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THE UNIVERSITY OF OKLAHOMA

GRADUATE COLLEGE

# DEVELOPMENT OF POST-SECONDARY TWO-YEAR EDUCATIONAL SERVICE AREAS FOR OKLAHOMA

A DISSERTATION

SUBMITTED TO THE GRADUATE FACULTY

in partial fulfillment of the requirements for the

degree of

DOCTOR OF PHILOSOPHY

BY

DAVID RAY TIMMONS

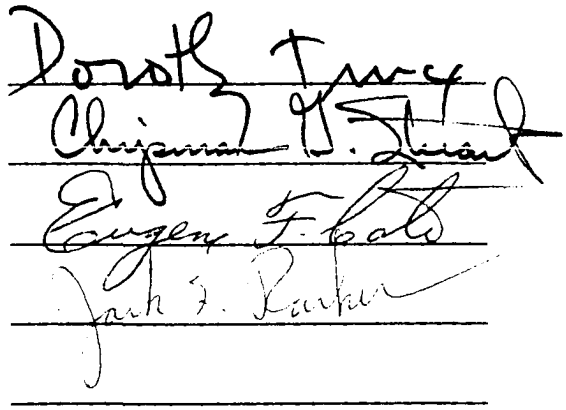
Norman, Oklahoma

1975

DEVELOPMENT OF POST-SECONDARY TWO-YEAR

EDUCATIONAL SERVICE AREAS FOR OKLAHOMA

APPROVED BY



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## DEDICATION

This is dedicated to my parents, Boyce and Alice Timmons, and to my son, David Brian.

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# DEVELOPMENT OF POST-SECONDARY TWO-YEAR EDUCATIONAL SERVICE AREAS FOR OKLAHOMA.

## CHAPTER I

## INTRODUCTION

The methods and criteria for state-wide planning of educational institutions vary according to the nature of the education provided and the administering agency. The diversity of the state agencies whose common goal is the education of the citizenry indicates the desirability of a cooperation or partnership between them. This may not necessarily be the case however, as separately administered state agencies providing education at the same academic level may work at cross-purposes. These cross-purposes may create duplication of services and training, cause confusion in the areas of responsibility and authority, and dilute the financial resources needed to maintain the institutions. It may be geographically feasible to coordinate activities to increase educational opportunities to area residents in an attempt to dissolve these problems. This author believes these problems exist in Oklahoma for the public institutions providing post-secondary education at a level less than that of the baccalaureate degree. Institutions specifically in the areas of concern are community and junior colleges and public technical schools, and the area vocational and technical education centers and schools. The

administrative agencies under whose direction these institutions operate include the Oklahoma State Board for Vocational and Technical Education, the Oklahoma State Regents for Higher Education, and to some degree the Oklahoma State Department of Education.

## Background, Need, and Purpose

In 1969 the Oklahoma Employment Security Commission published data[1] relating to the manpower production and needs in the state. To present the study in a comparative fashion and with manageable units, the state was geographically divided into eleven "Manpower in Oklahoma" regions. Each region consisted of three to eleven counties and was formed by county boundaries. Data for each region included figures of current conditions and future trends under such topics as populations, scholastic populations (kindergarten through twelfth grade), racial distributions, and the labor force and employment in industrial areas. Subsequent to the study two state offices referred to the published material for use in their own planning, the Oklahoma State Regents for Higher Education, and the Oklahoma State Board for Vocational and Technical Education.

The Oklahoma State Regents for Higher Education conducted a study of junior college education in Oklahoma and published its findings in 1970.[2] A junior college advisory committee of the State Regents, in order to study existing and future needs of junior college education, decided

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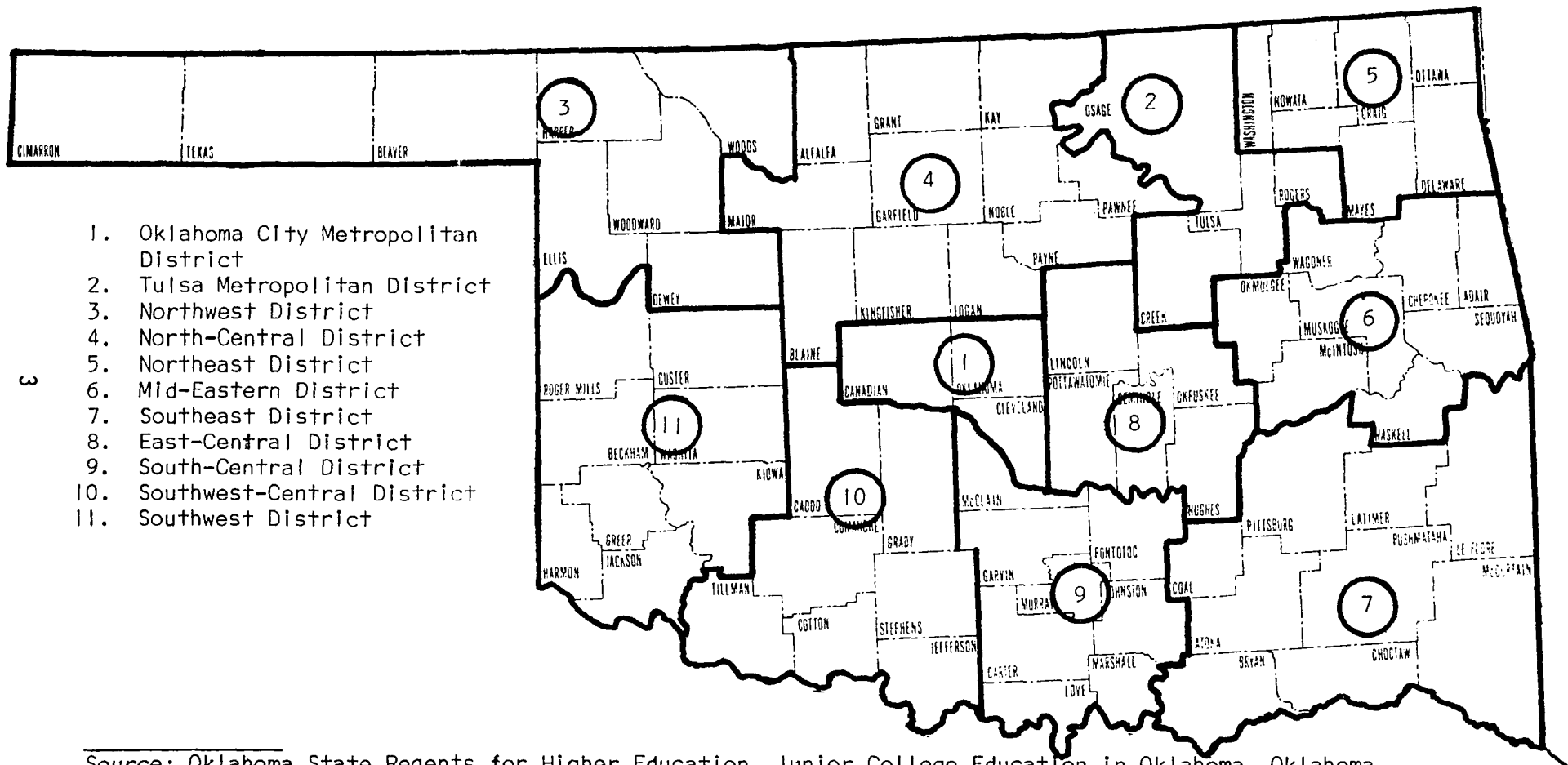
[1] Manpower in Oklahoma, Oklahoma Employment Security Commission, State Capitol, Oklahoma City, 1969.

[2] Junior College Education in Oklahoma, Oklahoma State Regents for Higher Education, State Capitol, Oklahoma City, 1970.

Figure 1
OKLAHOMA JUNIOR COLLEGE-TECHNICAL EDUCATION DISTRICTS




Source: Oklahoma State Regents for Higher Education, Junior College Education in Oklahoma, Oklahoma City, February, 1970, p. 77.

to divide the state geographically into eleven districts coextensive with the eleven "Manpower in Oklahoma" regions established by the Oklahoma Employment Security Commission. This was done because of the availability of the data and to insure that all areas of the state were considered in the study. The State Regents titled their regions the "Oklahoma Junior College-Technical Education Districts" (Figure 1). The Regents' report compiled data from six state junior colleges, and five community colleges. Since this report was made three other two-year institutions have been established, two community colleges and one state junior college.

The identification of the regions by the State Regents undoubtedly aided them in forming one of the conclusions in their publication, Oklahoma Higher Education: A State Plan for the 1970's. The conclusion was:

> Oklahoma should develop by 1980 a statewide system of comprehensive junior college-technical education whereby the citizens of all parts of the state may have an opportunity to participate in post-high school lower-division education. The state should be divided into a number of regions or service areas generally consistent with the manpower or economic development regions identified by state-level agencies for planning purposes. Existing state junior colleges, community junior colleges, and technical institutes in each of the regions would become parts of an administrative unit for regional post-high school education.[3]

The data of the "Manpower in Oklahoma" regions provide important information for use by the administrative units of the Oklahoma State Board of Vocational and Technical Education,[4] particularly as an aid in

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[3]Oklahoma Higher Education: A State Plan for the 1970's, Oklahoma State Regents for Higher Education, State Capitol, Oklahoma City, 1971, p. 17.

[4]Oklahoma Area Vocational-Technical Schools, State Board of Vocational and Technical Education, Stillwater, 1972, Part 3, p. 2.

determining the need to establish a vocational-technical area school district. Due to the methods of establishing area school districts, the area boundaries normally correspond to those of public school districts rather than to counties. Each of the sixteen area school districts and centers in operation in 1972, and the four schools under construction and/or in the planning stages, consisted of portions of as many as three counties or was formed by one county or a portion thereof.[5]

There were fourteen public junior and community colleges and two state university branches in Oklahoma in 1972[6] (Figure 2). There were twenty-seven designated program sites within the twenty area school districts mentioned above (Figure 3). Though both types of institutions operate under the auspices of separate state agencies, several functions of both are similar and include: (1) vocational and technical education requiring two years or less of post-high school work; (2) basic and vocational-technical education for non-high school graduates; and (3) oncampus adult education.[7] Authorization is also given to the boards of education of the more than 600 school districts in Oklahoma to provide similar education.[8] Thus authorization is provided to three separate state agencies to offer post-high school education.

