THE EDUCATIONAL UNIT FOR ADMINISTRATION, ORGANIZATION, AND SUPERVISION OF AREA VOCATIONAL-TECHNICAL SCHOOLS IN OKLAHOMA

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PREFACE

One of the important characteristics of a democracy is its system of free public education providing for the optimum development of every person. A disturbing element in our country today is the number of young people who do not, for many and sundry reasons, participate in formal education beyond high school. At the present time, this is distressing in Oklahoma, but even more so, when one of the causes is the lack of opportunity for vocational and technical students to attend a public supported institution of learning and training beyond the high school.

A method by which opportunities may be increased is to improve the working relationship between the State Education Agencies which have been delegated the authority for organization and supervision of a specified segment along the educational continuim, kindergarten through the adult years. This study is based on the idea that coordination of post-high school vocational and technical programs can be adequately accomplished through the cooperation of present State Agencies.

Grateful acknowledgement is made of the many contributions to this study by the members of my graduate advisory committee: Dr. Richard Jungers, chairman; Dr. Victor Hornbostel, Dr. Robert Price, and Dr. Maurice Roney. Certainly

without the encouragement and suggestions by this committee, the study would have been even more difficult.

I want to express my heartfelt thanks to Sovereign Grand Commander Luther A. Smith and Dr. Willard Givens, Director of Education, The Supreme Council Ancient and Accepted Scottish Rite of Freemasonry, Southern Jurisdiction U.S.A. for their constant morale bolstering and enthusiasm in my progress. The scholarship provided by The Supreme Council made possible my being able to attend Oklahoma State University. I am deeply appreciative for this support and will attempt to tender my thanks through service in education and by the bringing of a hope for a better tomorrow in boys and girls through our free public schools.

Finally, I wish to acknowledge the patience, interest, and reassurance of my wife and our three children, while making so many sacrifices with such understanding during this period of study. Certainly the constant inspiration of my very dear school teacher mother can never be forgotten!

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CHAPTER I

INTRODUCTION

Forces of many kinds are directly and obliquely changing the configuration of American society at an unprecedented rate. Adaptation by individuals and by societal agencies is imperative if they are to profit from opportunities rather than be overwhelmed by the adjustments new developments demand. Any segment of our society which seeks to perpetuate the status quo and to entrench tradition faces failure more surely in the future than in the past.

The rapid proliferation of knowledge and the unprecedented rate of application of technology have intensified the need for specialization. Opportunities for those who do not or cannot specialize are rapidly diminishing. Few will, or can, escape the impact.

The day is past when society can be indifferent and unresponsive to these forces and developments. To prosper, man must initiate, organize, and operate agencies which promote society's general welfare. Experience has shown that education is the most effective agency man has invented to contribute to his advancement and to his welfare.

The day has passed when an elementary and high school education will provide the formal preparation for the

responsibilities of citizenship, economic dependence, or social and personal well being. The need for the universal upward extension of educational opportunity for all was never greater. Our State and nation are on the brink of demands for education which will dwarf all past records of accomplishment.

Margaret Mead has phrased this very well,

> We must rid ourselves of the idea that anybody can ever finish his education. We cannot give our young people a good education. We can give them some education. We need extended education. We need to set up a program into which people can come at any time in their lives and get as much education as they can take.[1]

Tomorrow's post-secondary education must relate itself directly to the welfare of individuals and of society. No longer will a "classical" or "liberal arts" education suffice. Educators must accept the necessity of giving increased attention to things ordinary and practical, along with the theory and research. This is especially so if the post-secondary institutions are to serve well the needs of a larger segment of our society. The day is gone when a single kind of post-secondary institution can adequately provide all the kinds of education society needs. Society must provide the educational institutions and define their responsibilities--a master plan for education.

Oklahoma is now searching for a means to provide appropriate post-secondary education for major segments of its

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[1]Vocational Education, The Sixty-Fourth Yearbook of the National Society for the Study of Education, Part I. The University of Chicago Press (Chicago, 1965), p. 168.

society--segments which have not previously enjoyed the benefits of a higher education. To accomplish this, new institutions with new purposes must be created, along with redefining and extending the responsibilities of existing institutions. These changes and innovations in educational structure and function must not lag too far behind changes in society itself.

The rapid technological changes of the past three decades have created a challenge to the nation and state's educational institutions. Many changes have occurred and many more are about to occur.

The basic educational problem posed by the new technology is that of educating and training all young people for a changing world of work. A recent American Council of Education report places "education squarely between man and his job."[2]

The nations and states which are now enjoying the highest rate of economic growth are those where the all-out development of knowledge, skills, and abilities of people are receiving the major attention. Money and minerals are now giving way to education and training as parameters of economic development.[3]

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[2]Grant Venn, Man, Education and Work, The American Council on Education (Washington, 1964), p. 139.

[3]John K. Norton, "Education Pays Compound Interest," National Education Association Journal, XLIII No. 6 (November, 1958), p. 557.

Today there is a vast array of occupations for which new and specific training is necessary. These occupations are referred to as middle-manpower jobs, the vocational trades, the semi-professional and technical positions which comprise a major category of employment in business, industry, and the professions.[4] The majority of the new jobs today do not require four-year college programs. The jobs demand a kind of resourcefulness that can be developed in programs that depart from traditional patterns of education. This represents a challenge that cannot be overlooked.

A study of the expansion of educational opportunity beyond the present scope should take into account the changing manpower needs of the State coupled with the hopes and aspirations of Oklahomans for individual fulfillment in job, home, and the community. Expanding education must provide experiences that are meaningful.

With new educational opportunities has come controversy. Part of this comes from interpretations of federal law as well as Oklahoma laws.

On the federal level, Title VIII of National Defense Education Act gives the level of training "highly skilled technicians" to be at "less-than-college grade." Regulations of the U. S. Office of Education allow Title VIII funds to be used in technical education programs in two-year

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[4]Norman C. Harris, Technical Education in the Junior College--New Programs for New Jobs. American Association of Junior Colleges (Washington, 1964), p. 19.

colleges. Venn says, "The fact is, definition or no, that the two-year college programs are of college grade."[5]

Another controversy is the dichotomy of whether the new occupational educational institutions should be primarily academic, or functional, or the combination of the two that are practicable. The essential part is to recognize and acknowledge human differences and limitations.

Oklahoma is moving ahead with the area vocational-technical schools to better serve its most valuable asset, youth, as well as provide the opportunity to extend the knowledges and skills of the adults now employed. The question is whether the area schools, while operated by a local board, should be controlled at the State level as an extension of the secondary school through the State Board of Education or as a two-year post-secondary institution associated with the Oklahoma State Regents for Higher Education.

Nature of the Problem

In the United States' educational pattern there are different levels of education that may be recognized--the elementary school, the junior high school, the senior high school, the junior college, and the university. Another division could be the common schools, referring to public schools offering programs for grades K - 12, and higher education, those schools offering programs from the thirteenth

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[5]Venn, p. 115.

year through the Ph. D. There are common school districts that offer school programs through the fourteenth year or the junior college. Since the United States Constitution leaves education to the states as an independent function, it is only natural that each state has established systems of control for the different levels of education.

In 1958, Congress passed the National Defense Education Act of which Title VIII provides for the establishment of area vocational-technical schools with matching federal funds. The 1963 Vocational Education Act redefined area vocational-technical schools and provided considerable funds for area school construction and operation. The area schools may operate at the secondary level, at the post-secondary level, or at a combination of the two levels. Operating as a combination school, secondary and post-secondary, problems of authority and control by state education agencies occasionally develop.

Cutting across the traditional lines of authority and control--either common school education or higher education --of area vocational-technical schools has caused confusion in some states.

The Oklahoma Constitution provides for common schools and for a system of higher education. Article XIII-A provides that all education beyond the twelfth grade and supported by State funds shall be controlled by the Oklahoma State Regents for Higher Education. Article XIII of the Constitution provides for control of common schools at the

local level by the State Board of Education.

Since Oklahoma now has five area schools with plans for a total of fifteen across the State, the question arises, who will be the area vocational-technical school governing board? Post-high school education is really the concern of both the State Board of Education and the Oklahoma State Regents for Higher Education, but one State-level board must be given clear-cut authority to operate area schools.

Oklahoma has, through fiscal 1966, used $2,173,000 in federal funds for area vocational-technical schools.[6] Local school districts have supplied in excess of this with little or no State money being involved. There are conflicting school laws which must be changed to permit greater utilization of area school educational opportunities. When State funds are used to partially support the operation of an area vocational-technical school with post-secondary students and programs, the question of control according to law is important.

General Problem

Education today is being called upon to provide more services to society as a whole. These services are not only for more youth but also for a broader span of adults than have previously been served. Many of the pressures put on educational institutions today are rooted in the basic needs

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[6]"Status Report," State Board for Vocational Education (Stillwater, 1966), p. 2. (mimeographed)

of people. The increasing complexity of today's economy is widening and extending these needs beyond any previous level.

Education for the world of work has suddenly become a part of the main stream of education, as evidenced by Title VIII of the 1958 National Defense Education Act and by the 1963 Vocational Education Act, providing for technical training programs. No longer can occupational education be shunted to the backrooms or basements or not even allowed to exist. Vocational and technical education has suddenly grown up and is on an equal with general education.

Oklahoma is looking ahead. In 1966, the voters approved a constitutional amendment (State Question 434) allowing school districts to band together to provide area vocational-technical schools. These schools are for secondary and post-secondary students.

Oklahoma is now in a rather unusual situation involving the supervision of the area schools. Many programs are post-secondary and the question of college credit or transfer credit is raised. For the recent high school graduate, the attraction of college credit is indeed a factor, especially in the high-level technical programs pursued by above-average students. College credit is not important to the older worker primarily interested in a training or retraining type program.

The Oklahoma Constitution gives the Legislature the responsibility of establishing and maintaining a system of

free public schools.[7] State law adds,

> The public schools of Oklahoma shall consist of all free schools supported by public taxation and shall consist of...schools, not to exceed two (2) years of college work, night schools, adult and other special classes, vocational instruction, and such other school classes and instruction as may be supported by public taxation....[8]

A school district is defined as "any territory comprising a legal entity, whose sole purpose is that of providing free school education...."[9]

Some conflict seems to exist in another State law,

> Providing any district offering educational courses above the twelfth (12) grade or for adult classes shall charge tuition fees for such courses unless the school district has funds available to pay the cost thereof....[10]

The problem becomes more involved by a constitutional amendment, in 1941, which states,

> All institutions of higher education supported wholly or in part by direct legislative appropriations shall be integral parts of a unified system to be known as 'The Oklahoma State System of Higher Education'.[11]

The State System of Higher Education is operated by the Oklahoma State Regents for Higher Education, with authority over all institutions of higher learning to, among other things, prescribe standards, determine functions and courses of study, coordinate activities, courses, and funds of all state colleges and affiliated institutions of higher

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[7]Oklahoma Constitution, Article XIII-A, sec. 1.

[8]Oklahoma Statutes, 1961, Title 70, sec. 1-7.

[9]Ibid., sec. 1-9.

[10]Ibid., sec. 4-36.

[11]Oklahoma Constitution, Article XIII-A, sec. 1.

education, and grant degrees and other forms of academic recognition.[12]

Oklahoma law states that any school district offering educational courses above the twelfth grade shall comply with the regulations and standards set by the State Board of Education and the Oklahoma State Regents for Higher Education.[13] Oklahoma law further provides that all courses offered by a school district are educational regardless of the grade level.[14]

The 1965 Legislature adopted a new Higher Education Code[15] which broadened and reinforced legislative thinking on the powers and duties of the State Regents for Higher Education.

Article XII defines educational facilities and programs above the twelfth grade when provided by a school district as a "Municipal Junior College."[16] These "Municipal Junior Colleges" shall comply with and be accredited by and offer only courses, programs, certificates, and degrees authorized by the Oklahoma State Regents for Higher Education.[17]

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[12] Ibid., sec. 2.

[13] Oklahoma Statutes, 1961, Title 70, sec. 4-37.

[14] Ibid., sec. 4-36.

[15] Oklahoma Statutes, 1965 Supplement, Title 70, sec. 3101 - 4301.

[16] Ibid., sec. 4201.

[17] Ibid., sec. 4203.

In various publications of post-secondary education, statements are found which place education beyond high school under the Oklahoma State Regents for Higher Education. In Medsker's book, The Junior College: Progress and Prospect, "It (the Oklahoma State Regents for Higher Education) is responsible for the accrediting of all post-high school institutions in the State."[18]

A report from the U. S. Department of Health, Education, and Welfare states: "The Oklahoma State Regents for Higher Education is the agency for state level control of the public two-year college."[19]

As Oklahoma moves ahead with the forming of area vocational-technical school districts operated by a local board of education under the State Board for Vocational Education (the same individuals form the State Board of Education), the question arises, should they also be under the Oklahoma State Regents for Higher Education? Another question is in regard to the charging of tuition for a local post-secondary student when the word "free" is used to define a public school (other than a junior or community college).

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[18]Leland L. Medsker, The Junior College: Progress and Prospect, McGraw-Hill Book Co. (New York, 1960), p. 265.

[19]Coordinating Two-Year Colleges in State Educational Systems, Office of Education. U. S. Department of Health, Education, and Welfare. U. S. Government Printing Office (Washington, 1957), p. 71.

The important factor involved in the decision of control of the area vocational-technical school is the use of State money on a post-secondary program.

The provision of the Constitution identifying institutions under the Oklahoma State Regents for Higher Education uses the words "direct legislative appropriations" to establish a basis for control of higher education institutions supported by the State. However, appropriations, in practice, go directly to the Oklahoma State Regents for Higher Education and then to the colleges. A similar practice exists when the Oklahoma Legislature appropriates funds for the State Board for Vocational Education, thence to aid in the support of local vocational and technical programs.

Through 1966, Oklahoma has used $234,430 in State funds for area vocational-technical schools.[20] Does the using of monies appropriated by the State Legislature in the area schools allow the Oklahoma State Regents for Higher Education some control over the area schools?

At a meeting of the Governor's committee for area vocational and technical schools in 1966, Dr. Dan S. Hobbs, research assistant for the Oklahoma State Regents for Higher Education stated, "The Board of Regents for Higher Education takes the view that all education beyond the twelfth grade is their responsibility."[21]

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[20]"Status Report," p. 2.

[21]Governor's Committee for Area Vocational-Technical Schools, Oklahoma City, Oklahoma, April 11, 1966.

The State Agency in Oklahoma which should control the area vocational-technical schools operating at a post-secondary level, according to the Constitution and State Statutes, is the State Board for Vocational Education and either the State Board of Education or the Oklahoma State Regents for Higher Education. This study indicates practices in other states in post-secondary vocational and technical education.

This study also analyzes the opinions of a sample of three groups of educators regarding the philosophical problems of level of authority and type of institution for vocational and technical education. These practices and opinions will lead to recommendations for Oklahoma.

On May 24, 1966, the people of Oklahoma added an amendment to the State Constitution providing for the establishment of area vocational and/or technical school districts. The school district thus formed shall be administered and controlled as the law provides for independent school districts.[22] There is, within this amendment, a provision that states, "The Legislature may alter, amend, delete, or add to the provisions of this Section 9-B by law."[23]

Under this provision, the Legislature may give the area schools community college status with permission to grant associate degrees or other certificates. While this may be

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[22]State Question 434, Article 10, Section 92, paragraph (a).

[23]Ibid., paragraph (d).

in conflict with the true purpose and title of the amendment and the intentions of its supporters at the time of passage, as well as in conflict with Article XIII-B of the Constitution and the Higher Education Code passed by the 1965 Oklahoma Legislature, there are people who suggest such a change occurring in the near future.

A school that serves as a post-secondary institution automatically puts itself in the category of higher education, as higher education is conceived in the United States, today, regardless of legal interpretation.[24]

The roots of a dual system are already existent in Oklahoma. In most cases the present junior colleges are of the academic type. They are staffed by academicians to offer academic programs. Only in recent years have some junior colleges introduced a few vocational or technical courses in response to the general demand for expansion of the purpose of this kind of institution.

There is another professional group with specializations in the vocational and technical fields. This group is concerned primarily with operating pre-vocational and vocational programs in high school, special vocational-technical schools, and technical institutes.

Quite naturally, each professional group tends to favor its own field. Their biases can be managed in a competitive, yet constructive, manner in a single, comprehensive,

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[24]Medsker, p. 304.

coordinated system. The coordinating agency can establish policies and procedures to insure fair and impartial emphasis on each of these two important fields at the post-secondary level--university parallel and vocational-technical programs.

If there is not a working consensus between these two groups, the result may lead to dual structures of organization and control. Each group develops its own arguments and justification for its type of institution. Loyalties are developed in the populace for each type. Duplication, excessive cost, eliminated or foregone educational offerings, and limited choices for many individuals may be some of the hidden outcomes of dual systems. The dual system could drastically reduce the degree of freedom of opportunity available to students.

Statement of the Problem

The problem stated briefly: What level and type of educational unit responsible for the administration, organization, and supervision of area vocational-technical schools will most satisfactorily serve students, communities, and the total welfare of Oklahoma?

Assumptions

Some basic assumptions used in this study are:

1. Area vocational-technical schools will cover all sections of the State of Oklahoma. These schools will be so

located that each State resident will live within fifty miles of the school.

2. The area vocational-technical schools will be open to almost everyone as a student. This includes not only the high school and post-high school student, but also the school drop-out and the adult.

3. The area vocational-technical schools will use some State funds in their operating budgets.

4. The area vocational-technical schools will attract some post-secondary students and adults as students who will desire college credit leading to an associate degree. These students will probably be in the more sophisticated technical curricula.

5. The opinions of school people in responsible positions of leadership will facilitate the development of a good plan for the administration, organization, and supervision of area vocational-technical schools in Oklahoma.

6. The statements made in the individual states' plans of vocational education and their operating bulletins are correct and adhered to by the authorities of that state.

Scope

State plans of vocational education of forty-two states were reviewed.

The constitutions and amendments through the 1965 legislative sessions were checked to determine where, or if, the authority of the State Board of Education, or its

equivalent ended, and the State Agency for Higher Education began. All of the states' constitutions were examined.

While the opinionnaire was sent to a sample of junior college presidents, public school superintendents, and vocational and technical education leaders across the United States, only sixteen states are represented, besides Oklahoma, in the sample of junior college presidents. Sixteen states, besides Oklahoma, are represented in the sample of public school superintendents. The leaders represented seven different states. Each held a position of leadership for policy development of vocational and technical education.

Purpose of the Study

The major purpose of the study is to determine the opinions of three groups regarding the level of the state agency with control over the area vocational-technical schools in the United States. The trends in the states' current practices, in conjunction with results of the opinionnaire survey, will establish the basis for recommendations on the level of the Oklahoma education agency for the administration, organization, and supervision of area vocational-technical schools operating with post-secondary programs.

The level of control for vocational and technical education beyond the high school has been controversial. The groups representing authority on either side of the controversy have been, to various degrees, biased; while others

are unaware of the overall needs for the individual and for society in this age of the technological revolution.

The purpose of this study is to bring out points on both sides of the controversy by presenting facts and significant opinions of recognized leaders over the United States. The results of the study may bring more understanding and communication between the leaders in Oklahoma which will result in the formulation of principles and practices to allow for the optimum vocational and technical development of each Oklahoman on the level of his abilities and aspirations.

The objectives of the study are:

1. To identify some problems in the Oklahoma educational system relating to the administration, organization, and supervision of vocational education, either beyond or within the scope of the present school organization.

2. To identify some of the laws that are in conflict and point out where change would help in the total educational program in Oklahoma.

3. To focus the attention of leaders in Oklahoma education to a province where action is needed.

4. To present a theoretical solution to the identified problems, with positive recommendations based on study findings.

5. To stimulate interest in good vocational and technical education programs for the total citizenry of Oklahoma and possibly for other states.

Limitations of the Study

One major limitation of the study lies in the nature of the instruments used for obtaining the data. First, the validity of responses given to items is contingent upon the honesty and sincerity of the respondent and upon his willingness to cooperate.

A second limitation is in the selection of the items for the opinionnaire. In a study of this type, there is considerable difference in the frames of reference from which respondents interpret words and statements.

The study is of the survey type. It involves two approaches to gathering information:

1. A study of what exists, determined through the research of states' laws, constitutions, state plans for vocational education, and operating bulletins. This is to reveal the existing practices in the states regarding the level of the unit responsible for the administration, organization, and supervision of area vocational schools.

Van Dalen has this to say about the use of documentary analysis:

A. They can describe specific conditions and practices that exist in schools and society.

B. They can spot trends.

C. They can detect weaknesses.

D. They can disclose differences in practices of various areas, states, and countries.

E. They can detect the attitudes, interests, and values of people.

F. Investigators can easily draw faulty conclusions from the data.

G. Investigators fail to analyze the trustworthiness of source materials.[25]

2. The public opinion survey is to gather data regarding the public's opinions, attitudes, and preferences. This type of survey has limitations:

A. The opinion survey which is not carefully structured produces unreliable information.

B. The environment of the survey may affect the data.

C. If the people are uninformed concerning the topic, they can only give arbitrary decisions or snap judgments. Measuring the intensity or depth of opinion is difficult.

D. The opinion survey is better than hunches, blind guesses, or pressure group demands.[26]

With these thoughts, the descriptive survey method could be abandoned; however, Kerlinger lists advantages that outweigh the disadvantages. These include a wide scope, with a great deal of information from a large population, economical, and survey information is accurate, within sampling range. A major point is that the respondent presumably knows about his beliefs, opinions, and attitudes toward education and institutions and reacts truthfully on an opinionnaire.[27]

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[25]Deobold B. Van Dalen, Understanding Educational Research, McGraw-Hill Book Co. (New York, 1962), pp. 187-197.

[26]Ibid.

[27]Fred N. Kerlinger, Foundations of Behavioral Research, Holt, Rinehart, and Winston, Inc. (New York, 1964), pp. 396-407.

Using the opinionnaire, with some knowledge of its faults but also aware of the potential for information gathering, has provided the foundation instrument for securing the opinions used in this study.

Overall Study Hypotheses

The study is based on two groups of hypotheses. The first group are in regard to the review of the literature and level of control for the area schools.

The second group of hypotheses are the ones being tested, and have a single relationship to the opinionnaire statement responses.

This study is an attempt to relate the opinions of the groups responding to selected questions regarding the area vocational-technical schools. The basis of the study is the hypothesis that a sample, with opinionnaire data treated by the Chi-square formula, will reveal no significant differences among the groups on certain questions regarding the administration, organization, and supervision of area vocational-technical schools.

1. There are certain identifiable characteristics of states' plans for area vocational-technical schools' administration, organization, and supervision which may be used as an aid in developing recommendations for administration, organization, and supervision of area vocational-technical schools in Oklahoma.

2. A level of authority for the administration, organization, and supervision of area vocational-technical schools can be developed of such design as to accommodate the educational objectives of both the Oklahoma State Board of Education and the Oklahoma State Regents for Higher Education regarding students in educational programs beyond the twelfth grade.

Individual Opinion-Statement Hypotheses

The null hypotheses are used throughout the study regarding the opinions of the groups. There are four null hypotheses. The last three may be considered as alternate hypotheses. They are identified in the study by a number just slightly below and following the hypothesis symbol. The overall opinion hypothesis does not carry numerical identification.

H_0 There is no significant difference in the opinions of certain junior college presidents, public school superintendents, and leaders in vocational and/or technical education to questions or statements regarding vocational and/or technical education.

The significance level in the analysis of the data using the Chi-square test was set at .05. The opinion statement which indicated a significant difference of opinion resulted in the null hypothesis being rejected.

To further analyze the data when the overall null hypothesis was rejected, three additional null hypotheses

were developed in an attempt to locate more precisely the groups which were significantly different. The significance level was set at .025 in this analysis. These hypotheses are as follows:

H_1 There is no significant difference in the opinions of certain junior college presidents and public school superintendents to questions or statements regarding vocational and/or technical education.

H_2 There is no significant difference in the opinions of certain junior college presidents and leaders in vocational and/or technical education to questions or statements regarding vocational and/or technical education.

H_3 There is no significant difference in the opinions of certain public school superintendents and leaders in vocational and/or technical education to questions or statements regarding vocational and/or technical education.

