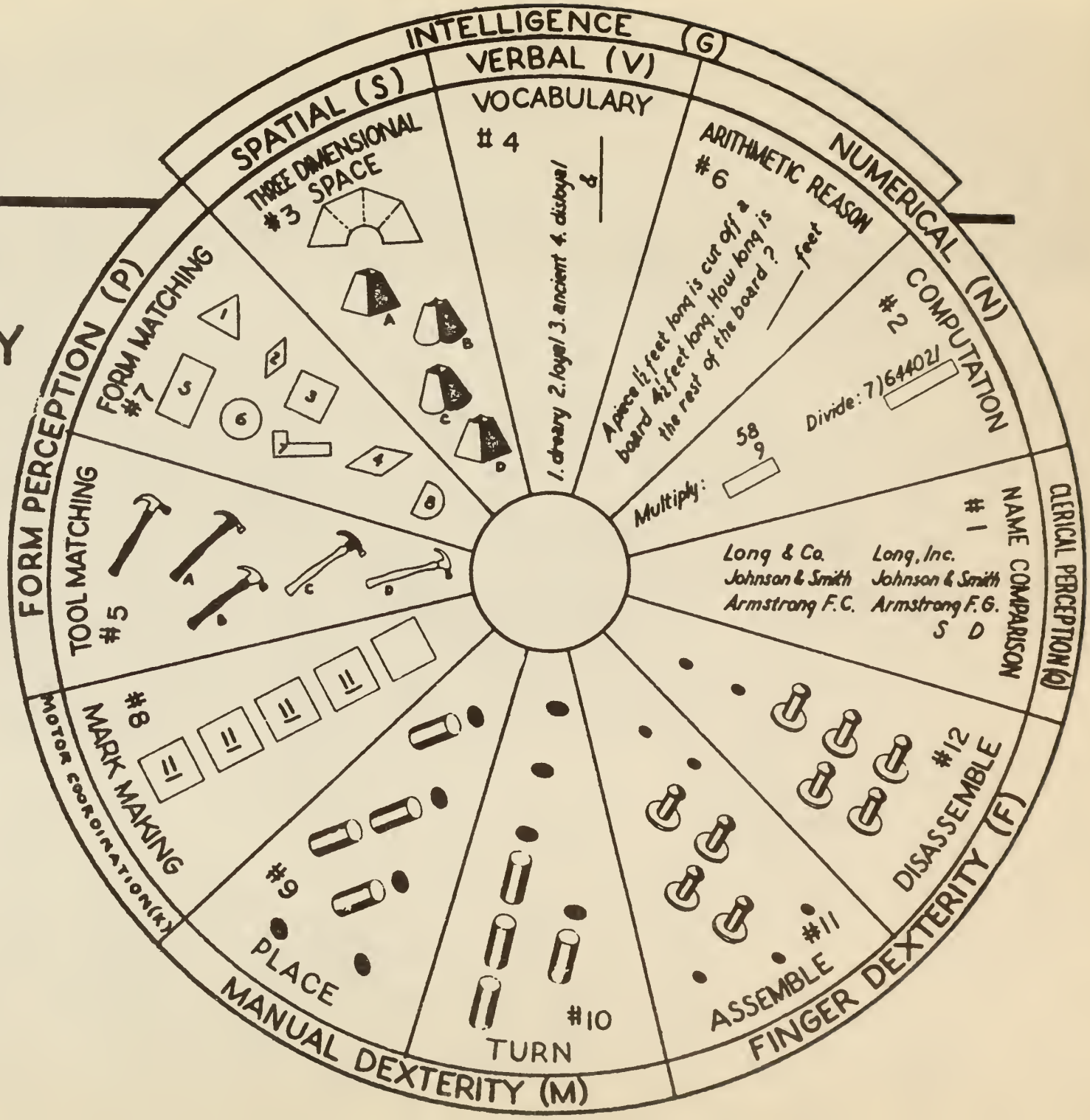
APPENDIX

OCCUPATION GROUPS OF EMPLOYED PERSONS - 1960 U. S. Census

OCCUPATION (Employed)	SHAWNEE (total)	JEFFERSON (total)	DOUGLAS (3/4)	JACKSON (3/4)	OSAGE (1/2)	WABAUNSEE (3/4)	TOTAL
Professional, Technical and Kindred Workers	6,984	334	3,413	271	324	163	11,489
Farmers and Farm Managers	863	880	902	965	1,110	764	5,484
Managers, Officials and Propr's, Exc. Farm	4,652	222	1,174	179	287	176	6,690
Clerical and Kindred Workers	10,739	412	2,473	326	496	201	14,647
Sales Workers	3,768	195	1,045	203	279	115	5,605
Craftsmen, Foremen, and Kindred Workers	6,606	526	1,876	391	446	214	10,059
Operatives and Kindred Workers	5,864	510	1,798	567	435	206	9,380
Private Household Workers	1,102	56	428	56	74	45	1,761
Service Workers, Except Private Household	4,952	277	2,106	191	262	146	7,934
Farm Laborers and Farm Foremen	293	255	235	234	179	229	1,425
Laborers, Except Farm and Mine	2,186	137	678	239	296	145	3,681
Occupations Not Reported	2,869	156	538	52	113	23	3,751
TOTAL	50,878	3,960	16,666	3,674	4,301	2,427	81,906

(NOTE: Corners of Pottawatomie, Lyon, Franklin, Leavenworth, Atchison Counties are not included in the above figures.)

9 APTITUDES MEASURED BY 12 TESTS IN THE GENERAL APTITUDE TEST BATTERY



SENATE BILL No. 438

An Act concerning public schools and providing area vocational-technical schools; providing that the state board of education shall also be the state board for vocational education; prescribing the method of establishing such schools; providing for certain powers and duties of the state board for vocational education and of certain local school boards; providing for state payment of certain area vocational-technical school expenses and authorizing certain tax levies; authorizing issuance of bonds if approved by election; amending section 72-4302 of the General Statutes Supplement of 1961, and repealing said original section.

Be it enacted by the Legislature of the State of Kansas:

Section 1. Declaration of purpose. It is the intention of the legislature and the purpose of this act to provide a means whereby the state of Kansas in co-operation with local communities can provide facilities for training and preparation of students for productive employment as technicians and skilled workers, and to more nearly equalize educational opportunity.

Sec. 2. Definitions. As used in this act, unless the context otherwise requires:

(a) "Board" means the governing body of any school district which operates a high school or junior college or institution of higher learning.

(b) "Area vocational-technical schools" means those vocational or technical schools organized and approved by the state board and officially designated as area vocational-technical schools under the provisions of this act.

(c) "State board" means the state board for vocational education.

Sec. 3. Location and establishment of area vocational-technical schools. Any board or group of boards may individually or jointly organize and present a plan to the state board for the establishment and operation of an area vocational-technical school. The plan may include co-operative arrangements which include junior colleges and state and municipal institutions of higher learning in the area.