---

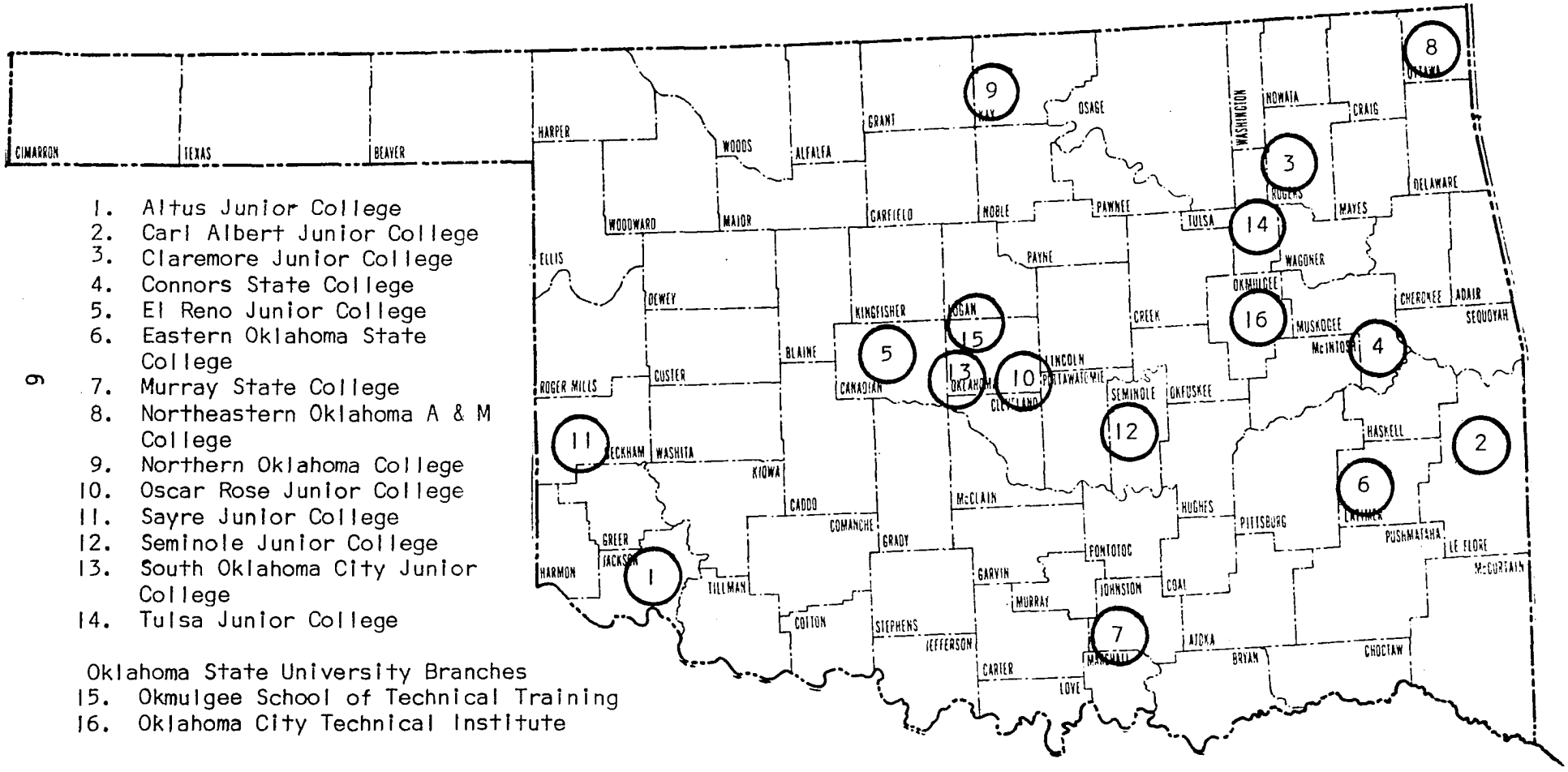
[5]Ibid., p. 30

[6]Report on Enrollments in Oklahoma Colleges: Fall, 1972, Oklahoma State Regents for Higher Education, Oklahoma City, 1972.

[7]Oklahoma Area Vocational-Technical Schools, Part 3, p. 3; Junior College Education, p 19.

[8]School Laws of Oklahoma 1973, Art. V, Section 75.

Figure 2
OKLAHOMA TWO-YEAR COLLEGES AND STATE UNIVERSITY BRANCHES

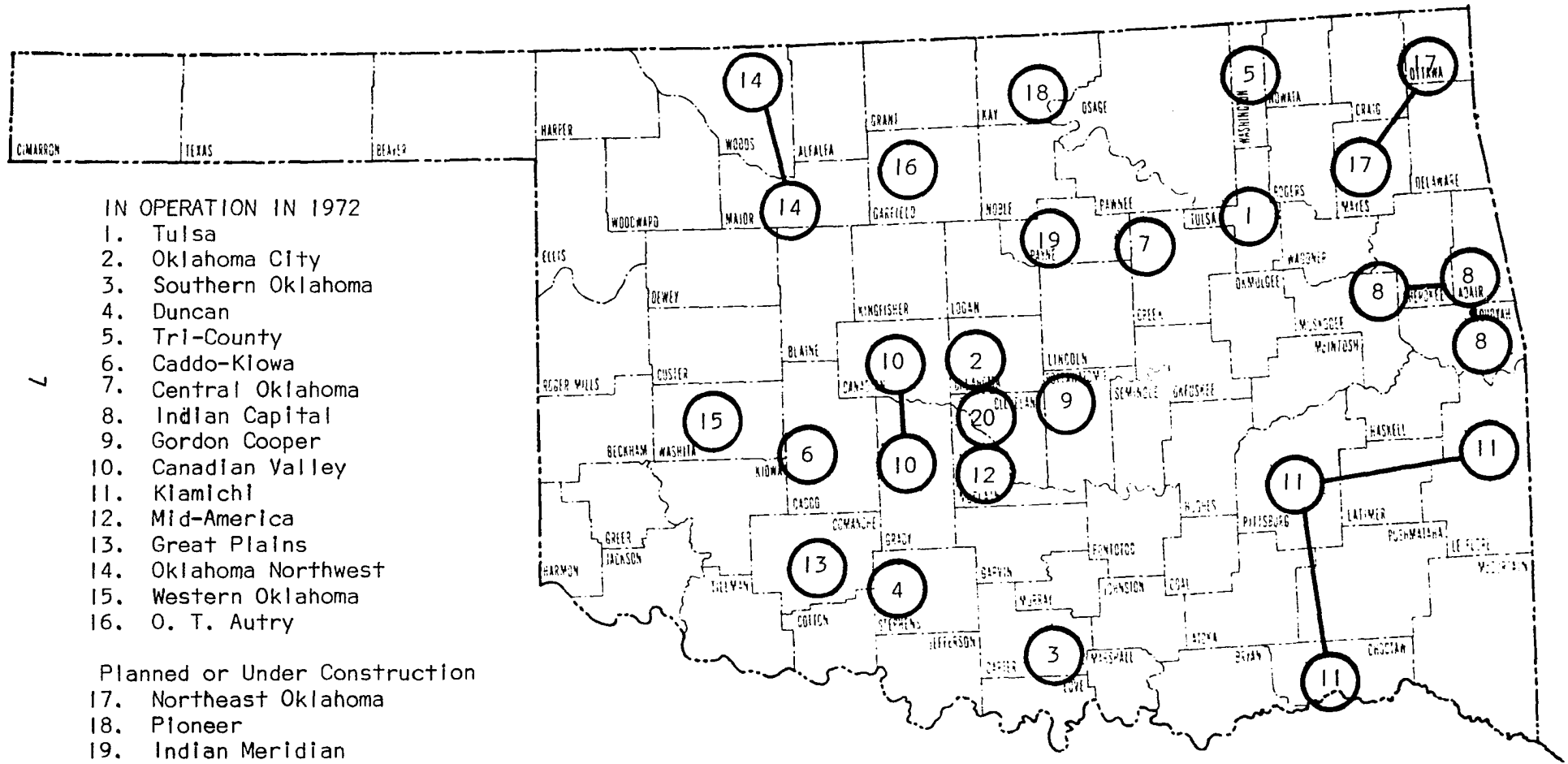



1. Altus Junior College
2. Carl Albert Junior College
3. Claremore Junior College
4. Connors State College
5. El Reno Junior College
6. Eastern Oklahoma State College
7. Murray State College
8. Northeastern Oklahoma A & M College
9. Northern Oklahoma College
10. Oscar Rose Junior College
11. Sayre Junior College
12. Seminole Junior College
13. South Oklahoma City Junior College
14. Tulsa Junior College

Oklahoma State University Branches

15. Okmulgee School of Technical Training
16. Oklahoma City Technical Institute

Figure 3
OKLAHOMA AREA VOCATIONAL-TECHNICAL SCHOOLS AND CENTERS




IN OPERATION IN 1972

1. Tulsa
2. Oklahoma City
3. Southern Oklahoma
4. Duncan
5. Tri-County
6. Caddo-Kiowa
7. Central Oklahoma
8. Indian Capital
9. Gordon Cooper
10. Canadian Valley
11. Kiamichi
12. Mid-America
13. Great Plains
14. Oklahoma Northwest
15. Western Oklahoma
16. O. T. Autry

Planned or Under Construction

17. Northeast Oklahoma
18. Pioneer
19. Indian Meridian
20. Moore-Norman

Two other institutions to be considered in the study are the post-secondary branch campuses under the direction of Oklahoma State University. These two-year institutions providing academic and technical education are located at Okmulgee and Oklahoma City. They are to be included in the study not only because of functions similar to those of the area vocational-technical schools and the junior colleges, but because indications are they should become separate institutions with their own governing boards,[9] and thus would need to be a part of a post-secondary two-year educational network in Oklahoma.

Vocational-technical schools are not usually classified as higher education as are junior colleges and community colleges.[10] However, their enrollments of a relatively large number of high school graduates and adults compared to their enrollment of high school students makes their inclusion necessary when considering post-secondary institutions.

In considering the geographical nature of post-secondary education, attention must be given to the area vocational-technical school districts in Oklahoma which have continually been established since the mid-1960's. An amendment to the State Constitution was voted on and approved by the people of Oklahoma in 1966, which provided for the formation of Area Vocational-Technical School Districts. This amendment allows for school districts to band together to form a new unit of government called the area district.[11] Communities maintaining a junior college, and

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[9] Oklahoma Higher Education: A Plan for the 1970's, p. 16.

[10] Junior College Education, p 19.

[11] Okla. Const., Art X, Section 9B.

state two-year college, may also form an area vocational-technical school district if they meet certain criteria.[12] The existing two-year colleges, the area vocational-technical schools, and the two branch campuses of Oklahoma State University, may be considered adequate to meet the demands for those needing training of less than baccalaureate degree level. Coordinated activities of admissions, counseling and guidance, employment offices, placement bureaus, financial aid offices, and instructional programs between area institutions should increase the avenues available to residents to meet their needs of training and education.

## Need

Cooperative efforts between institutions with similar functions could greatly benefit the state economically and educationally. Not only should institutions be cooperative, but efforts should involve total coordination, defined as "the planning for and systematic allocation of responsibility and resources among institutions to promote maximum efficiency and effectiveness in the achievement of higher education."[13] This study approaches the cooperative effort aspect geographically, particularly the efforts of the State Board of Vocational and Technical Education and the State Regents for Higher Education. The geographical study is being made because the post-secondary two-year educational institutions in the state are, or have been established, according to local

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[12] Oklahoma Higher Education Code, Art. XIV, Section 1410 and 1411.

[13] The Status and Direction of Oklahoma Higher Education, John Coffelt, Oklahoma State Regents for Higher Education, Oklahoma City, 1968, p. 8.

or area planning, and not according to a comprehensive state plan that is being suggested in this study.

## Purpose

The purpose of the research is to outline a more beneficial structure to utilize and give access to post-secondary two-year institutions. The specific focus of the study is to determine the educational service areas of public post-secondary two-year institutions (community colleges, junior colleges, area vocational-technical schools, technical and lower-division branches of the state university) in Oklahoma.

## The Problem

### Problem Statement

The problem is: What is the spatial pattern relationship between the educational service areas of public junior colleges, community colleges, area vocational-technical schools, and state university lower-division branches? To deal with this problem, it is the intention of the author to develop educational service areas for post-secondary two-year institutions.

Once each of the institutional service areas has been determined, differences in spatial relationships can be shown. Questions investigated include: (1) Are there educational service areas of the two-year post-secondary institutions that overlap? (2) How are the services duplicated? (3) What are the areas in the state that are lacking the educational services of such post-secondary institutions? (4) Can such a model network increase the quality of education for the state?

## Definition of Terms

Higher education (post-secondary education)--"all education of any kind beyond the twelfth grade in which students pursue study and for which the credit earned may apply toward meeting requirements for a degree, diploma, or other post-secondary academic or collegiate award, and shall also include bona fide post-secondary adult and continuing education, extension and public service education, and organized research as may be authorized by the State Regents...."[14]

Junior college, community college, post-secondary vocational school, technical institute, lower-division branch of state university--an educational institution which "(1) is legally authorized within such State to provide a program of education beyond secondary education; (2) admits as regular students persons who are high school graduates or the equivalent, or at least 18 years of age; (3) provides a two-year post-secondary educational program leading to an associate degree, or acceptable for credit toward a bachelor's degree, and also provides programs of post-secondary vocational, technical, occupational, and specialized education; (4) is a public or other nonprofit institution; (5) is accredited as an institution by a nationally recognized accrediting agency or association...."[15]

School district---"any area or territory comprising a legal entity, whose primary purpose is that of providing free school education,

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[14] Oklahoma Statutes-1973 Supplement, Art. 70, Sect. 2252

[15] Education Amendments of 1972, Public Law 92-318, Title X, Part A., Sect. 1018.

whose boundary lines are a matter of public record, and the area of which constitutes a complete tax unit."[16]

Post-secondary two-year educational service area---an area formed by several dependent and independent school districts, the area of which is served by a public junior college, community college, area vocational-technical school, or lower-division branch of a state university, or a combination of two or more, such institutions being within commuting distance of the area residents, and the area of which may form a complete tax unit.