CHAPTER II

REVIEW OF THE LITERATURE

A review of the literature revealed no studies designed to determine the educational unit for the administration, organization, and supervision of area vocational-technical schools. Several studies and authorities' comments are presented regarding organizational patterns and operating programs for vocational and technical education. These do have a bearing on the problem since there are no research studies available regarding the administration, organization, and supervision of the area vocational-technical schools.

A study by Burns related to the conditions, the principles, and the practices under which area vocational-technical programs have been established and operated in the United States. Applying these findings to the State of Missouri, two of his conclusions are:

> If an area vocational-technical school or program is to be established in conjunction with a junior college, it is advisable to integrate offerings and administration of the vocational program with that of the junior college.[1]

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[1]Richard L. Burns, "Factors Governing the Establishment and Operation of Area Vocational-Technical Schools and Programs in the United States with Application to Missouri." (unpublished Doctor's dissertation, University of Missouri, 1964), p. 2.

> When the findings are applied to Missouri, twenty-two areas result which could be served by area vocational-technical schools. Some of these tentative areas could well be served by a vocational-technical program within a junior college or perhaps a comprehensive high school.[2]

Dittrick, writing in The Bulletin of the National Association of Secondary School Principals, emphasizes that new practices in administration, new concepts of administration, and broad-based programs must be available for students at vocational levels.[3]

The American Vocational Association indicates that the self-contained vocational-technical school is effective from the standpoint of administration, well trained graduates, effective industrial relationships, and tangible contributions to our national economy.[4] They have demonstrated that technical institutes and programs in community colleges are effective in training technicians who are in great demand throughout industry.[5]

Dr. Lynn Emerson, consultant to the panel of consultants on vocational education appointed by the late President John F. Kennedy, included a brief study of the area schools in his report. One of his findings was:

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[2]Ibid., pp. 3-4.

[3]Alva R. Dittrick, "New Directions in Vocational Education," The Bulletin of the National Association of Secondary School Principals, IL No. 301 (May, 1965), p. 50.

[4]Area Vocational Education Programs, American Vocational Association (Washington, 1966), p. 10.

[5]Ibid., p. 14.

> The main emphasis appears to be toward meeting the needs of youth who have graduated from high school, youth who have dropped out of high school and have discovered that they need training, and adults who may want to prepare themselves for new industrial and technical occupations, or who may wish to upgrade themselves while still working. . . . The offerings for high school youth will probably be continued for some time, although the long-term trend is unmistakably in the direction of providing the most training for the skilled and technical occupations in programs beyond the high school.[6]

Emerson also noted, as part of his study findings, the lack of standard practices in area school administration.

> The administrative pattern for area vocational schools vary widely. Some are administered and financed directly by the state. Some are organized on a county basis. Some are developed through cooperative action of several school districts. . . .The patterns are influenced greatly by statewide patterns of organization of schools as a whole, by the degree of industrialization of the state, by the density of population in the state, and by other factors. Each pattern appears to grow out of individual state needs.[7]

One of the foremost scholars on the organization of education today is Dr. James B. Conant. In his study of the high schools of America he uses the following items as a background basis for certain recommendations:

> The controlling purpose of vocational education programs is to develop skills for useful employment. These programs relate school work to a specific occupational goal but involve more than training for specific job skills.

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[6]Lynn A. Emerson, Education for a Changing World of Work, Appendix I, Technical Training in the United States, Report of the Panel of Consultants on Vocational Education, Office of Education. U. S. Department of Health, Education, and Welfare. U. S. Government Printing Office (Washington, 1963), p. 80.

[7]Ibid., p. 81.

> Vocational education is not offered in lieu of general academic education, but grows out of it, supplementing and enhancing it. Vocational education is an integral part of the total education program and requires aptitude that students at the lowest levels do not have. . . . the administration of the federally aided vocational programs varies from state to state.
>
> My inclination is strongly in favor of including vocational work in a comprehensive high school instead of providing it in a separate school. My reasons are largely social rather than educational. I believe it is important for the future of American democracy to have as close a relationship as possible in high school between the future professional man, the future craftsman, the future manager of industry, the future labor leader, the future salesman and the future engineer. . . . I am convinced that one of the fundamental doctrines of American society is equality of status in all forms of honest labor as well as equality of opportunity.[8]

Smith made a study of vocational education in the comprehensive high school but covered some area vocational-technical school effects in certain states. Selected excerpts from this study are:

> Georgia requires a student to complete high school before he will be accepted in an area vocational-technical school.
>
> Public school principals from Georgia object to this very much. They contend the area schools are not meeting the needs of the students. They also contend more programs are now necessary at the secondary level.
>
> North Carolina public school principals contend the industrial centers program does not lessen the load on secondary schools. Since secondary students are allowed to enroll on a limited basis, and the slightly below average student cannot enter, the secondary school must carry the same or even enlarged vocational program.

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[8]James B. Conant, The American High School Today, McGraw-Hill Book Co., Inc. (New York, 1959), pp. 123-127.

> School principals in Pennsylvania were diverse in their opinions concerning area schools. Many principals were disturbed with the many student problems created by spending one-half day at the local high school and one-half day at the area vocational-technical school. Many thought the student should spend his time in one school.
>
> Another common disgruntlement with the area school was the requirement of an I. Q. of 105 which eliminated many who could be excellent craftsmen. What unit of education is supposed to take care of the below average youngsters?[9]

Principals of South Carolina had this to say concerning area school programs:

> The present program offers little or nothing for the youngster of very limited ability. Of all the developments in the technical schools not one has helped with the drop-out program.[10]

Smith concludes:

> Vocational and pre-vocational courses of study must be increased in view of the area school development. The experience of the six participating states (South Carolina, Georgia, Pennsylvania, North Carolina, California, and Vermont) in the study has been that the area vocational-technical schools tend to become strictly post-high school institutions with time.[11]

Gardner suggests that educators and society should:

> ...recognize that each of the different kinds of institutions has its significant part to play in creating the total pattern, and that each should be allowed to play its role with honor and recognition. ...we must develop a point of view that permits each kind of institution to achieve excellence in terms of its own objectives.[12]

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[9]John A. Smith, "Vocational Education in the Comprehensive High School," (unpublished Doctor's dissertation, University of Kansas, 1965), pp. 153-62.

[10]Ibid., p. 152.

[11]Ibid., p. 168.

[12]John W. Gardner, Excellence, Harper and Brothers (New York, 1961), pp. 83-84.

Smith was in charge of a study in Michigan concerning the secondary and post-secondary vocational programs needed. The study contrasts the emphasis of the secondary and post-secondary vocational education system. The following conclusions were reached:

> The comprehensive area post-secondary and adult education institution--the hub of the whole vocational education system of tomorrow--by whatever name it is called, will be the comprehensive area post-secondary and adult education institution.
>
> The national trend is in this direction, and the reasons are very clear. Most individual high schools cannot offer the variety of programs needed. More and more vocational-technical courses beyond the high school level are needed. The public favors later initial employment than at high school graduation. Employers favor the older employee and the one who has taken his vocational training at a post-secondary institution. The post-secondary institutions will have better facilities and a more specialized staff in many fields than the high schools can have. For these reasons, more and more youth, when post-secondary education is available to them, are likely to postpone their vocational training until after high school graduation....
>
> The logical institution to provide area post-secondary and adult education services in Michigan is the modern community college. Such an institution must not be confused with its predecessor, the two-year liberal arts junior college which still prevails throughout much of the Middle West. The modern community college is a comprehensive institution serving a commuting area by offering the services that the people need.[13]

Emerson, professor emeritus of Cornell University and consultant for vocational-technical education programs in Maryland, suggests the controlling board of higher education

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[13]Harold T. Smith, Education and Training for the World of Work, W. E. Upjohn Institute for Employment Research (Kalamazoo, 1963), p. 3.

and the state board of education be brought together in unified support:

> ...a department or a division of a junior college or community college or university under the supervision of the State Board of Vocational Education, which provides vocational education in no less than five occupational fields leading to immediate employment.[14]

The final report of the panel of consultants to the President contained this recommendation:

> Occupational training beyond the high school must be a major concern of vocational education in the years ahead to keep pace with technological change. The desirability of keeping young people out of the labor market until they are older and better prepared, the critical need for technicians, the importance of more extensive shops and laboratories; these all indicate the vital importance of the education for employment of youth in the years beyond the high school.[15]

Another of the panel's recommendations was:

> It is recommended that the Federal Government provide funds to assist States in developing and operating vocational and technical education programs at the post-high school level. The junior college and technical institute enrolling older youth and experienced persons have proven particularly effective in giving this type of training.[16]

The panel of consultants also recognized the importance of prestige in vocational and technical education in the different educational institutions as noted by these

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[14] A Proposed Plan for Occupational and Vocational-Technical Education for Rhode Island, Institute of Field Studies, Teachers College, Columbia University (New York, 1965), p. 30.

[15] Education for a Changing World of Work, Report of the Panel of Consultants on Vocational Education. Office of Education. U. S. Department of Health, Education, and Welfare. U. S. Government Printing Office (Washington, 1963), p. 232.

[16] Ibid., p. 259.

statements:

> Prestige is an important factor in all vocational education programs for, traditionally, they have been looked down upon by many academic educators and the public....The title of the school, the attractiveness and functional working of the school plant, the maturity and quality of the students, the placement record,...effect the schools prestige. Accreditation is an important factor. A technical program with accreditation by the Engineers Council for Professional Development ranks high among those who know the meaning of such accreditation....
>
> Offering certain types of credentials for graduates, such as the associate in arts degree, helps in raising the prestige of the school. . . the recruitment of students is facilitated by high prestige. The prestige of the post-high school institution facilitates the enrollment of persons who do not want to go back to high school for their further education.[17]

Harris suggests the answer for many students and their parents is the community college:

> The community junior college is in a very real sense society's answer to the need for expanding educational opportunity. . . . Their curriculums emphasize education, and avoid a narrow concept of "job training."[18]

Emerson's study makes a substantiating statement:

> Current developments in such states as New Jersey and North Carolina seem to be heading toward community college status for schools now considered as area vocational-technical schools.[19]

He does, however, have this conclusion:

> . . . the most appropriate institution for the training of technicians is the technical institute, independent of and separate from other types of

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[17]Ibid., p. 149.

[18]Harris, p. 19.

[19]Emerson, Report on Education, p. 74.

educational programs.[20]

The American Association of School Administrators 1966 Yearbook has two statements that are important in this study:

> 1. It is imperative that dignity be attached to all socially useful labor. One of the first obligations of educators is to raise the prestige of all socially useful labor and to place education for the professions in its proper perspective. . . .
>
> 2. The more specific the vocational training of an individual, the more vulnerable he is to changes in employment opportunities over which he has no control. The vocational education program for tomorrow must be directed toward general vocational excellence in broad occupational areas, leaving to the specific industry or craft the obligation of training workers for their particular assignment.[21]

Adler states "...it is an absolute misuse of college to include any vocational training at all."[22]

There are others who do not feel vocational education has a place in education. They contend the proper place for this type of training is on the job. Brubacker states:

> The fallacy of this approach in modern day America, with the rapid changes and necessity for retraining, is that on-the-job training tends to result in an individual that is more resistant to change and against retraining. Initial training with some theory broadens the individual for more versatility in doing the job as well as being less disturbed with change.[23]

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[20]Ibid., p. 59.

[21]Imperatives in Education, American Association of School Administrators (Washington, 1966), pp. 23-6.

[22]Mortimer J. Adler, "Labor, Leisure, and Liberal Education," Journal of General Education, VI (October-July, 1951), p. 43.

[23]John S. Brubacker, Bases for Policy in Higher Education, McGraw-Hill Book Co., Inc. (New York, 1965), p. 52.

Adler and Brubacker are completely opposite regarding vocational or technical programs in colleges.

A recent government report on the Manpower Act states:

> Pre-employment vocational education programs are designed to meet the needs of individuals for occupational competency in entry jobs in gainful employment, yet they also must develop the individual as a useful citizen in a democracy. To achieve this dual purpose, they must give due consideration to general education. In all pre-employment vocational programs, on whatever level, as many general education courses should be offered as is consistent with the occupational training goals of the programs.[24]

Venn states:

> Vocational and technical education have been isolated from the mainstream of education by federal statute, by local and state administration, by professional organizations, and by public preference. Even today occupational and general educators are split on proposals to expand and improve vocational and technical education.
>
> On the one hand are those vocational and technical educators who argue for the expansion of single-purpose vocational and technical institutions. The position of these educators is that successful vocational and technical education programs involve methods and procedures different from those of general education, and that as a practical matter the success of these programs depends on their sympathetic administration by people who thoroughly understand this 'fact'. Within comprehensive institutions, it is pointed out, occupational programs often suffer in comparison to the attention given to the general academic program.
>
> On the other hand, many educators have backed legislation to support technical education in the comprehensive two-year college. Their arguments involve concepts of learning and individual

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[24]"Report of the Secretary of Health, Education, and Welfare to the Congress on Training Activities Under the Manpower Development and Training Act." Office of Education. U.S. Department of Health, Education, and Welfare. U. S. Government Printing Office (Washington, March, 1963), p. 11.

> development. They declare that the changing nature of work is such that narrow specialization leads only to job displacement as the nature of specialities in the work world is constantly changed by the new technology. In a single purpose institution geared to matching people to existing jobs, the temptation is to emphasize skill training at the expense of the underpinnings of longer term occupational and civic competence, related knowledge, and general education. . . .
>
> The separate but equal approach to vocational and technical education is,...bad theory and bad practice. Its apartness has tended to identify it as a second-class kind of education in the public mind; if it is not respectable in the educational community, how can parents advocate it for their children? At the same time, its apartness has too frequently led it to be by-passed in the ferment over educational goals, methods, and standards, and has robbed it of valuable criticism and fresh ideas.
>
> ...It will be tragic for the nation if higher education fails to concern itself with this issue.[25]

John Russell, a former assistant commissioner for higher education in the United States Office of Education, made this statement:

> ...the fact that general and vocational education should not and cannot be separated in an effective program for the individual child inevitably means that the agency responsible for the conduct of one must also conduct the other phase of educational service.[26]

Lowell Burkett, assistant executive secretary of the American Vocational Association had this to say regarding the lack of general education in specialized occupational schools:

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[25]Venn, pp. 141-143.

[26]John Dale Russell, Vocational Education, President's Advisory Committee on Education, Staff Study No. 8. U. S. Government Printing Office (Washington, 1938), p. 176.

> Instead of enjoying the rich advantages of preparation for rewarding and productive living, there is a great risk that the students will have only routine training for routine jobs...that our society will lose their democratic qualities that have made it great.[27]

The panel of consultants brought out another aspect of training and retraining:

> It is becoming increasingly clear that there is no real assurance now that the mastery of an occupation, once achieved, will last any worker a lifetime. Although jobs may change, a worker who has mastered the skills of a trade or occupation and who has kept himself abreast of new techniques and developments can reasonably expect to continue in his trade through his working life. Pre-employment training of youth must, therefore, provide a solid occupational foundation. In addition, the potential member of the labor force must be well aware of his responsibilities for his own self-development if he is to continue to keep up-to-date in his occupation. Since more and more workers will need a program of lifelong learning, continuing educational opportunities must be provided to cope with occupational change. Vocational educators must train more broadly for career patterns, for a lifelong sequence of employment opportunities.[28]

A social study, in 1949, gave impetus to the advancement of people trained in comprehensive institutions:

> Management is bringing college trained men into the lower ranks of supervisors and promoting fewer from the ranks because it finds that the workers, while good men technically, do not have the necessary knowledge about handling men and relating themselves effectively to the higher reaches of management. Their education is often insufficient to make them good prospects for continuing advancement. The hiring of formally educated men effectively puts a ceiling over the legitimate aspirations of workers

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[27]Lowell A. Burkett, "Critical Issues in Vocational Education," Vocational Education for Rural America, ed. Gordon S. Swanson, Department of Rural Education, N. E. A. (Washington, 1960), p. 301.

[28]Education for a Changing World of Work, p. 16.

> expecting to rise in the ranks. The blocking of the workers mobility and the encouragement of college trained men is the alternate pay-off of what began in the grade schools.[29]

Dr. John Lombardi, Dean of Instruction, Los Angeles City College, emphasizes that now about every nonprofessional vocation in which one may secure employment becomes a proper subject for inclusion in the junior college vocational curriculum.[30]

The review of literature may be summarized in this way:

1. Area vocational-technical schools tend, through selection, to become post-secondary in nature.

2. There is no clear-cut pattern of administration, organization, or supervision of the area schools.

3. The comprehensive school is the best institution for secondary vocational training.

4. Prestige is an important factor in a student's selection of the institution where he will take post-secondary vocational or technical training.

5. There is a need to increase the status for vocational education programs.

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[29]W. Lloyd Warner, Marchia Meeker, and Kenneth Eells, Social Class in America, Science Research Association, Inc. (Chicago, 1949), p. 29.

[30]John Lombardi, "Vocational Education in the Junior College," School and Society, LXXIII (April 14, 1951), pp. 225-228.

CHAPTER III

DESIGN OF THE STUDY

The study was designed to determine the opinions of certain selected persons regarding the administration, organization, and supervision of area vocational-technical schools. These persons were selected from three groups--junior college presidents, public school superintendents, and nationally recognized leaders in the field of vocational and technical education. One of the criteria for selection was the position the individual held whereby he could affect policy developments in education.

Procedures of the study are:

1. A list of the state directors for vocational education was obtained from Mr. Byrle Killian, Assistant State Director for Vocational Education in Oklahoma.

2. A letter requesting a copy of their state plan for vocational education was sent to each state director. Forty-two of the state directors replied with either their state plan or their operating bulletin. Other directors answered that the state board had not authorized distribution of their state plan, or that available copies of their state plan were exhausted.

3. A list of the state superintendents of public instruction was obtained from Mr. E. H. McDonald, Deputy State Superintendent of Public Instruction in Oklahoma.

4. A letter requesting the following materials was sent to each state superintendent of public instruction:

A. A copy of his state's constitution.

B. The state school laws regarding area vocational-technical schools.

C. Information regarding the state agency for the control of education beyond the twelfth grade.

There were thirty-two states which sent constitutions, school laws, or statutes regarding public school education.

5. Each state's constitution was studied, along with the available education laws, and the state plan for vocational education, to secure information regarding these factors on the area vocational-technical schools:

A. Control by a state agency of higher education, or secondary education.

B. The source of funds for operation and for capital outlay.

C. If the associate degree is awarded in vocational or technical courses.

D. If the authority for the establishment was by statute or constitution.

E. If transportation is furnished for these students.

F. No attempt was made to establish evaluative criteria

for, or to in any way measure, the area vocational-technical schools or programs in the states.

6. Books, periodicals, studies, selected government documents, and college bulletins were reviewed for information.

7. Certain questions raised in the review of literature and the information from the state laws and plans for vocational education were developed into an opinionnaire instrument. This instrument was reviewed and refined with the assistance of:

Dr. Francis Tuttle, State Coordinator
Area Vocational-Technical Schools
Oklahoma State Department for Vocational Education

Mr. Dale Hughey, Assistant State Coordinator
Area Vocational-Technical Schools
Oklahoma State Department for Vocational Education

Dr. Paul Braden, Associate Professor
Industrial Education
Oklahoma State University

Mr. Don Phillips, Assistant Professor
Technical Education
Oklahoma State University

Mr. Cecil Duggar, Assistant Professor
Technical Education
Oklahoma State University

8. The instrument (Appendix B) was mailed together with:

A. An accompanying cover letter explaining the study and asking for cooperation. (Appendix A)

B. A sheet of definitions to establish a common reference on the statements. (Appendix B)

C. A self-addressed, stamped envelope for the return mailing.

9. Eighteen days after the opinionnaire was mailed, a follow-up letter was sent to the members of the sample who had not responded, inviting them to complete the instrument and return it. (Appendix C)

10. The results of the opinionnaire were tabulated. The Chi-square or Fisher Exact Probability Test was applied where each was appropriate. The percentages for each answer in the group were also calculated.

The use of a percentage figure is to present another view of the findings in order that they may be more meaningful to those persons unfamiliar with the Chi-square statistic. While a percent is indicated, the reader should be cognizant that it is not an exact measurement in these tables. The percent figure is indicative of a value with upper and lower limits, but for the sake of briefness and yet with a certain degree of accuracy, is here noted as a single number. It is only representative of a range and not single exactness.

The same thoughts permeate the use of a graph. A graph does give a visual clarification to certain pieces of information. The points on the graph are not, however, exact. There is no mathematical equivalency between the points on the graphs. Each graph-point and each percentage figure is to describe, very generally, the relationship to other groups in the study.

The results of the opinionnaire, covering both administrative and policy statements, were organized together to give survey evaluation information. These representations of opinions of the groups were used as criteria for final recommendations.

11. Personal interviews to discuss some of the early trends of the study, along with specific points for possible recommendations were held with:

Dr. Robert Kamm, President
Oklahoma State University

Dr. E. T. Dunlap, Chancellor
State Regents for Higher Education

Dr. Dan Hobbs, Research Specialist
State Regents for Higher Education

12. The last step of the study was to organize the data and use the results to make recommendations for the administration, organization, and supervision of area vocational-technical schools in Oklahoma.

Selection of the Sample

There were three groups to be represented in the gathering of information. For this study, these included:

1. Junior college presidents
2. Public school superintendents
3. Leaders in education.

These groups were restricted to those persons who are normally expected to possess some knowledge of vocational and/or technical education functions and the operations of public education.

The selection of the junior college presidents was made through the use of two sources of information for criteria. The list of all the junior colleges is in the publication of the American Association of Junior Colleges, American Junior Colleges, 1960.[1] This list was compared with the directory of schools and colleges offering technical programs listed in the Technician Education Yearbook, 1965-66.[2] Only those presidents of junior or community colleges listed in both publications were selected as the sample of the 590 American Junior College Presidents.[3]

The selection of public school superintendents was based on these factors:

1. They must be superintendent of a school with an enrollment in excess of three hundred students in the upper four grades.

2. There must be an area school within the district, or, it must have a technical program and be listed in the Technician Education Yearbook, 1965-66.

3. The superintendents of school districts with an area vocational-technical school or with the potential for location of an area school were selected as the Oklahoma sample.

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[1]American Junior Colleges, ed. Edmund J. Gleazer, Jr., American Association of Junior Colleges, American Council on Education (Washington, 1960).

[2]Technician Education Yearbook, 1965-66, Prakken Publications (Ann Arbor, 1966), pp. 11-67.

[3]American Junior Colleges, p. 18.

The directory of school superintendents in the United States was available in the Education Directory of Public School Systems.[4] This source was used in conjunction with the Technician Education Yearbook, 1965-66 and Summary Report of Vocational Technical Developments by States to select the public school superintendents.[5] Where an area vocational-technical school was not a part of a comprehensive school district, the school was not selected to be part of the sample as the chief administrator was generally not a superintendent of schools, but a director of a particular school.

The Oklahoma school districts having over three hundred students in the upper four grades was obtained from Mr. E. H. McDonald, Deputy State Superintendent of Public Instruction. These school districts were studied by Dr. Francis Tuttle, Area Vocational-Technical School Coordinator for the State Board for Vocational Education, and the final selection made according to school location.

The leaders in vocational and/or technical education were selected through a series of personal conferences with:

Dr. Maurice Roney, Director
School of Industrial Education
Oklahoma State University

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[4]Education Directory of Public School Systems, Office of Education, U. S. Department of Health, Education, and Welfare. U. S. Government Printing Office (Washington, 1965).

[5]Vocational and Technical Education, Fiscal 1963, Office of Education, U. S. Department of Health, Education, and Welfare. U. S. Government Printing Office (Washington, 1966), pp. 29-44.

Dr. Francis Tuttle, Coordinator
Area Vocational-Technical Schools
Oklahoma State Department for Vocational Education

A review of the positions each of these persons formerly held or are now holding revealed they were prominent in the leadership of a phase of vocational or technical education or both. (Appendix F)

Of the twelve leaders selected, eleven completed the opinionnaire while the twelfth replied he was too busy at the present time.