The plan shall be prepared in co-operation with the director of vocational education and on forms developed and provided by the state board.

Information included in support of the plan for any area vocational-technical school shall include, but not be limited to the following:

(a) Concentration of population within a reasonable community service area;

(b) Total school enrollments in grades one through eight, and in grades nine through twelve, separately;

(c) Number of high-school graduates within the area to be served;

(d) Probability of sustained growth in school enrollments within such area;

(e) Identification of educational services needed within such area;

(f) Local interest and attitudes toward the program within said area;

(g) Ability of such area to contribute to the financial support of the program;

(h) Consideration of the area in relation to other requests for programs of vocational-technical training to prevent overlapping or duplication of educational services.

Upon receipt and examination of such plan and supporting evidence, the state board shall conduct hearings, investigate school records, and such other information relating to vocational-technical training as it may deem appropriate.

After approval of such a plan, the school may be established and shall be officially classified by the state board as an area vocational-technical school and shall operate under the provisions of this act.

Sec. 4. Administrative organization. As used in this act the term "board of control" shall mean the governing body of an area of vocational-technical school upon which this act confers powers and imposes duties, and which shall be comprised as hereinafter provided. The board of control of any area vocational-technical school may be (1) the board of the school district in which such school is located; or (2) a board consisting of one or more representatives from each of the boards of the co-operating districts subject to the approval by the state superintendent as to the number of representatives from each such district.

Where the board of control is comprised as provided in (1) above, such board shall employ a director of the area vocational-technical school. Where the board of control is comprised as provided in (2) above, the board shall employ an administrator of the area vocational-technical school. Such director or administrator shall be called the "local director of vocational-technical education," hereinafter called "local director." If such local director is employed by a board comprised as provided in (1) above, his responsibilities shall be the development of the area vocational-technical school. If the local director is employed by a board of control comprised as provided in (2) above, his responsibilities shall be the development and administration of the area vocational-technical school. The local director shall have such vocational education experience and professional vocational education as may be required by the state board.

