

THE DEVELOPMENT OF POST-HIGH SCHOOL  
TECHNICAL-VOCATIONAL EDUCATION  
IN OKLAHOMA

BY

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## CHAPTER I

### THE PROBLEM

#### Introduction to the Problem

The striving for the satisfaction of individual needs of people around the world has been greatly altered in the last few years and will continue to be altered at a rapid pace. Educational and political leaders must help to prepare people for this changing world. Grant Venn, Associate Commissioner for Adult and Vocational Education, states that:

Technological change has, rather suddenly, thrown up a dramatic challenge to this nation's political, economic, social, and educational institutions. Though the full scope of this challenge may not be comprehended for years to come, its dimensions are now clear enough to call for a massive response on the part of American education. All levels of education, and particularly postsecondary education, must quickly move to assume greater responsibilities for preparing men and women for entry into the changed and changing world of technological work. Unless far more and far better education on the semiprofessional, technical, and skilled levels is soon made available to greater numbers of citizens, the national economy and social structure will suffer irreparable damage.<sup>1</sup>

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<sup>1</sup>Grant Venn, Man, Education and Work. (American Council on Education, Washington, D. C., 1964), p. 1.

Changes are taking place in all occupations. There is increased specialization in some and decreased specialization in others. Still other occupations are being created to meet the needs of the world. One of the occupational groups experiencing greatest growth in recent years has been the technical occupations. Many things have brought about considerable growth in the technical occupations.

The report of a survey conducted about public vocational-technical education in Oregon, states that:

As industry becomes more and more complex, the functional area between the skilled craftsman and the graduate engineer grows larger. The craftsman continues to translate the ideas and designs of the engineer into the finished tool or product. The engineer becomes more concerned with long-range planning and the application of fundamental scientific theory. This fact gives rise to the need for another type of worker who can devote his time and effort to the solution of day-to-day production activities; the detailing, designing, and estimating of products for production; and numerous other assignments in order to relieve the engineer of many routine duties.<sup>2</sup>

Another cause for the growth in technical occupations has been the changing emphasis in education as stated by William Schill in Curricula Content for Technical Education. He states that:

One of the prime examples of the changing emphasis in education can be found in the colleges of engineering. The colleges of engineering have gradually divorced themselves from practical

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<sup>2</sup>W. R. Flesher, M. A. Flesher, R. M. Reese, Public Vocational-Technical Education in Oregon. (School Survey Service, Columbus, Ohio, 1958), p. 2.

application of the abstract concepts of the sciences. This, in turn, has contributed to the increasing need for a new group of occupations that we have recently begun to call the technical occupations.<sup>3</sup>

The American educational system has not done enough in training people to fill these technical occupations, but has focused its attention overwhelmingly on the 20 per cent of students who receive a baccalaureate degree. What is to happen to the 80 per cent who do not go through college?<sup>4</sup> Some of them could be trained in technical-vocational occupations to fill the needs that exist.

Oklahoma faces many of the same problems as the rest of the nation with regard to training for technical-vocational occupations. Workers in technical occupations in Oklahoma make up the smallest major occupational group, but it is expected that the technical occupations will experience the greatest growth rate of any major occupational group in the near future. Employment in technical occupations is expected to increase by 30.3 per cent by 1975, over the 1963 level of employment.<sup>5</sup>

The clerical sales occupational group in 1963 was the largest occupational group in Oklahoma, and is ex-

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<sup>3</sup>William John Schill, Curricula Content for Technical Education. (University of Illinois, 1964), p. 2.

<sup>4</sup>Edward T. Chase, "Learning to be Unemployable", Harper's Magazine. (April, 1963), p. 33.

<sup>5</sup>Manpower in Oklahoma. (Oklahoma Employment Security Commission Oklahoma City, Oklahoma, December 1964), p. 16.



pected to remain the State's largest occupational group throughout the period 1963-1975. Employment in this group is expected to gain 23.1 percent by 1975, over the 1963 level of employment.<sup>6</sup>

The skilled labor force occupational group is the second ranked group in size in Oklahoma and is expected to maintain this position through 1975. Employment in this area is expected to gain 23.7 percent by 1975, over the 1963 level of employment.<sup>7</sup>

In Oklahoma approximately 70 per cent of the first grade school population will not obtain a baccalaureate degree. Technical-vocational education in Oklahoma could provide, to some of these 70 per cent who do not complete college, training that will permit them to work at their full capacity and help to alleviate the shortages of workers that exist and will exist to a greater extent in the technical-vocational occupations.

#### Statement of Problem

The major objective of this study is to investigate and present data about the development of post-high school technical-vocational programs in Oklahoma.

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<sup>6</sup>Ibid., p. 18.

<sup>7</sup>Ibid.

There have been many studies of various technical-vocational programs and their graduates, concerning higher education in Oklahoma, and about the history of industrial education in Oklahoma. However, there has not been any study that presents the development of technical-vocational education in Oklahoma from the aspect of legislation, programs offered, and trends.

### Purpose of Study

The major purpose of this study is to make available to the individuals for whom this information would be particularly relevant as well as to the general public, information concerning the development of post-high school technical-vocational education in Oklahoma. This purpose will be accomplished by investigating patterns and trends indicated in the following research questions:

1. To what extent have trends in technical-vocational education been influenced by legislation?
2. What enrollment and graduate trends are indicated by changes in the numbers of students participating in these programs since 1959?
3. Are there any trends with respect to the amount of recognition given to technical-vocational education in Oklahoma by the state legislature and administration, industrial people, researchers, and educators?

### Need for Study

With ever changing emphasis and development in the

area of technical-vocational education, there is a need for a recording of the various developments that have been made concerning this area of education. This type of record will be useful to technical-vocational instructors, guidance counselors, legislators, and others.

History is a composition of the past--the foundation upon which our future is laid. Before we can build successfully we must become familiar with that foundation, concluding from its flaws what to avoid and from its strong points how to progress. Before we can see where we are going, we must know where we have been.

The present state of our country is an unfinished product of the past. Before we can prepare for the future, it is necessary that we become familiar with and learn from the successes and mistakes of our forefathers. Without a thorough knowledge of history this preparation would be rather difficult.

### Methodology of Study

The methodology used in this study was a combination of historical and descriptive research. Several sources of data were used in this study. The Oklahoma State University Library was used extensively. In addition, contact was made with each of the state and locally supported public higher education institutions in Oklahoma either by personal contact or by mail.

Several studies have made strong contributions to

the completion of this thesis. They are: "The History of Legal Controls of Public Higher Education in Oklahoma," by E. T. Dunlap; A History of Industrial Education in Oklahoma up to 1950, by M. E. Franklin; "An Analysis of Post-High School Vocational Education Programs in Oklahoma", preliminary draft by Harry Nowka; and "Output of Engineering and Physical Science Related Technicians from Oklahoma, 1960-1967," preliminary draft by Howard Hardt.

Pertinent portions of these studies are used in this thesis. The additional information was obtained from the Oklahoma State University Library or from the individual institutions involved.

#### Limitations of Study

Limitations as to schools: This study is concerned only with the state and locally supported public higher education institutions in Oklahoma. A limiting factor is the accuracy and completeness of data that was available from the schools.

Limitations as to time: Information concerning the establishment of institutions, their boards of control, and legislation affecting technical-vocational education in Oklahoma will be presented from the time of establishment of Oklahoma University on December 19, 1890, until April 15, 1968. The data concerning enrollments and graduates at the various institutions are presented

from the 1959-1960 school year through the 1966-1967 school year.

Limitations as to programs investigated: Programs investigated for enrollment and graduate data were post-high school technical-vocational programs. Because of their very recent development, para-medical programs were not included and none of the programs for post-high school students at area vocational-technical schools were included.

General limitations: This report will not go into great detail about the establishment of the institutions, their boards of control, the legislation affecting technical-vocational education, etc., but will present as much of the information as this writer feels is necessary for the reader to get an overall view of the development of technical-vocational education. For more detailed information on the various subjects the reader may wish to consult the appropriate references.

#### Definitions of Terms<sup>8</sup>

Business Education--A program of instruction which consists of two parts: (a) office education, a vocational education program for office careers through initial, refresher, and upgrading education leading to employability and advancement in office occupations, and (b)

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<sup>8</sup>Unless otherwise noted, all definitions are from the following source: Definitions of Terms in Vocational-Technical and Practical Arts Education, American Vocational Association, (Washington: The Association), n.d.

general business education, a program to provide students with information and competencies which are needed by all in managing personal business affairs and in using the services of the business world.

Certificate of Completion (Certificate of Training)--

Written recognition granted to members of vocational classes upon satisfactorily completing the requirements of a course of instruction. Such certificates are presented when courses are not taken for credit towards graduation.

Community College--A junior college operated by the board of education of a local basic administrative unit (including the independent local board for one or more community colleges). Instruction is adapted in content, level, and schedule to the needs of the local community. (See junior college).

Distributive Education--A program of instruction in marketing, merchandising, and management. The program is concerned with training needed for purposes of updating, career development, and operational management.

Industrial Arts Education--Instructional shopwork of a non-vocational type which provides general educational experiences centered around the industrial and technical aspects of life today and offers orientation in the areas of appreciation, production, consumption, and recreation through actual experiences with materials and goods. It also serves as exploratory experiences which are helpful in the choice of a vocation.

Industrial Education--A generic term applying to all types of education related to industry, including industrial arts education, vocational industrial education (trade and industrial education), and much technical education.

Junior College--An institution of higher education which offers the first two years of college instruction, frequently grants an associate degree, and does not grant a bachelor's degree. Offerings include transfer and/or terminal programs (with an immediate employment objective) at the post-secondary instructional level and also may include adult education programs. It is an independently organized institution (public or non-public) or an institution which is a part of the public school system or an independently organized system of junior colleges. The term does not refer to the lower division of a four-year institution, even if this lower division is located on a campus entirely different from the campus of the parent institution. (See community college).

Manual Training--Manual Training is the name applied to shopwork taught in high schools beginning in the late seventies and continuing to about the second decade of the present century. The use of the term, "Manual Training", should be discontinued except in referring to early forms of shopwork instruction.<sup>9</sup>

Post-High School--(Post-Secondary Instructional Level)--The general level of instruction provided for pupils in college programs, usually beginning with grade 13, and any instruction of a comparable nature and difficulty provided for adults and out-of-school youth.<sup>10</sup>

Skilled Mechanic--One competent to perform, with a high degree of expertness, the work in one or more specialized divisions of a given trade.