TABLE I

OPINIONNAIRES SENT AND RETURNED

	Number Opinionnaires Sent	Number Returned	Per cent Return
Junior College Presidents	57	42	74
Public School Superintendents	50	45	90
Leaders in Vocational and Technical Education	12	11	92

Development of Instrument

Selected principles offered by Struck and by Harris were used to develop a pattern for the opinionnaire.

Principles selected from Struck are:[6]

[6]F. Theodore Struck, Vocational Education for a Changing World, John Wiley and Sons, Inc. (New York, 1944), pp. 129-49.

1. The chief function and purpose of vocational education is to prepare each individual for profitable, socially-useful employment.

2. Occupational competence is a basic requirement for vocational teachers.

3. Constant inquiries, investigations, studies, and occupational surveys are needed to determine current needs in vocational education.

4. Boards of Education and those engaged in vocational education need the advice and cooperation of advisory committees in order to determine the direction, nature, and scope of vocational education.

5. Vocational programs need community contacts such as labor unions, employers, and workers.

6. The standards in vocational education should be as high or higher than those of approved prevailing standards in the occupations concerned.

7. Vocational education must not only be kept in line with progress but must contribute toward progress.

8. Vocational education is for all who can use it for family, state, and national welfare.

9. Youth need a combination of good general education and vocational education.

10. Vocational education is needed for the nation's labor supply.

11. Vocational education should continue until the trainee can secure a job, hold it, and progress satisfactorily in it.

12. Vocational education should train persons whose services are usable.

13. Vocational education laws must permit flexibility.

14. Youth should be trained in occupations in which they have a real interest and for which they have aptitudes.

15. Vocational education is needed for the various levels of skill needed in occupations.

16. High schools should be expanded beyond the present twelfth grade by adding terminal courses of varied lengths.

17. Leaders in vocational education should be keenly interested in the best possible use of the training resources at their command.

18. There should be a better understanding of vocational education.

19. Vocational education is a cooperative effort among local, state, and federal agencies.

Other selected principles, obtained from Harris, are:[7]

1. The increasing complexity of everyday life in an urban, industrialized society.

2. The explosion of technical and scientific knowledge which has characterized the past four decades.

3. The fact that in our society education stands between man and his job.

4. The action and reaction within a free society which leaves no person content to stay in his place.

5. The needs of business and industry for semi-professional ("middle level") manpower.

6. Markedly increased levels of pre-employment education and training for almost all high school graduates.

7. Coordination, placement, and guidance services should be provided.

8. Departure from tradition frequently meets with indifference and sometimes with resistance from those who like the status quo.

9. New kinds of knowledge and skills are required to plan meaningful programs of occupational education.

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[7]Harris, Technical Education in the Junior College, p. 20.

10. New kinds of laboratories and classrooms will be required for new and advanced instructional programs.

These principles, questions raised in the review of the literature, and information from state laws and plans for vocational education were developed into an opinionnaire. The basic problem for the opinion questions was the educational unit for the administration, organization, and supervision of the area vocational-technical school. An original list of seventy-five questions was made. In attempting to secure answers that would be meaningful, the statements were worded in such a way that "yes" and "no" answers could be used. In reading the statements, logic indicated some could be answered by a neutral, so the choice, "no significant difference" was entered where it was deemed appropriate.

There were some elements where "yes" or "no" answers were not sufficient. These questions were rewritten with a selective rating requested.

The statements were grouped into similar thought areas and were refined in some anticipation of responses in order that all "no" or "yes" responses would be unlikely. The statements were then read by five people active in the field of vocational and technical education on the state level to determine readability and clearness of thought as well as other recommendations. These recommendations were rather uniform:

1. Cut the questions to a maximum of five pages.
2. Supply a set of definitions to make more uniform

the frame of reference each respondent would be working from.

In general, these persons thought the opinionnaire was appropriate for the study.

A review of all the statements was made, selecting fifty-three to remain on five pages. A definition sheet was developed and made a part of the sampling instrument. Three public school superintendents and one college president participated in a pilot study to determine any faults in instructions, any questions about the definitions, or any flaw in the statements. Two of these suggested the definition sheet not be stapled to the opinionnaire in order for it to be readily available for each sheet. This group found the instrument to be understandable and free from ambiguity.

Analysis of Data

Several questions were asked of each respondent in order to determine the opinions of the groups regarding the problem posed by the study. To analyze this data, the Chi-square statistical procedure was used.

The first step was to determine if there were differences of opinions among the three independent samples. This would indicate if there were genuine population differences of the groups or whether it represented mere chance variations such as are expected among several samples. The significance level was set at .05 on this test.

When a significant difference was found to be present among the three groups in the sample, another Chi-square statistic test was used to test differences between any two groups of the sample. The significance level was set at the .025 level for this analysis, using a two-tailed test. Siegel states "If H_1 does not indicate the direction of the predicted difference, then a two-tailed test is called for."[8]

The null hypothesis was developed to be the basis for statistical interpretation of the data. Garrett states, "A null hypothesis is ordinarily more useful than other hypothesis because it is exact."[9] "Experimenters have found the null hypothesis a useful tool in testing the significance of differences."[10] The rejection of a null hypothesis does not immediately force the acceptance of a contrary view.

A non-parametric statistic was chosen because:

1. The measurement was nominal which is not exact enough for parametric tests.

2. There are suitable non-parametric tests for treating samples made up of observations from different populations.

Siegel states: "When frequencies in discrete categories (either nominal or ordinal) constitute the data of

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[8]Sidney Siegel, Nonparametric Statistics for the Behavioral Sciences, McGraw-Hill Book Co., Inc. (New York, 1956), p. 13.

[9]Henry E. Garrett, Statistics in Psychology and Education, David McKay Co., Inc. (New York, 1958), p. 247.

[10]Ibid., p. 213.

research the χ^2 test may be used to determine the significance of the difference among K independent groups."[11] The hypothesis is that the groups differ with respect to some characteristics and therefore with respect to the relative frequency with which group members fall into several categories.[12]

The groups and responses were arranged either on a three-row, two-column table or a three-row, three-column table for the Chi-square test of significance. Those questions, which were determined to have a significant difference of opinion on a 3 x 2 table, were further analyzed on 2 x 2 tables to determine where the significance lay.

In using the 2 x 2 table, some cells would have an expected frequency of less than five when the total N was less than forty. Siegel suggested in this circumstance: "When N is between 20 and 40, the χ^2 test may be used if all expected frequencies are five or more. If the smallest expected frequency is less than five, use the Fisher test."[13] The Fisher Exact Probability Test was used to analyze discrete data when the samples were small in size. The results are given in exact probability.

A percentage distribution of each group's responses was also made to give another view of the arrangement of opinions.

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[11]Siegel, p. 175.

[12]Ibid., p. 104.

[13]Ibid., p. 110.

CHAPTER IV

FINDINGS OF THE STUDY

Introduction

When completed opinionnaires had been received from ninety-eight respondents, as reported in Chapter III, the returns were tabulated. There were some statements not marked by the respondents; only the items which were checked contained information for use in the study. Following the tabulation, the Chi-square tests and the Fisher Exact Probability Tests were made. The tabulating and statistical calculations were done by hand. The percentage was figured for each response. The treated data and interpretations are presented in Chapter IV. Each table is given the exact title as the question which was presented to the respondents.

Study Findings

The data in Table II indicate the three groups' opinions are in agreement that a state should have a master plan for education. This plan encompasses all of the public educational institutions offering vocational or technical courses.

All of the leaders' opinions are in favor of an inclusive master plan. Since no leader is against a master plan,

there is a zero in one cell of the table. The Chi-square test could not be applied with a zero, so the data are broken down into 2 x 2 tables and the Fisher Exact Probability Test is applied. The calculated probability resulted in the null hypothesis being retained. There is no significant difference of opinions between the groups with respect to a master plan for vocational and technical education within a state. The degree in which each group agrees is significant. The leaders are united on the issue.

TABLE II

SHOULD EACH STATE HAVE A "MASTER PLAN" FOR VOCATIONAL AND TECHNICAL EDUCATION ENCOMPASSING ALL PUBLIC EDUCATIONAL INSTITUTIONS?

	Yes	Per Cent	No	Per Cent
Junior College Presidents	33	97.1	1	2.9
School Superintendents	40	95.2	2	4.8
Leaders in Vocational and Technical Education	11	100.	0	0
Fisher Exact Probability:	Retain H_0		N = 87	
Jr. Col. Pres. - Lead.	P = .756		Retain H_1	
Jr. Col. Pres. - Supts.	P = .417		Retain H_2	
Supts. - Leaders	P = .625		Retain H_3	

The opinions of the groups in regard to whom should draw up the master plan are given in Table III. There are significant differences of opinions as to which body is the better for developing a plan. The null hypothesis is rejected at the .01 level of significance. This indicates the

groups are from different populations and the differences of opinions could have occurred by chance in this manner only once in one hundred times.

TABLE III

IF YOU ANSWERED YES TO THE ABOVE QUESTION, SHOULD THIS BE A LEGISLATIVE PLAN OR AN AGREEMENT BY OFFICIAL REPRESENTATIVES OF STATE AGENCIES AND INSTITUTIONS?

	Legis-lative	Per Cent	Agree. of Officials	Per Cent
Junior College Presidents	7	22.6	24	77.4
School Superintendents	18	48.7	19	51.3
Leaders in Vocational and Technical Education	6	66.7	3	33.3
$\chi^2 = 8.52$	Reject H_0 at .01		N = 77	
Jr. Col. Pres. - Supts.	$\chi^2 = 4.25$		Retain H_1	
Jr. Col. Pres. - Lead.	P = .035		Retain H_2	
Supts. - Leaders	$\chi^2 = .358$		Retain H_3	

The further analyses indicate there are no significant differences of opinions between any of the groups in a two-group test. The alternate null hypotheses are retained. The Chi-square test of H_1 is 4.25 with one degree of freedom, and would need to be at least 5.02 to reject H_1 at the .025 level of significance.

While the opinions of the junior college presidents and leaders in vocational and technical education differ as to whether the legislature or representatives of state agencies should draw up the master plan, the difference is not

significant. The Fisher Exact Probability is .035, larger than .025, thus the alternate null hypothesis (H_2) is retained.

The data in Table III indicate that the leaders' opinions support a legislative developed master plan for vocational and technical education. A majority of the junior college presidents are of the opinion the representatives of state agencies and institutions should cooperatively develop a state master plan for vocational and technical education. The school superintendents are about evenly divided on this question.

The groups' opinions do not agree as to whether the legislature or the representatives of state agencies would be the better body to develop a state master plan for vocational and technical education.

TABLE IV

DO THE REPRESENTATIVES OF INDUSTRY, LABOR, AND THE COMMUNITY HAVE ENOUGH VOICE IN POLICY MAKING WHEN SERVING IN AN ADVISORY CAPACITY TO THE STATE BOARD FOR VOCATIONAL EDUCATION?

	Yes	Per Cent	No	Per Cent
Junior College Presidents	18	64.3	10	35.7
School Superintendents	22	57.9	16	42.1
Leaders in Vocational and Technical Education	10	90.1	1	9.9
$\chi^2 = 4.02$	Retain H_0		N = 77	

Table IV contains the data regarding the groups' opinions on three representatives having enough affect on the state's vocational policy making while serving as members of the state advisory council. There are several other members of the state advisory council, but the opinions here concern only three of the representatives--industry, labor, and community.

There are no significant differences of opinions. The leaders strongly agree these representatives have sufficient influence in policy making for vocational and technical education when serving on the advisory council. The junior college presidents and school superintendents are not in as strong accord of opinions, but they do agree the three named groups have sufficient voice in state level vocational and technical education policy making when serving in an advisory capacity. The null hypothesis is retained, the differences of opinions are not significant.

Table V gives the groups' opinions in reference to the inflexibility of programs in area schools, which are provided for by the state constitution. The null hypothesis is rejected at the .001 level of significance. For the three groups, the differences of opinions regarding this question could have occurred by chance only once in one thousand times.

Provisions for the establishment of area vocational-technical schools are constitutional in some states. In other states, the authority for education is given to the

legislature. In these states, either general or specific statutes provide for the area schools.

TABLE V

IS THERE A DANGER OF INFLEXIBILITY IN AREA VOCATIONAL AND TECHNICAL SCHOOLS WHEN PROVISIONS FOR SUCH SCHOOLS ARE CONSTITUTIONAL?

	Yes	Per Cent	No	Per Cent
Junior College Presidents	27	81.1	4	18.9
School Superintendents	30	69.8	13	30.2
Leaders in Vocational and Technical Education	1	10.	9	90.
$x^2 = 14.83$	Reject H_0 at .001		N = 84	
Jr. Col. Pres. - Supts.	$x^2 = 1.45$	Retain H_1		
Jr. Col. Pres. - Lead.	P = .0003	Reject H_2 at .001		
Supts. - Leaders	P = .0009	Reject H_3 at .001		

Do the constitutional provisions provide restrictions and a lack of flexibility for area vocational-technical schools?

In the two-group analysis, the opinions of the junior college presidents and school superintendents are not significantly different. These two groups are of the opinion there is a danger of programs being rigid and inflexible when the area schools are provided for by specific statements in a state constitution.

There is a very significant difference of opinions between the leaders and each of the other two groups. The Fisher Exact Probability Test determined the significance

level to be beyond .001. The alternate null hypotheses (H_2 and H_3) are rejected.

As a group, the leaders' opinions are very much in favor of the area schools being provided for by a constitutional provision. The opinions of each group are strongly in agreement, there is little division within the group. According to the differences noted in this data, there must be important factors supporting the area schools being developed from constitutional provisions as well as from general statute authority.

TABLE VI

ARE THE OBJECTIVES OF THE AREA VOCATIONAL-TECHNICAL SCHOOL DISTINGUISHABLY DIFFERENT FOR THE SECONDARY STUDENT AND FOR THE POST-SECONDARY SCHOOL STUDENT?

	Yes	Per Cent	No	Per Cent
Junior College Presidents	19	63.3	11	36.7
School Superintendents	20	47.6	22	52.4
Leaders in Vocational and Technical Education	7	70.	3	30.
$x^2 = 2.71$	Retain H_0		N = 82	

The philosophy and objectives of every school program are important. They are the framework for decisions regarding the curricula for the students. The philosophy of the school determines the direction a school program may take. Most area vocational-technical schools offer curricula for both the secondary and post-secondary students. A question

arises as to whether the different levels of programs are distinguishable.

The data in Table VI indicate the opinions of the groups support the idea that the objectives of the area school are distinguishably different for the secondary and post-secondary students. The null hypothesis is retained. There are no significant differences in the opinions of the groups regarding objectives for the different area school students.

The area vocational-technical school's programs have different objectives to serve various needs of students. Students at the high school level have needs which are distinguishable from those of the post-high school level students. In these groups' opinions, the objectives of the area school, in a distinguishable manner, meet these needs.

Table VII presents the data of the study groups' opinions regarding a change in the philosophy of schools. This occurs when the area vocational-technical schools change to community colleges. The specific question asks the groups if this type of change will become commonplace.

There are significant differences of opinions resulting in the null hypothesis being rejected at the .05 level of significance. In the analyses of two groups' opinions, the Chi-square test indicates no significant difference between the junior college presidents' and school superintendents' opinions. There is a significant difference of opinions between the junior college presidents and leaders. The

alternate null hypothesis (H_2) is rejected at the .02 level. The Fisher Exact Probability Test indicates the opinions of the school superintendents and leaders are significantly different, beyond the .02 level, and the alternate null hypothesis (H_3) is rejected.

TABLE VII

SOME STATES HAVE EXPERIENCED A CHANGE IN THE PHILOSOPHY OF INSTITUTIONS, GOING FROM STRICTLY AREA VOCATIONAL-TECHNICAL TYPE SCHOOLS TO COMMUNITY COLLEGES. IS THIS TYPE OF CHANGE TO BE A COMMON PATTERN OF DEVELOPMENT IN OTHER STATES?

	Yes	Per Cent	No	Per Cent
Junior College Presidents	28	87.5	4	12.5
School Superintendents	21	67.7	10	32.3
Leaders in Vocational and Technical Education	3	37.5	5	62.5
$\chi^2 = 7.60$	Reject H_0 at .05		N = 71	
Jr. Col. Pres. - Supts.	$\chi^2 = 2.51$		Retain H_1	
Jr. Col. Pres. - Lead.	$\chi^2 = 6.53$		Reject H_2 at .02	
Supts. - Leaders	P = .0129		Reject H_3 at .02	

The junior college presidents and school superintendents agree the change of philosophy of institutions, area schools to community colleges, will be a common development in other states in the future. The leaders' opinions do not agree this philosophical change in institutions will be common in many states. While changes in institutions are occurring, the opinions, noted in Table VII, are not in agreement as to the trends institutional philosophy will take.

Table VIII presents the data of the groups' opinions regarding certain problems of the student attending both a home high school and an area school on a split schedule. The question of whether conflicting philosophies and objectives are noted when attending the two schools is raised.

TABLE VIII

WHEN AN AREA VOCATIONAL-TECHNICAL SCHOOL IS OPERATED ON A SHARED-TIME BASIS (½ DAY, ALTERNATE WEEKS, ETC.) FOR SECONDARY SCHOOL STUDENTS, IS THERE A PROBLEM OF CONFLICTING PHILOSOPHIES AND OBJECTIVES WITHIN THE TWO SCHOOLS RESULTING IN CONFUSION TO THE STUDENTS?

	Yes	Per Cent	No	Per Cent
Junior College Presidents	26	78.8	7	21.2
School Superintendents	15	39.5	23	60.5
Leaders in Vocational and Technical Education	3	30.	7	70.
$\chi^2 = 13.66$	Reject H_0 at .001		N = 81	
Jr. Col. Pres. - Supts.	$\chi^2 = 9.83$		Reject H_1 at .01	
Jr. Col. Pres. - Lead.	$\chi^2 = 6.24$		Reject H_2 at .025	
Supts. - Leaders	$\chi^2 = .033$		Retain H_3	

The groups' opinions are significantly different, at the .001 level. The null hypothesis is rejected. The two-group analyses of opinions, using the Chi-square technique, indicate a significant difference of opinions between the junior college presidents and school superintendents as well as between the junior college presidents and leaders. The alternate null hypotheses (H_1 and H_2) are rejected. The

opinions of the school superintendents and leaders are not significantly different. The alternate null hypothesis (H_3) is not rejected.

The junior college presidents are agreed in their opinions that students attending the area school and home high school do have problems. These problems are a result of conflicting philosophies and objectives of the two schools. The student, in their opinions, becomes confused due to the conflicts of these schools.

The school superintendents and leaders in vocational and technical education have a different opinion. Their opinions are that no confusion exists for the student. They are almost as strong in their opinions of no conflicting philosophies or objectives between the area school and the home high school as the junior college presidents' opinions are of conflicting philosophies and objectives.

TABLE IX

WHEN VOCATIONAL AND TECHNICAL COURSES ARE OFFERED FOR THE HIGH SCHOOL STUDENT AT THE PRE-EMPLOYMENT LEVEL, AND A FOLLOW-UP STUDY OF THE GRADUATES INDICATES THE MAJORITY ARE PURSUING PROFESSIONAL COLLEGE COURSES RATHER THAN IMMEDIATE EMPLOYMENT, DOES THIS IMPLY A FAILURE TO REACH THE OBJECTIVE OF VOCATIONAL AND/OR TECHNICAL COURSES?

	Yes	Per Cent	No	Per Cent
Junior College Presidents	8	24.2	25	75.8
School Superintendents	7	16.7	35	83.3
Leaders in Vocational and Technical Education	3	30.	7	70.
$x^2 = 1.19$	Retain H_0		N = 85	

The data in Table IX are the opinions of the groups regarding a follow-up of former high school vocational and technical students. In the follow-up study, many of these students are pursuing professional college courses. Is this an indication the high school vocational and technical courses are failures? The groups' opinions are significantly in agreement, and each group supported the "No" response. Because the student changes to a professional college course does not imply, in the groups' opinions, the failure of vocational or technical courses.

The null hypothesis is retained, there are not significant differences of opinions of the groups regarding the question presented in Table IX.

TABLE X

IS THERE A DEFINITE PROBABILITY THE COMMUNITY COLLEGE, BY OFFERING OCCUPATIONAL PROGRAMS, WILL GRADUALLY CHANGE THE PRESENT OBJECTIVES OF VOCATIONAL AND TECHNICAL PROGRAMS? (SIMILAR TO THE CHANGE IN THE OBJECTIVES OF THE LAND GRANT COLLEGES.)

	Yes	Per Cent	No	Per Cent
Junior College Presidents	26	78.8	7	21.2
School Superintendents	25	62.5	15	37.5
Leaders in Vocational and Technical Education	6	54.5	5	45.5
$x^2 = 3.20$	Retain H_0		N = 84	

When new educational institutions, such as the community college, enter the vocational and technical education fields,

will the objectives of these programs change? The data, presented in Table X of the three groups' opinions, indicate there will be a change in vocational and technical education objectives when offered by a community college. Each group's opinions indicates there will be a change. While the opinions agree there will be an altering of the present objectives, it is not indicated which way they will be altered or to what extent.

The null hypothesis is retained, there are no significant differences in the opinions of the groups. The three groups are of similar opinions, as the community college offers vocational and technical programs, the objectives of the programs will not remain the same.

TABLE XI

WITH THE PRESENT EMPAHSIS ON HIGH LEVEL TECHNICAL PROGRAMS, SHOULD HIGHER EDUCATION HAVE A ROLE IN THE ADMINISTRATION AND SUPERVISION OF VOCATIONAL AND/OR TECHNICAL PROGRAMS AT THE POST-SECONDARY LEVEL?

	Yes	Per Cent	No	Per Cent
Junior College Presidents	28	82.4	6	17.6
School Superintendents	23	57.5	17	42.5
Leaders in Vocational and Technical Education	5	50.	5	50.
$\chi^2 = 6.58$	Reject H_0 at .05		N = 84	
Jr. Col. Pres. - Supts.	$\chi^2 = 4.2$		Retain H_1	
Jr. Col. Pres. - Lead.	$\chi^2 = 2.76$		Retain H_2	
Supts. - Leaders	$\chi^2 = .0051$		Retain H_3	

As technical education programs become more sophisticated, so also does the level of difficulty of course materials. The increased difficulty of technical courses requires a better prepared student. This generally indicates the student is a high school graduate, or equivalent. As the high level technical programs move to the post-secondary level, should higher education have a role in their administration, organization, and supervision?

There are significant differences of opinions among the groups regarding higher education's role in the administration and supervision of vocational and technical programs at the post-secondary level. In rejecting the null hypothesis, the data, as recorded in Table XI, indicate the groups' opinions are for higher education having a role in the administration and supervision of post-secondary vocational and technical programs.

There is no significant difference of opinions between two groups at the .025 level. The junior college presidents, as a group, are definite in their opinions that higher education should have a role in the administration and supervision of the post-secondary vocational and technical programs. The school superintendents' opinions are slightly in support of higher education having some responsibility for the training programs of a vocational and technical nature at the post-high school level. The leaders, being evenly divided, do not express a trend of opinions either way.

The majority of the total respondents' opinions supported higher education's administration and supervision of

vocational and technical programs offered beyond the high school. Some agency, normally thought of as a higher education agency, has a responsibility for the advanced educational programs. The opinions, recorded in Table XI, indicate this responsibility includes vocational and technical programs at the post-secondary level.

TABLE XII

WHAT DO YOU CONSIDER THE THREE COMMON OBJECTIVES OF THE AREA VOCATIONAL-TECHNICAL SCHOOLS OR AREA PROGRAMS?

Weighted Values	Objectives
93 A.	To supply skilled workers to local and state employers.
61 B.	To supply technicians to local and state employers.
63 C.	To attract post-secondary students not interested in a baccalaureate degree program.
52 D.	To upgrade technicians and skilled workers.
16 E.	To serve drop-outs from high school and college.
10 F.	To increase the holding power of the schools and colleges.
183 G.	To give opportunity for the student's maximum development of aptitudes.

The opinions of the groups regarding the objectives of the area vocational school are not statistically treated. They are put together for group consensus to determine the three common objectives of the area school. The data in Table XII are weighted values of the respondents' opinions.

A first choice objective is three points, a second choice is two points, and a third choice is one point.

By observation, it is apparent the respondents' opinions are that the most important objective of the area school is G, to give an opportunity for the student to develop his aptitudes to the maximum. This objective received almost twice the support of the second selected objective.