Sec. 5. Financing. Federal moneys made available to the state under legislation passed prior to or after the passage of this act for technical and/or vocational training programs which are administered by the state board may be used in support of area vocational-technical schools within the provisions of federal legislation.

Tuitions and fees shall be established by the governing body and shall be charged to or for persons who are not enrolled as full-time students receiving instruction at said school. Tuitions and fees shall also be charged for instruction provided to students who live in a nonparticipating school district. The amount of tuition and fees to be charged shall be established by the governing body with the approval of the state board. Students residing outside of the co-operating or participating districts may make application to the county superintendent of the county in which such student resides for approval of attendance by such student in a particular area vocational-technical school. Upon approval of any such application by such county superintendent, the board of county commissioners of such county shall allow and pay the tuition

and fees of such student to attend such area vocational-technical school. Such county superintendent may refuse to approve any such application if the person applying is over the age of eighteen years and has resided in such county less than one full year, or for any reason which would disqualify such person from attendance in the public schools of such county. Upon approval by the board of control, any person may be admitted to the school upon his individual payment of the tuition and fees established by the board of control.

State funds made available by the legislature and administered by the state board for the promotion of vocational education may, at the decision of such board, be used to pay all or part of the vocational instruction expenses of any area vocational-technical schools. Such state funds shall be made available only in support of courses accredited pursuant to this act.

The state superintendent of public instruction shall establish standards for the accreditation of high school courses in vocational and technical training programs offered in the high schools of this state and in the vocational-technical schools authorized by this act.

The state board is hereby authorized to budget and request of the legislature funds to be appropriated and used for such expenses to establish, conduct, maintain and operate area vocational-technical schools officially approved and so designated.

Participating and co-operating school districts under the provisions of this act are hereby authorized to include and expend funds for this purpose from their general budget. Participating and co-operating governing bodies are hereby authorized after receiving official approval from the state board to levy a tax not to exceed two (2) mills for the purpose of providing revenue for the general fund of such school district to be used in sharing the cost of establishment, conducting, maintaining and operating the area vocational-technical school. Such tax levy shall be in addition to all other levies authorized or limited by law and shall not be subject to or within any aggregate tax levy limit prescribed by article 19 of chapter 79 of the General Statutes Supplement of 1961 or acts amendatory thereof.

The governing body may receive any donation, gift, grants or bequests made to the school for the conduct of any vocational class or instructional program, and in accordance with any conditions imposed with the taking, may expend the same without complying with the budget provisions of law, and the same shall not reduce the authority herein granted to levy and expend taxes and tax money. The state board may receive any donation, gift, grant or bequest made in behalf of any specific area vocational-technical school or for the state program of area schools to be distributed to the approved schools as equable as possible in the interest of the total co-ordinated program of area vocational-technical schools.

Sec. 6. The governing body of any co-operating or participating school district shall have authority to issue general obligation bonds of such district to acquire lands by purchase or eminent domain; and to improve or construct buildings and other improvements; and to equip, furnish, repair, remodel or make additions to any building or buildings used or to be used for an area vocational-technical school, if the board determines that the issuance of such bonds is necessary for one or more of such purposes and to carry out the

intent of this act. The board shall adopt a resolution stating the purposes for which bonds are to be issued and the estimated amount thereof. A bond election shall be required for the approval and authorization of issuance of bonds under the provisions of this act and such bond election shall be held in the manner provided in chapter 10 of the General Statutes of 1949, and amendments thereto, but no bond election shall be held without the written approval of the state superintendent, and the aggregate amount of any such bonds outstanding at any one time shall not exceed fifty thousand dollars ($50,000) for any school district: Provided, Where more than one co-operating or participating school district proposes to issue bonds under authority of this section, each individual district shall hold a separate bond election and if a majority of those voting on the bond proposition in any district shall approve the same, the bonds of such district may be issued; however, the boards of co-operating or participating school districts shall agree prior to any such election as to the respective rights of such districts in which bonds are approved and such districts in which bonds are not approved.