State Board for Vocational Education--The agency, created by a state, having major responsibility for the administration and general supervision of vocational education in that state. It is responsible for maintaining certain minimum standards in the expenditure of federal funds allotted to the state of vocational education.

Technical Education--Education to earn a living in an occupation in which success is dependent largely upon technical information and understanding of the laws of science and principles of technology as applied to modern design, production, distribution, and service.

Technician (Industrial)--A worker on a level between the skilled tradesman and the professional scientist or engineer. His technical knowledge permits him to assume some duties formerly assigned to the graduate engineer or scientist. For example, technicians may design a mechanism, compute the cost, write the specifications, organize the production, and test the finished product. There are technicians in other occupational fields.

Terminal Course--One which completes the subject matter of a specific area with employment as the immediate objective.

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<sup>9</sup>DeWitt Hunt, "Industrial Arts in Oklahoma, Past, Present, and Future." (Unpublished Manuscript presented October 25, 1946) Stillwater, Oklahoma (mimeographed).

<sup>10</sup>U. S. Department of Health, Education, and Welfare, Office of Education, Standard Terminology for Instruction in Local and State School Systems (third draft), (Washington: May, 1967), p. 679.

Trade and Industrial Education--Instruction which is planned to develop basic manipulative skills, safety judgment, technical knowledge, and related occupational information for the purpose of fitting persons for initial employment in industrial occupations and upgrading or retraining workers employed in industry.

Vocational Education--Vocational or technical training or retraining which is given in schools or classes (including field or laboratory work incidental thereto) under public supervision and control or under contract with a state board or local educational agency, and is conducted as part of a program designed to fit individuals for gainful employment as semi-skilled or skilled workers or technicians in recognized occupations (including any program designed to fit individuals for gainful employment as semi-skilled or skilled workers or technicians in recognized occupations (including any program designed to fit individuals for gainful employment in business and office occupations, and any program designed to fit individuals for gainful employment which may be assisted by federal funds under the Vocational Education Act of 1946 and supplementary vocational education Acts, but excluding any program to fit individuals for employment in occupations which the Commissioner determines, and specifies in regulations, to be generally considered professional or as requiring a baccalaureate or higher degree.) Such term includes vocational guidance and counseling in connection with such training, instruction related to the occupation for which the student is being trained or necessary for him to benefit from such training, the training of persons engaged as, or preparing to become, vocational education teacher, teacher-trainers, supervisors, and directors for such training, travel of students and vocational education personnel, and the acquisition and maintenance and repair of instructional supplies, teaching aids and equipment, but does not include the construction or initial equipment of buildings or the acquisition or rental of land.<sup>11</sup>

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<sup>11</sup>As defined in Public Law 88-210.



## CHAPTER II

### REVIEW OF LITERATURE

During the past few years there have been many studies of various aspects of technical-vocational education. These studies have been important in shaping the future of educational opportunities which serve to prepare people for work. These studies have been done in Oklahoma as well as throughout the United States.

An investigation of Federal legislation concerning technical-vocational education is necessary to comprehend the total development of technical-vocational education in Oklahoma.

It was necessary to include in a review of literature information pertaining to the research methods incorporated in this thesis.

The remainder of this chapter expands on the ideas mentioned above by dividing the material into three major areas:

1. Literature related to the historical and descriptive research methods.
2. Literature related to the Federal legislation concerning technical-vocational education.
3. General literature related to technical-vocational education.

## Research Methods

The research methods used in this study involve two major types of research, historical and descriptive.

Historical research is defined in Good's Dictionary of Education as:

The type of research that has as its chief purpose the ascertaining of facts that fit into a significant time sequence and the relationships among these facts; usually concerned in a broad way with some delimited subject, delineating many aspects of the subject as each throws light on other aspects or on the general story; normally concerned with causes, but these may have to be imputed. The term implies that a story will be reconstructed from observations that were not made especially for the purpose of the study; sources must be discovered and evaluated as to authenticity and accuracy.<sup>1</sup>

In Research in Education John W. Best speaks of the importance of historical research. He states:

A knowledge of the finding of historical research is important to the professional worker in education. These studies provide important information concerning the effects of certain past educational practices, and may suggest programs for future action, based upon the evaluation of these past experiences. They also offer an explanation of the how and why of many of the theories and practices that have developed and that now prevail in the schools.<sup>2</sup>

Descriptive research is the predominant research method of the behavioral sciences. The term descriptive

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<sup>1</sup>Carter V. Good, ed., Dictionary of Education. (2nd ed., New York, 1959), p. 464.

<sup>2</sup>John W. Best, Research in Education. (Englewood Cliffs, New Jersey, 1959), p. 860.

research is used to cover a multitude of research techniques. Best states:

Descriptive research describes and interprets what is. It is concerned with conditions or relationships that exists; practices that prevail; beliefs, points of view, or attitudes that are held; processes that are going on; effects that are being felt; or trends that are developing.<sup>3</sup>

The descriptive research method is defined in Good's Dictionary of Education as:

The general procedures employed in studies that have for their chief purpose the description of phenomena, in contrast to ascertaining what caused them or what their value and significance are (according to some, the term should be restricted to status studies, including simple surveys; according to others, the term is expanded to include descriptions of change, as historical studies or growth studies.)<sup>4</sup>

#### Federal Legislation

In order to get the full picture of technical-vocational education in Oklahoma it is necessary to view the Federal legislation that has made this type of education possible. The following is a short account of the pertinent Federal legislation.

The first vocational legislation was the Smith-Hughes Act of 1917. This act provided \$7 million annually for the promotion of vocational agriculture, trades and in-

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<sup>3</sup>Ibid., p. 102.

<sup>4</sup>Good, Ibid., p. 165.

dustry and home economics education.<sup>5</sup>

The George-Reed Act (1929), George-Ellzey Act (1934) and the George-Dean Act (1936), were all short term acts passed to supplement the Smith-Hughes Act. Distributive Occupations received support in the 1936 Act.<sup>6</sup>

The George-Barden Act of 1946 brought further expansion of the provisions of the Smith-Hughes Act and in 1956 the George-Barden Act was amended to include practical nursing and fishery occupations to the list of federal financed programs.<sup>7</sup>

In all of these acts it was stated that this money was to be used on programs of secondary grades or of "less than college grade."<sup>8</sup>

In 1958, the National Defense Education Act was passed. One of its functions was to try to alleviate the problems related to "vocational facilities and technical manpower."<sup>9</sup> This was made Title VIII of the NDEA and stated specifically that its purpose was the training of "highly skilled technicians in recognized occupations requiring scientific knowledge.....in fields necessary

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<sup>5</sup>Grant Venn, Man Education and Work. The American Council on Education, (Washington, D. C. 1964), p. 112.

<sup>6</sup>Ibid., p. 113.

<sup>7</sup>Ibid., p. 114.

<sup>8</sup>Ibid.

<sup>9</sup>Ibid., p. 115.

for the national defense."<sup>10</sup>

All of Title VIII was put in the statutes as Title III of the George-Barden Act and thus it had the same restrictions as the George-Barden Act. One restriction was that the program had to be less than college grade. "U. S. Office of Education regulations, however, have made it possible to use Title VIII money in the technical education programs of the two-year college."<sup>11</sup>

The Area Redevelopment Act of 1961 and the Manpower Development and Training Act of 1962 were started as training programs for unemployed and underemployed persons who could not obtain full-time jobs at their present skill level or who were working under their potential.<sup>12</sup>

"The year 1963 was the most important in the legislative history of vocational education since 1917."<sup>13</sup> The Higher Education Facilities Act was passed and gave special recognition of the importance of post-secondary technical education to higher education and to the nation.<sup>14</sup> The Vocational Education Act of 1963 was passed and provided for much flexibility in the use of

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<sup>10</sup>Ibid.

<sup>11</sup>Ibid.

<sup>12</sup>Ibid., p. 119.

<sup>13</sup>Ibid., p. 124

<sup>14</sup>Ibid., p. 128.

vocational education funds, which was one of the shortcomings of previous acts.<sup>15</sup>

A strong influence on the Vocational Education Act of 1963 was the report of the Panel of Consultants on Vocational Education.<sup>16</sup> The report of this panel will gain added significance in years to come as stated by Melvin L. Barlow:

In the years ahead, the one single document which will have the greatest impact upon the program of vocational education will be the report of the Panel of Consultants on Vocational Education.<sup>17</sup>

The purpose of Title VII of the Higher Education Act of 1965 was to broaden the scope of the Higher Education Facilities Act of 1963. This act amended Title I, HEFA of 1963, to permit a State Commission to transfer allotted Federal funds among the public community colleges, public technical institutes and the State's other higher education insitutions, depending on the applications for such funds.<sup>18</sup>

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<sup>15</sup>Ibid., p. 125.

<sup>16</sup>Melvin L. Barlow, History of Industrial Education in the United States, (Peoria, Illinois, 1967), p. 453.

<sup>17</sup>Ibid.

<sup>18</sup>Higher Education Act of 1965, U.S. Department of Health, Education, and Welfare, Office of Education (Washington, D. C., 1965), p. 23.

## Technical-Vocational Education in General

Since technical-vocational education has been federally financed in high school programs for a longer period of time than for post-high school programs, there have been more high school technical-vocational programs than post-high school programs. Also, more research work has been done on the high school level technical-vocational education programs.

The following is a review of a few studies that deal with high school or post-high school technical-vocational education or with related topics.