The objective receiving the second greatest number of points, as indicated by the respondents' opinions, is A, to supply skilled workers for local and state employers.

The third selected objective is only two points from the fourth selected one. This does not indicate conclusive opinions from the respondents. Objectives B and C, therefore, are ranked as equals for the third selection, according to the opinions of the study participants.

The objectives receiving the lowest number of selections are E and F. It is noteworthy the respondents' opinions are that one of the three more common objectives of the area school does not include serving drop-outs.

One of the stipulated objectives of the 1963 Vocational Education Act is to serve drop-outs. Another objective, F, to increase the holding power of the schools, is the lowest rated item. Another of the points in support of the area schools is for the student that starts to college and is not completely suited for the four-year college, then drops out. This student may, along with others not presently attending school, find a program suitable for him and in which he will

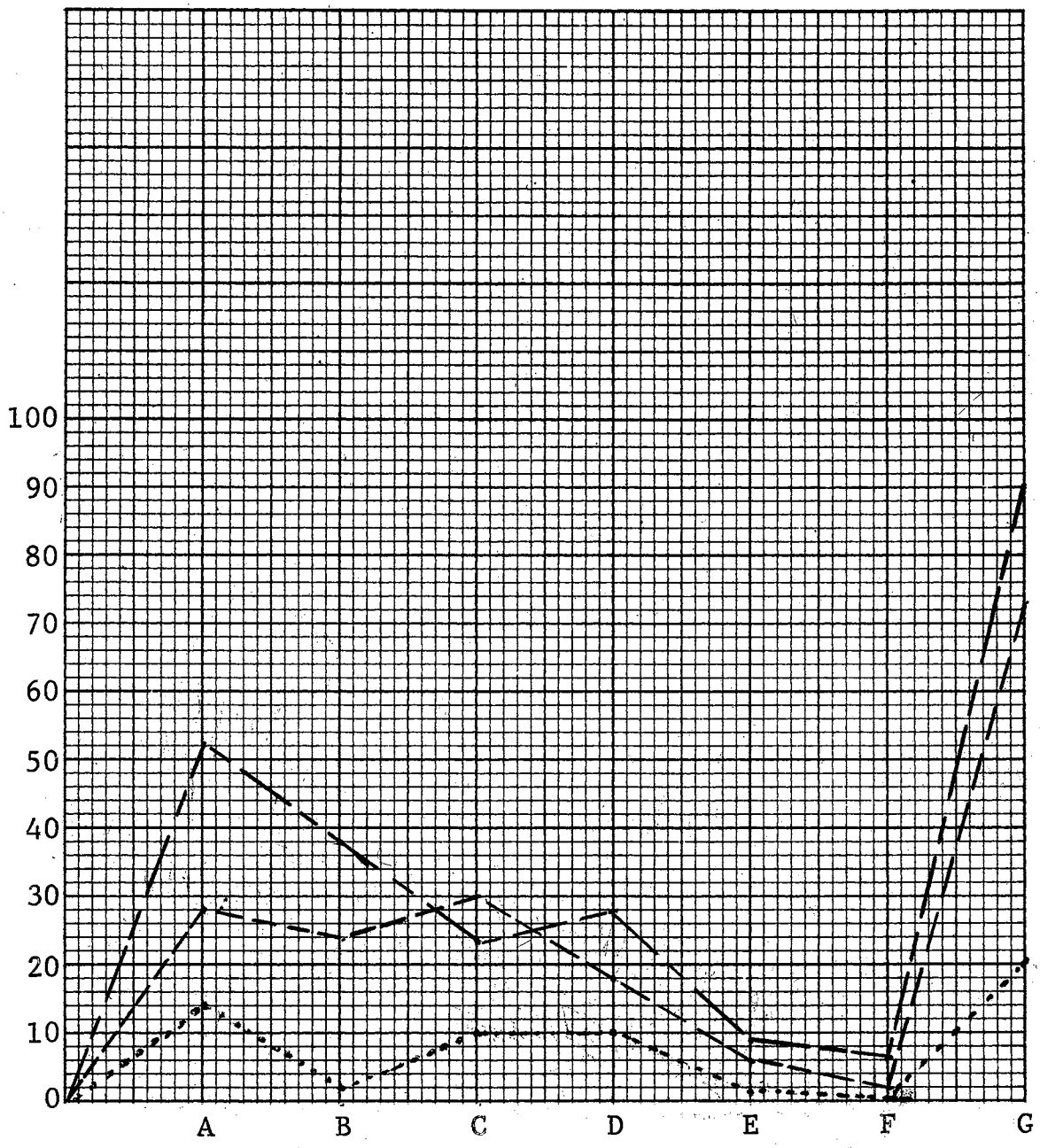

Figure 1. Rank of Objectives of the Area Vocational-Technical Schools by Groups

———Junior College Presidents
— — -School Superintendents
·····Leaders in Vocational and Technical Education

be successful at the area school. This would, in effect, be increasing the holding power of the school.

Each of the groups' opinions on a single objective is plotted on a graph, as indicated in Figure 1. The weighted points are also used in the graph. By observation, the groups' opinions are agreed objective G is their first choice and objective A is their second choice. Objective B takes a drop from objective A and tied with C for third place. There are differences of opinions regarding objectives C and D, but the groups again agree on E and F. Figure 1 indicates the groups' opinions are not importantly different, using weighted measures, regarding the first and second choice objectives of the area vocational-technical schools.

The standards, by which a vocational or technical curriculum is measured to give credit for a course at a certain level, must be set by some recognized agency. If the area vocational-technical schools are organized and supervised by the state board of education, should they be the sole agency to set standards for secondary and post-secondary vocational and technical programs? The data in Table XIII indicate the groups' opinions are that the state board of education should not be the sole agency to set standards and make recommendations for the accreditation of post-secondary vocational and technical programs.

The respondents in each group are of the opinion that another agency should assist the state board of education in determining standards for accreditation of the area school's

TABLE XIII

SHOULD THE STANDARDS AND RECOMMENDATIONS TO ACCREDIT AREA VOCATIONAL AND TECHNICAL SCHOOL PROGRAMS AT THE SECONDARY AND POST-SECONDARY LEVELS BE SET SOLELY BY THE STATE BOARD OF EDUCATION?

	Yes	Per Cent	No	Per Cent
Junior College Presidents	7	23.3	23	76.7
School Superintendents	17	43.6	22	56.4
Leaders in Vocational and Technical Education	4	40.	6	60.
$x^2 = 4.03$	Retain H_0		N = 79	

post-secondary programs. The junior college presidents show more of a trend in their opinions. They indicate the state board of education should not be the single agency to set standards for post-secondary vocational and technical programs.

Since there are no significant differences of opinions, the null hypothesis is retained.

If the state board of education, in the groups' opinions, should work with another agency to set standards for post-secondary area school programs, what group should it be?

The data, regarding the groups' opinions on an agency of higher education having some responsibility for the accreditation of post-secondary programs in the area schools, are presented in Table XIV. There are significant differences of opinions among the groups on this issue. The level of rejection is at the .01 level indicating the responses

will by chance fall into such a rejection pattern only once in one hundred times. The null hypothesis is rejected.

TABLE XIV

IN AN AREA VOCATIONAL-TECHNICAL SCHOOL FUNCTIONING AT THE POST-SECONDARY LEVEL, SHOULD AN AGENCY OF HIGHER EDUCATION HAVE SOME RESPONSIBILITY FOR ACCREDITING?

	Yes	Per Cent	No	Per Cent
Junior College Presidents	27	84.4	5	15.6
School Superintendents	28	73.7	10	26.3
Leaders in Vocational and Technical Education	3	33.3	6	66.7
$\chi^2 = 9.52$	Reject H_0 at .01		N = 79	
Jr. Col. Pres. - Supts.	$\chi^2 = .251$	Retain H_1		
Jr. Col. Pres. - Lead.	$\chi^2 = 6.90$	Reject H_2 at .025		
Supts. - Leaders	$\chi^2 = 3.63$	Retain H_3		

In the two-group analyses, the junior college presidents' and school superintendents' opinions are not significantly different. The school superintendents' and leaders' opinions are different, but not significantly so at the .025 level. The junior college presidents and leaders are significantly different in their opinions beyond the .025 level.

The junior college presidents, as a group, registered opinions convincingly in agreement that an agency for higher education has a responsibility for accrediting post-secondary area school programs. The school superintendents are not united in their opinions, but they do agree that higher

education agencies have a responsibility in this situation. A majority of the leaders' opinions indicate higher education agencies should not have a responsibility in the accreditation of post-secondary programs in the area vocational-technical schools.

The opinions indicate not all of the groups are in favor of an agency of higher education having some responsibility for accrediting vocational and technical programs at the post-secondary level in the area school. There is no mention of the associate degree being awarded or of college transfer credit being allowed.

TABLE XV

WHEN A TECHNICAL INSTITUTE IS DESIGNATED AS AN AREA TECHNICAL SCHOOL, SHOULD ACCREDITATION BE BY A STATE AGENCY FOR HIGHER EDUCATION?

	Yes	Per Cent	No	Per Cent
Junior College Presidents	22	75.9	7	24.1
School Superintendents	20	52.6	18	47.4
Leaders in Vocational and Technical Education	5	62.5	3	37.5
$x^2 = 3.76$	Retain H_0		N = 75	

The groups' opinions regarding a state agency of higher education accrediting a technical institute designated as an area school are recorded in Table XV. The data indicate there are no significant differences of opinions among the groups. Each group has a majority of opinions that an agency

of higher education should accredit the technical institute program. These groups would commonly place the level of challenge, the maturity of the students, and the type of instruction of the technical institute as similar to that of a university type course.

The students in a technical institute must have a high school diploma, or equivalent, before being admitted to the program. While most technical institute programs have as an objective pre-employment training, their programs may be accredited for the associate degree.

The data in Table XV confirm the null hypothesis regarding the three groups' opinions that higher education should accredit a technical institute program.

Since the passage of the 1963 Vocational Education Act by Congress, there have been changes in school programs. Many of these changes have been due to the expanding scope of vocational and technical training programs. With all of the changes in the last three years, is supervision and administration of vocational and technical programs by an agency of higher education detrimental to these particular programs' objectives?

The data in Table XVI indicate the groups' opinions on the above question. There are differences of opinions which are significant at the .05 level. The null hypothesis is rejected.

In the two-group analyses, the two groups which differ in their opinions at the .025 level of significance are the

TABLE XVI

CONSIDERING THE CHANGES OF THE LAST THREE YEARS, IS ADMINISTRATION AND SUPERVISION BY AN AGENCY OF HIGHER EDUCATION DETRIMENTAL TO THE OBJECTIVES OF VOCATIONAL AND TECHNICAL EDUCATION?

	Yes	Per Cent	No	Per Cent
Junior College Presidents	7	24.1	22	75.9
School Superintendents	14	40.	21	60.
Leaders in Vocational and Technical Education	6	75.	2	25.
$x^2 = 7.14$	Reject H_0 at .05		N = 72	
Jr. Col. Pres. - Supts.	$x^2 = 1.16$		Retain H_1	
Jr. Col. Pres. - Lead.	P = .022		Reject H_2 at .022	
Supts. - Leaders	$x^2 = 1.95$		Retain H_3	

junior college presidents and the leaders in vocational and technical education. The analyses indicate the junior college presidents' and school superintendents', as well as the school superintendents' and leaders' opinions are not significantly different at the .025 level.

The majority of the leaders' opinions are that higher education agencies will not serve the objectives of vocational and technical education advantageously. The Fisher Exact Probability Test is applied to the junior college presidents' and leaders' groups rather than the Chi-square test due to a small N. The exact probability is .022, less than the .025 level. The alternate null hypothesis (H_2) is rejected.

Opinions, which are directly opposite to the leaders by the same ratio of majority, are indicated by the junior college presidents. They, as a group, are of the opinion that an agency of higher education will not be detrimental to the objectives of vocational and technical education in administrative and supervisory capacities. The opinions of school superintendents are similar, but there is less accord as a group.

TABLE XVII

SINCE VOCATIONAL AND TECHNICAL EDUCATION ARE BROADENING THEIR MASS APPEAL, BOTH VERTICALLY AND HORIZONTALLY, SHOULD THE PRACTICE OF THE MAJORITY OF THE STATES HAVING THE STATE BOARD OF EDUCATION ALSO SERVING AS THE STATE BOARD FOR VOCATIONAL EDUCATION BE RE-EVALUATED WITH A GOAL OF BROADENING THE MEMBERSHIP OF THIS POLICY MAKING BODY?

	Yes	Per Cent	No	Per Cent
Junior College Presidents	24	77.4	7	22.6
School Superintendents	30	85.7	5	14.3
Leaders in Vocational and Technical Education	4	44.4	5	55.6
$\chi^2 = 7.09$	Reject H_0 at .05		N = 75	
Jr. Col. Pres. - Supts.	$\chi^2 = .305$		Retain H_1	
Jr. Col. Pres. - Lead.	$\chi^2 = 2.21$		Retain H_2	
Supts. - Leaders	$\chi^2 = 4.79$		Retain H_3	

Data presented in Table XVII represent the opinions of the three study groups regarding a change in the state board for vocational education membership. This question is posed

with the assumption that vocational and technical education are broadening their appeal to the masses of society, both vertically and horizontally. As a result of this, should the practice of a majority of states which now have their state board of education also serve as the state board for vocational education be re-evaluated with a goal of broadening their membership?

The Chi-square result is 7.09 with two degrees of freedom. A Chi-square of 5.99 indicates a significant level of .05 and a Chi-square of 7.38 indicates a .025 level. The groups' opinions are significantly different at the .05 level. The null hypothesis is thus rejected.

In the two-group analyses, there are no significant differences of opinions. While there are differences, at the .025 level none are calculated to be importantly different. The Chi-square of the superintendents' and leaders' opinions is 4.79, but needs to be at least 5.02 to allow the alternate null hypothesis to be rejected.

The school superintendents displayed the most unity of opinion for broadening the membership of the state board for vocational education. A majority of the junior college presidents' opinions are for broadening the membership of this policy making body. There is a marked agreement between the junior college presidents' and school superintendents' opinions on broadening the membership of the state board of education.

The leaders' opinions are not in favor of changing the membership of the state board. By observation, there is only one leader's opinion difference on this issue.

While there are differences of opinions among the three groups, it is more of degree than of direction. One person's opinion could have changed, with the result being each group would favor a broadening of the membership of the state board for vocational education. The opinions, shown in Table XVII, indicate the groups are in favor of broadening the membership of the state board for vocational education.

TABLE XVIII

SHOULD AN AREA VOCATIONAL-TECHNICAL SCHOOL UNDER THE SUPERVISION OF THE STATE BOARD OF EDUCATION BE PERMITTED TO AWARD THE ASSOCIATE DEGREE ON COMPLETION OF THE TWO-YEAR POST-SECONDARY PROGRAM REQUIREMENTS?

	Yes	Per Cent	No	Per Cent
Junior College Presidents	14	45.2	17	54.8
School Superintendents	28	77.8	8	22.2
Leaders in Vocational and Technical Education	9	90.	1	10.
$\chi^2 = 10.77$	Reject H_0 at .01		N = 77	
Jr. Col. Pres. - Supts.	$\chi^2 = 6.25$		Reject H_1 at .025	
Jr. Col. Pres. - Lead.	$\chi^2 = 4.49$		Retain H_2	
Supts. - Leaders	$\chi^2 = 1.69$		Retain H_3	

The student completing the two-year post-secondary course requirements of an area vocational-technical school

expects to receive a certificate or diploma. Should the state board of education be permitted to grant the associate of arts or associate of science degree to this student?

The data in Table XVIII indicate there are significant differences of opinions among the groups on this matter. The null hypothesis is rejected at the .01 level of significance.

The two-group analyses indicate there is a difference of opinions beyond the .025 level of significance between the junior college presidents and superintendents. The alternate null hypothesis (H_1) is rejected. There is not a significant difference of opinions between the other two groups.

The leaders are almost unanimous in their opinions that the state board of education should be permitted to award the associate degree for the successful completion of programs in an area vocational-technical school. The majority of school superintendents' opinions agree with the leaders. The junior college presidents are rather evenly divided, but their opinions are not in favor of the state board of education awarding the associate degree. The simple "Yes" or "No" answer does not take into consideration, as common factors, differences in scope and challenge of programs nor the level of instruction necessary for an associate degree.

Table XIX reveals the groups' opinions regarding the quality of area school programs when both secondary and post-secondary level courses are offered in the same area school, in contrast to a single level program being offered. There was a third choice answer on this question, "No

Significant Difference". The Chi-square analysis is on a 3 x 3 table with four degrees of freedom. The Chi-square test revealed no significant differences in the groups' opinions. The null hypothesis is retained.

TABLE XIX

IS THE QUALITY OF THE AREA SCHOOL PROGRAM BETTER WHEN OFFERED EITHER AT THE SECONDARY OR POST-SECONDARY LEVEL THAN WHEN THE AREA VOCATIONAL-TECHNICAL SCHOOL OFFERS BOTH LEVELS OF PROGRAMS?

	Yes	Per Cent	No	Per Cent	No Sig. Differ.	Per Cent
Jr. Col. Presidents	13	41.9	10	32.2	8	25.8
Superintendents	4	11.8	13	38.2	17	50.
Leaders	2	20.	3	30.	5	50.
$x^2 = 8.64$		Retain H_0			N = 75	

While the opinions are different the null hypothesis is retained, indicating the differences occurred by chance. There is no consensus of the groups' opinions. Exactly one-half of the leaders and superintendents agreed in their opinions that two levels of programs in an area school do not lower the quality of the programs. More junior college presidents are of the opinion a single level program is better than a program at both the secondary and post-secondary levels.

No direction of opinions is determined by the data in Table XIX.

TABLE XX

IF AN AREA VOCATIONAL-TECHNICAL SCHOOL OFFERS A SINGLE FIELD OF TRAINING, EITHER VOCATIONAL (SKILL TRADE) OR TECHNICAL, WILL THE AREA SCHOOL HAVE A BETTER AND MORE EFFECTIVE PROGRAM THAN IF IT WERE OFFERING BOTH FIELDS?

	Yes	Per Cent	No	Per Cent	No Sig. Differ.	Per Cent
Jr. Col. Presidents	5	16.7	17	56.7	8	26.7
Superintendents	4	11.7	18	52.9	12	35.4
Leaders	1	10.	8	80.	1	10.
$x^2 = 2.36$		Retain H_0			N = 74	

The data in Table XX indicate the groups are agreed in their opinions that a single type of program does not improve the effectiveness of the program in an area school over one offering two types of programs. The leaders are strongly agreed that both vocational programs and technical programs offered in an area school are better and more effective than if only one program is being offered.

The data, presented in Table XXI, support retaining the null hypothesis. There are differences of opinions. The results of the Chi-square test indicate the differences are not significant at the .05 level.

The groups' opinions, as a whole, are that community colleges do not misuse federal matching funds received for vocational or technical programs. A majority of the junior college presidents are of the opinion that colleges are using these federal funds correctly. The school

superintendents agree with them.

TABLE XXI

WHEN COMMUNITY COLLEGES ARE DESIGNATED AS AREA VOCATIONAL AND/OR TECHNICAL SCHOOLS, IS THERE A TENDENCY TO MISUSE FEDERAL MATCHING FUNDS BY CUTTING DOWN ON LOCAL EFFORT OR TRANSFERRING FUNDS WITHIN THE LOCAL BUDGET AND SUPPLANTING WITH FEDERAL MONEY?

	Yes	Per Cent	No	Per Cent
Junior College Presidents	7	23.3	23	76.7
School Superintendents	16	45.7	19	54.3
Leaders in Vocational and Technical Education	5	55.6	4	44.4
$x^2 = 4.85$	Retain H_0		N = 74	

The correct use of federal matching funds to supplement existing or new vocational and technical programs is essential. There is concern among some vocational people that the two-year college really uses federal funds to supplant their own funds, or, that the technical supporting courses are the same general education courses with new names.

A majority of the leaders' opinions indicate the community colleges are not using vocational and technical funds in a proper manner. The junior college group is the only one giving a significant direction of opinion.

The opinions are not distinctive, either "Yes" or "No", regarding the community college's use of vocational and technical matching funds.

It is necessary to study the responses given in Table XXII carefully. All of the groups' opinions are in favor of

designating a junior college, when it is properly located, as an area school. However, the null hypothesis is rejected, there are significant differences in the groups' opinions at the .01 level. In the two-group analyses, there is a significant difference of opinions at the .025 level between the junior college presidents and leaders. The alternate null hypothesis (H_2) is rejected. There are no significant differences of opinions between the other groups.

TABLE XXII

CAN DEPARTMENTS OF JUNIOR COLLEGES, GEOGRAPHICALLY LOCATED TO CONVENIENTLY SERVE A POPULATION, BE SUCCESSFULLY DESIGNATED AS AREA VOCATIONAL-TECHNICAL CENTERS?

	Yes	Per Cent	No	Per Cent
Junior College Presidents	32	97.	1	3.
School Superintendents	27	67.5	13	32.5
Leaders in Vocational and Technical Education	4	57.1	3	42.9
$\chi^2 = 11.45$	Reject H_0 at .01		N = 80	
Jr. Col. Pres. - Supts.	$\chi^2 = 1.62$	Retain H_1		
Jr. Col. Pres. - Lead.	$\chi^2 = 6.23$	Reject H_2 at .025		
Supts. - Leaders	$\chi^2 = .001$	Retain H_3		

As the three groups agree in direction, the differences of opinions must be in the degree of majority of opinion. The junior college presidents are, by a ninety-seven per cent majority opinion, for junior colleges being designated as area schools. The school superintendents' majority opinion

is less, but it is still over two to one supporting certain junior colleges being designated as area schools. The leaders are more narrowly divided on the issue, giving a majority opinion of one.

The results indicate the groups' opinions definitely favor a junior college being designated as an area vocational-technical school. This is on the premise the junior college is so located, geographically, that people may be served conveniently.

TABLE XXIII

AFTER A COMMUNITY COLLEGE IS DESIGNATED AS AN AREA SCHOOL, HOW MANY VOCATIONAL AND/OR TECHNICAL PROGRAMS SHOULD BE A MINIMUM NUMBER TO BE OFFERED?

	5-10	Per Cent	11-20	Per Cent
Junior College Presidents	19	86.4	3	13.6
School Superintendents	25	80.7	6	19.3
Leaders in Vocational and Technical Education	6	75.	2	25.
$x^2 = .65$	Retain H_0		N = 61	

The minimum number of vocational and technical programs in a community college designated as an area school is, in the three groups' opinions, between five and ten. Each group indicates a strong majority opinion supporting this minimum. The junior college presidents are the most united group with the leaders being the least united on the issue.

Public Law 88-210 specifies an area school must offer five programs. The groups' opinions, according to the data

of Table XXIII, agree with the law. There are no significant differences of opinions among the groups. The null hypothesis is retained.

TABLE XXIV

DOES A TECHNICAL INSTITUTE THAT IS A PART OF A PUBLIC, GRADUATE DEGREE GRANTING COLLEGE OR UNIVERSITY OFFERING A HIGH LEVEL TECHNICAL PROGRAM HAVE MORE ATTRACTION TO STUDENTS CAPABLE OF BEING SUCCESSFUL IN SUCH A PROGRAM THAN DOES AN EQUAL PROGRAM AT A COMMUNITY COLLEGE?

	Yes	Per Cent	No	Per Cent
Junior College Presidents	11	35.5	20	64.5
School Superintendents	22	57.9	16	42.1
Leaders in Vocational and Technical Education	5	55.6	4	44.4
$\chi^2 = 4.32$	Retain H_0		N = 78	

Technical institutes operate in different forms of educational organizations. One form is a division or department of a community college. Is there a greater attraction to technical programs at the technical institute on the university campus than a technical program at a community college? The data in Table XXIV indicate there is a difference of opinions between the junior college presidents, as a group, and the other two groups regarding this. However, the difference is not significant at the .05 level.

The junior college presidents, by a two-to-one majority, are of the opinions that the technical institute on a

university campus does not have more attraction for students than a community college technical program.

The opinions of the superintendents and leaders support the technical programs which are a part of a college offering a graduate degree or a university as being more attractive to the students.