## Delimitations

This study is limited to the geographical defining of educational service areas for post-secondary two-year education in Oklahoma. The study does not propose courses of instruction for any institution, nor does it examine the administrative organization within an institution. However, since the study deals with institutions under separately controlled agencies, and there is the concern for the overlap, or the lack of, student services between institutions, some references are made to the administrative relationships between, and selected office within, the institution.

## The Data

Scholastic enrollment data, post-secondary two-year public institutions' (junior colleges, community colleges, two-year branch campuses of Oklahoma State University, and area vocational-technical

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[16] School Laws of Oklahoma 1973, Art. I, Sect. 8.

schools) locations, institutional financial expenditures and resources, and defined school district and area school district boundaries are required for the study. These items of information have been obtained from the Oklahoma State Board of Education, the Oklahoma State Regents for Higher Education, and the Oklahoma State Board for Vocational and Technical Education. Maps for delimiting the boundaries of school districts, and area school districts were obtained from the Oklahoma State Highway Department. In order to make this study as timely as possible, all data collected correspond to reports submitted by the different agencies for the 1972-73 academic year.

## The Method of Research

### Theoretical Framework

The procedures for delimiting boundaries of educational institutions vary according to the criteria for establishing the particular type of institution needed. Among the primary determinants in the efficiency and effectiveness of these institutions and their services are the location, area, and student population. Areal factors greatly influence the size and economic base of institutions as well as the quantity and quality of their educational services. Without attention to the spatial relationships between the institutions, little can be done to eliminate or at least alleviate the possible causes of duplication, and at the same time strengthen the student services at each of the schools.

Based on the premise that schools act as first order places according to Central Place Theory,[17] the minimization of distance from

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[17]Alexander, John W., Economic Geography, (Englewood Cliffs, N.J.: Prentice Hall, Inc., 1963), p. 560.

student residences to schools should centralize the location of schools within the school boundaries. According to the Central Place Theory if the population is evenly distributed across the landscape, then the trade area boundary of first order places should be in a hexagonal pattern with the first order place in the center. Following the same logic, if student population is evenly distributed across the landscape, if each school enrolls an equal number of students, and if school boundaries are delimited by minimum student residence to school distance, then the boundaries should form a hexagonal pattern with the school located in the center. Although student population is not evenly distributed across the landscape and each school does not have an equal enrollment, the minimum student residence to school distance should still centralize the location of schools with respect to the distribution of students. This is similar to Herrick's recommendation that a school site is "where the requirements of centrality and accessibility are best satisfied."[18]

Model school district networks have been developed using the linear programming transportation technique. Yeates[19] and Gruver[20] both used the method but delimited their studies to square-mile sections in a county. Both studies involved finding the optimum school district network

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[18]Herrick, John H., From School Program to School Plant (New York: Henry Holt and Company, 1965), p. 75.

[19]Yeates, Maurice H., "Hinterland Delimination: A Distance Minimizing Approach," The Professional Geographer, Vol. 16, 1963, pp. 7-10.

[20]Gruver, David Noel, The Development of a Model School District Network for Cherokee County, Oklahoma, Master's Thesis, The University of Oklahoma, 1972.

which minimized student residence to school transportation costs. This method was not considered feasible for this study due to the amount of data required to develop a similar network for an entire state.

Research indicates that when there is a plan to geographically divide a state into divisions, a convenient approach is to use surveys and census reports for each county because of the availability of the data. This type of research often does not consider the location of the educational institutions with respect to its service area, and often the results show the need for more institutions, the elimination of some, or the need to relocate an existing institution. A primary assumption of this study is that there are a sufficient number of institutions in the state to provide post-secondary two-year educational programs, to all interested citizens.

## Research Design and Procedure

The procedure for delimiting the boundaries of post-secondary two-year institutional service areas is the method of "Thiessen polygons."[21] The method involves the following: (1) lines are drawn joining a given center to each adjacent center; (2) each of these inter-center lines is bisected to give the midpoint of the line; (3) from the midpoint of the line a boundary line is drawn at right angles to the original inter-center line to give a series of polygons. In Bogue's[22] method the counties lying across the boundaries are included within the boundary of the center

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[21]Haggett, Peter, Locational Analysis in Human Geography (London: Edward Arnold Ltd., 1965), pp. 247-248.

[22]Bogue, Don J., The Structure of the Metropolitan Community (Ann Arbor, Mich.: The University of Michigan, 1949), p. 17.

within which the greater part of the county area lies. For this study the 637 independent and dependent school districts in Oklahoma in 1972-73 are used instead of the 77 counties.

The validity of the method lies in two assumptions:[23] (1) the area within the intersecting boundary lines of the polygon lies nearer to the enclosed center than to any other center; (2) a metropolis (in this study a post-secondary two-year institution) dominates all the area that lies geometrically nearest to it.

The following principles govern the delimitation of the model educational service areas:

1. The areas must follow school district lines in all cases. The data collected pertaining to public school districts are used to construct the educational service area.

2. The delimitation is made on the basis of objective empirical data to the greatest extent possible. General impressions and informal observations are relied upon solely when no other data are to be had.

3. School districts within any one model educational service area, and the service areas themselves, shall be contiguous. Only minor deviations from this principle are permitted, either in the case of a physical separation such as a body of water, or where there has been the elimination of a school district due to the testing for homogeneity which is discussed later.

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[23] Locational Analysis in Human Geography, p 248.

4. Each model area shall have a minimum scholastic population of 15,000 and a minimum assessed valuation of $40,000,000. This principle corresponds to a criterion for establishing an area vocational-technical school district.

5. Each model area should have a radius of no more than 50 miles from any one center. This corresponds to a criterion of establishing an area vocational-technical school district.

To subject the tentative delimitation to an objective test, the units of analysis are computed for each of the model educational service areas. Each model service area contains a number of public school districts. From each of the districts the units of analysis are tabulated and include the scholastic populations and assessed valuations. The tentative delimitation for each model area, arrived at by the "Thiessen polygon" procedure, is tested to make certain that the areas delimited are as homogeneous as it was feasible to make them, according to the principles of delimitation being used. This test for homogeneity was performed as follows. The units of analysis are listed on worksheets, grouped according to the tentative delimitation. Sums of the units of analysis for each area are taken, and the mean value of each computed. The mean values for each area are compared to determine if there is any significant difference between them. Revision of the areas is made if a significant difference is found. Once the areas have been delimited as homogeneous as possible, and because of the location of the educational institutions in the state, it was assumed that some public school districts of the state would not be grouped into one of the areas. The status of these educational "desert" districts are considered in the conclusions of the study.

## Organization of the Study

Chapter I explains the background, need and purpose of the study; a statement of the problem; a description of the data; and the theoretical framework and procedure to be followed in the study. A review of the related literature is given in Chapter II. Chapter III reviews the development of post-secondary two-year education in Oklahoma. Chapter IV reports the findings of the study to determine the boundaries of post-secondary two-year educational service areas in Oklahoma. The conclusions of the study and recommendations are contained in Chapter V.

## CHAPTER II

## REVIEW OF RELATED LITERATURE

Efforts to develop a network of post-secondary two-year institutional service areas require coordination at high government levels. A 1971 South Carolina plan[1] for implementing a community college system within the state recommended a new state board to govern all two-year institutions in the state. These institutions were the separately-administered technical education centers and the lower-division university branches of the state. The division of the state into 13 districts was made according to population data, the service areas or districts to be coterminous with counties, and each district having a board of trustees for control.

Legislative action and approval in Iowa permitted the development of a state system of post-secondary educational institutions to operate under the auspices of the State Board of Public Instruction.[2] "These institutions were officially designated as area schools and were

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[1] Two-Year Post-Secondary Education in South Carolina, Joint Report of the South Carolina Commission on Higher Education and the State Committee for Technical Education, Columbia, South Carolina, 1971.

[2] Opportunities 1969-70: Facts About Iowa's Area Schools and Public Junior Colleges, Iowa Department of Public Instruction, Des Moines, n.d.

to be organized by merged areas which included two or more counties."[3] The area schools could either develop as area community colleges or area schools. Out of the fifteen area schools operating in 1969, eleven were area community colleges and four were organized as area vocational schools. Existing public junior colleges merged with the area schools as did some adult education and post-secondary programs operated by local school districts.

There is a tendency in some states to incorporate area vocational-technical schools into a comprehensive community college system. The Indiana Vocational Technical College was not developed as a single campus, but as a number of vocational-technical training facilities located across the state. In a commission report,[4] it was recommended that the area vocational-technical schools should handle the skill courses, and the community colleges should provide the technical programs. However, it was further suggested that authorization be given to the State Board of Regents to develop a system of comprehensive community colleges by expanding the Indiana Vocational Technical College. It would be converted into a State Community College Board to govern thirteen post-secondary service areas in the state.[5] This system of establishing community colleges corresponds to a Michigan proposal that area vocational education centers should serve an area in anticipation of the establishment of a community college, the area schools to serve as "virtually

---

[3]Ibid., p. 4.

[4]An Indiana Pattern for Higher Education, Indiana State Policy Commission on Post High School Education, Indianapolis, 1968, p. 50.

[5]Ibid., p. 5.

embryo community colleges."[6]

A later study in Michigan outlining a master plan for higher education proposed that in areas where community colleges exist, the college should serve as the post-secondary area vocational school.[7] It would be the responsibility of the State Board of Education to see that there was no duplication of facilities and services between other area vocational-technical centers and community colleges. A study three years earlier concerning post-secondary education needs in Michigan recommended 29 community college districts be developed in the state to augment the then existing 18 independent community colleges.[8] The districts would be multicounty or multicollege in nature, depending on the needs of the area.

If area vocational centers are not available, community colleges could become the area vocational school as proposed in Michigan, or cooperate with area high schools in sharing facilities. This latter approach in an Oregon study suggested that "a community college should make facilities available to high schools of the area, on a sound contractural basis, for appropriate secondary courses, academic or vocational."[9]

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[6] Education and Training for the World of Work: A Vocational Education Program for the State of Michigan. Harold T. Smith, The W. E. Upjohn Institute for Employment Research, Kalamazoo, 1963, p. 4.

[7] "An Examination and Analysis of the State of Michigan Plan for Higher Education," John W. Porter, paper prepared for the Midwest Community College Leadership Council, 1968, p. 7.

[8] Report of Study Committee I-C, Area Postsecondary Institutions---Community Colleges, Citizens Committee on Higher Education, Kalamazoo, 1965, p. 17.

[9] Delineation of the Community College's Place in Oregon Education, Oregon State Department of Education, Salem, 1965, p. 6.

There have been some efforts to restrict the creation of separate vocational-technical facilities from those of high schools or junior colleges. A report on Missouri schools and junior colleges suggested that vocational-technical education be retained in comprehensive high schools and not in separate facilities.[10] It was added that all post-high school and technical education should be the responsibility of the junior colleges. It would be the responsibility of the Missouri State Board of Education to develop a specific junior college district plan to provide junior college districts within commuting distances of as many high school graduates as possible.[11]

Research pertaining to area vocational-technical schools and public two-year colleges seems to view each as separate educational agencies with similar functions. In state planning there are attempts that neither take a secondary position to the other, and that each be assigned its proper role in the development of post-secondary education. The master plan for community colleges and occupational education in Colorado rests on the concept that the two are essential and important parts of a total educational system.[12] The recommendations of the plan included the division of the state into seven community college

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[10] Looking Ahead to Better Education in Missouri, A Report on Organization, Structure, and Financing of Schools and Junior Colleges, Academy for Educational Development, Inc., New York, 1966, p. 51.