In Oregon the development of technical-vocational education showed a very limited offering of programs prior to 1917. With the passing of the Smith-Hughes Act, steady progress was made in the development of this type of education. A sizable increase in the program occurred following the appropriation of additional funds by Congress in 1936 and 1946. This development was mentioned in Public Vocational-Technical Education in Oregon as being a rather typical developmental pattern for this type of education.<sup>19</sup>

A study completed in 1964 entitled Oklahoma Public Schools is a report concerning the entire Oklahoma Public School System. It is mostly concerned with high school

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<sup>19</sup>W. R. Flesher, Marie A. Flesher, and Robert M. Reese, et. al., Public Vocational-Technical Education in Oregon (Columbus 21, Ohio, 1958), p. 49.

education, but in the area of technical-vocational education it makes some major recommendations concerning post-high school education.<sup>20</sup>

During the past two years there has been increased activity in Oklahoma with respect to studies of various aspects of technical-vocational education. Two such studies are: the Ling-Temco-Vought study entitled Basic Planning with Action Oriented Recommendations Relative to Vocational and Technical Skills and Literacy Systems in the State of Oklahoma,<sup>21</sup> and a study entitled Occupational Education Beyond the High School in Oklahoma, completed by Dr. Maurice W. Roney and Dr. Paul V. Braden of Oklahoma State University.<sup>22</sup> These studies will only be mentioned lightly here but will be dealt with more in Chapter III.

The Roney-Braden study investigated, among many other things, the number of technical people available in Oklahoma in relation to the number needed. The study makes many recommendations that if carried out could greatly

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<sup>20</sup>Oklahoma Public Schools. (Division of Surveys and Field Services), George Peabody College for Teachers, Nashville, Tennessee, 1964), Chapter V, pp. 25-28.

<sup>21</sup>Ling-Temco-Vought Inc., Basic Planning with Action Oriented Recommendations Relative to Vocational and Technical Skills and Literacy Systems in the State of Oklahoma, (Arlington, Texas, December, 1967).

<sup>22</sup>Maurice W. Roney, and Paul V. Braden, Occupational Education Beyond the High School in Oklahoma. (Stillwater, Oklahoma, January, 1968).



influence the future educational structure and economic achievement of Oklahoma.

The Ling-Temco-Vought study also made many basic recommendations that could likely affect the future of technical-vocational education in Oklahoma. Only time will tell how many recommendations of either study will be adopted.

Since most of the educational programs of a technical-vocational nature are two-year programs, it would seem natural that the two-year junior colleges and community colleges would be good places to have this type of education. In actuality technical-vocational education is not in general the strong drawing point for the two-year college. Leland Medsker in The Junior College: Progress and Prospect states:

It is obvious. . . that the two-year college in America is focused more on the transfer than the terminal function. It is paradoxical that, in the institutions studied, about two-thirds of the students prepared to transfer yet, from a given entering class only one-third of them actually went beyond the junior college. Conversely, only a third of the students were enrolled in courses which ostensibly prepared them for employment, yet two-thirds of them went into some type of life activity without further college experience.<sup>23</sup>

He also commented on the reasons for small enrollments in terminal programs:

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<sup>23</sup>Leland L. Medsker, The Junior College: Progress and Prospect. (New York, 1960), p. 112.

The principal explanation for small enrollments in terminal offerings seems not to be a disdain for occupational training but simply a cultural factor that causes students to covet the reputation of being a preparatory student. Undoubtedly, too, many cling to the transfer program even when they know they may need soon to go to work because they think that some day they may be able to pursue a degree--as well they may. Unfortunately, too, many students were not informed in high school about terminal programs and the occupations to which they lead, and thus have not had the occasion to become interested in such programs when they entered the junior college.<sup>24</sup>

The ideas expressed by these statements of Mr. Medsker seem to hold true for the junior and community colleges of Oklahoma.

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<sup>24</sup> Ibid., p. 113.

## CHAPTER III

### DEVELOPMENT OF TECHNICAL-VOCATIONAL EDUCATION IN OKLAHOMA

It has been previously stated that the purpose of this thesis is to investigate the trends and patterns indicated by the following research questions:

1. To what extent have trends in technical-vocational education been influence by Federal legislation?
2. What enrollment and graduate trends are indicated by changes in the numbers of students participating in these programs since 1959?
3. Are there any trends with respect to the amount of recognition given to technical-vocational education in Oklahoma by the state legislature and administration, industrial people, researchers, and educators?

This chapter will attempt to answer these research questions by dividing the investigation into the following five major areas:

1. The development of higher education institutions in Oklahoma
2. Industrial education development
3. Oklahoma legislative developments
4. Enrollment and graduate development
5. Recent research developments

## Institutions

It is necessary in a report of this nature to examine the development of institutions which offer post-high school technical-vocational education. The type, level, and quality of our present programs are the outgrowth from the history of the institutions which provide these services. An effort will be made in this section to present in brief form information about the establishment of the state and locally supported public institutions of higher education in Oklahoma, and of their boards of control. The institutions will be grouped together according to their present governing boards.

### The University of Oklahoma

The University of Oklahoma, which offers paramedical and business programs, was established on December 19, 1890,<sup>1</sup> by the first Legislative Assembly of the Territory of Oklahoma. Its governing board is the Board of Regents of the University of Oklahoma. This board governs the operations of the University as well as three constituent agencies, the School of Medicine, the University Hospitals,

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<sup>1</sup>Unless otherwise noted, this date and all others given in this section of this report were taken from a doctoral dissertation written in 1956 by E. T. Dunlap. More detailed information on the legislative aspects of the foundation and development of the institutions and their boards of control may be found in this dissertation.

and Geological Survey.<sup>2</sup> This Board of Regents has governed the University of Oklahoma since 1890 with the exception of the period from March 6, 1911 until April 3, 1919; during which time the State Board of Education governed this school and all other institutions of higher education in the state except for the Agricultural and Mechanical Colleges.<sup>3</sup> The education of the University was to be cultural and practical. As stated recently by the State Board of Regents: ". . . the University of Oklahoma was assigned the tasks of producing 'scientific, industrial and professional' personnel, school teachers, and good citizens."<sup>4</sup>

#### The Agricultural and Mechanical Colleges

The Agricultural and Mechanical Colleges of the Territory of Oklahoma was established by an act of the Legislative Assembly effective December 25, 1890. This institution, later called Oklahoma A & M College and now Oklahoma State University, was established under terms of

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<sup>2</sup>The Oklahoma State System of Higher Education. Oklahoma State Regents for Higher Education, February, 1963, p. 5.

<sup>3</sup>E. T. Dunlap, The History of Legal Controls of Public Higher Education in Oklahoma. unpublished doctoral dissertation, Oklahoma Agricultural and Mechanical College, 1956, p. 31.

<sup>4</sup>Goals for Oklahoma Higher Education. Self study of higher education in Oklahoma, Report 8, 1966, p. 5.

Morrill Act of 1862.<sup>5</sup>

Oklahoma State University has two branches geographically apart from the main campus at Stillwater. The technical Institute in Oklahoma City was established in 1961 and now offers several technical programs for full-time and part-time students.<sup>6</sup> The Oklahoma State University School of Technical Training at Okmulgee was organized on October 1, 1946, and now offers nearly forty areas of study in technical, business and skill training occupational groups.

The agriculture and mechanical colleges of the state have been under various boards of control since their inception, but on July 11, 1944, an amendment was added to the Oklahoma constitution which created a Board of Regents for the Agricultural and Mechanical Colleges of Oklahoma.<sup>7</sup> Thus this board governs Oklahoma State University; Oklahoma Panhandle State College, established June 10, 1909; Langston University, established March 12, 1897; Connors State College, Cameron State Agricultural College, and Murray State College, all established May 20, 1908; Eastern Oklahoma State College, established May 28, 1908; and Northeastern Oklahoma Agricultural and Mechanical College, established March 17, 1919. All of

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<sup>5</sup>Ibid.

<sup>6</sup>Oklahoma State University, Technical Institute, Oklahoma City Catalog for 1965-1967.

<sup>7</sup>Dunlap, p. 106.

the aforementioned offer technical, business and vocational programs. Cameron State Agricultural College instituted an associate nursing program in the fall of 1966.

The functions of these agricultural and mechanical colleges have broadened throughout the years. As a result, these colleges have become multi-purpose institutions.

### The State Colleges

There are six institutions in Oklahoma that were started as normal schools and are now called state colleges. They are: Central Normal School, founded April 6, 1890, at Edmond, now Central State College; Northwestern Normal School, founded March 12, 1897, at Alva, now Northwestern State College; Southwestern Normal School, founded March 8, 1901, at Weatherford, now Southwestern State College; Northeastern Normal School, founded March 6, 1909, at Tahlequah, now Northeastern State College; Southeastern Normal School, founded March 6, 1909, at Durant, now Southeastern State College; and East Central Normal School, founded March 25, 1909, at Ada, now East Central State College. These colleges offer no technical programs but some do contribute strongly to business enrollments with their certificate programs.

The functions of these colleges have been changed over the years as stated in Report Number Eight of the

# State Board of Regents:

Whereas the original function of the teachers' colleges had been to offer instruction in pedagogy only, a legislative act in 1939 broadened their purposes to allow these institutions to offer courses in the various educational branches without being restricted to the purpose of educating persons in the arts of teaching.<sup>8</sup>

And also:

Although the six state colleges are moving from a single-purpose orientation toward a more broadened set of functions, their chief activity is still the production of teachers for the public schools of the state and the nation.<sup>9</sup>

These institutions have been under various boards of control as stated in the December 1, 1964, Biennial Report of the State Board of Regents of Oklahoma Colleges:

Date of Establishment to 1907.....	Territorial Board of Education
1907 to 1939.....	State Board of Education
1939 to 1943.....	Board of Regents of Oklahoma Colleges
1943 to 1947.....	State Board of Education
1947 to present.....	Board of Regents of Oklahoma Colleges

Senate Bill 33, S. L. 1947 created the State Board of Regents of Oklahoma Colleges and placed these six colleges under the supervision of said Board.<sup>10</sup>

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<sup>8</sup>Goals for Oklahoma Higher Education, p. 7.

<sup>9</sup>Ibid.

<sup>10</sup>Biennial Report of the State Board of Regents of Oklahoma Colleges. (Oklahoma City, Oklahoma, December 1, 1964), p. 3.



### Northern Oklahoma College

The University Preparatory School for the Territory of Oklahoma, now Northern Oklahoma College, was founded at Tonkawa March 8, 1901. It was established to provide secondary instruction for the students of Oklahoma in preparing them to go on to a university. In 1919, vocational training, particularly business education became the main function of the school. The school gained college status in 1920.<sup>11</sup> Northern Oklahoma College has its own Board of Regents, and offers technical-business, and vocational programs.