Due to a lack of support of the groups' opinions, another conclusion is reached. There is, in the three groups' opinions, no significant difference in the attraction of the student to technical programs in a graduate degree granting college or a university than to the technical programs in a community college.

TABLE XXV

IS A TECHNICAL INSTITUTE, IN TOTAL, A BETTER INSTITUTION FOR SPECIALIZED EDUCATION WHEN ASSOCIATED WITH A GRADUATE DEGREE GRANTING COLLEGE OR UNIVERSITY THAN AS AN INDEPENDENT INSTITUTE?

	Yes	Per Cent	No	Per Cent	No Sig. Differ.	Per Cent
Jr. Col. Presidents	8	25.	19	59.4	5	15.6
Superintendents	12	31.6	15	39.5	11	28.9
Leaders	1	9.1	7	63.6	3	27.3
$x^2 = 4.84$		Retain H_0			N = 81	

The quality of technical programs in the technical institute is important. The data presented in Table XXV are in regard to the groups' opinions on the quality of programs in two different types of technical institutes. The two

types of institutes, one in a university, and the other an independent institute, may have different quality programs.

There are two groups, the leaders and junior college presidents, whose majority opinions indicate the technical institute is of no better quality when a part of a university than an institute which is an independent educational unit. Data in Table XXV indicate the school superintendents' opinions are the strongest, as a group supporting this, but it is not a majority of the group. It may be concluded that the technical institute's program is not, in the groups' opinions, a better program as a department of the university than as an independent technical institute.

There are no significant differences in the groups' opinions, the null hypothesis is retained.

TABLE XXVI

DO POST-SECONDARY EDUCATIONAL INSTITUTIONS WITH AUTHORITY TO OFFER TRANSFER CREDIT HAVE MORE ATTRACTION FOR STUDENTS THAN THE POST-SECONDARY INSTITUTION NOT AUTHORIZED TO OFFER TRANSFER CREDIT?

	Yes	Per Cent	No	Per Cent
Junior College Presidents	27	90.	3	10.
School Superintendents	35	87.5	5	12.5
Leaders in Vocational and Technical Education	9	90.	1	10.
$x^2 = .51$	Retain H_0		N = 80	

The data contained in Table XXVI reveal the opinions of the groups in regard to the post-secondary students' interest

in transfer credit. All three groups are of the same opinions, to almost the same proportions. They strongly agree, nine to one, that a post-secondary educational institution which has the authority to offer transfer credit is more attractive for students than an equal institution which cannot offer transfer credit.

The post-secondary students are certainly aware of the transfer credit factor, according to these opinions, in deciding on an educational institution. There is little difference in the groups' opinions. The null hypothesis is retained.

TABLE XXVII

WHEN A COMMUNITY COLLEGE IS DESIGNATED AS AN AREA SCHOOL, SHOULD THE CLASSROOMS AND LABORATORIES BE INTEGRATED?

	Integrated	Per Cent	Separate	Per Cent
Junior College Presidents	24	80.	6	20.
School Superintendents	28	87.5	4	12.5
Leaders in Vocational and Technical Education	5	62.5	3	37.5
$\chi^2 = 2.64$	Retain H_0		N = 70	

There are two schools of thought on the location of vocational and technical classes--in a building by themselves or in a part of a building which also has some general education classrooms. The data in Table XXVII indicate the groups' opinions on one phase of this problem. This

question is in regard to a community college which has been designated as an area school.

Should the community college's classrooms and laboratories be integrated? The groups' opinions are favorable for integrated classrooms and laboratories. The school superintendents' majority is the most pronounced here, with the leaders being in the least agreement. The teaching of the academic courses and the vocational or technical courses in the same building is better on the community college campus, according to these opinions.

The null hypothesis is retained as there are no significant differences in the groups' opinions.

TABLE XXVIII

DO EMPLOYERS FIND GRADUATES OF SECONDARY SCHOOL VOCATIONAL PROGRAMS EMPLOYED IN THE SPECIFIC FIELD AS THEIR TRAINING MORE SUCCESSFUL THAN THE EMPLOYEES NOT HAVING HAD VOCATIONAL TRAINING?

	Yes	Per Cent	No	Per Cent
Junior College Presidents	22	91.7	2	8.3
School Superintendents	35	87.5	5	12.5
Leaders in Vocational and Technical Education	10	90.	1	10.
$x^2 = 4.87$	Retain H_0		N = 75	

Does high school vocational training really pay off? According to the data in Table XXVIII, it does. In the groups' opinions, employers using employees who have had previous vocational training in the field in which they are

working are more successful than employees not having had this training.

The test of a school program is the product. The test of a vocational program is the performance of its graduates. The study groups' opinions indicate high school vocational programs are successful.

There is very strong agreement among the groups, as well as within each individual group. There are no significant differences of opinions and the null hypothesis is retained.

TABLE XXIX

FOR THE SUCCESSFUL POST-SECONDARY TECHNICAL STUDENT, WHAT COURSES ARE THE MOST IMPORTANT AT THE SECONDARY LEVEL? TECHNICAL COURSES; ADVANCED COURSES IN MATHEMATICS, SCIENCE, AND COMMUNICATIONS.

	Technical Courses	Per Cent	Advanced Courses	Per Cent
Junior College Presidents	6	20.	24	80.
School Superintendents	18	51.4	17	48.6
Leaders in Vocational and Technical Education	2	30.6	5	71.4
$\chi^2 = 7.21$	Reject H_0 at .05		N = 72	
Jr. Col. Pres. - Supts.	$\chi^2 = 5.59$		Reject H_1 at .025	
Jr. Col. Pres. - Lead.	P = .138		Retain H_2	
Supts. - Leaders	P = .247		Retain H_3	

A student planning on going into a post-secondary technical program should have a good background preparation or foundation in high school. What are the best courses to

take in high school? Table XXIX contains the data on the three groups' opinions regarding this question.

The two choices listed are pre-technical courses or advanced courses in mathematics, science, and communications. There are significant differences in the groups' opinions at the .05 level. The null hypothesis is rejected.

In the two-group analyses, there is a difference of opinions between the junior college presidents and superintendents that is significant at the .025 level. The other groups have no significant differences of opinions, using the Fisher Exact Probability Test for analyses. The alternate null hypothesis (H_1) is rejected.

The junior college presidents and leaders are sure, in their opinions, that advanced courses in math, science, and communications at the high school level are the most important for the successful post-secondary technical student. The school superintendents are almost evenly divided in their opinions regarding the proper secondary preparation for post-secondary technical students.

Based on the support of two groups and the narrow division of the third, the three groups' opinions may be viewed as supporting certain courses in high school for the successful post-secondary technical student. These courses are advanced mathematics, science, and communications.

What courses in high school are the most important for the student who is successful in a post-secondary vocational program? The three groups' opinions differ regarding this,

but the differences are not significant. The null hypothesis is retained, as indicated by the data in Table XXX.

TABLE XXX

FOR THE SUCCESSFUL POST-SECONDARY VOCATIONAL STUDENT, WHAT COURSES ARE THE MOST IMPORTANT AT THE SECONDARY LEVEL? VOCATIONAL COURSES; OR A VARIETY OF EXPLORATORY COURSES?

	Vocational Courses	Per Cent	Exploratory Courses	Per Cent
Junior College Presidents	13	43.3	17	56.7
School Superintendents	22	59.5	15	40.5
Leaders in Vocational and Technical Education	6	60.	4	40.
$\chi^2 = 1.94$	Retain H_o		N = 77	

The two choices indicated are vocational courses or a variety of exploratory courses. The school superintendents' and leaders' opinions supported, by a small majority, the vocational courses being the most important at the secondary level. The junior college presidents' opinions supported the exploratory courses.

Based on the data of the groups' opinions noted in Table XXX, no conclusive choice is made. Two of the groups' opinions support a secondary student taking vocational courses being more important to his success in a post-secondary vocational course, and the third group is narrowly divided in choosing the exploratory course. The opinions here, generally, indicate secondary vocational courses are

more important for the successful post-secondary vocational student.

TABLE XXXI

SHOULD GENERAL EDUCATION, OTHER THAN REMEDIAL, BE OFFERED IN AN AREA VOCATIONAL-TECHNICAL SCHOOL?

	Yes	Per Cent	No	Per Cent
Junior College Presidents	27	81.8	6	18.2
School Superintendents	29	72.5	11	27.5
Leaders in Vocational and Technical Education	7	70.	3	30.
$\chi^2 = 1.06$	Retain H_0		N = 83	

The question of providing general education in an area vocational-technical school frequently arises. The groups' opinions regarding general education in the area school are noted in Table XXXI. Each group supported the proposition of offering general education courses in the area vocational-technical school. The junior college presidents' opinions are over four to one in favor of the area school having general education courses. The other two groups' opinions also support offering general education. There are no significant differences in the groups' opinions. The null hypothesis is retained.

Under the provisions of Public Law 88-210, the area school is to be used exclusively, or principally, for vocational education. The participants in the study indicate, by their opinions, that the area school should not be used

exclusively for vocational training. According to a majority of the groups' opinions, general education courses have a place in the area vocational-technical school.

TABLE XXXII

IS THE ROLE OF THE AREA VOCATIONAL-TECHNICAL SCHOOL IN ACTUAL OPERATION MORE FOR EXTENSION THAN FOR PRE-EMPLOYMENT TRAINING?

	Yes	Per Cent	No	Per Cent
Junior College Presidents	8	28.6	20	71.4
School Superintendents	8	19.5	33	80.5
Leaders in Vocational and Technical Education	1	10.	9	90.
$x^2 = 1.19$	Retain H_0		N = 79	

The data in Table XXXII present the groups' opinions regarding one role of the area school. Specifically, is the area school more for extension training or for pre-employment training? The groups' opinions support the area school's role being more for pre-employment training than for extension training. This indicates the area school's major function is to prepare students for job entry. The extension program, updating the skills and knowledges of those persons presently employed, is a minor role of the area school. There are no significant differences in the groups' opinions. The null hypothesis is retained.

The actual enrollments in the technical education programs do not agree with these opinions. Data in the

Technician Education Yearbook, 1965-66, presents information (Tables XXXIII, XXXIV, and XXXV) on the secondary, post-secondary, and extension students enrolled in pre-technical programs.[1]

TABLE XXXIII

ENROLLMENT IN PRE-EMPLOYMENT TECHNICAL PROGRAMS

	1960	1961	1962	1963	1964
Secondary	8,467	11,778	13,028	19,662	20,755
Post-Secondary	24,470	27,446	40,043	56,226	71,824
Total Pre-Employment	32,937	39,224	53,071	75,888	92,579
Extension	68,342	83,728	95,849	108,707	128,662

In comparing the secondary and post-secondary enrollments, the secondary students in a technical course number about one-third of the post-secondary students. From 1960 to 1964, each group increased almost three times.

TABLE XXXIV

EXTENSION ENROLLMENTS IN TECHNICAL PROGRAMS

	1960	1961	1962	1963	1964
Area School	4,471	9,404	12,172	21,681	20,902
Comprehensive Two-Year Colleges	19,914	28,844	37,356	42,030	49,606
Technical Institute	3,387	9,547	4,079	6,808	13,416

[1]Technician Education Yearbook, 1965-66, pp. 96-97.

Comparing the pre-employment enrollments with the extension enrollments, over the five-year period, indicates the extension enrollments are considerably larger. The pre-employment enrollments are growing faster than the extension program enrollments.

The extension enrollments in the three institutions, commonly designated as area schools or area school programs, are presented in Table XXXIV.

TABLE XXXV

PRE-EMPLOYMENT ENROLLMENT IN TECHNICAL PROGRAMS

	1960	1961	1962	1963	1964
Area School	837	4,467	7,832	14,147	12,229
Comprehensive Two-Year College	8,987	13,743	22,258	32,589	42,112
Technical Institute	2,193	1,828	5,892	6,943	7,698

These enrollments cover a five-year period. In 1960, the comprehensive two-year colleges' enrollments were twice that of either the area schools or the technical institutes. From 1960 to 1964, the enrollments in the area school technical programs increased about five times, the comprehensive two-year college increased two and one-half times, and the technical institute increased about four times. In 1964, the comprehensive two-year college enrolled a majority of the technical students, over twice as many as the area school, and almost four times as many technical students as the technical institutes enrolled.

Table XXXV contains the data on enrollments in pre-employment technical programs for five years, 1960 to 1964, in three schools. The comprehensive two-year colleges enrolled over eleven times the pre-employment technical students as the area schools enrolled in 1960, and four times the enrollment of the technical institutes.

From 1960 to 1964, the enrollments in pre-employment technical programs in the area schools increased about fifteen times, in the comprehensive two-year colleges about five times and in the technical institutes over three times. In 1964, the pre-employment enrollments in the technical programs in the comprehensive two-year college were over three times that of the area school and about six times that of the technical institute.

The data, presented in Tables XXXIII, XXXIV, and XXXV, do not corroborate the groups' opinions as presented in Table XXXII.

The technical courses at the post-secondary level require a well-prepared student with average or above average ability. The data in Table XXXVI note the groups' opinions on the area school attracting a quantity of students capable of succeeding in high level technical courses. There are very significant differences of opinions at the .001 level. The null hypothesis is rejected.

The two-group analysis indicates the junior college presidents and school superintendents do not have a significant difference of opinions. The Fisher Exact Probability

Test indicates a significant difference of opinions exists between the junior college presidents and leaders, as well as between the school superintendents and leaders. The alternate null hypotheses (H_2 and H_3) are rejected.

TABLE XXXVI

DO AREA VOCATIONAL-TECHNICAL SCHOOLS ATTRACT THE TYPE OF A STUDENT IN A QUANTITY NECESSARY FOR HIGH LEVEL PRE-EMPLOYMENT TECHNICAL COURSES?

	Yes	Per Cent	No	Per Cent
Junior College Presidents	6	20.7	23	79.3
School Superintendents	16	45.7	19	54.3
Leaders in Vocational and Technical Education	9	90.	1	10.
$x^2 = 15.0$	Reject H_0 at .001		H = 74	
Jr. Col. Pres. - Supts.	$x^2 = 3.36$	Retain H_1		
Jr. Col. Pres. - Lead.	P = .00013	Reject H_2 at .001		
Supts. - Leaders	P = .013	Reject H_3 at .013		

The leaders' opinions are very strong supporting the area school being able to attract many students capable of doing high level pre-employment technical work. The junior college presidents are almost as strong in their opinions that the area schools will not attract a quantity of students able to succeed in pre-employment technical courses.

The school superintendents are about equally divided in their opinions. Due to the differences indicated here, a definite conclusion is not reached.

TABLE XXXVII

IS THERE ANY PROBLEM IN PRESENT DAY SOCIETY OF THE LABEL "UNDEMOCRATIC" BEING APPLIED TO THE AREA VOCATIONAL-TECHNICAL SCHOOL SINCE IT DOES NOT TEACH THE LIBERAL ARTS?

	Yes	Per Cent	No	Per Cent
Junior College Presidents	2	7.4	25	92.6
School Superintendents	3	7.9	35	92.1
Leaders in Vocational and Technical Education	1	10.	9	90.
$\chi^2 = .246$	Retain H_0		N = 75	

The main function of the area school does not include teaching the liberal arts. The groups' opinions, as to whether this may cause the label of "undemocratic" to be applied to the area school, are indicated in Table XXXVII.

The groups are agreed in their opinions regarding the area school being democratic. They are all very strong in agreeing that, in their opinions, the label of "undemocratic" will not be applied to the area school because it does not teach the liberal arts. The null hypothesis is retained.

There are many factors involved which affect a student making a selection of a post-secondary vocational or technical school. Is prestige of the school or the school programs important in the student's selection? The groups' opinions regarding this are indicated in Table XXXVIII. There are no significant differences of opinions. The null hypothesis is retained.

TABLE XXXVIII

IS PRESTIGE A FACTOR IN DETERMINING THE INSTITUTION IN WHICH A STUDENT WILL TAKE POST-SECONDARY VOCATIONAL OR TECHNICAL TRAINING?

	Yes	Per Cent	No	Per Cent
Junior College Presidents	28	90.3	3	9.7
School Superintendents	30	75.	10	25.
Leaders in Vocational and Technical Education	5	62.5	3	37.5
$\chi^2 = 4.42$	Retain H_0		N = 79	

The groups' opinions agree that prestige is a factor in the student's selection of an institution in which he will take post-secondary vocational or technical courses. The junior college presidents have a strong majority of opinions supporting this view. The leaders are the least positive, in their opinions, supporting prestige as a factor in student selection of post-secondary schools or programs.

The groups' opinions indicate a prestige school or prestige programs influence students making a vocational-technical school or program choice.

Are there conflicts between the students of different programs, occupational and university parallel, when both are offered on the same campus, such as at the community college? The answers to this question are contained in Table XXXIX. The groups do not have significant differences of opinions regarding conflicts of students in occupational and university parallel programs.

TABLE XXXIX

WHEN UNIVERSITY PARALLEL AND OCCUPATIONAL PROGRAMS ARE OFFERED ON THE SAME COMMUNITY COLLEGE CAMPUS, ARE THERE CONFLICTS BETWEEN STUDENTS IN THE UNIVERSITY PARALLEL PROGRAMS AND THOSE IN THE OCCUPATIONAL PROGRAMS?

	Yes	Per Cent	No	Per Cent
Junior College Presidents	5	16.1	26	83.9
School Superintendents	8	23.5	26	76.5
Leaders in Vocational and Technical Education	1	12.5	7	87.5
$\chi^2 = .75$	Retain H_0		N = 73	

They are decidedly agreed that no conflicts occur between the students in university parallel courses and occupational courses on the same community college campus. In the comprehensive post-secondary educational institutions, where students in vocational programs, technical programs, and general education programs are intermingled for classes and social experiences, the groups' opinions are there will be no conflicts. The null hypothesis is retained.

The comprehensive post-secondary institution generally requires certain subjects of all graduates. The offering of core general education subjects is to increase the understandings and respect of one group for another and for the individuals and vocations they represent. Does the inclusion of the core subjects break down status symbols of certain programs? The data in Table XL indicate the groups' opinions are that core subjects for all students break down

the status of different programs. Too often vocational education is rated as a low-level program for the less capable students. Many students do not distinguish between a vocational course and a technical course. The students in the university parallel courses, through core classes, may develop a better understanding of the vocational education programs. Also, the vocational and technical students may gain an improved impression and rapport for the professional programs and the students in these programs.

TABLE XL

DOES THE INCLUSION OF A "CORE" OF LIBERAL ARTS COURSES FOR ALL STUDENTS--VOCATIONAL, TECHNICAL, AND COLLEGE PREPARATORY--TEND TO BREAK DOWN THE STATUS SYMBOL OF PARTICULAR PROGRAMS?

	Yes	Per Cent	No	Per Cent
Junior College Presidents	20	66.7	10	33.3
School Superintendents	23	60.5	15	39.5
Leaders in Vocational and Technical Education	4	50.	4	50.
$x^2 = .77$	Retain H_0		N = 76	

As a group, the junior college presidents gave the largest majority of opinions favoring core subjects while the leaders are evenly divided on the question. There are no significant differences of opinions among the three groups. The null hypothesis is retained.

Our society is impressed with ratings and rankings. Institutions and programs are selected by students and are

rated by students using some value judgment measure. Teachers also make program and student evaluations. Table XLI contains the groups' opinions on an evaluation by teachers in a comprehensive educational institution of a certificate program when compared to the associate degree program.

TABLE XLI

HOW DO TEACHERS IN A COMPREHENSIVE EDUCATIONAL INSTITUTION VALUE THE "CERTIFICATE OF PROFICIENCY" PROGRAM WHEN COMPARED TO AN "ASSOCIATE DEGREE" PROGRAM?

	Equal	Per Cent	Lower	Per Cent
Junior College Presidents	4	15.4	23	84.6
School Superintendents	7	22.6	24	77.4
Leaders in Vocational and Technical Education	3	33.3	6	66.7
$\chi^2 = 1.36$	Retain H_0		N = 67	

All three groups are of the opinions that teachers value the associate degree program much higher than a certificate program. The junior college presidents give the largest majority of opinions for the teachers ranking the degree program higher than the certificate program. The lowest majority of opinions is in the leaders' group, but it is a two-to-one opinion selection for the associate degree program.

There are no significant differences in the groups' opinions in Table XLI. The null hypothesis is retained. In the groups' opinions, teachers in a comprehensive school

value the associate degree program higher than a certificate of proficiency program.

TABLE XLII

HOW DO STUDENTS IN A COMPREHENSIVE EDUCATIONAL INSTITUTION VALUE THE "CERTIFICATE OF PROFICIENCY" PROGRAM WHEN COMPARED TO AN "ASSOCIATE DEGREE" PROGRAM?

	Equal	Per Cent	Lower	Per Cent
Junior College Presidents	3	11.1	24	88.9
School Superintendents	11	35.5	20	64.5
Leaders in Vocational and Technical Education	3	33.3	6	66.7
$\chi^2 = 4.83$	Retain H_0		N = 67	

Table XLII gives the data on the groups' opinions of how students in a comprehensive school value the certificate program when compared to an associate degree program. There are no significant differences in the groups' opinions. The null hypothesis is retained.

The groups' opinions are that students value certificate programs lower than associate degree programs. The junior college presidents' opinions strongly support the idea that students value the associate degree over the certificate program. The school superintendents' and leaders' opinions agree with the junior college presidents, but to a lesser degree.

All of the groups' opinions are that students in a comprehensive school place a higher value on an associate

degree program than they place on a certificate of proficiency program.

TABLE XLIII

HOW DO INDUSTRIAL EMPLOYERS VALUE THE "CERTIFICATE OF PROFICIENCY" WHEN COMPARED TO THE "ASSOCIATE DEGREE" AND HELD BY A POTENTIAL EMPLOYEE?

	Equal or Higher	Per Cent	Lower	Per Cent
Junior College Presidents	8	33.3	16	66.7
School Superintendents	17	54.9	14	45.1
Leaders in Vocational and Technical Education	4	36.4	7	63.6
$x^2 = 2.80$	Retain H_0		N = 66	

The data in Table XLIII indicate the groups' opinions regarding the industrial employers' value of a potential employee holding a certificate compared to a potential employee holding an associate degree. There are differences in the groups' opinions, but they are not significant. The null hypothesis is retained. Junior college presidents and leaders agree, in their opinions, that industrial employers value a certificate lower than an associate degree when held by a prospective employee. The school superintendents are fairly evenly divided on the question, but a majority of their opinions favor the certificate being valued higher by the industrial employer.

Based on the opinions in Table XLIII, industrial employers tend to value a certificate of proficiency held by a potential employee slightly lower than an associate degree.

TABLE XLIV

SHOULD THE ASSOCIATE DEGREE BE AWARDED FOR THE SUCCESSFUL COMPLETION OF A TWO-YEAR POST-SECONDARY VOCATIONAL TRADE PROGRAM?

	Yes	Per Cent	No	Per Cent
Junior College Presidents	15	51.7	14	48.3
School Superintendents	28	77.8	8	32.2
Leaders in Vocational and Technical Education	6	60.	4	40.
$x^2 = 4.94$	Retain H_0		N = 75	

In the three groups' opinions, the associate degree program is rated higher than that of the certificate program. Should the associate degree be awarded for post-secondary vocational programs? The groups' opinions, noted in Table XLIV, indicate it should be. There are not differences of significance among the groups. They each, singly and collectively, offer favorable opinions toward awarding the associate degree for post-secondary vocational programs.

The junior college presidents are the least favorable in their opinions, while the school superintendents' opinions are the most favorable, toward awarding the associate degree for vocational programs. Based on the opinions of the study groups, the associate degree should be awarded in vocational training programs at the post-secondary level.

The data in Table XLV indicate the groups' opinions on the graduates of an area school more nearly meeting industry's needs than the graduates of the same program in a

community college. There are very significant differences of opinions among the groups. The opinions are noted on the 3 x 3 table with a "No Significant Difference" column.

TABLE XLV

DO THE GRADUATES OF THE AREA VOCATIONAL-TECHNICAL SCHOOL MORE NEARLY MEET THE NEEDS OF INDUSTRY THAN DO THE GRADUATES OF THE SAME NAME PROGRAM IN A COMMUNITY COLLEGE?