For the purposes described in this section, and within the limitations herein provided, any co-operating or participating school district is authorized to issue its bonds in payment of a joint undertaking with other co-operating or participating school districts. Such bonds may be issued for the purposes herein provided whether the lands, buildings or improvements are located in the school district issuing such bonds, or in one of the other co-operating or participating districts. Before any such bonds are issued under the provisions of this paragraph a contract shall be entered into between the participating school districts upon forms provided by the state superintendent and approved by the attorney general. Any such contract shall provide respective rights of the participating districts and the rights that shall accrue to bondholders.

Any bonds issued under authority of this act shall recite reference to this act and, except as is herein otherwise provided, shall be issued and paid in accordance with chapter 10 of the General Statutes of 1949 and acts amendatory thereof or supplemental thereto.

Sec. 7. Qualifications of applicants; rules and regulations governing. Participating students shall meet such requirements of minimum age as are provided by law for specific occupation or training programs.

The board of control shall promulgate rules and regulations to determine eligibility of applicants to participate in the program.

Sec. 8. Section 72-4302 of the General Statutes Supplement of 1961 is hereby amended to read as follows: Sec. 72-4302. The state board of education is hereby designated the state board for vocational education which shall be the state board for the administration of the act mentioned in section 72-4301 of the General Statutes of 1949, and is hereby charged with the duty and responsibility of co-operating with the federal board for vocational education in the administration of said act and is given all power necessary for such administration and co-operation. The state board for vocational education shall appoint and fix the compensation of a director of vocational education who shall serve at the pleasure of such board. Said director is hereby designated

as and shall be the chief executive officer of the state board for vocational education for the administration of the act of which this section is amendatory and he shall administer said act in accordance with policies established by such board.

Sec. 9. Section 72-4302 of the General Statutes Supplement of 1961 is hereby repealed.

Sec. 10. This act shall take effect and be in force from and after July 1, 1963, and its publication in the statute book.

SELECTION, CURRICULUM, AND JOB PLACEMENT OF STUDENTS IN THE TOPEKA, KANSAS, AREA VOCATIONAL-TECHNICAL SCHOOL

by

PHILLIP EDWARD BECKER

B. S., Ohio State University, 1961

AN ABSTRACT OF A MASTER'S REPORT

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requirements for the degree

MASTER OF SCIENCE

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In 1961 President John F. Kennedy appointed a panel to study the programs of vocational education in the nation. This panel, in its report to the President, stated that there will be 87,000,000 people assuming full-time employment, of which 3,000,000 will be wives, mothers, and widows who will have returned to work between 1960 and 1970; 26,000,000 will be young workers entering the labor market; while 58,000,000 now working will still be employed. The 26,000,000 young workers must possess the skills and education needed to match the demands of a changing economy. Women returning to the work force and adults continuing to work will require additional training to keep pace with new jobs and new skills.

Congress passed the Vocational Education Act of 1963, also known as the Perkins Act, as a result of the study made by the President's panel.

The Kansas State Legislature passed Senate Bill 438 in 1963 to assist the federal government in the development of vocational education in the state of Kansas.

Statement of the Problem

It was the purpose of this report to (1) examine the methods used in selecting students for the Topeka, Kansas, Area Vocational-Technical School; (2) to study the curriculum; (3) to examine the future status of occupations

being taught; and (4) to determine job placement after the students' graduation.

Procedures

Procedures for studying the group selected. In this report the following methods were used to compile the necessary information for studying the Topeka, Kansas, Area Vocational-Technical School: (1) interviews with the school's officials and officials of the state vocational board; and (2) a review of the literature which included books, periodicals, laws and unpublished materials.

SUMMARY AND CONCLUSIONS

Selection of high school students for the Topeka, Kansas, Area Vocational-Technical School was handled exclusively by the counselors of the participating schools. Testing of non-high school students and selection of Manpower Development and Training Act students was handled, primarily, by the Kansas State Employment Security Bureau.

The teacher-pupil ratio appeared to be satisfactory, with classes averaging fifteen to twenty-five students.

The curriculum of the school is adequate. Students are being trained for jobs now in demand and for those with a good outlook.

Recommendations

A full-time, state-qualified counselor is needed at the school. At the time of this report, the school had neither a part-time nor a full-time counselor.

A curriculum study is suggested every two to three years to keep offerings current with job needs.

The State of Kansas should make available scholarships for students who need high school vocational training and, at the same time, must earn a livelihood. Also, scholarships for advanced vocational training may be considered for exceptionally able individuals.