### Oklahoma College of Liberal Arts

The Oklahoma Industrial Institute and College for Girls was started at Chickasha March 27, 1909. The State Board of Regents on July 7, 1965 made this institution co-educational, changed its name to Oklahoma College of Liberal Arts, and provided for a seven member board of regents to govern the institution.<sup>12</sup>

Until 1965, the function of the school was to "give instruction in industrial arts, the English language, and

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<sup>11</sup>Goals for Oklahoma Higher Education, p. 8.

<sup>12</sup>Higher Education in Oklahoma. A report from the Chancellor, Oklahoma State Regents for Higher Education, Vol. 1, No. 4, July 25, 1965, p. 6.

the various branches of mathematical, physical, natural, and economic sciences, with special reference to their application in the industries of life."<sup>13</sup>

In 1965 the functions were changed, "whereby both men and women students would be admitted to pursue four years of study in the liberal arts culminating with the bachelor's degree."<sup>14</sup> Oklahoma College of Liberal Arts does offer work in the business administration area, but has de-emphasized two-year terminal business training.

#### Oklahoma Military Academy

The Eastern University Preparatory School at Claremore was established on March 25, 1909. In 1919 the purposes of the institution were to include both vocational and military training. "The purposes of the institution remain today substantially what they were in 1919, except that the vocational training curriculum has been de-emphasized in favor of the military science program."<sup>15</sup> The Oklahoma Military Academy does offer work in the business administration area, but does not emphasize vocational business training.

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<sup>13</sup>Goals for Oklahoma Higher Education, p. 8.

<sup>14</sup>Ibid.

<sup>15</sup>Ibid.

### Municipal Junior Colleges

Municipal junior colleges located at Altus, El Reno, Poteau, Sayre, and Seminole are under the control of local school boards. All offer business programs with Sayre and Altus offering technical work. These five are all that remain of the nineteen such community colleges that were in existence in Oklahoma in 1940.<sup>16</sup> The Oklahoma State Regents for Higher Education describe the functions of municipal colleges as follows:

The functions of the municipal colleges closely parallel those of the state-supported junior colleges. Both of these groups are chiefly concerned with those students who will be transferring to senior colleges and universities, and as a consequence they offer relatively little in the way of vocational and technical training.<sup>17</sup>

#### Oklahoma State Regents for Higher Education

Article XIII-A Section One added to the Constitution of Oklahoma on March 11, 1941, states that: "All institutions of higher education supported wholly or in part by direct legislative appropriations shall be integral parts of a unified system to be known as the Oklahoma State System of Higher Education."<sup>18</sup> This article also created the Oklahoma State Regents for Higher Educa-

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<sup>16</sup>Ibid., p. 10.

<sup>17</sup>Ibid.

<sup>18</sup>Article XIII A, Section 1, Oklahoma Constitution.

tion as the coordinating board of control for all state institutions, and states the specific powers of the State Regents.

As a result of provisions stated in Article XIII of the Oklahoma Constitution, all of the aforementioned institutions rely on the State Board of Regents for setting standards of higher education and determining the functions and courses of study in each of the institutions.

In conclusion: All of the aforementioned state supported institutions offer some type of terminal, technical-vocational training with the exception of Oklahoma College of Liberal Arts, Oklahoma Military Academy, Northeastern State College, and Southeastern State College. Oklahoma College of Liberal Arts deleted two technology programs in the fall of 1967 and Poteau Community College has cancelled two technology programs in the recent past.

#### The Development of Industrial Education

The term technical-vocational education is relatively new. It has only been in the last few years that this term has been used extensively. Technical-vocational education is a portion of a broader division of education which has its roots in industrial education. Thus, it was decided that a necessary part of this report would be a brief look at the development of industrial education in Oklahoma. For a more detailed report on this subject the reader may wish to consult A History of Industrial

Education in Oklahoma Up to 1950, by M. E. Franklin.<sup>19</sup>

The earliest industrial education in Oklahoma was in Indian academies taught by missionaries. In the 1840's missionaries were cooperatively supported by churches and tribal governments for the purpose of providing "industrial training" to the Indians.<sup>20</sup>

In 1901 manual training and agriculture for boys were introduced into the Choctaw Nation Academies as was domestic science for the girls.

In September 1904, manual training was started in Oklahoma City.<sup>21</sup> Manual training was introduced in the Normal Schools at Edmond and Alva in 1904, other post-high school institutions soon followed.<sup>22</sup>

The courses of a manual training nature that were offered at the University of Oklahoma and at Oklahoma Agricultural and Mechanical College before statehood were for "technical purposes in connection with the work in engineering."<sup>23</sup>

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<sup>19</sup>Marion Edmund Franklin, A History of Industrial Education in Oklahoma Up to 1950. (Northeastern State College, Tahlequah, Oklahoma, 1954).

<sup>20</sup>Ibid., p. 19.

<sup>21</sup>Ibid., p. 24.

<sup>22</sup>Ibid., pp. 25-26.

<sup>23</sup>Ibid., pp. 26-27.

With the coming of statehood came the development of the Oklahoma education program. This development was taking place at a time when manual training was reaching its peak in America. Thus, manual training became an important part of high school education in Oklahoma. During this time manual training was taught and sometimes required in the higher education institutions of Oklahoma.<sup>24</sup>

The passage of the Smith-Hughes Act in 1917 and Oklahoma's acceptance of the Act brought about a development of vocational education in Oklahoma. During the early 1920's adult vocational programs were more readily accepted than were the same types of programs in the high schools.<sup>25</sup>

World War I brought an end to expansion of manual training in Oklahoma. With the end of the war the manual training program began to expand again. In 1920 a statewide organization of manual training teachers was started. In 1925 this was expanded to include teachers in vocational trade and industrial education. With this uniting of groups the term "manual training" was dropped and the term "industrial education" was accepted.<sup>26</sup>

The period from 1927-1937 was characterized by the industrial education organization becoming more and more

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<sup>24</sup>Ibid., pp. 29-34.

<sup>25</sup>Ibid., pp. 38-42.

<sup>26</sup>Ibid., pp 45-51.

dominated by vocational interests. This brought about the start of a State Advisory Committee for Industrial Arts which was to look after the needs and problems of industrial arts.<sup>27</sup>

During the period from 1938 to 1950, industrial education expanded in several areas including; trade and industrial education, distributive education, industrial arts, and vocational education. Most of this type education had been carried out for high school students, but during this period part-time trade preparatory classes were offered to adults at 51 centers in 14 different occupations.<sup>28</sup>

Since 1950 there has been further development in industrial education. Industrial arts, vocational education, distributive education, trade and industrial education have all expanded and also a new division of education called technical education has expanded on the high school and post-high school levels.

#### State Legislation

Some federal and state legislation has already been discussed as it has affected in general higher education institutions in Oklahoma. This section presents a brief look at state legislation that has affected technical-

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<sup>27</sup>Ibid., pp. 53-57.

<sup>28</sup>Ibid., pp. 59-65.

vocational education in the various educational institutions in Oklahoma.

The legislation that Oklahoma has passed concerning technical-vocational education has largely been in acceptance of the federal legislation on the subject.

On March 24, 1917, the Oklahoma Legislature passed a bill which accepted the provisions of the Smith-Hughes Act. The Oklahoma bill is entitled:

An act to provide for vocational education to provide for the cooperation with the federal government in the promotion of such education in agriculture, the trades and industry; to provide for the cooperation with the federal government in the preparation of teachers of vocational subjects; and to appropriate money and to regulate its expenditure.<sup>29</sup>

This bill also created a State Board of Vocational Education, consisting of a designated five members, which was required to cooperate with the Federal Board for Vocational Education in the administration of the provisions of the Smith-Hughes Act, and to do all things necessary to entitle the state to receive the benefits thereof.<sup>30</sup>

A bill approved on June 19, 1929, amended the above bill and placed the duties of the Board of Vocational Education under the control of the State Board of Education. All acts and parts of acts that were in conflict

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<sup>29</sup>Oklahoma Session Laws. 1917, Chapter 155, Section 1, p. 245.

<sup>30</sup>Ibid., Section 3.



with this bill were repealed.<sup>31</sup>

A bill approved on April 16, 1941, amended the above bill. The amended bill did very little other than make more specific some of the duties of the State Board of Education with regard to vocational education. This was the first bill to state specifically that the State Board of Education was designated as the State Board of Vocational Education.<sup>32</sup>

The next change that took place with respect to the State Board of Education in its capacity as the State Board of Vocational Education was the addition of a Division of Vocational Rehabilitation. This was put into effect by a bill approved June 7, 1949.<sup>33</sup> This did not change the previous duties of the Board. This was put in the Statutes under Article 14.

A bill approved June 29, 1961 acted only to shorten the Session Laws. It repealed sections 14A-1 and 14B-1 of the Oklahoma Statutes stating that the State Board of Education was the State Board of Vocational Education, because they were only duplicating what was stated in the Statutes.<sup>34</sup>

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<sup>31</sup>Oklahoma Session Laws, 1929, Chapter 267, Section 1, p. 391.

<sup>32</sup>Oklahoma Session Laws, 1941, Chapter 26, Section 5, p. 451.

<sup>33</sup>Oklahoma Session Laws, 1949, Chapter 1A, Article 14C, Section 1, p. 566.

<sup>34</sup>Oklahoma Statutes, 1961, Title 70, sec. 14A-1, 14B-1.

Each of the aforementioned acts were in promotion of vocational education, according to the terms of the Smith-Hughes Federal Act and acts amendatory or supplemental to it.

An amendment to the Constitution of Oklahoma was adopted by a special election of the people on May 24, 1966. This amendment provided for the establishment of area school districts for vocational and/or technical schools.<sup>35</sup>

This section has been mostly about high school level vocational education as it is the State Board of Education that controls the high school educational system. As previously stated, the State Board of Regents is the controlling board of higher education in Oklahoma. When money became available from the federal government for post-high school vocational and/or technical programs, as provided through amendments in the George-Barden Act and the Higher Education Facilities Act of 1963, there was in evidence a conflict over who would apportion the monies from the federal government. The State Board of Education was the State Board of Vocational Education and controlled high school education, but they did not have control of the higher education institutions. To make things more complicated the area vocational-technical schools could offer both high school and post-high school

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<sup>35</sup>Oklahoma Constitution, Article X, sec. 9B.

education programs. The question was, which board should handle the appropriations?