[11] Ibid., p. 58.

[12] Colorado Master Plan for Community Colleges and Occupational Education, Colorado State Board for Community Colleges and Occupational Education, Denver, 1968.

administrative areas and seven occupational planning and programming areas. The administrative areas would be established as the base for area vocational programs. The state board for community colleges would be responsible for all occupational education curriculums offered in the state institutions of higher education. The community college president would be responsible for all programs in the area; the area occupational education coordinator would be responsible for evaluating, developing, funding and authorizing programs.

The Colorado plan recommended that no new permanent area vocational school facilities be constructed,[13] as also was the case in Oklahoma where it was believed that "the creation of any additional vocational and technical institutions at the post-secondary level would be unwise."[14]

This study does not debate which type of institutions should be established, if any. This author does contend, however, that if two-year colleges, area vocational-technical schools, and lower-division branches of universities are to be established, there should be a state plan for the location of such institutions.

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[13] Ibid., p. 27.

[14] A Special Report of the Oklahoma Commission on Education Related to Vocational and Technical Education, An Addendum to the Fourth Annual Report of the Oklahoma Commission on Education, Oklahoma Commission on Education, Oklahoma City, 1973, p. 14.

# CHAPTER III

# DEVELOPMENT OF POST-SECONDARY TWO-YEAR EDUCATION IN OKLAHOMA

## Colleges and Branch Institutions

Oklahoma's history of junior college education and growth is reflected in the establishment of educational institutions even before statehood. For several institutions, however, it was a matter of evolvement to the two-year post-secondary level. As early as 1901 the legislature of the Territory of Oklahoma authorized the establishment of the University Preparatory School at Tonkawa.[1] It was to provide four years of work for eighth grade graduates to prepare students for a university course of study.[2] The courses of study were later changed to give special emphasis in business, and the name was changed to "Oklahoma State Business Academy."[3] After adding the two years of lower-division college work, the courses of study were broadened to include academic subjects as well as vocational subjects, and in 1931 its name was changed to Northern Oklahoma Junior College.[4]

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[1]Session Laws 1901, Chap. 28, Section 1.

[2]Session Laws 1919, Chap. 180, Section 1.

[3]C. O. S. 1921, Section 10770.

[4]Session Laws 1931, Chap. 44, Section 7263.

After statehood, efforts were made to balance the institutions in what was Oklahoma Territory with similar schools in the previous Indian Territory lands. In 1909 the Eastern University Preparatory School was established at Claremore, and like the school at Tonkawa, was "to educate boys and girls in all branches up to and necessary for admission to the freshman class in the State University or other institutions of higher education."[5] In 1919 the school was changed to the Oklahoma Military Academy to furnish young men with academic, vocational and military training.[6] Four years later the first two years of college work were added making it a junior college. It was not until 1971 that the functions of the military academy were changed to meet those of a comprehensive junior college, and the name was changed to Claremore Junior College.[7]

In 1908 there was authorized to be established in each of the five Supreme Court Judicial Districts a district agricultural school of secondary level.[8] These schools were to offer instruction in agriculture, mechanics and applied sciences, domestic science, and economics, "with courses of instruction leading to the Agriculture and Mechanical College and the state normal schools."[9] Under authority of the act,

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[5]Session Laws 1909, H. B. 362.

[6]C. O. S. 1921, Section 10777.

[7]Sixteenth Biennial Report-Part II, Oklahoma State Regents for Higher Education, Oklahoma City, 1972, p. 38.

[8]Session Laws 1908, Art. 3, Chap. 3, Section 14.

[9]Ibid.

five schools were established and named as follows: Panhandle Agricultural Institute, Goodwell, in 1909; Murray State School of Agriculture, Tishimingo, in 1909; Connors State School of Agriculture, Warner, in 1908; Cameron State School of Agriculture, Lawton, in 1909; and the Connell State School of Agriculture, Helena, in 1910. This last school was changed to the West Oklahoma Home for White Children in 1917.[10]

Within the next twenty years, the four remaining secondary agriculture schools extended their scope of training to include the first two years of college work. The dates of change to the role of a junior college and their names were: Panhandle Agricultural and Mechanical College, 1921;[11] Murray State School of Agriculture, 1924;[12] Connors State Agricultural College, 1927;[13] and Cameron State Agricultural College, 1927.[14] All the colleges had as their governing board the State Board of Agriculture.[15] Only the schools at Warner and Tishimingo have continued as junior colleges, the other two schools becoming four-year institutions. However, it was recommended by the State Regents for Higher Education that the two new four-year colleges continue to provide post-high school vocational-technical programs of less than baccalaureate degree length, as "these institutions are located in areas not now

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[10] Session Laws 1917, Chap. 169, Section 1.

[11] Session Laws 1921, Chap. 84, Section 1.

[12] Session Laws 1923-24, Chap. 69, Section 1.

[13] Session Laws 1927, Chap, 53, Section 1.

[14] Session Laws 1927, Chap. 44, Section 1.

[15] Okla. Const., Art. VI, Section 31.

adequately served by existing community junior colleges."[16]

Two more junior colleges were originally established as schools to train students for vocations in mining and metallurgy. Eastern Oklahoma State College was originally established as the State School of Mines and Metallurgy in 1908.[17] In 1927 its name was changed to Eastern Oklahoma College, and made a co-educational institution offering the first two years of college work.[18] Northeastern Oklahoma A & M College was established as the Miami School of Mines in 1919,[19] but added the first two years of college work five years later and the legislature changed the school's name to Northeastern Oklahoma Junior College.[20] The change expanded the curriculum, but "subjects of study authorized for the Northeastern Oklahoma Junior College shall be those designed to serve best those students who do not expect to continue beyond junior college work."[21]

Municipal junior colleges operated without the expressed legislative sanction, but were under the local Board of Education and administered by the local superintendent of schools.[22] The majority of

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[16] Goals for Oklahoma Higher Education, Self-Study of Higher Education in Oklahoma-Report 8, Oklahoma State Regents for Higher Education, Oklahoma City, 1966, pp. 31 and 33.

[17] Session Laws 1907-1908, Chap. 70, Art. III.

[18] Session Laws 1927, Chap. 85, Section 1.

[19] C. O. S. 1921, Section 10855.

[20] Session Laws 1924, Chap. 54, Section 1.

[21] Ibid., Section 3.

[22] Education in Oklahoma, Institute of Community Development, University of Oklahoma, (no date).

the courses were taught in the local high school facilities with instruction provided by teachers who also taught in the high schools. Work completed in the colleges was accredited by the State Committee on Municipal and Independent Junior Colleges and was accepted as transfer credit to any college in the State.[23]

The municipal institutions and their dates of establishment were as follows:[24]

Two-year institutions
- Altus Junior College, 1925
- Bartlesville Junior College, 1927
- Bristow Junior College, 1928
- Capital Hill Junior College, 1935
- Duncan Junior College, 1927
- El Reno Junior College, 1938
- Kiowa County Junior College (Hobart), 1934
- Muskogee Junior College, 1920
- Okmulgee Junior College, 1926
- Sapulpa Junior College, 1932
- Sayre Junior College, 1938
- Seminole Junior College, 1931
- Tillman County Junior College (Frederick), 1938
- Wetumka Junior College, 1938
- Woodward Junior College, 1932

One-year institutions
- Carnegie Junior College, 1938
- Holdenville Junior College, 1939
- Okemah Junior College, 1933
- Shidler Junior College, 1936

In 1939 the Oklahoma legislature passed the "Junior College Bill" which authorized local school districts to provide instruction in their facilities for all persons beyond the twelfth grade.[25] However, the

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[23] Ibid.

[24] A System of Higher Education for Oklahoma, The Report of the State Coordinating Board, Oklahoma State Regents for Higher Education, Oklahoma City, 1942, p. 35.

[25] Session Laws 1939, Chap. 34, Art. 16, Section 1.

act did not allow a district to levy taxes for more than what was already authorized for grades one through twelve, though the districts would be allowed to charge tuition.[26] Many of the smaller districts, and the less wealthy ones, could not divert monies necessary from the elementary and secondary school budgets, and therefore had to close their municipal colleges. Of the 19 municipal junior colleges operating in 1939, 14 were forced to close.[27] By 1965 the college at Muskogee had already closed, but a new college had been established at Poteau.[28]

Later legislation in Oklahoma enacted a statute that "a community junior college may be established, maintained, and operated in any community in accordance with criteria and standards, rules and regulations prescribed by the Oklahoma State Regents for Higher Education."[29] Under this statute two new community junior colleges were established, Oscar Rose Junior College, Midwest City in 1968, and South Oklahoma City Junior College, Oklahoma City in 1970. The legislature granted authority to the Oklahoma State Regents for Higher Education to establish a state junior college in Tulsa, which was named Tulsa Junior College, and which first opened its doors in 1970.[30] Federal assistance to help construct the new junior colleges had been authorized on the

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[26]Ibid., Section 6.

[27]Goals for Oklahoma Higher Education, p. 10.

[28]Ibid., p. 34.

[29]O. S. Supp. 1968, Title 70, Section 4401.

[30]Oklahoma Higher Education Code, Art. XIV, Section 1413.

basis of matching funds through several acts.[31]

In 1946 under the direction of the Oklahoma A & M College (Oklahoma State University) there was established an industrial trade school at Okmulgee.[32] The post-secondary school offers vocational-technical education and requires some general education courses for completion of programs. Oklahoma State University founded another branch campus in Oklahoma City in 1961 to provide instruction in technical areas of specialization.[33]

In addition to the fourteen two-year colleges and the two branches of Oklahoma State University, one or two additional lower-division institutions to be established have been suggested "to provide adequate lower-division coverage for Oklahoma to the year 1980...."[34] This estimate of new two-year institutions for Oklahoma corresponds to the number recommended in a study by the Carnegie Commission.[35] Authorization has been granted for community colleges to be established at Henryetta, Ardmore, and Woodward,[36] but there is no indication at the time of this

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[31] Vocational Education Act of 1963, Public Law 88-210, 77 Stat. 403, Part A., Section 4; Higher Education Facilities Act of 1963, Public Law 88-204, Title I, Section 103; Allied Health Professions Training Act of 1966, Public Law 89-751, Part G., Sections 791 and 795.

[32] Fifteenth Biennial Report-Part II, Oklahoma State Regents for Higher Education, Oklahoma City, 1970, p. 19.

[33] Ibid., p. 16.

[34] Oklahoma Higher Education: A State Plan for the 1970's, p. 17.

[35] The Open Door Colleges, The Carnegie Commission on Higher Education, McGraw-Hill Book Co., New York, 1970, p. 37.

[36] Oklahoma Higher Education Code, Art. XIV, Section 1408.

study that these institutions will be established. Altus Junior College has been converted to a state junior college,[37] and authorization has been granted to the Oklahoma State Regents for Higher Education to establish two-year state colleges in place of the remaining six community colleges.[38]

In 1972 in Oklahoma there were eight state junior colleges, six public community colleges, and two two-year branches of Oklahoma State University. Their names and locations were as follows: (state junior colleges) Altus Junior College, Altus; Claremore Junior College, Claremore; Connors State College, Warner; Eastern Oklahoma State College, Wilberton; Murray State College, Tishimingo; Northeastern Oklahoma A & M College, Miami; Northern Oklahoma College, Tonkawa; Tulsa Junior College, Tulsa; (community colleges) Carl Albert Junior College, Poteau; El Reno Junior College, El Reno; Oscar Rose Junior College, Midwest City; Sayre Junior College, Sayre; Seminole Junior College, Seminole; South Oklahoma City Junior College, Oklahoma City; (Oklahoma State University branches) School of Technical Training, Okmulgee; and Technical Institute, Oklahoma City.

## Area Vocational and Technical Facilities

Oklahoma's interest in vocational-technical education began with the establishment of the secondary agricultural schools, organized, and funded, by the State. But in 1917 the State's vocational program gained its first major federal support with the passage of the Smith-Hughes

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[37] Ibid., Section 1418.