	Yes	Per Cent	No	Per Cent	No Sig. Differ.	Per Cent
Jr. Col. Pres.	5	16.7	20	66.7	5	16.7
School Supts.	15	45.5	4	12.1	14	42.4
Leaders	3	37.5	1	12.5	4	50.
$\chi^2 = 22.64$	Reject H_0 at .001				N = 71	

The null hypothesis is rejected. No further statistical analysis is made. By observation, certain groupings are noted. The junior college presidents give a sound majority opinion to "No", the area school graduate doesn't meet the needs of industry any more than the community college graduate does.

The school superintendents' opinions are almost evenly divided between "Yes" and "No Significant Difference". The answer of "No" is noted by only twelve per cent of this group. Their opinions are more favorable toward the area school graduate meeting industry's needs than the community college graduate.

The leaders noted half of their total opinions for there being "No Significant Difference" between the graduates of the two schools' vocational or technical programs meeting industry's needs.

The data in Table XLV indicate there is no group agreement on which program more nearly meets industry's needs. With the differences of opinions, there is little basis for a firm conclusion regarding the graduates of the area school more nearly meeting industry's needs than the graduates of the same name program in the community college.

Technical skill requirements are those skills necessary to do the assigned performance tasks well. These tasks are on the job only and do not include human relations factors. Do the technical institutes better prepare the technical student with technical skills than do the community colleges? The three study groups have significant differences of opinions regarding this question. The null hypothesis is rejected at the .01 level.

The data in Table XLVI are not further analyzed to compare group-with-group in a 2 x 2 table. It may be determined by observation that the school superintendents' opinions are strong in supporting the technical institutes' programs as better in preparing students with technical skills than a community college's program. The leaders are divided on the question. One-half of the leaders' opinions indicate no significant difference exists between the technical institute and the community college in teaching the technical skills.

TABLE XLVI

DO PROGRAMS OF THE TECHNICAL INSTITUTES BETTER PREPARE THE TECHNICAL STUDENTS WITH TECHNICAL SKILL REQUIREMENTS THAN DO THE COMMUNITY COLLEGE PROGRAMS?

	Yes	Per Cent	No	Per Cent	No Sig. Differ.	Per Cent
Jr. Col. Pres.	8	26.7	14	46.7	8	26.7
School Supts.	23	65.7	2	5.7	10	28.6
Leaders	3	37.5	1	12.5	4	50.
$x^2 = 16.93$		Reject H_0 at .01			N = 73	

The junior college presidents' opinions are the most prevalent in the "No" column. Their opinions do not sustain the technical institute as doing a better job than the community college is doing in teaching the technical skills.

Due to the differences of opinions noted in Table XLVI, no conclusion is reached on the presented question.

Total job success includes the technical skills required of the job as well as other factors. These may include the human relations aspects, getting along with people and being able to manage a group of workers as a supervisor. To be critical of another's work or his performance without arousing anger or hostility is important. Total job success includes being able to discuss current issues intelligently.

The data in Table XLVII indicate the groups' opinions on programs of the technical institute or the community college which better prepare the student for total job success. There are significant differences of opinions among the

groups. The null hypothesis is rejected at the .01 level. An additional analysis is not made of the data.

TABLE XLVII

DO PROGRAMS OF THE TECHNICAL INSTITUTES BETTER PREPARE THE STUDENTS FOR TOTAL JOB SUCCESS THAN DO THE PROGRAMS OF THE COMMUNITY COLLEGES?

	Yes	Per Cent	No	Per Cent	No Sig. Differ.	Per Cent
Jr. Col. Pres.	3	10.3	22	75.9	4	13.8
School Supts.	14	45.2	8	25.8	9	29.0
Leaders	4	50.	2	25.	2	25.
$\chi^2 = 17.57$		Reject H_0 at .01			N = 68	

The groups' opinions, being significantly different, suggest that both the technical institutes and the community colleges' technical programs are conducting satisfactory education programs. The curricula of these institutions encompasses some human relations factors as well as the technical competence skills.

The junior college presidents are definite in their opinions that the technical institute does not better prepare the student for total job success than the community college does. The school superintendents' opinions are strong in support of the technical institute as the better training for total job success. The leaders' opinions also favored the technical institute as better preparing the student for total job success than the community college.

Due to the wide difference of opinions, no conclusion is made on the better of the two programs for preparing the student for job success. It is apparent programs of both the technical institute and the community college are respected by some members of each group.

TABLE XLVIII

AT THE POST-SECONDARY LEVEL, WHAT PER CENT OF STUDENTS ENROLLING IN A TWO-YEAR TECHNICAL PROGRAM ACTUALLY COMPLETE THE REQUIREMENTS FOR GRADUATION?

	10-50%	Per Cent	51-100%	Per Cent
Junior College Presidents	18	81.8	4	18.2
School Superintendents	13	72.2	5	27.8
Leaders in Vocational and Technical Education	3	50.	3	50.
$x^2 = 2.26$	Retain H_0		N = 46	

The data on the per cent of students enrolling in a technical program who actually complete the program are presented in Table XLVIII. The data, representing the groups' opinions, indicate less than fifty per cent who enroll will graduate. There are no significant differences in their opinions and the null hypothesis is retained. The drop-out rate in the two-year technical programs, in the groups' opinions, is high.

Table XLIX contains data from the Technician Education Yearbook, 1965-66, on enrollments and graduates for four years in pre-employment technical programs.[2] The 1961

[2]Ibid., pp. 98-106.

enrollments may be compared to the 1963 graduates and the 1962 enrollments may be compared to the 1964 graduates to get an actual per cent of graduates in two years:

Secondary 1961 enrollments to 1963 graduates - 29%

Post-secondary 1961 enrollments to 1963 graduates - 29%

Secondary 1962 enrollments to 1964 graduates - 41%

Post-secondary 1962 enrollments to 1964 graduates - 27%

TABLE XLIX

ENROLLMENTS AND GRADUATES IN PRE-EMPLOYMENT TECHNICAL PROGRAMS

Enrollments	1961	1962	1963	1964
Secondary	11,778	13,028	19,662	20,755
Post-Secondary	27,446	40,043	56,226	71,824
Graduates				
Secondary	1,897	3,515	3,432	5,395
Post-secondary	5,699	6,431	8,180	10,952

The opinions of the groups are thus supported by definite figures. There is a high drop-out rate in the technical programs.

The groups' opinions on the per cent of graduates of a post-secondary vocational program are presented in Table L. The groups are not agreed, but the differences are not significant at the .05 level.

The junior college presidents and leaders are agreed in their opinions. They indicate less than fifty per cent of

the post-secondary vocational students enrolling will graduate. The school superintendents' opinions indicate over fifty per cent will graduate.

TABLE L

AT THE POST-SECONDARY LEVEL, WHAT PER CENT OF THE STUDENTS ENROLLING IN A TWO-YEAR VOCATIONAL PROGRAM ACTUALLY COMPLETE THE REQUIREMENTS FOR GRADUATION?

	10-50%	Per Cent	51-100%	Per Cent
Junior College Presidents	13	62.5	3	31.5
School Superintendents	3	42.8	4	57.2
Leaders in Vocational and Technical Education	2	66.7	1	33.3
$x^2 = 3.29$	Retain H_0		N = 26	

Based on the opinions of the groups, noted in Table L, it may be concluded, with some reservation, that less than fifty per cent of post-secondary vocational students who enroll in two-year programs will graduate.

The chief administrator of an area vocational-technical school should be properly prepared. The data in Table LI indicate the groups' opinions regarding certain qualifications of the chief administrator of an area school.

No statistical analysis on the data in Table LI is performed. By observation, it may be determined the three groups' opinions are agreed, and at about the same level of choice in each group. The prominent selection is all four of the listed items. The combination of all four items does

not contain a majority of any group, but it is the most favored opinion by each group.

TABLE LI

SHOULD THE CHIEF ADMINISTRATOR IN AN AREA VOCATIONAL-TECHNICAL SCHOOL HAVE:
___1. A COLLEGE DEGREE IN VOCATIONAL OR TECHNICAL EDUCATION.
___2. A TEACHING CERTIFICATE IN VOCATIONAL OR TECHNICAL EDUCATION.
___3. AN ADMINISTRATORS CERTIFICATE.
___4. AN ADVANCED DEGREE.

Item	Total Choices	Per Cent	Junior College	Per Cent	Supts.	Per Cent	Leaders	Per Cent
1	16	19.3	8	26.7	7	16.2	1	10.
2	0		0		0		0	
3	6	7.2	2	6.6	4	9.3		
4	10	12.	5	16.7	3	6.9	2	20.
1 & 3	14	16.9	3	10.	8	18.6	3	30.
1,2,3 and 4	37	44.6	12	40.	21	48.8	4	40.
				N = 83				

Based on the opinions of the groups as noted in Table LI, the chief administrator of an area school should have these qualifications:

1. A college degree in vocational or technical education,
2. A teaching certificate in vocational or technical education,
3. An administrator's certificate, and
4. An advanced degree.

These qualifications, along with others, are listed as requirements for area school administrators in many state

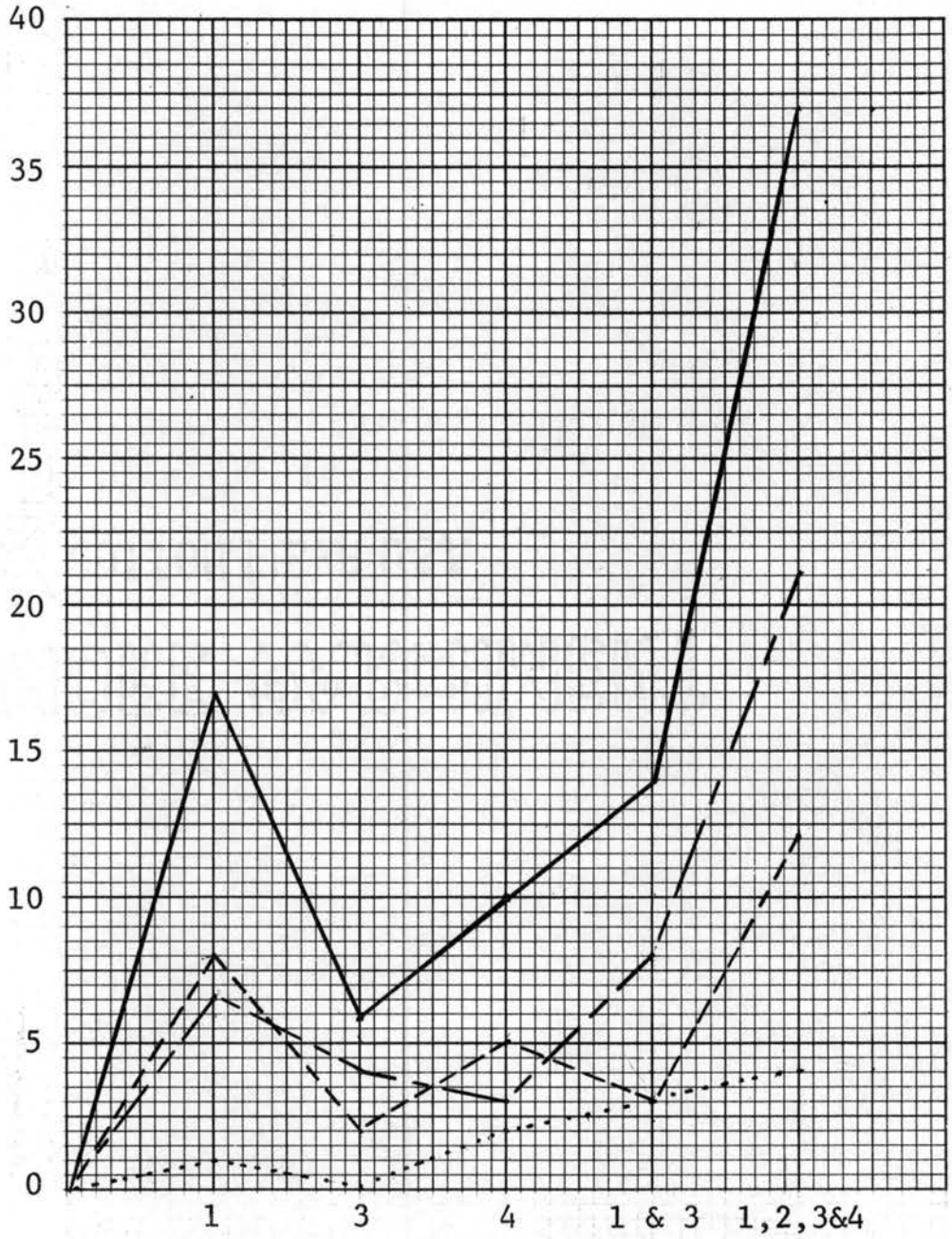

Figure 2. Certain Qualifications of the Area Vocational-Technical School Administrator by Study Groups

– – –Junior College Presidents
— —School Superintendents
·····Leaders in Vocational and Technical Education
———Total

plans for vocational education. This may have had an influence on the members of the groups' opinions.

Figure 2 is a graph of the groups' opinions on the items. Since no one selected item number 2, it is not on the graph. The points on the graph are the total number of selections by the opinions of the members of a group. The top line is a composite of all the respondents to this question.

TABLE LII

SHOULD VOCATIONAL AND TECHNICAL TEACHERS IN THE AREA SCHOOLS MEET THE SAME STANDARD CERTIFICATION REQUIREMENTS AS SECONDARY GENERAL EDUCATION TEACHERS?

	Yes	Per Cent	No	Per Cent
Junior College Presidents	6	19.4	25	80.6
School Superintendents	17	43.6	22	56.4
Leaders in Vocational and Technical Education	4	36.4	7	63.6
$\chi^2 = 3.70$	Retain H_0		N = 81	

There is some question as to vocational and technical teachers in the area schools meeting the same certification requirements as the general education teachers. The data on the groups' opinions regarding this question are presented in Table LII.

The groups are agreed that vocational and technical teachers in the area school should not be required to meet the same certification requirements as general education teachers. There is a firm display of opinions supporting

this by the junior college presidents. The school superintendents gave it the weakest support of the three groups.

There are no significant differences of opinions among the groups. The null hypothesis is retained. Based on these opinions, area school vocational and technical teachers should have individual group recognition for certification requirements.

TABLE LIII

DO STANDARD SECONDARY SCHOOL CERTIFICATION REQUIREMENTS HAVE A RETARDING EFFECT ON CURRENT INDUSTRIAL INNOVATIONS BY VOCATIONAL AND TECHNICAL TEACHERS?

	Yes	Per Cent	No	Per Cent
Junior College Presidents	18	66.7	9	33.3
School Superintendents	20	66.7	10	33.3
Leaders in Vocational and Technical Education	8	80.	2	20.
$\chi^2 = .67$	Retain H_0		N = 67	

A teacher of vocational or technical subjects must keep current with industrial practices. New products and processes in the field must be brought into the classroom and laboratory for the students. Do standard teacher certification requirements have a retarding effect on these industrial innovations by vocational and technical teachers? In the opinions of the three groups, they do. Table LIII presents the data on the groups' opinions regarding this question.

All three groups are definite in their opinions and the groups agree. There are no significant differences in the groups' opinions.

The leaders are the most united in their opinions regarding the retarding effect of standard certification on classroom innovation by vocational and technical teachers. A teacher required to return to the college campus every summer has little time to get back into industry to stay apace with new developments.

Based on the groups' opinions, noted in Table LIII, certification requirements for vocational and technical teachers may need to be re-evaluated.

TABLE LIV

DISREGARDING THE REQUIREMENTS OF FEDERAL MATCHING FUNDS, WOULD COLLEGE CREDIT TOWARD A PROFESSIONAL DEGREE IN TECHNICAL AREAS ATTRACT A DIFFERENT STUDENT TO TECHNICAL PROGRAMS THAN DOES THE TWO-YEAR ASSOCIATE DEGREE PROGRAM?

	Yes	Per Cent	No	Per Cent
Junior College Presidents	16	61.5	10	38.5
School Superintendents	25	78.1	7	21.9
Leaders in Vocational and Technical Education	6	66.7	3	33.3
$\chi^2 = 1.93$	Retain H_0		N = 67	

If a four-year professional degree is awarded in technical programs, does this attract a different student than the awarding of a two-year associate degree in technical programs? The data in Table LIV indicate the professional

degree attracts a different student to technical programs than does an associate degree.

All three groups agree. Their differences are not significant. The null hypothesis is retained.

Specific regulations of Title VIII of N.D.E.A. and of Public Law 88-210 permit government funds to be used for programs which do not lead to professional degrees. Based on the opinions of the groups, a professional degree would attract a different student than does the associate degree, the restrictive regulations on federal funds for technical programs become more understandable. The federal funds are to help support programs in technical education for a certain group of students. If the technical programs were to offer the baccalaureate degree, this group of students would, according to the groups' opinions, be different.

TABLE LV

WHAT PER CENT OF THE LABORATORIES IN THE AREA SCHOOLS CAN BE PROPERLY UTILIZED AS DUAL PURPOSE--SERVING BOTH AS A VOCATIONAL LABORATORY AND AS A TECHNICAL LABORATORY?

	10-50%	Per Cent	51-100%	Per Cent
Junior College Presidents	9	47.3	10	52.7
School Superintendents	14	77.8	4	22.2
Leaders in Vocational and Technical Education	4	66.7	2	33.3
$\chi^2 = 3.21$	Retain H_0		N = 43	

In an area vocational-technical school, the greater utilization of expensive laboratory space and equipment assists in the efficiency of the school. What per cent of the area school laboratories can be used for both vocational and technical classes? The data in Table LV indicate the groups' opinions are that less than fifty per cent may be used for both programs. The differences of opinions are not significant.

The junior college presidents are narrowly divided, with a majority of the opinion that over fifty per cent of the area school's laboratories could be used for both vocational and technical classes. The school superintendents and leaders are agreed in their opinions that less than fifty per cent could be dually utilized.

TABLE LVI

IN AN AREA VOCATIONAL-TECHNICAL SCHOOL OFFERING BOTH SECONDARY AND POST-SECONDARY PROGRAMS, WHAT PER CENT OF THE SECONDARY GRADUATES WILL: ATTEND A POST-SECONDARY VOCATIONAL-TECHNICAL SCHOOL?

	10-50%	Per Cent	51-90%	Per Cent
Junior College Presidents	7	87.5	1	12.5
School Superintendents	9	81.8	2	18.2
Leaders in Vocational and Technical Education	7	87.5	1	12.5
		N = 27		

The data in Table LVI indicate the groups' opinions regarding the per cent of the graduates of a secondary area school program who will not attend a post-secondary area vocational-technical school. Because of the small number of

responses, a statistical analysis is not made of the data in this table.

The groups are agreed, and each strongly so, that less than fifty per cent of the secondary graduates of an area school will attend an area school on the post-secondary level.

TABLE LVII

IN AN AREA VOCATIONAL-TECHNICAL SCHOOL OFFERING BOTH SECONDARY AND POST-SECONDARY PROGRAMS, WHAT PER CENT OF THE SECONDARY GRADUATES WILL: ATTEND THE SAME POST-SECONDARY INSTITUTION AND CONTINUE IN THE SAME PROGRAM AS THEY DID AS SECONDARY STUDENTS?

	10-50%	Per Cent	51-90%	Per Cent
Junior College Presidents	6	75.	2	25.
School Superintendents	8	100.	0	
Leaders in Vocational and Technical Education	6	85.3	1	14.7

N = 23

Table LVII contains the groups' opinions regarding the graduate of a secondary vocational-technical school attending the same area school and the same program at the post-secondary level. The groups are agreed that less than fifty per cent will attend the same area school in the same program. The small number of responses is not conducive to the Chi-square test.

The school superintendents are unanimous in their opinions. The junior college presidents are strongly united on this question.

Based on the data of the groups' opinions, it may be concluded that less than fifty per cent of the graduates of the secondary area school programs will re-enroll in the same area school and in the same program at the post-secondary level.

TABLE LVIII

WHICH INSTITUTION OFFERS THE BEST PROGRAM OF TECHNICAL TRAINING?

FIRST-PLACE RANKINGS OF INSTITUTIONS OFFERING TECHNICAL PROGRAMS

	Area Schools	Per Cent	Comm. College	Per Cent	Tech. Inst.	Per Cent
Jr. Col. Pres.	1	3.7	11	40.7	15	55.6
School Supts.	8	23.5	2	5.9	24	70.6
Leaders	1	11.1	2	22.2	6	66.7
$x^2 = 11.67$		Reject H_0 at .02			N = 70	

The groups' opinions are obtained on the best institution to offer technical training. Table LVIII gives the data on the first place rankings of the institutions offering technical programs.

There are significant differences in the groups' opinions. The null hypothesis is rejected at the .02 level. By observation of this 3 x 3 table, it is noted that all three groups selected the technical institute as the best institution for technical training. The differences of opinions may have occurred between the area school and the community college.

Based on the groups' opinions in this table, the best institution for technical training is the technical institute.

TABLE LIX

SECOND-PLACE RANKINGS OF INSTITUTIONS OFFERING TECHNICAL PROGRAMS

	Area Schools	Per Cent	Comm. College	Per Cent	Tech. Inst.	Per Cent
Jr. Col. Pres.	3	12.5	11	45.8	10	41.7
School Supts.	21	67.7	5	16.1	5	16.1
Leaders	4	44.4	2	22.2	3	33.3
$x^2 = 15.4$		Reject H_0 at .01			N = 64	

Table LIX presents the groups' opinions of the second best institution for technical training. There are significant differences of opinions among the groups. The null hypothesis is rejected at the .01 level.

The junior college presidents' opinions favor the community college as second in quality of technical training programs. The school superintendents' and leaders' opinions support the area schools as being the second best institution for technical training.

The second best institution for technical training is not determined from the opinions noted in Table LIX.

The groups' opinions on the third ranked institution for technical training are presented in Table LX. The null hypothesis is rejected. There are very significant differences of opinions at the .001 level.

TABLE LX

THIRD-PLACE RANKINGS OF INSTITUTIONS OFFERING TECHNICAL PROGRAMS

	Area Schools	Per Cent	Comm. College	Per Cent	Tech. Inst.	Per Cent
Jr. Col. Pres.	21	84.	3	12.0	1	4.
School Supts.	3	10.	25	83.3	2	6.7
Leaders	4	44.4	5	55.6	0	
$x^2 = 29.17$	Reject H_0 at .001				N = 64	

The junior college presidents' opinions support the area school's technical training program as being of somewhat lower quality than that of the technical institute or the community college. The school superintendents and leaders agree the community college's technical program is, in their opinions, the third ranked institution for technical training.

Because of the differences of opinions, a determination of the third ranked institution for quality of post-secondary technical training is not accomplished.