This situation has now been improved upon by HB 995, passed by the legislature and signed by the Governor on April 15, 1968, which creates the State Board of Vocational and Technical Education which succeeds to all the powers and duties of the State Board for Vocational Education.

Among the stated powers and duties of the new Board is the following:

Have the supervision of the vocational and technical schools and colleges of Oklahoma, except Oklahoma State University of Technical Training at Okmulgee and the Oklahoma State University Technical Institutes at Oklahoma City, and Stillwater, which, however, shall be eligible to participate in Federal programs administered by the State Board of Vocational and Technical Education as hereinafter provided.<sup>36</sup>

There have been other types of legislation passed by the state legislature that indirectly affect technical-vocational education. A bill approved July 14, 1965, was entitled:

An act relating to education; establishing student educational assistant fund; authorizing the regents for higher education to administer the fund and promulgate rules and regulations with respect thereto; stating basic terms of student loan guarantee; and declaring an emergency.<sup>37</sup>

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<sup>36</sup>Oklahoma, Oklahoma State Legislature, Enrolled House Bill No. 995, 31st Leg., 2nd sess., 1968.

<sup>37</sup>Oklahoma Statutes Supplement, 1965, Title 70, sec. 623.

This act guaranteed loans made by private or public lending institutions to students applying for such loan guarantees for the purpose of obtaining financial assistance for attendance at any state-supported vocational rehabilitation school, vocational education or trade school, or any other institution of higher learning in the state of Oklahoma under certain conditions.

A joint resolution relating to industrial development was approved April 17, 1967, which created a governor's advisory committee for post-high school technical-vocational-scientific training and provided for powers and duties of this committee.<sup>38</sup>

A bill became effective on April 24, 1967, which stated that community junior colleges may be established, maintained and operated by the Oklahoma State Regents for Higher Education. It also provided that the governing board of a community junior college shall have the power and authority to enter into cooperative agreements with any area vocational-technical school in such communities for the joint use of facilities and personnel, joint courses of study and educational programs and other cooperative efforts to the mutual benefit of each school and the community.<sup>39</sup>

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<sup>38</sup>Oklahoma Statutes Supplement, 1967. Title 74, sec. 1122-1125.

<sup>39</sup>Oklahoma Statutes Supplement. 1967, Title 70, sec. 4401-4409.

A proposed Constitutional amendment that is before the State Legislature now (April 15, 1968), will, if approved, provide for some state financing of the area school districts and other state-owned vocational and/or technical schools. This amendment would add Section 38 to Article X of the Constitution and the preliminary draft of the bill states:

The Legislature of the State of Oklahoma is hereby authorized to enact necessary legislation whereof the state may become indebted in an amount not to exceed Twenty Million Dollars (\$20,000,000.00), for the purpose of providing capital improvements, including the purchasing of sites, purchase of equipment for a state-owned equipment pool, constructing, purchasing, improving and equipping real property and buildings in area school districts and other state-owned school facilities for vocational and/or technical schools without or with participation of the Federal Government, its agencies or instrumentalities, and such legislation shall provide for the payment and discharge of the principal of such debt, together with interest on such indebtedness, . . . . .<sup>40</sup>

Post-High School Technical-Vocational Programs  
in the Public Institutions of Oklahoma

It is essential in a study of the development of technical-vocational education in Oklahoma, to consider the programs that are available in technical-vocational education and the enrollments and graduates of these programs. This section will investigate the technical-

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<sup>40</sup>Oklahoma, Oklahoma State Legislature, House Joint Resolution No. 536, (preliminary draft), 31st Leg., 2nd Sess., 1968.

vocational education programs in Oklahoma by dividing them into three divisions: technical, business education, and skill training.

It is sometimes difficult to ascertain the enrollment and graduation of those students who intend to become employed after completing technical-vocational education programs. Programs at Oklahoma State Tech at Okmulgee are all terminal programs, that is, the work is designed for direct employment, so the enrollment and graduate data for these programs were not too difficult to obtain. Also because of the nature of the technical programs at the state institutions and the records that are kept on these programs, the enrollment and graduate data for technical programs were not difficult to obtain.

However, some institutions offer planned programs of study which may be applied toward a degree, or used for the purpose of getting a job in business or industry. The business programs at most institutions, as well as other vocational programs, may be pursued either as terminal or transfer programs. Thus it is difficult to determine who is taking a program as terminal education and who is planning to go on to a bachelor's degree.

Most of the development of this type of program has been since 1960, so the enrollment and graduate data will only be given for the school years 1959-1960 to 1966-1967. The figures for technical education start one year later.

### Technical Education in Oklahoma<sup>41</sup>

Graduates in post-high school technical programs in the public institutions of Oklahoma have been concentrated in electronics, drafting, and mechanical technologies as shown in Table I.

In the fall of 1966 there were 1,908 enrolled as full-time students in technical programs in higher education institutions of Oklahoma. The Oklahoma State University Technical Institutes and Oklahoma State Tech at Okmulgee had 1,313 of the 1,908 enrollees, or 68.8 per cent. The eight junior colleges had 548, or 28.7 per cent of the total and the other four-year colleges had 47, or 2.5 per cent of the total as indicated in Figure 1.

There were 430 graduates of Oklahoma's higher education technical programs in 1967. Approximately 62 per cent, or 268 of the graduates were from the Oklahoma State University Technical Institutes at Stillwater and Oklahoma City and from Oklahoma State Tech at Okmulgee. The junior colleges graduate 156, or 36.9 per cent and the other four graduates, or one per cent of the total, come from the other four-year colleges.

Part-time enrollments follow similar patterns of percentages, although the four-year college programs which

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<sup>41</sup>The data in this section is from Occupational Education Beyond the High School in Oklahoma, by Maurice W. Roney and Dr. Paul V. Braden. (Oklahoma State University, January 15, 1968), pp. 37-43, data reported by Howard Hardt.

TABLE I

GRADUATES OF OKLAHOMA TECHNICAL PROGRAMS FOR  
THE SCHOOL YEARS 1960-61 TO 1966-67

	Total	Radiation	Metals	Mechanical, Ref. & Heating	Instrumentation & Process Control	Fire Protection	Electronics	Electrical	Drafting	Data Processing	Construction	Civil	Chemical	Aeronautical
1960-61	282	0	8	87	0	12	72	16	68	0	5	0	0	14
1961-62	252	0	0	55	0	19	79	9	67	0	13	0	0	10
1962-63	285	0	6	50	0	12	97	7	89	0	10	0	3	11
1963-64	379	0	7	112	0	12	99	4	96	14	11	0	8	16
1964-65	457	0	0	105	0	13	116	8	160	19	5	2	21	8
1965-66	472	11	7	107	3	12	116	8	141	34	5	1	18	9
1966-67	430	11	4	86	3	9	121	0	134	37	2	4	10	9
Total	2557	22	32	602	6	89	700	52	755	104	51	7	60	77



are Langston and Chickasha have no part-time enrollments. The technical programs at Chickasha have been deleted from their curricula offerings for the fall 1967. Part-time enrollments are indicated in Figure 2.

The part-time portion of the total enrollments has steadily increased in the 1960's as shown in Figure 3. The part-time enrollment in the 1960-1961 school year was only 9.5 per cent of the total enrollment. By the 1966-1967 school year the percentage had increased to 34.9 per cent of the total enrollment. This indicates that a large segment of the labor force is now maintaining their technical competencies through part-time enrollment in technical programs.

Part-time and full-time enrollments did not increase at their previous rates during the 1964-1965 school year. This may account for the lack of increase in technical graduates during the 1966-1967 school year as shown in Figure 4.

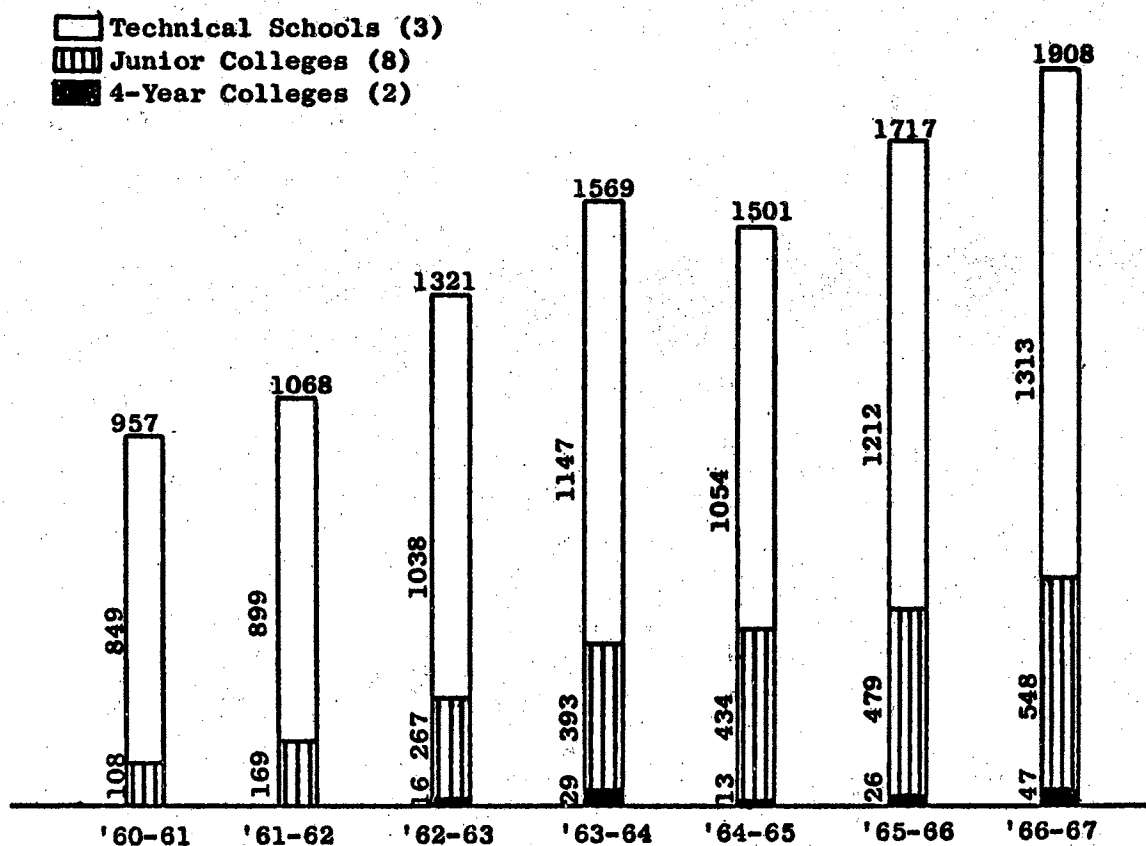


Figure 1 . Full Time Post-High School Technical Program Enrollments In Oklahoma from 1960-61 to '66-67