[38] Ibid., Supplement 1973, Part III, Section 200.

Act.[1] That same year, in order to participate in the appropriations of the Act, Oklahoma created the State Board of Vocational Education, "consisting of five members as follows: the Chairman of the State Board of Education, the President of the Board of Agriculture, the President of the State University, the President of the Agricultural and Mechanical College, and one member to be appointed by the governor."[2] In 1929 the duties of Vocational Education were placed under the control of the State Board of Education and the State Superintendent of Public Instruction was designated director of Vocational Education.[3]

The Smith-Hughes Act did not permit use of the monies for construction of vocational facilities as it required the State or local community, or both, to provide the required physical plants and equipment.[4] Instruction in the areas of agriculture, trade and industry, and home economics as specified in the Act was therefore contained within the secondary school, agricultural school, and/or the college.

During the early years of statehood there was a movement in some high schools to help adults learn to read, to learn vocations, and also to help train teachers for the common schools. This attempt at providing adult and vocational education in what were known as "moonlight" schools, were approved by the legislature, but were not funded,

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[1] Smith-Hughes Vocational Education Act, 39 Stat. 929 (1917)

[2] Session Laws 1917, H. B. 213.

[3] Sessions Laws 1929, Chap. 267, S. B. 30.

[4] Smith-Hughes Act, Section 10.

publicly or privately.[5] Nearly forty high schools by 1916 had joined the efforts to eliminate illiteracy and help in training teachers, the work and time volunteered by regular high school teachers.[6] In 1919 legislation was passed permitting any school district to provide part time schools or classes for not less than 140 hours per year, if the district had 20 or more persons working who were between the ages of 16 and 18.[7]

Further development of vocational education for the states was provided by the George-Dean Act of 1936.[8] The Act required matching funds be provided by the State or local community, or both. The funds assisted those program authorized by the Smith-Hughes Act, but also added programs in distributive occupational subjects and assistance in the part time classes being operated.[9] Again there were no provisions for the construction of vocational education facilities.

Under the Vocational Education Act of 1946,[10] states were appropriated matching funds for the same conditions as given in the Smith-Hughes Act and the George-Dean Act. This newer legislation provided funds for use in training and work-experience vocational programs for out-of-school youths, as well as for the administration of other programs. There

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[5]Duke, E. A., A Guide to Better Schools (Oklahoma City: Western Bank Supply Co., 1916), p. 152.

[6]Ibid., p. 112.

[7]Session Laws 1919, Chap. 235, H. B. 318.

[8]George-Dean Act, Chap. 541, 49 Stat. 1488.

[9]Ibid., Section 3.

[10]George-Barden Act, Chap. 725, 60 Stat. 775.

was a provision for the purchase and rental of equipment, but none for the construction of facilities.[11] It was during this year that the technical institute at Okmulgee was established under the direction of Oklahoma State University.

Occupational education, a synonym for vocational and technical education, received a much broader definition and more federal money with the enactment of the Vocational Education Act of 1963.[12] The purpose for which the funds could be used were:[13]

> 1. Those persons attending high school, persons who have completed or left high school and who are available for full time study in preparation for entering the labor market, those who have already entered the work force and need training or retraining; and those who have academic, socioeconomic or other handicaps that may prevent them from succeeding in a regular vocational education program.
> 2. Ancillary services and activities such as teacher training, supervision and evaluation of programs, experimental and demonstration programs, development of instructional materials, and improvement of administration and leadership.
> 3. Construction of area vocational educational facilities.

Prior to this act vocational and technical programs were being taught in junior college facilities and other public education facilities. This was the first step by the federal government to provide assistance for construction of vocational education facilities. Previous legislation in 1958 had provided funds for area vocational educational programs, but not for construction of facilities for such programs.[14]

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[11] Ibid., Section 3.

[12] Vocational Education Act of 1963, Public Law 88-210, 77 Stat. 403.

[13] Ibid., Section 4(a).

[14] National Defense Act of 1958, Public Law 85-864, 72 Stat. 1580, Title VIII, Section 304.

The federal definitions of "area vocational education school" in the 1963 Vocational Education Act included specialized high schools, technical or vocational schools for those who have completed or left high school, and the departments for divisions of post-secondary institutions.[15] The agency in Oklahoma for these funds is the State Board of Vocational and Technical Education whose powers and duties include entering into agreements with and receiving funds from "federal agencies in matters relating to vocational and technical education and manpower training, and to be the sole state agency for such purposes."[16] Further agreements with other public and private educational and training institutions may be made "as may be necessary or feasible for the furtherance of vocational and technical training within this state."[17] This meant assistance to area vocational-technical schools as well as junior and community colleges.

Because of the indicated national urgency to provide area school training opportunities for in-school as well as out-of-school youths and adults, the Vocational Education Act of 1963 required that 25 per cent of the Federal allotment be used to construct such area school facilities or for the cost of operating such programs.[18] The Oklahoma State Board of Vocational and Technical Education designated the first area vocational centers. Their names and dates opened are as follows:

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[15] Vocational Education Act of 1963, Section 4(b).

[16] School Laws of Oklahoma 1971, Art. XIV, Section 175(3).

[17] Ibid., Section 175(6).

[18] Vocational Education Act of 1963, Section 4(b).

Tulsa Area Vocational-Technical Center, 1965; Oklahoma City Area Vocational-Technical Center, 1966; Southern Oklahoma Area Vocational-Technical Center (Ardmore), 1966; and the Duncan Area Vocational-Technical Education Center, 1966.[19]

An amendment to the State Constitution approved by a vote of the people in Oklahoma in 1966 allowed for the formation of Area Vocational-Technical School Districts.[20] Under this amendment school districts may band together and form a unit of government called the area district. The new districts elect a board, vote a levy for operation purposes, and share in State and Federal funds. The amendment also provides for the election on a levy for a building fund for an area school district.[21] Area Vocational-Technical School Districts, their name, location, and date opened are as follows:[22]

1. Tri-County, Bartlesville, 1968
2. Caddo-Kiowa, Ft. Cobb, 1968
3. Central Oklahoma, Drumright, 1969
4. Indian Capital, Muskogee-Stilwell-Sallisaw, 1969
5. Gordon Cooper, Shawnee, 1969
6. Canadian Valley, El Reno-Chickasha, 1970
7. Kiamichi, Poteau-Hugo-McAlester, 1969
8. Mid-American, Wayne, 1971
9. Great Plans, Lawton, 1971
10. Oklahoma Northwest, Alva-Fairview, 1972
11. Northeast Oklahoma, Afton-Pryor, 1973
12. Western Oklahoma, Burns Flat, 1971
13. O. T. Autrey, Enid, 1967

(Planned or under construction)

14. Pioneer, Ponca City, 1974
15. Indian Meridian, Stillwater, 1975
16. Moore-Norman, 1976

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[19]Peggy Pickens, Division of Area Vocational-Technical Education, in telephone interview, Stillwater, Okla., August, 1974.

[20]Oklahoma Constitution, Art. X, Section 9B.

[21]Ibid., Art. X., Section 10.

[22]Peggy Pickens, Division of Area Vocational-Technical Education.

Caution has been expressed by the Oklahoma State Regents for Higher Education that "additional post-high school institutions not be created through unplanned expansion of area vocational schools."[23] An Oklahoma Education Commission report also said that such a move "would be unwise."[24] However, in addition to the last three schools planned or under construction, two more such institutions have been suggested, one each to be opened in the years 1977 and 1978.[25]

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[23]Oklahoma Higher Education: A State Plan for the 1970's, p. 18.

[24]A Special Report of the Oklahoma Commission on Education Related to Vocational and Technical Education, p. 14.

[25]Oklahoma State Plan 73-74, State Board for Vocational and Technical Education, Stillwater, 1973, p. 208.

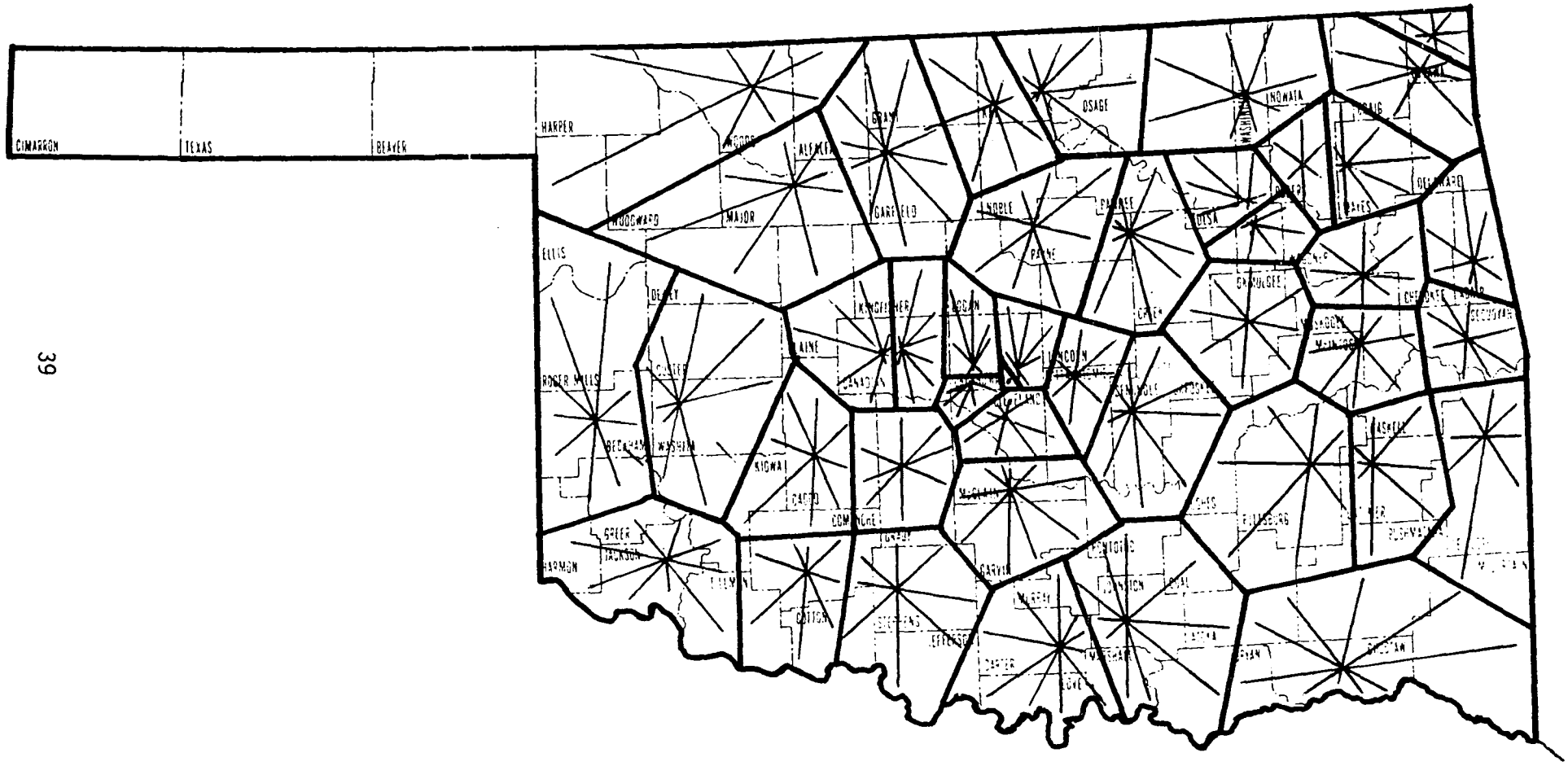
# CHAPTER IV

## REPORT OF FINDINGS OF STUDY

A pattern of contiguous polygons was prepared as a preliminary step for developing post-secondary two-year educational service areas in Oklahoma (See Figure 4). Each polygon represents an institutional area according to the procedures for delimiting such areas. Only in one instance does a polygon represent an area served by two institutions. This was in LeFlore County where Carl Albert Junior College and the Kiamichi Area Vocational-Technical School are located adjacent to one another in Poteau. It was not considered feasible to divide this area due to the sparsity of the scholastic population and the propinquity of the two institutions.