The graph in Figure 3 depicts each groups' opinions and the total of the groups' opinions regarding the best institution for technical training. The points are located on a weighted choice basis, a first ranked institution is three points, a second ranked institution is two points, and a third ranked institution is one point. The groups' opinions selection of the technical institute being the best institution for technical training is easily determined. The

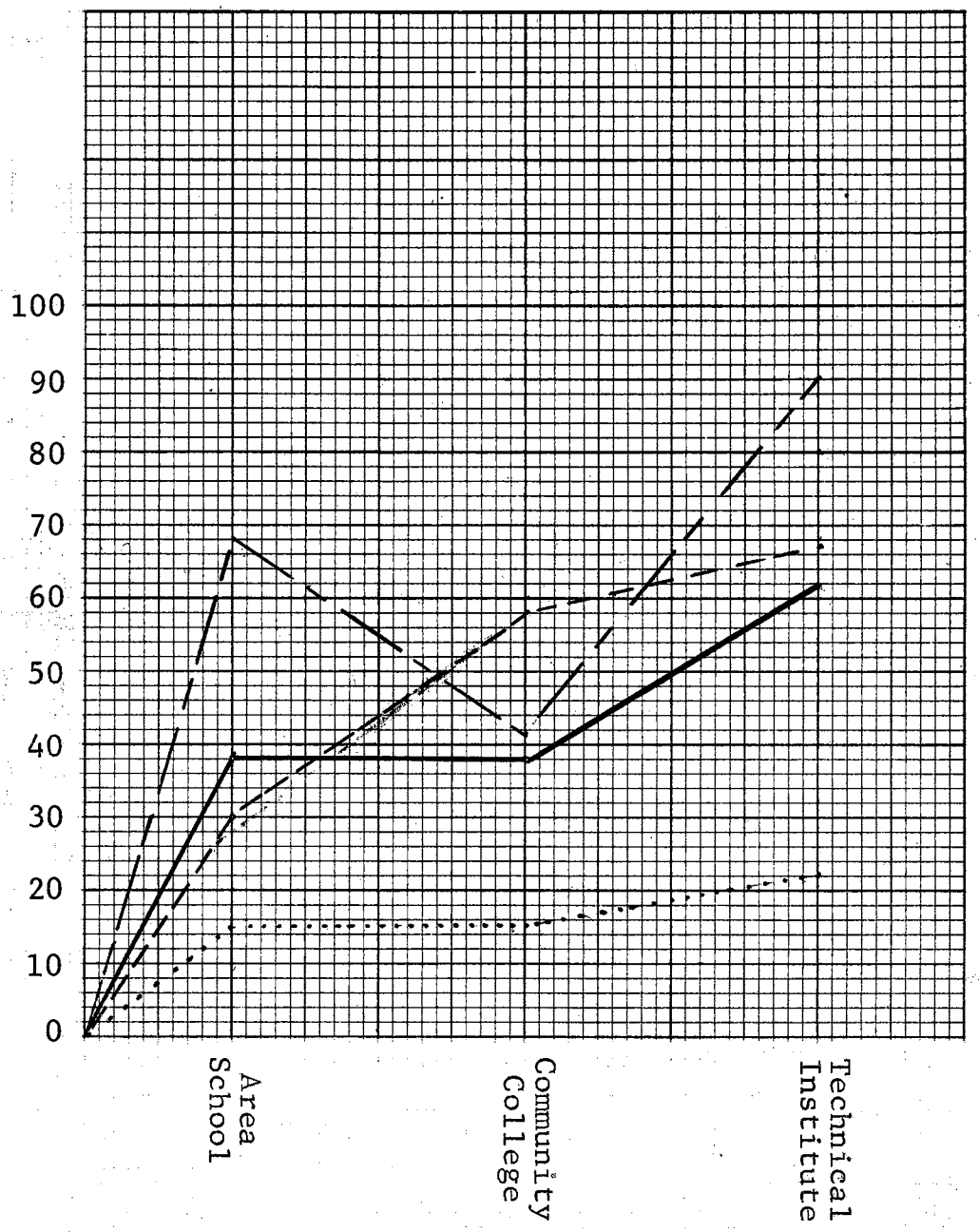

Figure 3. Best Institution for Technical Training in the Opinion of Study Groups

——— Presidents
— — Superintendents
····· Leaders
——— Average of Three Groups

differences of opinions in selecting the second best institution is also discernable in this figure.

The Kendall Coefficient of Concordance statistical analysis is made on the groups' opinions of the best institution for technical training. The agreement by the groups is low, W = .237.

TABLE LXI

WHICH INSTITUTION OFFERS THE BETTER PROGRAM OF POST-SECONDARY VOCATIONAL TRAINING?

	Area School	Per Cent	Commun. College	Per Cent
Junior College Presidents	4	15.4	22	84.6
School Superintendents	33	100.	0	
Leaders in Vocational and Technical Education	5	71.4	2	28.6
$\chi^2 = 44.96$	Reject H_0 at .001		N = 66	

The institution offering the better program of post-secondary vocational training is noted in Table LXI. This is according to the three study groups' opinions.

The data in the table indicate the junior college presidents' opinions are that the community college is better for vocational training than the area school. The school superintendents' and leaders' opinions favor the area school's program as being of better quality than the program of the community college. The school superintendents are unanimous in their opinions.

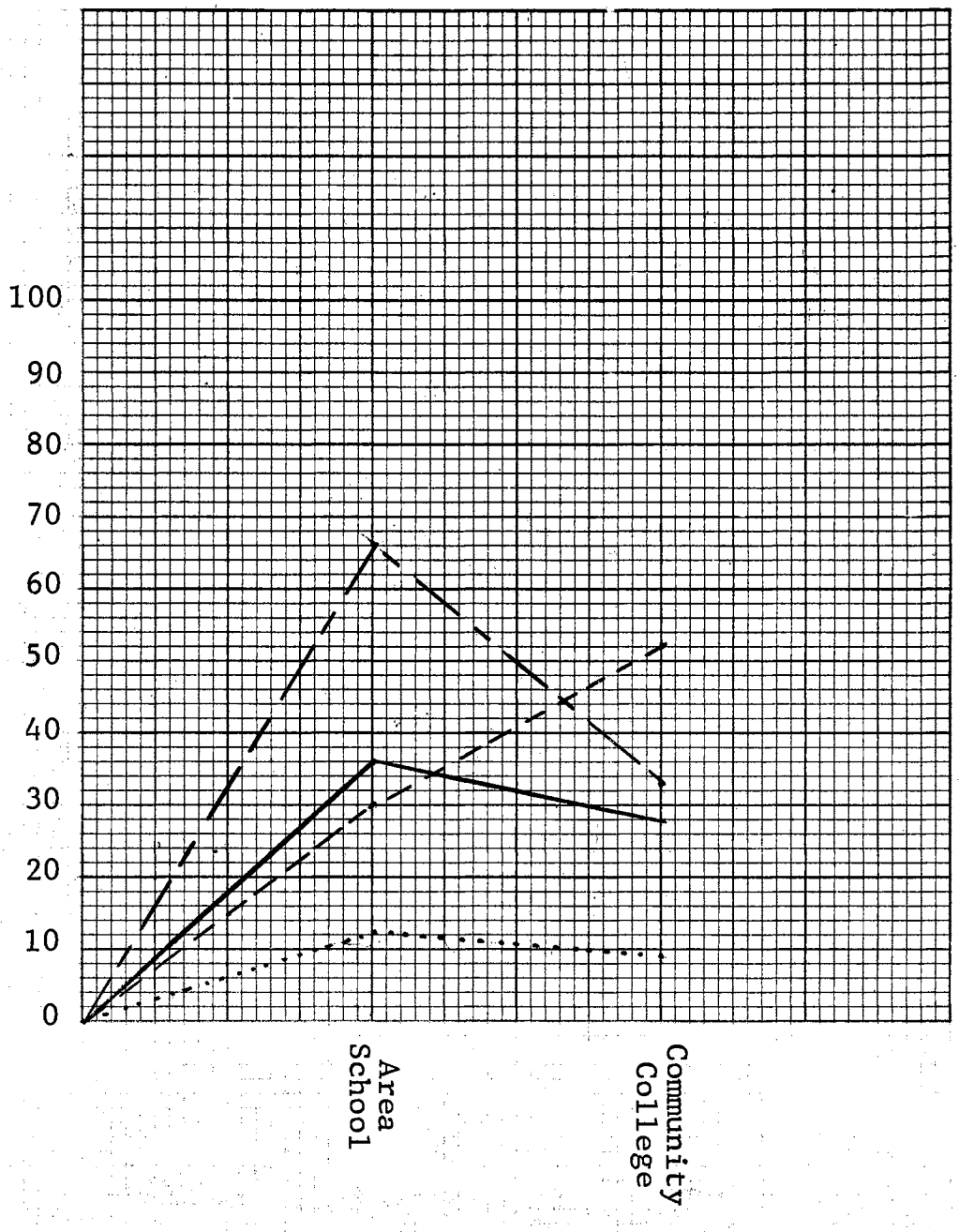

Figure 4. Better Institution for Vocational Training in the Opinion of Study Groups

— — —Junior College Presidents
——— —School Superintendents
. . . . . Leaders in Vocational and Technical Education
————Average of Three Groups

There are very significant differences of opinions among the groups. The null hypothesis is rejected at the .001 level. The data in Table LXI does not warrant a conclusion of the better institutional program for vocational education at the post-secondary level.

Figure 4 gives the groups' opinions on a weighted choice basis. The difference of opinions may be noted in this figure.

Findings Summary

Fifty-three statements or questions were presented in opinionnaire form to three groups of leaders in education. These people were presumed to have an above-average knowledge of vocational and technical education. Their responses were statistically treated by the Chi-square test. According to the opinionnaire items which did not elicit significant differences of opinions at the .05 level, the following summary may be made:

1. Each state should have a master plan for vocational and technical education encompassing all public educational institutions.

2. The representatives of industry, labor, and the community have enough voice in policy making when serving in an advisory capacity to the state board for vocational education.

3. The objectives of the area vocational-technical school are distinguishably different for the secondary and

post-secondary students.

4. The objectives of vocational and technical education are being served when a high school graduate, who has completed a pre-employment vocational or technical course during high school, pursues a professional college course rather than immediate employment.

5. As the community colleges offer occupational programs, they will gradually change the objectives of vocational and technical programs.

6. Higher education should have a role in the administration and supervision of vocational and/or technical programs at the post-secondary level.

7. The standards and recommendations for the accreditation of area vocational-technical schools operating at the secondary and post-secondary levels should not be set solely by the state board of education.

8. A technical institute designated as an area technical school should be accredited by a state agency for higher education.

9. An area vocational-technical school will not have a better and more effective program when offering only one field of training than if it were offering both fields of training.

10. There is no tendency for community colleges designated as area schools to mis-use federal funds.

11. Departments of junior colleges, geographically located to conveniently serve a population, may be

successfully designated as an area vocational-technical center.

12. A community college designated as an area school should offer a minimum of five to ten vocational and technical courses.

13. A technical institute that is a department or division of a university or a graduate degree-granting college is not a better institution than an independent technical institute.

14. A post-secondary educational institution which can offer transfer credit has more attraction for students than an institution not authorized to offer transfer credit.

15. The programs and laboratories of a community college should be integrated with the other programs of the school and not isolated in separate buildings.

16. Employers find secondary school graduates of vocational programs more successful when employed in their field of training than the employees who have not had vocational training.

17. For the successful post-secondary vocational student, vocational courses at the high school level are more important than exploratory courses.

18. General education courses should be offered in the area vocational-technical school.

19. The role of the area school is more to serve as a pre-employment institution than as an extension institution.

20. There isn't a problem of the area school being labeled undemocratic because it does not teach the liberal arts.

21. Prestige is a factor in determining the institution in which a student will take post-secondary vocational or technical training.

22. University parallel and occupational programs on the same college campus do not stimulate conflicts between the students of the two programs.

23. The inclusion of core subjects of liberal arts for all students tend to break down the status symbols of particular programs.

24. Teachers in a comprehensive institution value a certificate program lower than an associate degree program.

25. Students in a comprehensive educational institution value a certificate program lower than an associate degree program.

26. Industrial employers value a certificate lower than the associate degree when held by a potential employee.

27. The associate degree should be awarded for the successful completion of a two-year post-secondary vocational program.

28. Less than fifty per cent of the students enrolling in a two-year post-secondary technical program complete the requirements for graduation.

29. Less than fifty per cent of the students enrolling in a two-year post-secondary vocational program complete the

requirements for graduation.

30. Vocational and technical teachers in the area school should not be required to meet the same certification requirements as secondary general education teachers.

31. Standard certification requirements have a retarding effect on current industrial innovations into the classroom by vocational and technical teachers.

32. A professional degree would attract a different student to the technical programs than does the associate degree.

33. Less than fifty per cent of the laboratories of an area school can be properly used by both vocational and technical classes.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

The goal of public education should be to help each child and each adult realize every potential talent that he possesses. This means a variety of goals for the educational institutions in order that every student, who so desires, may have an opportunity to develop his aptitudes. These aptitudes may be for the professions or for vocational or technical occupations. Certainly the professional, the vocational, and the technical occupational development correlates and applies the basic skills acquired in the common schools. There are many institutions of higher education to offer an opportunity for professional development. To extend public educational opportunities for certain people in vocational or technical training programs will mean new concepts of education in conjunction with modern institutions.

One modern educational institution may be the area vocational-technical school. Its role will be in vocational and technical training at the secondary and post-secondary levels. Because area vocational-technical schools are new, their patterns for development and operation are not clear or definite.

At the present time, in Oklahoma, there appear to be certain conflicts of law which are providing problems for the proper development of area schools.

Thirty-eight states now have area vocational-technical schools. Many of the states have designated area school programs in the junior colleges, technical institutes, and community colleges.

The results of the study of states' plans for vocational education are combined with the results of an opinionnaire to make recommendations for the administration, organization, and supervision of area vocational-technical schools in Oklahoma.

The opinionnaire consisted of selected criteria regarding the administration, organization, and supervision of area vocational-technical schools. This was submitted to three groups of people who were considered to be knowledgeable about public school operations and vocational and technical education. The groups consisted of selected junior college presidents, school superintendents, and identified leaders in vocational or technical education. The items on which the groups' opinions agreed were determined by statistical analysis. These items, listed in Chapter IV, are combined with the practices as noted in the states' plans for vocational education to make recommendations regarding the educational unit for the administration, organization, and supervision of area schools in Oklahoma.

Conclusions

The conclusions of the study are based on the information collected in the study of state laws and state plans for vocational education; the review of the literature; and the detailed data collected and analyzed in Tables II through LXI. The data in the tables are the opinions of three study groups.

1. Significant differences of opinions exist among junior college presidents, school superintendents, and leaders in vocational and/or technical education on certain key issues. These issues involve the administration, organization, and supervision of area vocational-technical schools. There are nineteen tables in the study in which the null hypothesis of no significant difference of opinion was rejected at the .05 level.

2. The area school does not have a common level of educational scope in the United States. It vacillates from secondary to post-secondary, a combination of secondary and post-secondary, a part of a technical institute or serves exclusively in the two-year colleges. These many patterns are determined within each state.

3. Area vocational-technical schools tend to be located near population centers. This location provides opportunities for employed persons in advancement and continuing education programs. The opportunity for students to enroll in pre-employment training programs is also present. The

location factor seems to be much more important when a technical institute is designated as an area school or has area school programs.

4. The level of programs of the area vocational-technical schools tend to become post-secondary. Some factors involved in this are: the type of program, the maturity of the student needed for the scope and depth of instruction, and the area school campus away from the home school.

5. Oklahoma is the only state not providing state funds for the operation of area schools. The majority of states also provide funds for area school building construction. Oklahoma does not.

6. A majority of the states designate specific programs of the two-year colleges as area school programs. All of the border states of Oklahoma have area schools or area vocational-technical programs in two-year colleges. Oklahoma does not.

7. The literature, state plans, and approval of items in the opinionnaire indicate many successful vocational and technical programs are in the community colleges. This does not seem to be because of the single quality of vocational or technical instruction, but due to societal pressures.

The following conclusions are based on the noted sections of Oklahoma Law.

8. The Oklahoma Constitution and Oklahoma Laws give the Oklahoma State Regents for Higher Education the authority for all public education beyond the twelfth grade when

State appropriated funds are used to support such a program.

(Article XIII, Section 1-A - Oklahoma Constitution
Title 70, Section 4-37 - Oklahoma Statutes
Title 70, Section 1990 - Oklahoma Statutes
Title 70, Section 3102-d - Oklahoma Statutes
Title 70, Section 4-38, Oklahoma Statutes
Title 70, Section 2201 - Oklahoma Statutes
Title 70, Section 3206 - Oklahoma Statutes)

9. All children between six and twenty-one shall be entitled to attend school free of charge in the district in which they reside.

A junior college approved by the Oklahoma State Regents for Higher Education and established by the school district may charge post-twelfth grade students tuition.

If a school district has funds in surplus of those needed for the common school program and operates a post-twelfth grade educational program, the students residing in the district may attend this post-twelfth grade program without tuition.

(Title 70, Section 1-16 - Oklahoma Statutes
Title 70, Section 4-36 - Oklahoma Statutes
Title 70, Section 2201 - Oklahoma Statutes)

The Oklahoma State Regents for Higher Education is a coordinating agency for all higher education in Oklahoma. Through an extension of this agency's services, all post-secondary education can be coordinated in the State.

(Article XIII, Section 1-A - Oklahoma Constitution
Title 70, Section 3206 - Oklahoma Statutes)

The following conclusions are based on the groups' opinions as noted in Chapter IV.

10. A certificate, at the completion of a two-year post-secondary vocational or technical program, does not

seem to carry the status or prestige to society, to an employer, or to the student, as does an associate degree.

11. The vocational and technical programs are recognized as carrying more prestige and status when offered in a comprehensive two-year college, according to this study.

12. High level technical programs are generally in the technical institutes. These programs are commonly regarded as a part of higher education.

13. Vocational and technical teachers have particular requirements for keeping up-to-date in course content. The methods used to keep current information and practices before the students are not the same as those of teachers in general education courses. The certification requirements for vocational and technical teachers probably differ from those for the general education teachers.

Recommendations

The following recommendations are based on the researcher's interpretations of the study findings.

1. Cooperative planning for the imminent future, and also for long-range roles and programs, developing a coordinated system of post-secondary vocational and technical training for Oklahoma seems to be needed. This planning may be accomplished by the Oklahoma State Regents for Higher Education and the Oklahoma State Board for Vocational Education (the State Board of Education), either as a group, or, through their executive officers.

2. Findings indicate area vocational-technical program designations should be extended to some of the State junior colleges. This may well include the School of Technical Training at Okmulgee.

3. It seems logical that a modern technical institute facility should be located in each of the two large urban areas of the State. The institutes may be designated as area or regional technical schools. They may well be accredited to award the associate degree and be administered by a state supported Oklahoma university.

4. The study indicates planning should be started to determine the feasibility of changing certain area vocational-technical schools to community colleges.

5. Plans might well be developed to encompass each portion of the State in an area vocational-technical school or a community college district by 1970.

6. The survey of the several states' operation of area schools indicate the Oklahoma State Legislature should consider the possibility of providing matching State funds for construction, equipment, site purchase, and operation of the technical institutes and area vocational-technical schools.

7. Closer cooperation of Oklahoma's industrial and educational leaders should be developed. This may provide methods for vocational and technical teachers spending some time in industry to bring them up-to-date in industrial practices as well as meeting teacher certification requirements.

8. Oklahoma State laws should be examined for possible conflicts regarding post-secondary education.

9. Based on the findings of the study in the review of the literature, and the states' plans for vocational education, the results of the opinionnaire, a study of Oklahoma Statutes regarding vocational and technical education, common education, and higher education, the following recommendation is made:

The educational unit for the administration, organization, and supervision of area vocational-technical schools in Oklahoma may be a new agency of government. The agency could conceivably be formed through the cooperation of the Oklahoma State Regents for Higher Education and the Oklahoma State Board for Vocational Education.

A new division might well be created within the Oklahoma State Regents for Higher Education to work on an unrestricted, cooperative, and equal basis with the Area Vocational-Technical School division of the State Board for Vocational Education. Such a new educational unit may be responsible for coordinating and accrediting all post-secondary vocational and technical programs of the State as well as administering, organizing, and supervising the area vocational-technical schools and the area school programs.

Recommendations for Further Study

In the review of the literature, in the study of state plans for vocational education, and in the data received

from the opinionnaire, it is perceptible there are pertinent facts not available regarding the wide scope of administration, organization, and supervision of area vocational-technical schools. Further study of specific problems by collecting and bringing together some much needed information will be helpful for establishing and improving the opportunities in vocational and technical education for every citizen. Listed here are some points and issues for additional research and investigation.

Issues Requiring Further Study

1. An intensive study should be undertaken with students who spend part of their secondary school time in an area school and the other part in a home high school. This study may determine if there are conflicts presented in such a dual enrollment. There were significant differences of opinions among the groups in the study regarding problems created for the student who was enrolled in both schools.

2. A joint study should be made of vocational and technical curricula, its scope and depth, to determine if an associate degree is justified as an award for the successful completion of these programs.

3. A study should be undertaken to find out if the graduate of vocational or technical programs, given a certificate at completion of the program, is received or viewed in a different way than the graduate holding an associate degree when:

A. Scrutinized by the industrial employer.

B. Considered for promotions in positions of responsibility.

C. In a leadership role of responsibility, as viewed and respected by his subordinates.

4. A study should be completed to accurately determine the best secondary preparation for the high-level post-secondary technical programs. The results should be made available to every high school counselor and administrator in Oklahoma. There were significant differences of opinions among the groups regarding the proper preparation for the successful post-secondary technical students.

5. A study should be prepared to secure information as to why the drop-out rate of the present post-secondary vocational and technical programs is high. An extensive study may bring out factors to help in student selection as well as assist in locating student problems, and correcting them, before the drop-out stage is reached.

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APPENDIX A

LETTER WHICH ACCOMPANIED OPINIONNAIRE FORM SENT TO SAMPLE OF JUNIOR COLLEGE PRESIDENTS, SCHOOL SUPERINTENDENTS, AND NATIONALLY RECOGNIZED LEADERS IN VOCATIONAL AND/OR TECHNICAL EDUCATION.

OKLAHOMA STATE UNIVERSITY • STILLWATER

School of Industrial Education
Industrial Building Room 104

74075

Dear Sir:

I am making a study of area vocational technical schools and programs. This study is limited to factors involving organization, administration, and supervision of area school programs. Forty-two state plans for vocational education have been reviewed, noting the distinguishing provisions of each. After compiling the distinguishing provisions, comparisions were made to identify conflicting elements. These elements have been organized into an opinionnaire survey instrument in an attempt to select the better items. These selected items will be used as a suggested criteria to improve area vocational technical school programs in Oklahoma - secondary through post-high school.

A small number of carefully chosen leaders in education, known and respected for their contributions for the improvement and advancement of educational programs, are being asked to respond to this opinionnaire. You have been determined to be one of these leaders. Will you please react to the statements on the enclosed opinionnaire? Any statement you consider too perplexing may be omitted. Assurance is given that all responses will be treated in a confidential manner. The data will be compiled in such a way identification will be impossible. The results of the opinionnaire will be sent to you following tabulation. A self-addressed stamped envelope is enclosed for your convenience.

Dr. Richard Jungers, Director of Field Services, Department of Education, at Oklahoma State University is supervising the study. Dr. Francis Tuttle, Director of area schools for the Oklahoma State Department for Vocational Education is cooperating with the study.

I appreciate your taking time to assist in this project and want to thank you for co-operating.

Sincerely yours,

Scott Tuxhorn

APPENDIX B

OPINIONNAIRE FORM SENT TO SAMPLE OF JUNIOR COLLEGE PRESIDENTS, SCHOOL SUPERINTENDENTS, AND NATIONALLY RECOGNIZED LEADERS IN VOCATIONAL AND/OR TECHNICAL EDUCATION

APPENDIX B

AN OPINIONNAIRE REGARDING AREA SCHOOLS

Please indicate your opinion to the following statements by circling the proper word or responding on the blank.

1. Should each state have a "master plan" for vocational and technical education encompassing all public educational institutions?

YES NO

2. If you answered yes to the above question, should this be a legislative plan or an agreement by official representatives of state agencies and institutions?

_____Legislative
_____Agreement by officials

3. Do the representatives of industry, labor, and the community have enough voice in policy making when serving in an advisory capacity to the State Board for Vocational Education?

YES NO

4. Is there a danger of inflexibility in area vocational and technical education programs when provisions for such schools are constitutional?

YES NO

5. Are the objectives of the area vocational-technical school distinguishably different for the secondary student and for the post-secondary school student?

YES NO

6. Some states have experienced a change in the philosophy of institutions, going from strictly area vocational-technical type schools to community colleges. Is this type of change to be a common pattern of development in other states?

YES NO

7. When an area vocational-technical school is operated on a shared time basis (1/2 day, alternate weeks, etc.) for

secondary school students, is there a problem of conflicting philosophies and objectives within the two schools resulting in confusion to the students?

YES NO

8. When vocational and technical courses are offered for the high school student at the pre-employment level, and a follow-up study of the graduates indicates the majority pursuing professional college courses rather than immediate employment, does this imply a failure to reach the objective of vocational and/or technical courses?

YES NO

9. Is there a definite probability the community college, by offering occupational programs, will gradually change the present objectives of vocational and technical programs? (Similar to the change in the objectives of the Land Grant Colleges.)

YES NO

10. With the present emphasis on high level technical programs, should higher education have a role in the administration and supervision of vocational and/or technical programs at the post-secondary level?