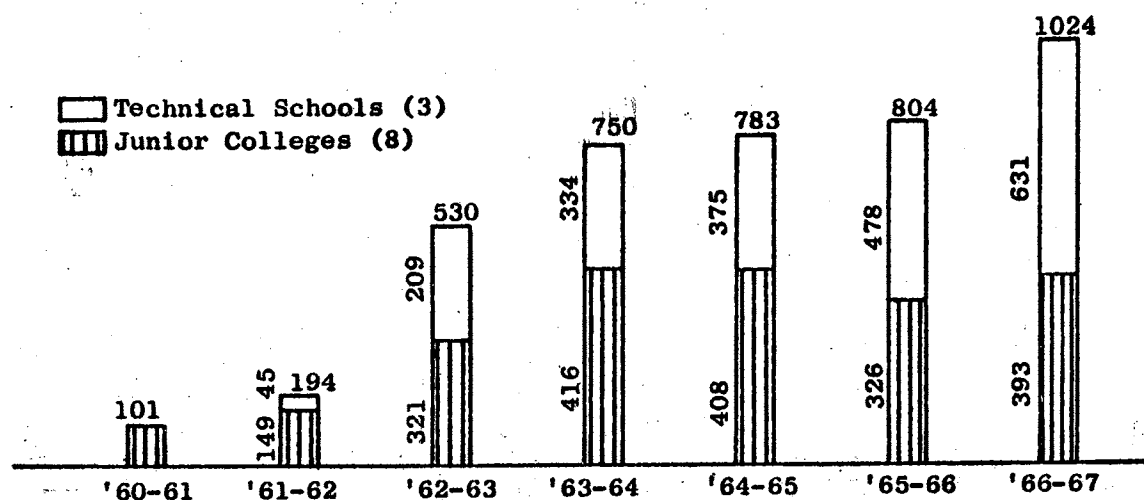


Figure 2 . Part Time Post-High School Technical Program Enrollments In Oklahoma from 1960-61 to '66-67

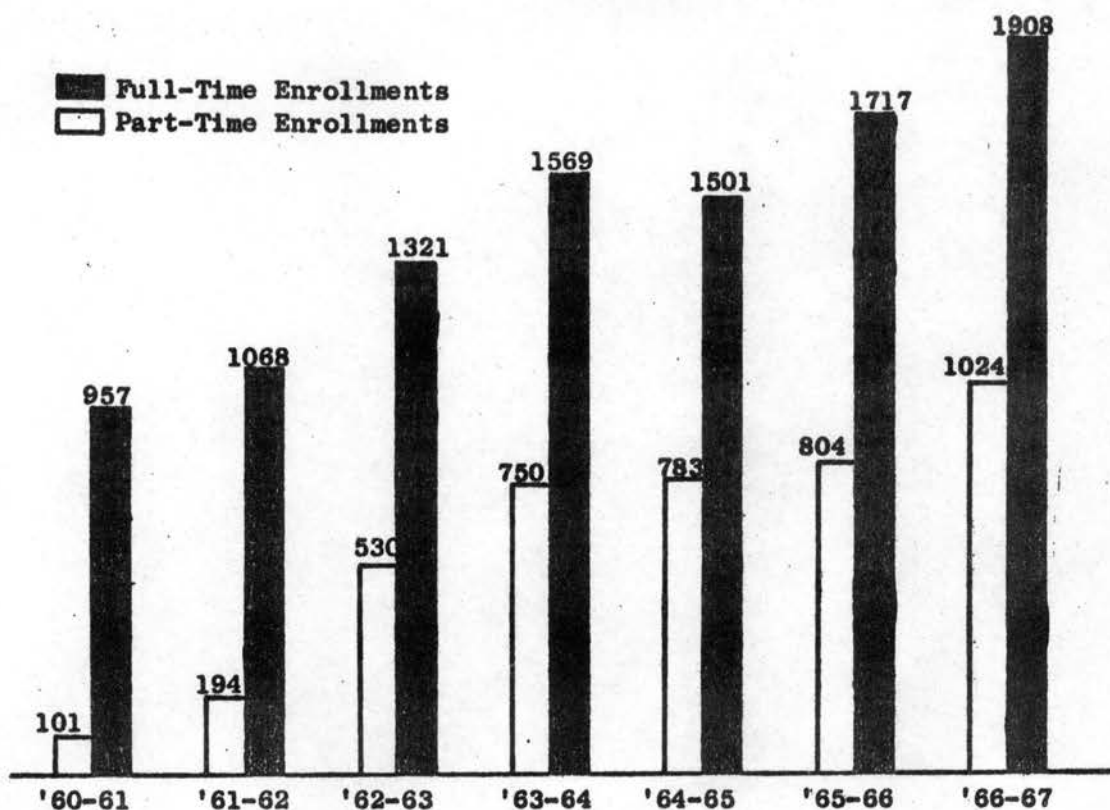


Figure 3 . A Comparison of Full and Part Time Post-High School Technical Program Enrollments in Oklahoma from 1960-61 to '66-67

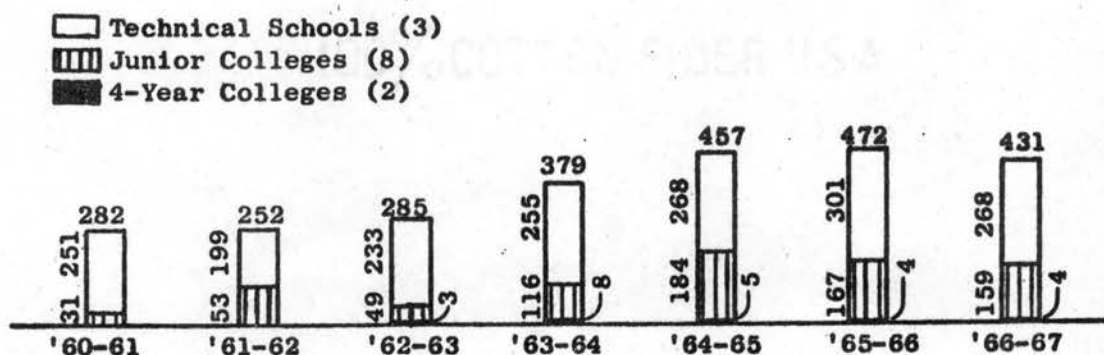


Figure 4 . Yearly Post-High School Technical Program Graduates in Oklahoma from 1960-61 to '66-67

Business Education in Oklahoma<sup>42</sup>

The 1966 data for lower division business enrollments in higher education in Oklahoma are presented in Table II. The totals include all students who at the freshman or sophomore level indicated business or business education as their area of emphasis. Many of the four-year institutions have historically listed the business education students under the classification of education rather than business. In other colleges the business education students are not indicated. For these colleges there is no difference between the detailed listing of all business majors, including business education and the summary total of business.

In 1966 only East Central State College listed separately the vocational business short course students in their report to the Oklahoma State Regents for Higher Education. Other institutions classified such students as office administration, office management, secretarial science, secretarial administration, business administration, general business, business, or business education students.

The enrollment data presented in Table II are based on a head count. Head-count data approximates the full-

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<sup>42</sup>The data in this section is from Occupational Education Beyond the High School in Oklahoma, by Dr. Maurice W. Roney and Dr. Paul V. Braden, (Oklahoma State University, January 15, 1968), pp. 56-60, data reported by Harry Nowka.

time equivalent students at most institutions. Most institutions enroll part-time and night students. The most frequently used method of classifying these students was to list all the part-time and night students as special students. Another method of classification was to combine the night students classified as either freshmen or sophomores who were pursuing Certificates or Associate Degrees were included in the totals.

A few institutions have Manpower or other such programs that are engaged in business training or retraining. Most institutions have not included these students in their lower division enrollments.

Although many junior colleges have one year specialized business programs listed in their catalogs, only Northern Oklahoma College actually awards a one-year Intensive Business Certificate. The Oklahoma State University School of Technical Training at Okmulgee also has one and two-year business programs for which Certificates of Accomplishment are awarded. Many colleges have a 40 semester hour or two-year business program for which an Associate Degree or Certificate may be awarded. (See the asterisk that indicates such institutions in Table II.)

Most holders of Associate Degrees awarded by junior colleges have pursued an academic program leading to transfer to a four-year college or university. Preliminary data indicate that business associate degree holders have

TABLE II

FALL, 1966 FRESHMEN AND SOPHOMORE BUSINESS  
ENROLLMENT IN OKLAHOMA INSTITUTIONS  
OF HIGHER EDUCATION

## STATE INSTITUTIONS OF HIGHER LEARNING

*1.	Central State College	1592
*2.	East Central State College	271
3.	Langston University	108
4.	Northeastern State College	297
*5.	Northwestern State College	217
*6.	Oklahoma College of Liberal Arts	120
*7.	Oklahoma State University	1424
*8.	Panhandle A & M College	118
9.	Southeastern State College	181
*10.	Southwestern State College	426
*11.	The University of Oklahoma	1111

## STATE JUNIOR COLLEGES

*12.	Cameron State Agricultural College	502
*13.	Connors State Agricultural College	72
*14.	Eastern Oklahoma A & M College	188
*15.	Murray State Agricultural College	128
*16.	Northeastern Oklahoma A & M College	365
*17.	Northern Oklahoma Junior College	249
*18.	Oklahoma Military Academy	67

## INDEPENDENT SENIOR COLLEGES

19.	Benedictine Heights College	None
*20.	Bethany Nazarene College	155
*21.	Oklahoma Baptist University	91
22.	Oklahoma Christian College	92
*23.	Oklahoma City University	252
24.	Oral Roberts University	52
*25.	Phillips University	137
*26.	The University of Tulsa	944

TABLE II (Continued)

## INDEPENDENT AND MUNICIPAL JUNIOR COLLEGES

27.	Bacone College	68
28.	Central Pilgrim College	19
*29.	Saint Gregory's College	157
30.	Southwestern College	21
*31.	Altus Junior College	18
*32.	El Reno Junior College	44
*33.	Poteau Community College	27
*34.	Sayre Junior College	13
*35.	Seminole Junior College	NA

## TECHNICAL INSTITUTES

*36.	OSU School of Technical Training	237
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\* Indicates that students could receive in 1966-1967 either a Certificate of Completion or an Associate Degree with a concentration in business.