The area within each polygon lies nearer to the institution within the polygon than to any other institution being considered in this study. It can be observed that a few institutions do not appear at the geometric center of a polygon. This was expected because of a greater number of institutions serving a highly populated area. It was also expected that some institutions would appear to serve large areas where the population density is much lower than in the urban areas, and where there are fewer institutions established.

Figure 4
POLYGONAL EDUCATIONAL SERVICE AREAS OF
TWO-YEAR POST-SECONDARY INSTITUTIONS



Using large scale county maps the boundaries of Oklahoma's 637 public school districts were drawn from information obtained from the State Department of Education. The school districts were grouped according to the polygonal area in which they were located. When a school district lay across the side(s) of a polygon, the district was included in that polygon within which the greater part of the district lay.

All school districts were assigned to one of the polygons. Summations were made of the average daily attendance (ADA) and the assessed valuations of the school districts within each of the polygons. This information was prepared as the basis of the criteria to be used to develop the post-secondary two-year educational service areas. The criteria for such an area included: (1) a scholastic population (ADA) of at least 15,000; (2) a minimum assessed valuation of $140,000,000; and (3) a radius of no more than 50 miles.

Educational service areas were formed attempting to balance all areas in terms of ADA and assessed valuations. It is shown in Table I that the criteria of scholastic population and assessed valuation have been met. The scholastic population of the Northwest Area and the relatively high assessed valuation per capita depicts the sparsity of population in a large predominantly agricultural area. Since there was such variation between the scholastic population and assessed valuation of each of the areas, it was believed that the assessed valuation per capita would provide for a better analysis of the areas.

TABLE I

SCHOLASTIC POPULATION (ADA) AND ASSESSED VALUATION
OF POST-SECONDARY TWO-YEAR EDUCATIONAL
SERVICE AREAS IN OKLAHOMA

| | AREA | SCHOLASTIC POPULATION (ADA) | ASSESSED VALUATION | ASSESSED VALUATION PER CAPITA |
|---|---|---|---|---|
| 1. | Northwest | 15,166 | $ 261,728,107 | $17,257.55 |
| 2. | Southwest | 46,805 | 280,613,334 | 5,995.37 |
| 3. | Northern | 35,122 | 346,031,987 | 9,852.28 |
| 4. | West Central | 25,369 | 202,634,595 | 7,987.48 |
| 5. | Oklahoma City | 134,354 | 1,043,056,921 | 7,763.49 |
| 6. | Southern | 47,618 | 284,434,514 | 5,973.25 |
| 7. | Southeastern | 37,144 | 134,658,641 | 3,625.31 |
| 8. | East Central | 44,192 | 224,746,516 | 5,085.68 |
| 9. | Eastern | 35,437 | 136,873,261 | 3,862.43 |
| 10. | Tulsa | 86,988 | 875,509,433 | 10,064.71 |
| 11. | Northeastern | 37,144 | 134,658,641 | 3,625.31 |
| TOTALS | | 545,339 | $3,924,945,950 | |

The final result of developing the two-year post-secondary educational service areas of Oklahoma is shown in Figure 5. In three areas--Northwest, Southwest, and Southeast--the criterion of a maximum 50 mile radius from an institution was not met. The other two criteria were satisfied in all service areas. Due to the sparsity of population in the areas of Oklahoma which were not originally assigned to one of the polygons in order to meet the 50 mile radius criterion, it was not considered feasible to construct a special educational service area for such small portions of Oklahoma. Therefore all previously excluded portions lying outside a 50 mile radius of an institution were assigned to an adjoining educational service area.

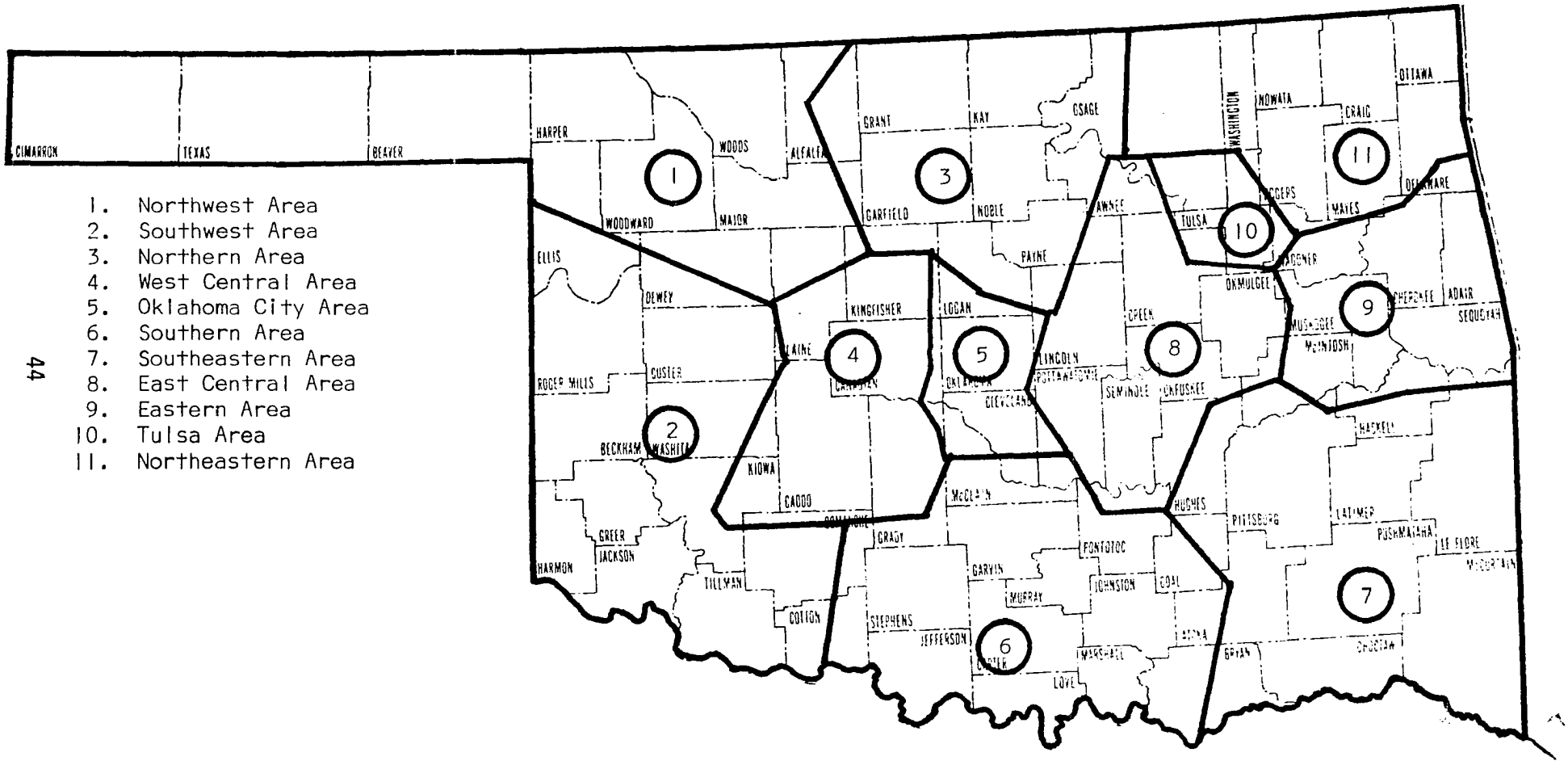
Each educational service area consists of at least one public junior college or one area vocational-technical school, or a combination of both. Table II shows the distribution of these institutions within each area.

TABLE II

DISTRIBUTION OF POST-SECONDARY TWO-YEAR INSTITUTIONS OF OKLAHOMA'S EDUCATIONAL SERVICE AREAS

| AREA | PUBLIC TWO-YEAR COLLEGES | VOCATIONAL-TECHNICAL SCHOOLS | TOTAL |
|---|---|---|---|
| 1. Northwest | 0 | 2 | 2 |
| 2. Southwest | 2 | 2 | 4 |
| 3. Northern | 1 | 4 | 5 |
| 4. West Central | 3 | 1 | 4 |
| 5. Oklahoma City | 3 | 2 | 5 |
| 6. Southern | 1 | 3 | 4 |
| 7. Southeastern | 2 | 3 | 5 |
| 8. East Central | 2 | 2 | 4 |
| 9. Eastern | 1 | 3 | 4 |
| 10. Tulsa | 1 | 1 | 2 |
| 11. Northeastern | 2 | 3 | 5 |
| TOTALS | 18 | 26 | 44 |

Figure 5
TWO-YEAR POST-SECONDARY EDUCATIONAL SERVICE AREAS



In many instances an area vocational-technical school is located within a 15-30 mile radius of an existing public two-year college. For example, the school in Ponca City is less than 15 miles from Northern College in Tonkawa. Both a school and college are located in Poteau, as well as in El Reno and Tulsa. In the Oklahoma City metropolitan area there are the Oklahoma City Technical Institute, a vocational-technical school, the Norman-Moore vocational-technical school, Oscar Rose Junior College and South Oklahoma City Junior College. The Gordon Cooper school east of Shawnee is less than 20 miles from Seminole Junior College. The school in Muskogee is about the same distance from Connors State College at Warner. The Western Oklahoma School at Burns Flat is about 25 miles from Sayre Junior College. The school at Afton is less than 20 miles from Northeastern Oklahoma A & M College at Miami. Less than 20 miles separate the school at Pryor from Claremore Junior College. Southern Oklahoma School at Ardmore is less than 30 miles from Murray State College at Tishomingo.

In 1972 there were 12 colleges and universities offering a four-year degree or more in the Oklahoma State System of Higher Education. Table III shows the number of these other public institutions that are located in the post-secondary two-year educational service areas. Some note should be made of these institutions as they could affect to some degree the two-year service areas being considered, not only in terms of drawing students from the same scholastic population, but also in providing some of the same services of the two-year institutions. Some of the area vocational-technical schools and four-year colleges are located

in the same city. The Oklahoma Northwest School and Northwestern State College are located in Alva. The Great Plains School and Cameron State College are both in Lawton.

TABLE III

DISTRIBUTION OF POST-SECONDARY TWO-YEAR INSTITUTIONS
AND FOUR-YEAR COLLEGES AND UNIVERSITIES
IN OKLAHOMA EDUCATIONAL SERVICE AREAS

| | AREA | POST-SECONDARY TWO-YEAR INSTITUTIONS | FOUR-YEAR INSTITUTIONS | TOTAL |
|---|---|---|---|---|
| 1. | Northwest | 2 | 2 | 4 |
| 2. | Southwest | 4 | 2 | 6 |
| 3. | Northern | 5 | 2 | 7 |
| 4. | West Central | 4 | 1 | 5 |
| 5. | Oklahoma City | 5 | 2 | 7 |
| 6. | Southern | 4 | 1 | 5 |
| 7. | Southeastern | 5 | 0 | 5 |
| 8. | East Central | 4 | 1 | 5 |
| 9. | Eastern | 4 | 1 | 5 |
| 10. | Tulsa | 2 | 0 | 2 |
| 11. | Northeastern | 5 | 0 | 5 |
| TOTALS | | 44 | 12 | 56 |

One other geographical aspect pertaining to the location of post-secondary two-year institutions concerns those institutions which lie outside the borders of Oklahoma. These institutions can draw a portion of their students from the scholastic populations of Oklahoma. They can set up programs and offer special considerations for attracting Oklahoma students. Figure 6 locates two-year institutions near, but outside, the borders of Oklahoma.

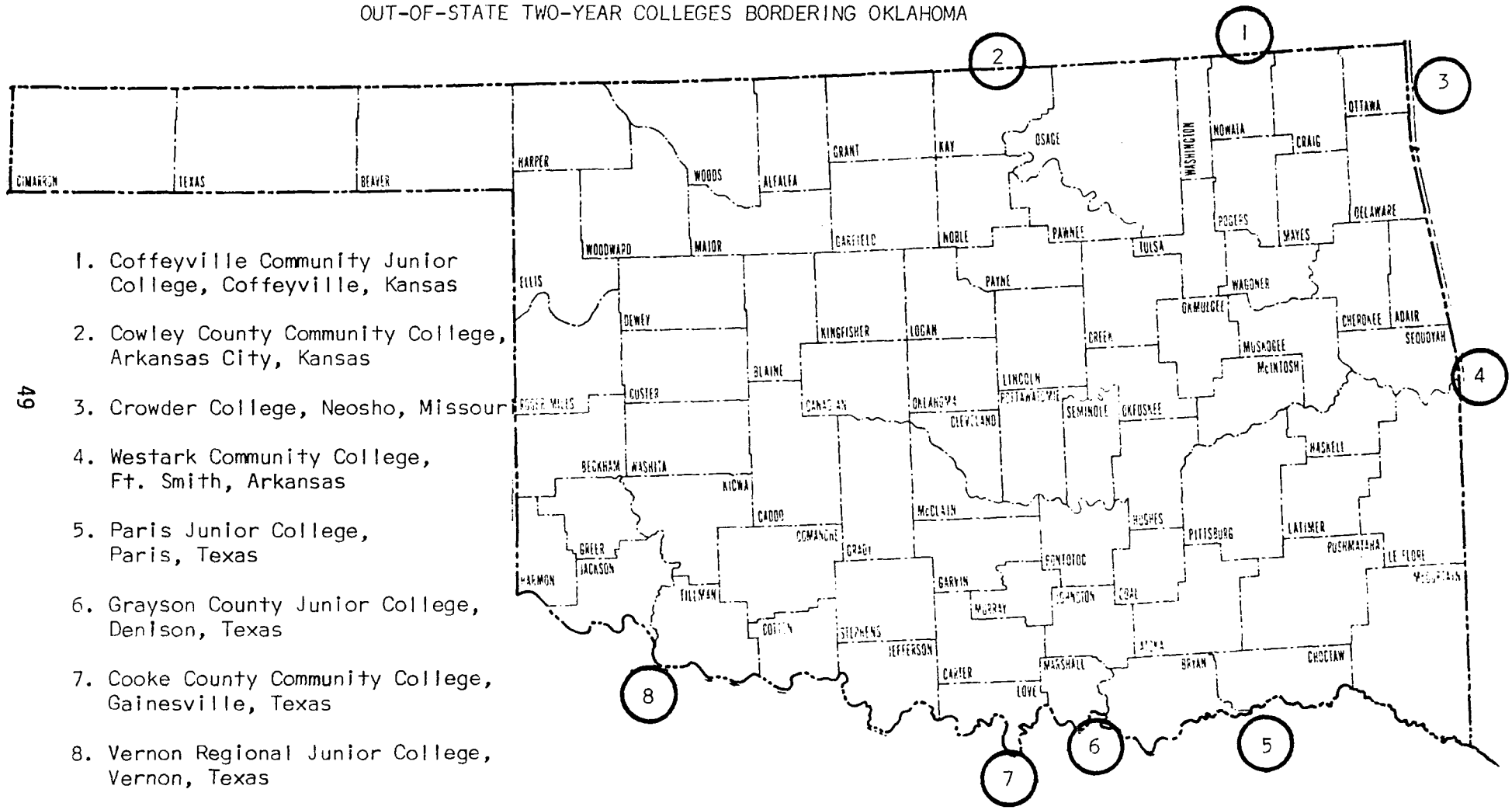
This study is to show locational relationships between vocational-technical schools and two-year colleges in Oklahoma. Through the use of certain criteria educational service areas were formed with an areal approach to educational coordination of some services rather than to an institutional approach. The services referred to in this study are those of the student personnel services.

Depending upon the resource, student personnel services include a variety of positions and functions. Areal education services which could be coordinated include precollege and post-high school information, admissions, orientation, counseling and advising, financial assistance, and placement and employment services. Other student personnel functions that are more institutional in the light of this study area are: registrations and records; housing; food services; discipline; health services; remediation; and student activities.

Some of the positions at the colleges to direct the functions of the areal services mentioned include: director of admissions and/or registrar; dean of students and/or dean of women; director of financial aid; director of counseling or counselor; placement or employment officer;

Figure 6

OUT-OF-STATE TWO-YEAR COLLEGES BORDERING OKLAHOMA




1. Coffeyville Community Junior College, Coffeyville, Kansas
2. Cowley County Community College, Arkansas City, Kansas
3. Crowder College, Neosho, Missouri
4. Westark Community College, Ft. Smith, Arkansas
5. Paris Junior College, Paris, Texas
6. Grayson County Junior College, Denison, Texas
7. Cooke County Community College, Gainesville, Texas
8. Vernon Regional Junior College, Vernon, Texas

and director of guidance and testing. The functions of these positions in a vocational-technical school are usually handled through the school's principal, director or superintendent, their assistants and secretaries, and possibly an adult coordinator. Some of the functions are also directed by the personnel of the high school that is coordinating its programs with an area vocational-technical school.

The vocational-technical school can either be a part of a public school system as in Oklahoma City, or several school districts can form an area vocational-technical school district to serve several adjoining school districts. In both cases a primary goal is to provide services for high school students. But their programs are extended to post-high school students and adults. The enrollments in vocational-technical schools in 1972 is shown in Table IV.

TABLE IV

VOCATIONAL-TECHNICAL SCHOOL
ENROLLMENTS IN 1972

| VOCATIONAL-TECHNICAL SCHOOL(S) | SECONDARY | POST-SECONDARY | ADULT | OTHER | TOTAL |
|---|---|---|---|---|---|
| Alva-Fairview | 245 | 0 | 202 | 0 | 447 |
| Ardmore | 433 | 24 | 312 | 120 | 889 |
| Bartlesville | 490 | 186 | 914 | 0 | 1,590 |
| Burns Flat | 294 | 20 | 252 | 357 | 923 |
| Drumright | 638 | 50 | 276 | 154 | 1,118 |
| Duncan | 373 | 58 | 533 | 0 | 964 |
| El Reno-Chickasha | 564 | 46 | 847 | 50 | 1,507 |
| Enid | 701 | 56 | 1,191 | 0 | 1,948 |
| Ft. Cobb | 418 | 13 | 465 | 0 | 896 |
| Hugo-McAlester-Poteau | 752 | 77 | 384 | 0 | 1,213 |
| Lawton | 587 | 317 | 630 | 1,229 | 2,763 |
| Muskogee-Sallisaw-Stillwell | 598 | 54 | 467 | 0 | 1,119 |
| Oklahoma City | 681 | 0 | 1,047 | 151 | 1,879 |
| Shawnee | 469 | 34 | 655 | 0 | 1,158 |
| Tulsa | 834 | 115 | 2,000 | 295 | 3,244 |
| Wayne | 368 | 64 | 556 | 0 | 988 |
| TOTALS | 8,445 | 1,114 | 10,731 | 2,356 | 22,646 |

Admission to a junior college requires, in most cases, graduation from a high school or the equivalent of such education. There are some exceptions for admission, such as test scores or the evaluation of other types of training. In 1972 more than 25 per cent of the head-count enrollments in institutions of the Oklahoma State System of Higher Education were in junior colleges and two-year branches of state universities. A report of enrollments for these institutions is shown in Table V.

TABLE V

HEAD COUNT AND FULL-TIME EQUIVALENT STUDENT ENROLLMENT OF POST-SECONDARY TWO-YEAR INSTITUTIONS IN THE OKLAHOMA STATE SYSTEM OF HIGHER EDUCATION IN 1972

| | HEAD COUNT | FTE |
|---|---|---|
| Altus Junior College | 810 | 510 |
| Carl Albert Junior College | 430 | 365 |
| Claremore Junior College | 1,049 | 818 |
| Connors State College | 924 | 766 |
| Eastern Oklahoma State College | 1,658 | 1,474 |
| El Reno Junior College | 494 | 374 |
| Murray State College | 730 | 703 |
| Northeastern Oklahoma A & M College | 2,270 | 2,137 |
| Northern Oklahoma College | 1,325 | 1,130 |
| Oklahoma State University School of Technical Training | 2,664 | * |
| Oklahoma State University Technical Institute | 1,422 | * |
| Oscar Rose Junior College | 3,643 | 2,211 |
| Sayre Junior College | 251 | 223 |
| Seminole Junior College | 889 | 675 |
| South Oklahoma City Junior College | 1,086 | 1,039 |
| Tulsa Junior College | 4,834 | 2,753 |
| Total | 24,479 | |
| Total Enrollment in Oklahoma State System of Higher Education | 101,515 | |
| Percentage of Enrollment in Two-Year Institutions | 26.08 | |

*Not reported

Source: Enrollments in Oklahoma Higher Education Fall 1972, and Fall 1973, Oklahoma State Regents for Higher Education.

Post-secondary two-year educational service areas have been developed in Oklahoma in this study. It has been shown that in each area there is located a vocational-technical school, a junior college, or some combination of both. Chapter I indicated the similar functions of both types of institutions in providing educational opportunities to the communities they serve. Both the vocational-technical school and junior college require student personnel services to effectively serve the students of the institutions and members of the communities. As shown in the enrollment reports both types of institutions have programs at the post-secondary, less than baccalaureate degree, level. That there are two types of institutions serving the same area which may be working at cross-purposes and duplicating services does not seem economically nor educationally feasible. A discussion of the post-secondary two-year educational service areas in Oklahoma and recommendations follow in the next chapter.

# CHAPTER V

## SUMMARY, CONCLUSIONS, RECOMMENDATIONS, AND SUGGESTED FURTHER STUDY

The purpose of this study is to develop a state plan for post-secondary two-year education in Oklahoma. The plan is to designate regions as educational service areas using the locations of public two-year colleges and vocational-technical schools as points of reference.

The data collected required delimiting the boundaries of Oklahoma's 637 public independent and dependent school districts, and obtaining the scholastic population and assessed valuation of each district in 1972. The next step was to plot the locations of vocational-technical schools and two-year colleges in Oklahoma. Using a method known as "Thiessen polygons," a series of contiguous polygons was delimited within the state. Each side of a polygon shown in Figure 4 represents a line through the mid-point between two institutions. The public school districts were then assigned to the polygon in which all or a major portion of the district lay. Through a series of summations, a group of eleven larger polygons was delimited. All polygonal areas met certain criteria for a post-secondary two-year educational service area, two of which are given in Table I.

## Conclusions

The conclusions of this study do not propose to be statistically supportive. There was not any comparative statistical analysis made because there is no existing plan against which the plan developed in this study could be compared. The efforts of this researcher have been to geographically bring together areal educational services of two separate agencies as a preliminary step for a more beneficial utilization of facilities.

Vocational-technical schools and two-year colleges are two educational systems operating under separate authorities. However, in Chapter I it was shown that both include in their functions: (1) vocational and technical education requiring two years or less of post high school work; (2) basic and vocational-technical education for non-high school graduates; and (3) on-campus adult education. Junior colleges also have the function of providing transfer collegiate programs to four-year colleges and universities, and therefore have been associated with higher education. Vocational-technical schools on the other hand also provide programs for cooperating high schools in their districts and therefore are generally recognized at a less-than collegiate level. But Table IV shows nearly 60 per cent of vocational-technical school enrollments are post-high school students and adults. When the two types of institutions are within a 25-30 mile radius of each other, there is some question in this author's mind of the effectiveness and efficiency of secondary and post-secondary area education.

Area post-secondary enrollments of vocational-technical schools should be of special concern of college administrators. In 1972 eight of the state's fourteen two-year colleges reported full-time-equivalent student enrollments of less than 1,000. The state regents recommended that minimum and maximum enrollments for all two-year public colleges be set at 1,000 and 5,000 full-time-equivalent students respectively.[1] If by 1975 there are institutions failing to have enrollments within the range recommended, a review would determine the need for continuing operation of the college.