Source: Oklahoma State Regents for Higher Education, State Capitol, Oklahoma City, Oklahoma.

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increased significantly since 1960. While the orientation of the Associate Degree holders tends to be transfer in nature, many students terminate their higher education experience after receiving the Certificate or Associate Degree.

Since 1960 several institutions have more than doubled their production of Certificate holders. Preliminary data indicate that the state-supported institutions have produced more combined Associate Degree and Certificate holders and also have had the greater increase in enrollment as shown in Table III.

As institutions change their functions, changes can be anticipated in the preceding programs. Examples of this are: Oklahoma College of Liberal Arts may delete a

particular program while Panhandle State College institutes that program. Cameron State College anticipates a one or two-year certificate program when the college attains four-year status.

TABLE III

FALL, 1959-1966 FRESHMEN AND SOPHOMORE BUSINESS  
ENROLLMENT IN OKLAHOMA INSTITUTIONS  
OF HIGHER EDUCATION

Fall Semester	Private and Municipal	State Supported Enrollments	Total Enrollments
1959-60	1285	4199	5484
1960-61	1391	4601	5992
1961-62	1325	4847	6172
1962-63	1321	5053	6374
1963-64	1367	5275	6642
1964-65	1569	6233	7802
1965-66	2199	7659	9858
1966-67	2090	7673	9763

Source: Oklahoma State Regents for Higher Education,  
State Capitol, Oklahoma City, Oklahoma.

Skill Training in Oklahoma Higher Education Institutions

The preceding two sections of this chapter have dealt with enrollments and graduates in technical and business programs. There are other technical-vocational education programs that are offered by the higher education institutions of Oklahoma. These programs of skill development are limited almost entirely to the programs at Oklahoma State Tech at Okmulgee.

Table IV shows the entire list of programs offered at Oklahoma State Tech including the technical and business



programs. The courses vary in length from one trimester (1/3 year) to six trimesters ( two years) and usually involve a combination of classroom instruction and laboratory experiences.

TABLE IV

PROGRAMS OFFERED AT OKLAHOMA STATE UNIVERSITY  
SCHOOL OF TECHNICAL TRAINING AT OKMULGEE  
SCHOOL YEAR 1966-67

Program	Years
Accounting	2
Appliance Repair	1-1/3
Auto Body	1-1/3
Paint Specialist	2/3
Metal Preparation	2/3
Body Customizing	1/3
Auto Body Shop Operation	1-2/3
Auto Mechanics	1-2/3
Tune-up Specialist	1
Automatic Transmissions	1
Brakes and Front Ends	1
Service Station Operation	1
Automotive Service Management	2
Auto Trim	1
Auto Glass	1/3
Auto Parts	1
Bakery	1-1/3
Cake and Pastry Production	1/3
Variety Breads and Rolls Production	1/3
Cake Decoration	1/3
Bookkeeping	1-1/3
Building Construction	
(Carpentry and Cabinet)	2
Clerk Typist	1
Commerical Art and Advertising	2
Culinary Arts	1-1/3
Baking	1/3
Fry Cook	1/3
Pantry and Salad	1/3
Dinner Cook	1/3
Diesel Fuel Injection	1
Diesel Mechanics	2
Drafting	2

TABLE IV (Continued)

Program	Years
Dry Cleaning	1-1/3
Wool Finishing	1/3
Silk Finishing	1/3
Dry Cleaning Procedures	1/3
Spotting and Wet Cleaning	1/3
Electrical Maintenance	1-2/3
Engineering Aide	2
Farm Machinery	2
Furniture Upholstery	1-1/3
General Business	2
Industrial Electrical Maintenance	2
Industrial Electronics	2
Key Punch Machine	1/3
Plumbing	1-2/3
Printing (Letterpress)	1-2/3
Machine Composition	1
Floor Work	1
Press Work	1-1/3
Printing (Lithography)	1-2/3
Refrigeration and Air Conditioning	2
Secretarial	1-1/3
Shoe, Boot and Saddle Repair	1-2/3
Shoe Repair	1
Bootmaking	2/3
Saddlemaking	2/3
Small Gasoline Engines	1
Stenographic	1
Teletypesetter Perforator	1/3
Television Electronics	2
Watchmaker and Micro-Instrumentation	2
Watchmaker	1-1/3
Micro-Instrumentation	2/3

Source: School Catalog from Oklahoma State Tech at Okmulgee

Fall enrollments at Okmulgee in skill training programs have more than doubled since 1959 as shown in Table V.

TABLE V  
FALL ENROLLMENTS AT OKMULGEE IN PROGRAMS  
OTHER THAN TECHNICAL AND BUSINESS

Year	Enrollment
1959-1960	698
1960-1961	751
1961-1962	849
1962-1963	not available
1963-1964	1006
1964-1965	1141
1965-1966	1449
1966-1967	1429

Source: Oklahoma State Tech Registrar's  
Office, Okmulgee, Oklahoma.

Graduates of the skill training programs at Okmulgee in the years since 1959 are enumerated in Table VI. The graduates are included for three trimesters in each year, except for the 1966-1967 year when the summer term graduates are not included. The instrument used to record the enrollment and graduate data is shown in the Appendix of this thesis.

Because of the varying lengths of programs at Okmulgee, it was difficult to compare the amount of increase in enrollment with the amount of increase in the number of graduates. However, since the programs with the largest number of graduates i.e., auto body, auto mechanics, culinary arts, diesel mechanics, and lithographic

printing, are all over one year in length, the graduate figures of a certain period were compared with the enrollment figures of a period two years earlier. Specifically, a comparison was made of the enrollment increase between the 1959-1960 school year and the 1963-1964 school year with the graduate increase from the 1961-1962 school year to the 1965-1966 school year. The enrollment increase for this period was 44.1 per cent, while the graduate increase was 34.3 per cent. Since there has been extensive fluctuation in the number of graduates from these programs, the above-stated percentages would not remain constant for other periods.

As indicated in Table VI, several programs do not now and never have produced very many graduates. Although not within the scope of this thesis, these data suggest important questions concerning why certain of these programs, such as farm machinery and tractor repair, leathercraft, and auto trim, have not been more popular and whether it is feasible to continue those programs that have produced very few graduates.

Other institutions have listed in their catalogs several of the same types of programs as are offered at Okmulgee, but a check of these programs at the various institutions showed that enrollments and graduates from these programs were very small or sometimes nonexistent.

Among the other programs offered is a funeral service course at Central State College at Edmond, which

TABLE VI

GRADUATES OF OKLAHOMA STATE TECH AT OKMULGEE  
EXCLUDING TECHNICAL AND BUSINESS GRADUATES  
FOR THE SCHOOL YEARS 1960-61 to 1966-67

	1959-1960	1960-1961	1961-1962	1962-1963	1963-1964	1964-1965	1965-1966	1966-1967	Total
Auto Body	22	20	19	19	31	43	34	41	229
Auto Machinist							8	14	22
Auto Mechanics	54	57	67	65	79	114	85	96	617
Auto Parts	2	3	2	3	7	13	14	5	49
Station Operators								2	2
Auto Service									
Auto Trim	2	5	1	3	2	7	6	5	31
Baking	10	12	12	12	15	18	12	20	111
Building Construction and Cabinet Making	6	6	9	12	15	13	10	16	87
Commercial Art and Advertising	9	5	11	6	13	10	11	10	75
Culinary Arts	11	9	9	16	14	12	23	27	121
Diesel Mechanics	67	46	71	72	56	77	88	50	527
Dry Cleaning	16	5	13	5	4	9	5	9	66
Engineering Aide	4	3	5	4	5	2	3	1	27
Farm Machinery and Tractor Repair	2	3	1	-	1	3	2	1	13
Furniture Upholstery	2	2	1	5	3	6	3	7	29
Leathercraft	4	5	1	3	-	3	1	3	20
Letterpress Printing	11	7	16	12	8	7	7	6	74
Lithography Printing	7	13	17	12	26	21	17	32	145
Plumbing	11	5	5	3	5	9	7	10	55
Small Gas Engines					1	9	13	14	37
Teletype Setter				3	8	7	4	6	28
Watchmaker and Microinstrumentation	4	3	8	4	11	10	7	10	57
Total	244	209	268	259	304	393	360	385	2422

students may take either as a two or four-year program. By the end of the 1966-1967 school year there had been four two-year graduates and eleven four-year graduates. Thus, this program tends to be a baccalaureate degree program.

The cosmetology program at Langston is another example of the programs offered. This program has averaged eleven enrolled and six graduates for each year since 1959-1960.

Very few other terminal programs do exist with the above-mentioned programs being the largest for which accurate data could be obtained.

#### Recent Research Developments

As stated in Chapter II there have been completed in recent months two research projects that could greatly influence the industrial and educational development of Oklahoma. These are the Roney-Braden study and the Ling-Temco-Vought, Inc. study, cited in Chapter II.

Perhaps the major recommendation of both studies is for the creation of an administrative agency that would coordinate the development of occupational education in Oklahoma with the demands of business and industry.

A step in this direction has been made by the previously mentioned House Bill 995, creating the State Board for Vocational and Technical Education.

Other major recommendations of both studies include:

1. Informing the high school counselors of the opportunities available through occupational education.
2. Establishment of a program to improve the image of occupational education in Oklahoma.
3. Establishment of an information center to coordinate the worker needs of Oklahoma industries with the job seeking activities of the graduates of occupational programs.