If there has been determined a need for a vocational-technical school within a radius of 30 miles of an existing junior college, perhaps there were needs of individuals that were not, or could not, be fulfilled. Part of the development of vocational-technical education schools within the educational service area of a junior college reflects the educational attitudes of junior colleges working against the establishment of terminal or occupational curricula beyond the high school and below the baccalaureate level.[2] When junior colleges ignore a particular kind of student, program, or educational function, it may be necessary to create another kind of institution to assume part of the burden.[3] Here then is an instance for the development of area vocational-technical schools.

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[1] Oklahoma Higher Education: A State Plan for the 1970's, p. 14.

[2] Grant Venn, Man, Education and Work (Washington: American Council on Education, 1964), p. 71.

[3] Oklahoma Higher Education: A State Plan for the 1970's, p. 2.

Junior colleges have an advantage of being within commuting distance of high schools. However, since their identity is associated with higher education and post-secondary work, and not at the secondary level, program articulation between high schools and junior colleges has not been effectively exploited.[4] It would appear more feasible for colleges to open their facilities to high schools of their area for appropriate secondary and post-secondary academic and vocational courses that the high schools cannot afford. The college would serve as an area education center for high schools. If they do not approach this need, parallel institutions such as area vocational-technical schools, drawing students from the same area, requiring more tax money from residents, and duplicating programs of existing junior colleges, may be developed. The result is that the post-high school work of the area school and the two-year college overlap.

It is not incorrect to speak of an area being dependent upon an educational center for its needs, for though this is true, the center is also dependent upon the outlying area for its existence. Where there is more than one "center" for an area, each center desiring some autonomy and disassocation from the other, there can be anticipated some conflict and duplication. The fault may lie with both types of institutions, either through inadequate planning or unconsidered avenues of approach. If the junior college does not truly meet the needs of its area for

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[4]Edmund J. Gleazer, Jr., This Is The Community College (Boston: Houghton Mifflin Company, 1968), p. 74.

youth seeking vocational education opportunities, and yet "is adjudged unique solely on the basis of its special services to the students who do not transfer, it fails to measure up."[5] Area vocational-technical schools can be highly specialized, single-purpose institutions, where general education is often nonexistent.[6] Separate facilities for vocational education from the high school do offer some advantages, but such an arrangement can depict academic and vocational education as two different animals, and not the "twin aspects of personal development that must be blended if our schools are to graduate youngsters capable of dealing with their responsibilities both as providers and citizens."[7] For the small community and for a more comprehensive high school, the only practical place for vocational education is in the existing academic high school.[8]

It is the high school that must be the focal point for many students and vocational education.[9] If this is true, it is the junior college that must assume the burden of total post-secondary vocational education programs as well as the academic programs. A study has found

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[5]Leland L. Medsker, The Junior College: Progress and Prospect (New York: McGraw Hill Book Co., 1960), p. 112.

[6]Man, Education and Work, p. 87.

[7]Charles E. Trotter, Jr., "What's New in Vocational-Technical Education Facilities" in Planning Community Junior College Facilities, ed. by Floyd G. Parker and Max S. Smith, Proceedings of a Conference by College of Education and Continuing Education Service, Michigan State University, 1968, p. 112.

[8]Franklin Jefferson Keller, The Comprehensive High School (New York: Harper and Brothers Pub., 1955), p. 36.

[9] Man, Education and Work, p. 85.

it may be economically more rational for society to invest in two years of junior colleges than for it to invest in two years of post-secondary vocational-technical education.[10] The Carnegie Commission on Higher Education has also recommended that state plans be directed toward emphasis on vocational-technical education monies be used in junior colleges rather than in other types of institutions.[11]

Some parts of the state fall outside a 30 mile radius of a post-secondary two-year institution. When this occurs the institution serving such an area as suggested in Figure 5 of this research should attempt to provide the services needed by those communities in the distance parts of the state. High schools and communities should be able to work with one of these institutions, either in Oklahoma or in a neighboring state, for assistance in meeting certain educational needs. Plans could originate through local high schools and ultimately be developed into a kind of extension course or program provided by the nearest area institution. Such areas are located in the northwest, southwest, and southeast parts of Oklahoma. Their sparse population densities do not call for the establishing of an institution, but should be considered as part of a state-wide plan for post-secondary education.

An important factor in developing educational services areas concerns distance. This includes not only the distance students must

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[10]Ernst W. Stronsdorfer, Review and Synthesis of Cost-Effectiveness, Studies of Vocational and Technical Education (Columbus, Ohio State University, 1972), p. 57.

[11]The Carnegie Commission on Higher Education, The Open Door Colleges (New York: McGraw-Hill Book Co., 1970), p. 27.

travel to an institution, but also the distance between institutions. The distance factor for students desiring post-high school education or the physical unavailability of facilities could be a barrier as great as tuition costs or admission requirements. Location of post-secondary institutions should be a plan to provide services wherever needed but on a sound economic plan. "Proximity of educational opportunity is a powerful force and calls for widespread facilities and programs."[12]

The plan within this research of post-secondary two-year educational service areas has within each area institutions providing post-high school programs. Because of the proximity of some institutions, some students have a choice of institutions to attend. "The effect of distance upon the proportion of graduates from a given high school who will attend a junior college is very strong. Beyond 25-30 miles attendance by high school graduates falls off markedly."[13] Accessibility is often considered in terms of mileage distance, and maximums noted for commuting distance should be under 30 miles one way, or not more than one hour.[14] Within a radius of 30 miles from 12 of the state's 14 two-year colleges there exists, or is planned, a vocational-technical school. Oklahoma residents are also within a 30 mile radius of eight

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[12]This is the Community College, p. 7.

[13]Marsden B. Stokes, L. Edwin Hirschi, Rutledge Jay, H. Gordon Campbell, Arizona Junior Colleges: An Investiment in Educational Opportunities for Youths and Adults (Tuscon: The University of Arizona, 1968), part 2, p. 28.

[14]This is the Community College, p. 75.

two-year colleges in bordering states. Three of these colleges are less than 30 miles from an Oklahoma area vocational-technical school.

Conclusion: There are in Oklahoma educational service areas of vocational-technical schools and two-year colleges that overlap.

Geographically defined in this research has been a statewide system of post-secondary two-year educational service areas or regions. Considered as points of centrality in forming the areas were the locations of junior colleges, community colleges and vocational-technical schools. This system corresponds with the recommendation made by the Oklahoma State Regents for Higher Education for such a plan.[15] The Regent's recommendation also stated that all such institutions within an area would become parts of an administrative unit for regional post-high school education. A major function of that administrative unit would include student personnel services.

The areal concept of student personnel services is that the personnel would work for the benefit of all persons within an area. For example, an admissions officer of a junior college visiting a high school or community affair should direct attention at serving the student's needs. The officer should be cognizant of all post-high school educational opportunities within his area, including vocational-technical schools and four-year colleges. An adult coordinator of a vocational-technical school must be willing to direct a student to a junior college if that is where the student's needs can best be fulfilled. Testing and

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[15] Oklahoma Higher Education: A State Plan for the 1970's, p. 17.

counseling for evaluation of post-high school work should be available at all institutions regardless of the intent of the student as to the school selected or the type of institution where such services are obtained. Information about employment and financial assistance should be shared between institutions. The following chart explains this areal student personnel services approach.

High School Needs Community Needs

Student Personnel Services
of Junior Colleges and
Vocational-Technical Schools

Vocational-Technical School Junior College Other

Without some coordinated plan as shown in the chart parallel efforts between the vocational-technical schools and two-year colleges become competitive in nature rather than cooperative. Each institution needs to supplement and complement services provided by others. Synergy between institutions would help to create a better relationship and enhance an institution's own services. A study of community colleges has shown that those with the best student personnel services were weakest in occupational counseling and placement.[16] Services of vocational-technical schools could strengthen this weakness. Vocational education programs provide people with an education and train skilled workers for

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[16]This Is the Community College, p. 75.

the labor force. Yet it has been noted that often such programs do neither of these well.[17] Junior college assistance may ameliorate such conditions. If it is shown that general and vocational education should not and cannot be separated in an effective program for the individual, this means that an agency responsible for services in one must also serve the other phase of education.

Conclusion: There is duplication of student personnel services between vocational-technical schools and two-year colleges.

The Oklahoma State Regents for Higher Education have divided the state geographically into eleven regions, "Oklahoma Junior College-Technical Districts." These districts, formed by county boundaries, each consist of a number of different institutions providing post-secondary education. They include vocational-technical schools, two-year colleges, and four-year colleges and universities. The plan developed in this study however, even though eleven regions or areas were also designated, used the two-year post-secondary institutions as points of centrality and formed the areas according to public school district boundaries. It is believed that the plan developed can be more beneficial because it relates to the location of institutions with respect to each other as well as to the scholastic populations of these areas which is an important criterion for considered post-secondary education.

The Oklahoma State Board of Vocational and Technical Education has approved the establishment of a number of area vocational-technical

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[17] Man, Education and Work, p. 30.

schools. The schools provide services for high schools and communities of a district formed by the vote of the residents of one or several adjoining school districts. Therefore, an area vocational-technical school district is dependent upon the vote of the school district residents, and at the time of this study much of the state is without an area school district. This does not mean that vocational-technical education is not available outside area school districts as local high schools provide a number of these programs. The system proposed in this study provides that every school district in Oklahoma is a part of a post-secondary two-year educational service area. Each of the eleven educational service areas delimited in the plan meet the criteria for an area vocational-technical school district.

It has been noted that the functions are similar between the vocational-technical schools and the two-year colleges. Yet the proximity of some of these institutions indicates the lack of one or the other to provide all the services necessary for an area. One institution cannot be required to fulfill all the educational needs of an area, but there are other areas of exploration rather than building a new facility. It can only be apparent that some duplication of services and programs likely exists. In certain areas taxpayers are having to pay for both types of institutions. Residents of Seminole Junior College area pay taxes to support the area vocational-technical school in Shawnee. This situation also exists for area residents of Murray State College and the school at Ardmore, El Reno Junior College and the El Reno School, Northern Oklahoma College residents and the

school at Ponca City, and Claremore Junior College, and the school at Pryor. The areal approach in this study proposes that junior colleges, vocational-technical schools, and to some degree, high schools and four-year colleges and universities, establish a plan and/or an administrative unit to use each other's services and facilities so as to dissolve any duplications and conflicts, lessen the strain on the financial resources for educational programs and services, and to cooperate in providing services within their respective areas. This requires institutions to exploit all resources available in an area for fulfilling educational needs, and a sharing of responsibilities and facilities. It means that institutions need to commit themselves to a total educational plan rather than to restrict their attitudes and programs for specific levels. Such efforts, it is believed, can only provide the articulation necessary for a logical and feasible progression of education from school to school and level to level.

Conclusion: The quality of education can be improved when institutions use synergetic methods for providing educational services.

## Recommendations

It is recommended that Oklahoma consider a state-wide plan for post-secondary two-year education as suggested in this study.

It is recommended that an administrative unit in each area developed in this study, consisting of personnel from high schools, vocational-technical schools, two-year colleges, be established for better utilization of facilities.

It is recommended that student personnel workers of two-year colleges and vocational-technical schools share responsibilities and services to area high schools and communities.

It is recommended that cooperative educational agreements for services and programs be made between institutions of adjacent states whose service areas extend into Oklahoma and the residents of those areas, and between residents of other states and Oklahoma educational institutions.

It is recommended that there be no further establishment of vocational-technical schools or two-year colleges in Oklahoma.

## Suggested Further Study

Required for further development of the plan in this research is an evaluation of programs being offered in high schools, two-year colleges, and vocational-technical schools. This evaluation should study the total spectrum of educational programs being offered within an area, and not within a given institution or at a particular level. Related to this would be a study of the expenditures of funds for educational programs in these institutions to determine whether all programs are economically sound in return to the students and the state. Though this research has been limited to two-year colleges and vocational-technical schools, an influence on post-secondary education also exists from four-year colleges and universities, and from the private institutions. To what degree they contribute to the less-than baccalaureate level of education, and how their facilities might be utilized in this area, should be explored.

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