Each study made several recommendations as a result of its findings. A few of the major findings as stated in each study are presented here. The reader may wish to consult the respective studies for data concerning the findings.

The major findings of the Roney-Braden study include:

1. The major effort in developing occupational education beyond the high school in Oklahoma has been made by the Oklahoma State University.
2. The state's major population areas do not have adequate technical education services.
3. Oklahoma's schools are not producing the kinds and numbers of technical personnel needed to meet the state's manpower requirements in the future.
4. Oklahoma is not keeping pace with the national movement toward occupational education beyond the high school.
5. Oklahoma's post-high school programs in technical (engineering and scientific) fields are operating at about half capacity.
6. Oklahoma industries are not employing available graduates of Oklahoma technical schools.
7. The graduate technician's role in Oklahoma's economic development is not being fully realized.

8. Employment opportunities for graduate technicians are expected to improve markedly in the future.
9. Business, office, distributive, and paramedical programs at the Associate Degree level have not been developed in Oklahoma.
10. All schools now providing two-year post-high school technical programs in Oklahoma are needed to meet the demand for technical graduates and to serve students with different characteristics.<sup>43</sup>

The following are selected major findings, quoted from the Ling-Temco-Vought, Inc. study:

1. An urgency exists to consolidate occupational education to achieve a most effective economic development program.
2. Some Personnel Directors contacted indicate that the supply of workers which can qualify for existing Oklahoma job openings and perform satisfactorily with minimum training is extremely limited.
3. Vocational-Technical Schools award no degrees.
4. There is insufficient and inadequate coordination between economic and educational planning in the state of Oklahoma.
5. The funding practices in Oklahoma for Area Vocational-Technical Schools are inadequate and/or inoperative with respect to need.
6. There is inflexibility in the current Oklahoma vocational-technical programs.
7. Little to no effort is exerted to coordinate and encourage the expansion of Adult Basic Education with occupational education of job needs in the State of Oklahoma.
8. Effective vocational guidance in Oklahoma high schools is subordinated to counseling of students relative to college entrance.

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<sup>43</sup>Roney, Braden, pp. xv-xxiii.



9. Little or no program of interdisciplinary counseling in Oklahoma institutions of higher education exists for advising potential college dropouts concerning their transfer to occupational curriculums.<sup>44</sup>

These selected lists of findings indicate that significant research has been carried out concerning technical-vocational education programs in Oklahoma and that many recommendations have come from these findings. It is anticipated that the findings of these and future research projects can contribute to an acceleration of industrial development in Oklahoma.

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<sup>44</sup>Ling-Temco-Vought, Inc., Section III, p. 1-4.

## CHAPTER IV

### FINDINGS, CONCLUSIONS, RECOMMENDATIONS

The following research questions were investigated in this study.

1. To what extent have trends in technical-vocational education been influenced by Federal legislation?
2. What enrollment and graduate trends are indicated by changes in the numbers of students participating in these programs since 1959?
3. Are there any trends with respect to the amount of recognition given to technical-vocational education in Oklahoma by the state legislature and administration, industrial people, researchers, and educators?

This chapter of findings, conclusions and recommendations will attempt to answer these questions.

#### Findings and Conclusions

1. The State Board of Regents determines the functions of each of the higher education institutions of Oklahoma.
2. Some institutions are starting technical-vocational education programs while other institutions are deleting programs.
3. The legislation that Oklahoma has passed concerning technical-vocational education has been largely derived from Federal legislation on the subject.
4. There has been increased awareness by the legislature, state administration, industrial people, and researchers of the role of technical-vocational education in the industrial development

of Oklahoma.

5. The institutions of higher education in Oklahoma that are governed by the Board of Regents for Oklahoma Agricultural and Mechanical Colleges furnish the bulk of the technical-vocational education opportunities in Oklahoma higher education institutions.
6. Oklahoma State Tech at Okmulgee provides practically all the skill training that is offered in higher education institutions of Oklahoma.
7. Enrollments in skill training at Okmulgee have more than doubled between 1959 and 1966.
8. Technical training in higher education institutions of Oklahoma is mostly in 3 fields; electronics, drafting, and mechanical technologies.
9. Enrollments in technical training in Oklahoma higher education institutions have approximately doubled between 1960 and 1966.
10. The part-time portion of the total enrollments in technical programs has steadily increased during the 1960's.
11. Freshman and Sophomore business enrollments in Oklahoma institutions of higher education have almost doubled between 1959 and 1966.
12. Until the State Board of Vocational and Technical Education was created on April 15, 1968, there had been no coordinating board to supervise all technical-vocational education in Oklahoma at the high school and post-high school levels. The act passed at that time does not include the supervision of the programs at Oklahoma State Tech and the Oklahoma State University technical institutes at Oklahoma City and Stillwater. These institutions at the present time provide the bulk of this type of training in Oklahoma higher education institutions.

#### Recommendations

1. The information presented in this thesis needs to be kept current with the addition of new materials as new developments occur in technical-vocational education.

2. Research needs to be conducted to determine to what extent technical-vocational education is provided by private concerns.
3. An investigation needs to be made of existing technical-vocational programs to determine if it is feasible to continue to offer certain programs that have not produced substantial numbers of graduates.
4. Research needs to be continued into the possibility of establishing a coordinating board for all technical-vocational education in Oklahoma.

## SELECTED BIBLIOGRAPHY

- Barlow, Melvin L. History of Industrial Education in the United States. Charles A. Bennett Co. Inc., Peoria, Illinois, 1967.
- Best, John W. Research in Education. Prentice-Hall Inc., Englewood Cliffs, New Jersey, 1959.
- Biennial Report of the State Board of Regents of Oklahoma Colleges. Oklahoma City, Oklahoma, December 1, 1964.
- Chase, Edward T. "Learning to be Unemployable," Harper's Magazine. April, 1963.
- Dunlap, E. T. "The History of Legal Controls of Public Higher Education in Oklahoma." Unpublished doctoral dissertation, Oklahoma Agricultural and Mechanical College, 1956.
- Flesher, W. R., Flesher, Marie A., Reese, Robert M., et. al. Public Vocational-Technical Education in Oregon. Report of a survey made for the Oregon State Board of Education. School Survey Service, Columbus, Ohio, 1958.
- Franklin, Edward, EdD. A History of Industrial Education in Oklahoma. University of Oklahoma, Norman, Oklahoma, 1952.
- Goals for Oklahoma Higher Education. Self-study of higher education in Oklahoma, Report No. 8, 1966.
- Good, Carter V., ed. Dictionary of Education, 2nd ed. New York City, New York, McGraw-Hill Book Co. Inc., 1959.
- Higher Education Opportunities and Needs in Oklahoma. Self-study of higher education in Oklahoma, Report No. 7, 1965.
- Higher Education in Oklahoma. A report from the Chancellor, Oklahoma State Regents for Higher Education. Vol. 1, No. 4, July 26, 1965.

- U. S. Department of Health, Education and Welfare.  
Highest Education Act of 1965. Office of Education,  
Washington, D. C., 1965.
- Ling-Temco-Vought, Inc. Basic Planning with Action Oriented Recommendations Relative to Vocational and Technical Skills and Literacy Systems in the State of Oklahoma. Corporate Systems Management Services, Arlington, Texas, December 28, 1967.
- Manpower in Oklahoma. Oklahoma Employment Security Commission, Oklahoma City, Oklahoma, December 1964.
- Medsker, Leland L. The Junior College: Progress and Prospect. McGraw-Hill Book Co., New York, 1960.
- Oklahoma Higher Education Code. Oklahoma State Regents for Higher Education. September, 1965.
- Oklahoma Public Schools: A survey report to the Oklahoma Governor's Advisory Committee on Common School Education, Division of Surveys and Field Services, George Peabody College for Teachers, Nashville, Tennessee, 1964.
- Oklahoma Session Laws, 1917. Chapter 155, sec. 1, p. 245.
- Oklahoma Session Laws, 1929. Chapter 267, sec. 1, p. 391.
- Oklahoma Session Laws, 1941. Chapter 26, sec. 5, p. 451.
- Oklahoma Session Laws, 1949. Chapter 1A, Article 14C, sec. 1, p. 566.
- Oklahoma State Legislation. Enrolled House Bill No. 995. Oklahoma City, Oklahoma.
- Oklahoma State Legislation. Preliminary Draft of House Joint Resolution. No. 536, Oklahoma City, Oklahoma.
- Oklahoma State University, Technical Institute, Oklahoma City Branch, Catalog for 1965-1967.
- Oklahoma Statutes, 1961. Title 70, sec. 14 A-1, 14 B-1.
- Oklahoma Statutes Supplement, 1965. Title 70, sec. 623.
- Oklahoma Statutes Supplement, 1967. Title 74, sec. 1122-1125.
- Oklahoma Statutes Supplement, 1967. Title 70, sec. 4401-4409.

Roney, Maurice W. and Braden, Paul V. Occupational Education Beyond the High School in Oklahoma. Research Foundation, Oklahoma State University, Stillwater, Oklahoma, January 15, 1968.

Schill, William John. Curricula Content for Technical Education. University of Illinois, Urbana, Illinois, 1964.

The Oklahoma State System of Higher Education. Oklahoma State Regents for Higher Education, February, 1963.

Tuxhorn, Scott E. "The Educational Unit for Administration, Organization and Supervision of Area Voc-Tech Schools in Oklahoma." Unpublished doctoral dissertation. Oklahoma State University, May, 1967.

Venn, Grant. Man, Education and Work. American Council on Education. Washington, D. C., 1964.

## APPENDIX



TECHNICAL-VOCATIONAL EDUCATION IN STATE  
SUPPORTED INSTITUTIONS IN OKLAHOMA

School \_\_\_\_\_

Y E A R S

PROGRAMS	*	1959- 1960	1960- 1961	1961- 1962	1962- 1963	1963- 1964	1964- 1965	1965- 1966	1966- 1967
	A								
	B								
	A								
	B								
	A								
	B								
	A								
	B								
	A								
	B								
	A								
	B								
	A								
	B								

\* A -- Enrollments

B -- Graduates

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