YES NO

11. What do you consider the three common objectives of the area vocational-technical schools or area programs? (rank three in order, 1, 2, 3)

_____A. To supply skilled workers to local and state employers.

_____B. To supply technicians to local and state employers.

_____C. To attract post-secondary students not interested in a baccalaureate degree program.

_____D. To upgrade technicians and skilled workers.

_____E. To serve drop-outs from high school and college.

_____F. To increase the holding power of the schools and colleges.

_____G. To give opportunity for the student's maximum development of aptitudes.

_____H. (other)

12. Should the standards and recommendations to accredit area vocational and technical school programs at the secondary and post-secondary level be set solely by the State Board of Education? (The State Board of Vocational Education establishing program and matching fund policy.)

YES NO

13. In an area vocational-technical school functioning at the post-secondary level, should an agency of higher education have some responsibility for accreditation?

YES NO

14. When a technical institute is designated as an area technical school, should accreditation be by a state agency for higher education?

NO ACCREDITATION YES NO

15. Considering the changes of the last three years, is administration and supervision by an agency of higher education detrimental to the objectives of vocational and technical education?

YES NO

16. Since vocational and technical education are broadening their mass appeal, both vertically and horizontally, should the practice of the majority of the states having the State Board of Education also serving as the State Board for Vocational Education be re-evaluated with a goal of broadening the membership of this policy making body?

YES NO

17. Should an area vocational-technical school under the supervision of the State Board of Education be permitted to award the <u>associate degree</u> on completion of the two-year post-secondary program requirements?

YES NO

18. Is the quality of the area school program better when offered either at the secondary or post-secondary level than when the area vocational-technical school offers both levels of programs?

NO SIGNIFICANT DIFFERENCE YES NO

19. If an area vocational-technical school offers a single field of training, either vocational (skill trade) or technical, will the area school have a better and more effective program than if it were offering both fields?

NO SIGNIFICANT DIFFERENCE YES NO

20. When community colleges are designated as area vocational and/or technical schools, is there a tendency to misuse federal matching funds by cutting down on local effort or transferring funds within the local budget and supplanting with federal money?

YES NO

21. Can departments of junior colleges, geographically located to conveniently serve a population, be successfully designated as area vocational-technical centers?

YES NO

22. After a community college is designated as an area school, how many vocational and/or technical programs should be a minimum number to be offered?

_____5-10 _____11-20

23. Does a technical institute that is a part of a public, graduate degree granting college or university offering a high level technical program have more attraction to students capable of being successful in such a program than does an equal program at a community college?

YES NO

24. Is a technical institute, in total, a better institution for specialized education when associated with a graduate degree granting college or university than as an independent institute?

NO SIGNIFICANT DIFFERENCE YES NO

25. Do post-secondary educational institutions with authority to offer transfer credit have more attraction for students than the post-secondary institution not authorized to offer transfer credit?

YES NO

26. When a community college is designated as an area school, should the classrooms and laboratories be integrated?

YES NO

27. Do employers find graduates of secondary school vocational programs employed in the specific field as their training more successful than the employees not having had vocational training?

NO SIGNIFICANT DIFFERENCE YES NO

28. For the successful post-secondary technical student, what courses are the most important at the secondary level?

_____technical courses

_____advanced courses in mathematics, science and communications.

29. For the successful post-secondary vocational student, what courses are the most important at the secondary level?

_____vocational courses

_____a variety of exploratory courses

30. Should general education, other than remedial, be offered in an area vocational-technical school?

YES NO

31. Is the role of the area vocational-technical school in actual operation more for extension than for pre-employment training?

YES NO

32. Do area vocational-technical schools attract the type of student in a quantity necessary for high level pre-employment technical courses?

YES NO

33. Is there any problem in present day society of the label "undemocratic" being applied to the area vocational-technical school since it does not teach the liberal arts?

YES NO

34. Is prestige a factor in determining the institution in which a student will take post-secondary vocational or technical training?

YES NO

35. When university parallel and occupational programs are offered on the same community college campus, are there conflicts between students in the university parallel programs and those in the occupational programs?

YES NO

36. Does the inclusion of a "core" of liberal arts courses for all students--vocational, technical, and college preparatory--tend to break down the status symbol of particular programs?

YES NO

37. How do teachers in a comprehensive educational institution value the "certificate of proficiency" program when compared to an "associate degree" program?

HIGHER EQUAL LOWER

38. How do students in a comprehensive educational institution value the "certificate of proficiency" program when compared to an "associate degree" program?

HIGHER EQUAL LOWER

39. How do industrial employers value the "certificate of proficiency" when compared to the "associate degree" and held by a potential employee?

HIGHER EQUAL LOWER

40. Should the associate degree be awarded for the successful completion of a two-year post-secondary vocational trade program?

YES NO

41. Do the graduates of the area vocational-technical school more nearly meet the needs of industry than do the graduates of the same name program in a community college?

NO SIGNIFICANT DIFFERENCE YES NO

42. Do programs of the technical institutes better prepare the technical students with technical skill requirements than do the community college programs?

NO SIGNIFICANT DIFFERENCE YES NO

43. Do programs of the technical institutes better prepare the students for total job success than do the programs of the community college?

NO SIGNIFICANT DIFFERENCE YES NO

44. At the post-secondary level, what per cent of students enrolling in a two-year technical program actually complete the requirements for graduation?

_____10%-50% _____51%-100%

45. At the post-secondary level, what per cent of the students enrolling in a two-year vocational program actually complete the requirements for graduation?

_____10%-50% _____51%-100%

46. Should the chief-administrator in an area vocational-technical school have:

1._____a college degree in vocational or technical education.

2._____a teaching certificate in vocational or technical education.

3._____an administrator's certificate.

4._____an advanced degree.

47. Should vocational and technical teachers in the area schools meet the same standard certification requirements as secondary general education teachers?

YES NO

48. Do standard secondary school certification requirements have a retarding effect on current industrial innovations by vocational and technical teachers?

YES NO

49. Disregarding the requirements of federal matching funds, would college credit toward a professional degree in technical areas attract a different student to technical programs than does the two-year associate degree program?

YES NO

50. What per cent of the laboratories in the area schools can be properly utilized as dual purpose--serving both as a vocational laboratory and as a technical laboratory?

_____10%-50% _____51%-100%

51. In an area vocational-technical school offering both secondary and post-secondary programs, what per cent of the secondary graduates will:

attend a post-secondary vocational-technical school?

_____10%-50% _____51%-90%

attend the same post-secondary institution and continue in the same program as they did as secondary students?

_____10%-50% _____51%-90%

52. Which institution offers the best program of technical training? (rank 1, 2, 3)

_____ area vocational-technical schools.

_____ community colleges.

_____ technical institutes.

53. Which institution offers the better program of post-secondary vocational training? (rank 1, 2)

_____ area vocational-technical schools.

_____ community colleges.

BRIEF DEFINITIONS FOR OPINIONNAIRE

ACCREDIT - To designate an educational institution as meeting the required standards or accepted criteria of quality established by a competent agency. The accreditation agency may be a regional association, a governmental bureau or a state agency.

AREA VOCATIONAL-TECHNICAL SCHOOL - A school or program involving a large geographical territory usually including more than one local basic administrative unit. It may offer specialized training to high school students who are preparing to enter the labor market. It also may provide vocational and/or technical education to persons who have completed or left high school and are available for full-time study.*

COMMUNITY COLLEGE - A two-year college operated by the board of education of a local basic administrative unit (including the independent local board for one or more community colleges). Instruction is adapted in content, level and scheduled to meet the needs of the local community.*

EXTENSION CLASSES - Classes for instruction to employed workers for the purpose of increasing or extending their skill and knowledge in the trade or occupation in which they are or have been engaged.*

HIGHER EDUCATION - Any type of education beyond the twelfth grade that is given for credit or accepted for credit by a baccalaureate degree granting institution.#

HIGH LEVEL PROGRAMS - The level of a program that studies theoretical knowledge approaching that of the professions, combined with practical "know-how" about instruments, tools and laboratory equipment used in industrial or professional activities.+

PRE-EMPLOYMENT CLASSES - Classes which are organized, brief, with intensive instruction for a workers entrance into employment in a specific job; or retraining for workers leading to new duties or a new position.*

TECHNICAL INSTITUTE - A school at the post-secondary level which offers technical education in one or more fields to prepare people for employment in positions which lie between the skilled workers and professional scientists or engineers.*

TECHNICAL EDUCATION - Emphasizes work in the field of science and mathematics, frequently related to industry and engineering. Much attention is given to technical knowledge but stresses practice and skill in the use of

tools and instruments leading to competence in a technical occupation and usually to an associate degree. The training usually includes a core of general education courses.+

VOCATIONAL EDUCATION - Training or retraining conducted as a part of a program to fit individuals for gainful employment as semi-skilled or skilled workers in recognized trades or occupations.

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*Definitions of terms in Vocational Technical and Practical Arts Education by American Vocational Association.

+Technical Education in the Junior College by Norman Harris.

#Oklahoma State Statutes, Higher Education Code, 1965.

APPENDIX C

FOLLOW-UP LETTER SENT TO SAMPLE OF JUNIOR COLLEGE PRESIDENTS, SCHOOL SUPERINTENDENTS, AND NATIONALLY RECOGNIZED LEADERS IN VOCATIONAL AND/OR TECHNICAL EDUCATION

OKLAHOMA STATE UNIVERSITY • STILLWATER
School of Industrial Education
Industrial Building Room 104
74075

Dear Sir:

Approximately three weeks ago an opinionnaire survey form regarding area vocational technical schools was sent to you. As of this date I have not received your return. Since this survey was sent to such a small number of carefully selected persons it is important that each individual responds. If you have not already done so will you please take the time to react to the opinionnaire and return it?

Thank you for your cooperation.

Sincerely yours,

Scott Tuxhorn

APPENDIX D

OKLAHOMA CONSTITUTION

APPENDIX D

OKLAHOMA CONSTITUTION

Article XIII, Section 1-A of the Oklahoma Constitution; Title 70, Section 1971: All institutions of higher education supported wholly or in part by direct legislative appropriations shall be integral parts of a uniform system to be known as "The Oklahoma State System of Higher Education."

Oklahoma State Laws

Title 70, Section 1-16: All children between the ages of six (6) . . . and twenty-one (21) years on or before September 1st shall be entitled to attend school free of charge in the district in which they reside. . . . that children who do not reside in a school district and who have not been transferred thereto . . . may be admitted to the schools of such district on a tuition basis only; and no such nonresident or nontransferred pupil, . . ., shall be allowed to attend school in any school district unless there shall have been paid in advance yearly or by semester as determined by the local board of education, to such district, before such attendance during any period, a tuition fee equal to the per capita cost of education for a similar period in such district the preceding year.

Title 70, Section 4-36: The board of education of every school district in the state is hereby authorized to provide educational courses for all persons and said board is authorized to provide necessary buildings, equipment and other facilities for such persons. Such educational courses may include grades one (1) - twelve (12), inclusive, for persons between the ages of six (6) and twenty-one (21) years and may also include nursery and kindergarten classes, junior college grades, vocational instruction, adult and part-time classes and other special classes. The curricula and qualifications of teachers shall be determined by the State Board of Education except as otherwise provided herein. Provided any school district offering educational courses above the twelfth (12) grade or for adult classes shall charge tuition fees for such courses unless the school district has funds available to pay the cost thereof, which are not needed to maintain the common school program.

Title 70, Section 4-37: Any School district establishing educational courses above the twelfth (12) grade shall, in order to insure offering in such courses comply with the regulations and standards set up by the State Board of Education and the State Regents for Higher

Education, which shall establish a committee to supervise the courses above the twelfth (12) grade on all matters relating to education offering. Representative of the facilities of the State University and of Oklahoma State University - - - shall be among the membership of this committee. All institutions of higher learning in the State of Oklahoma supported wholly or in part by the state are authorized to accept, as of standard worth, grades and credits which may be awarded to students upon the completion of such courses.

Title 70, Section 4-38: Any person who is of legal age and a resident of Oklahoma, over the age of twenty-one (21) and under the age of twenty-six (26) who has not completed the twelfth (12) grade in school shall be given the same educational opportunities and privileges provided by law for children over the age of six (6) and under the age of twenty-one (21), upon submitting to the board of education of the school district in which said person resides evidence satisfactory to the board showing that during the time before he was twenty-one (21) years of age he was unable to attend school for the definite period or periods of time because of physical disability, or service in the United States armed forces or auxiliary organizations, by reason whereof it was impossible for him to complete the twelfth (12) grade before reaching the age of twenty-one (21) provided further said pupil shall be counted in the average daily attendance of the district where he attends school during the period of time provided for in this Article for the purpose of calculating state aid for the district.

Title 70, Section 1983: Private, denominational and other institutions of higher learning (other than those supported wholly or in part by direct legislative appropriations) may become coordinated with the Oklahoma State System of Higher Education, under regulations as set forth by the Regents, ..., but such private, denominational, or other institution of higher learning shall never receive any financial aid out of any appropriations made by the Legislature and over which said Regents may have control.

Title 70, Section 1990: Higher Education ... is defined to include all education of any kind beyond or in addition to the twelfth (12) grade or its equivalent, as that grade is now generally understood and accepted in the public schools of the State of Oklahoma; . . . .

Title 70, Section 2201: Any school district which has established junior college educational courses above the twelfth (12) grade which complies with the regulations and standards set up by the State Board of Education and the State Regents for Higher Education, and by its Board of Education, acting for and in behalf of such school district, . . ., shall have authority to charge and collect from all students in attendance at such college, school, or institution, or from any

specified class or part thereof for which such facilities are so deemed necessary, fees and charges for the use and availability of such buildings and structures and for the services or commodities to be made available by such plants, systems or facilities. . . .

Title 70, Section 2144-E: The schools of Oklahoma are composed of private schools and all schools supported by public taxation and consist of elementary and secondary schools including not to exceed two (2) years of junior college work, night school, adult and other special classes and vocation instruction.

The Oklahoma Higher Education Code, 1965

Title 70, Section 3206-g: It (the State Regents) may coordinate private, denominational and other institutions of higher learning with the State System under regulations set forth by the State Regents.

Title 70, Section 3212: ...No such institution, however, shall receive any financial aid out of any appropriations made by the Legislature and over which the State Regents may have control.

Title 70, Section 1202: Municipal Junior Colleges shall comply with, and be accredited under, regulations and standards prescribed by the Oklahoma State Regents for Higher Education.

Title 70, Section 1203: Municipal Junior Colleges shall offer only, those courses and programs and shall grant only those certificates and degrees which may be authorized by the Oklahoma State Regents for Higher Education.

APPENDIX E

STUDY DATA FROM STATE PLANS FOR VOCATIONAL EDUCATION AND STATE EDUCATION LAWS

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Alabama:

The Alabama State Board of Education is the State Board for Vocational Education. The State Superintendent is the Chief executive officer of the State Board, as designated by statute. The State Board of Education has control and supervision over all public education except the University, Alabama College, and the Alabama Polytechnic Institute.

The State Board consists of eleven members, nine appointed by the Governor for six-year terms, and the Governor and State Superintendent of Schools as ex officio members.

The 1961 Legislature added a new duty to the State Board of Education by creating an Alabama Trade School and Junior College Authority. This spells out the responsibility of the State Board for controlling, supervising and coordinating the trade school and junior college programs. (Article IV, Title 52, Section 509 /96/).

The 1963 Legislature approved the construction of fifteen State vocational-technical schools; four technical junior colleges and ten State junior colleges. The junior colleges may, when the programs are approved, award the associate of arts or science degree.

The State provides a per cent of operating funds, as funds allow, along with a State Bond Fund that is available for local matching of funds for capital construction.

A minimum of 33 1/3 per cent of P. L. 88-210 funds must be spent for area schools or for post-secondary programs until 1968, then the minimum will drop to twenty-five per cent.

Local school districts may get State funds for vocational programs only after an occupational survey shows employment opportunities exist and the training programs conform to the specific employment needs. The main objective is for entry employment training but there are extension programs.

The Alabama State Board for Vocational Education may construct and operate area schools. The preferred way is for information and technical assistance to be supplied by the State Board to local boards of education, and the local boards operate the area schools.

Teachers' salaries may also include leave for education. Funds may be used for transportation of students to and from school.

Alaska:

The State Board of Education is the State Board for Vocational Education with responsibilities for vocational education administration throughout the State. The State Board of Education has no administrative authority.

The State Board members are appointed by the Governor for three-year terms with confirmation by the Senate; however, they, as well as the appointed State Commissioner of Education, serve at the pleasure of the Governor.

Alaska has two area vocational-technical schools, one at Nome and one at Kodiak. The Anchorage Community College is designated as an area vocational-technical school.

The State of Alaska pays a per cent of a vocational teacher's salary and travel expense with the local unit financing the remainder of the costs.

Arizona:

The Arizona State Board of Education is composed of ex officio members--the Governor, the Superintendent of Public Instruction, the President of the University of Arizona, the President of Arizona State University, and the President of Arizona State College, along with three members appointed by the Governor. The board is designated as the State Board for Vocational Education.

The State Board of Education is authorized to establish technical schools as it deems advisable. The Legislature has authorized a system of junior colleges, and these may work in cooperation with two or more high school districts to offer vocational and technical training. Phoenix College has a technical education program.

The State pays a per cent of the total approved expenditures of the programs without specifying salary or other factors. A State junior college may receive up to $150,000 in state aid.

All of the academic courses of the junior colleges must be approved by the University of Arizona, and for a three-year period. The junior colleges are under the control of a State Board of Directors for Junior Colleges.

Arkansas:

The Arkansas State Board of Education is the State Board for Vocational Education. The State Board consists of nine members appointed by the Governor for nine-year terms. At least one member of the State Board must be from each of the six congressional districts. The appointees must also be confirmed by the State Senate. The State Superintendent is appointed by the State Board and serves at their pleasure, but is not an ex officio member of the State Board.

There are area schools in operation at the secondary level. These schools also offer post-secondary courses.

The community junior colleges offer technical courses and have the opportunity for transfer credit and the associate degree. The community colleges are under the Commission on Coordination of Higher Education through the State Community College Board.

The State provides fifty per cent of the approved expenses for a vocational program, based on the State salary schedule. If adult programs are offered, one hundred per cent of the funds are supplied by the State. A maximum of five hundred dollars travel and conference expense is available to the instructors and supervisors of vocational and technical programs.

The State Board for Vocational Education may construct and operate area schools. These schools serve the populace of the entire state.

The area school furnishes transportation for the students, bus or contract.

California:

The ten members of the California State Board of Education are appointed by the Governor, with the consent of the Senate, serve four-year terms, and also serve as the State Board for Vocational Education.

The California junior colleges carry on an intensive technical and vocational program. Fifty-three junior colleges offer over 180 different curricula in twenty fields of specialization. California is rapidly increasing the number and scope of the vocational and technical programs available

through the tuition free junior college system. In fiscal 1964, the State provided ten million dollars to combine with federal funds for area vocational-technical school construction purposes.

The California area schools are post-secondary "education centers". These centers provide for enrollments of selected high school age students who have either dropped out of school or have unusual individual problems. The area schools are not designed for, nor operated for, the maturity level of secondary school students.

The State Board for Vocational Education may construct and operate area vocational-technical schools. The State Board would prefer the local education agencies sponsor and operate the area schools. Each junior college that has a qualifying program, and makes application, is designated as an area vocational-technical school.

California statutes provide the State Board of Education with control over "high schools, technical schools, adult schools and junior colleges."

Many of the technical curricula offered at the junior colleges are approved for transfer credit even though the primary objective is employment preparation.

The State provides funds on a formula basis of $125 per student in A.D.A. with the junior colleges receiving $543 per resident pupil in A.D.A. State aid for adults enrolled in the junior colleges is a maximum of $220 per individual. With these operating funds by the State, there are no "special" vocational operating funds as such.

There is, for junior colleges, a twenty per cent matching fund for construction from the State in addition to special grants provided for area vocational-technical schools under P. L. 88-210.

Colorado:

The Colorado State Board for Vocational Education is an independent body whose members are appointed by the Governor for six-year terms. There are seven members on the State Board and they must include a representative of each of the following:

1. An organization of employers.
2. An organization of employees.
3. The distributive occupations.
4. A practicing farmer.
5. A practicing homemaker.

6. The office occupations.
7. The trade and industries.

While the law specifies the State Board for Vocational Education as being a division of the State Board of Education, the actual function finds the State Board for Vocational Education independent of other governmental agencies.

A recent State law has designated the State Board for Vocational Education as an educational institution. (Chapter 146, Article I, Section 6, Colorado Statutes).

Colorado has designated five junior colleges, two four-year colleges and three secondary schools as area vocational-technical schools. The State Board, working with its advisory council, has designated fourteen geographic areas of the State to develop area vocational-technical programs to serve local students and industry.

The State provides funds for a per cent of the approved program expenses for approved vocational programs. This changes each year, depending on the number of programs and available funds. Junior college funds are provided on a ratio of $2100 for every seven full time students.

The State Board of Education may accredit the technical programs at the junior colleges for the associate degree or for transfer credit.

Connecticut:

The Connecticut State Board of Education is the State Board for Vocational Education. The State Board of Education's duties and authority is not constitutional and seems rather loosely defined by statute. The nine members of the Board are appointed by the Governor for six-year terms.

The State Board actually operates the regional vocational and technical schools in Connecticut. There are ten regional vocational-technical schools in operation. There are four technical institutes in operation with two more planned. The technical institute may award the associate degree but their main goal is employment training.

Connecticut has a separate division called the Evening Institute Division of the Department of Education which offers a wide variety of adult and extension courses.

There are two community colleges with approved vocational programs in distributive education and office and business education programs.

The State Board for Vocational Education may provide transportation for students of the regional vocational-technical schools or the technical institutes until the student is twenty-one years of age. There is a maximum of $150 per pupil for transportation that the State will reimburse.

Delaware:

The Delaware State Board of Education is also the State Board for Vocational Education. The State Board consists of six members, appointed by the Governor for three-year terms with no more than three members from the same political party.

The State Board of Education does not have authority for an educational program beyond the twelfth grade, but they may supervise adult programs.

There are area vocational-technical centers for several school districts and operated by a separate Board of Trustees. The Legislature, in 1965, approved reimbursement for operating funds in the full amount for the approved vocational and technical programs.

An unusual statement is found in this State Plan in Section 8-A, "The student must have an aptitude and interest or he will be rejected and his behavior must be, and remain, good or he will be suspended."

The State of Delaware provides a scheduled amount for area school financial support, with local funds used to supplement the programs. The State furnishes all costs of necessary transportation with local support available for extended operations. Sixty per cent of construction costs are provided by the State for schools for White children and one hundred per cent for schools for Negro children.

Florida:

The State Board of Education is also the State Board for Vocational Education. The State Board is composed of five ex officio members--the Governor, the Secretary-of-State, the Attorney General, the State Treasurer and the State Superintendent of Public Instruction.

The area vocational-technical schools are set up as county schools and receive State funds as all other schools do. The junior colleges are also designated as area technical schools and are receiving State and federal support for construction and operation. A limit of no more than fifty per cent of federal construction funds may be used for junior colleges. This limit is imposed by the State.

There are several schools competing for funds, for program approval, and for students. The Chancellor of the State Board of Regents has the responsibility for liaison between board and agencies in coordinating programs.

The State Finance Foundation program goes through the junior college level and is based on a scheduled amount minus the district taxpaying ability. The junior colleges have a correction factor applied for extra salaries and supervision. Transportation is reimbursed, up to $1,250 per designated unit per year.

The associate degree may be awarded for technical program completion in the junior colleges.

Georgia:

The State Board of Education in Georgia is also the State Board for Vocational Education. The State Board consists of ten members appointed by the Governor, with the consent of the Senate, for terms of seven years.

The State of Georgia has developed fifteen area vocational-technical schools with planning for twelve more. These schools are operated at the post-secondary level, but no credit toward a degree or for transfer is awarded. These schools offer training and educational opportunities to the rural area students as well as the industrial center residents. The schools are joint financed, local, State and federal. The North Georgia Technical and Vocational School at Clarksville, and the South Georgia Technical and Vocational School at Americus are State operated and financed. They are designated as regional schools. Dormitory space is available at these two schools.

Neither the State nor the area school district may provide transportation for students.

The State provides funds to supplement vocational teachers' salaries and vocational supervisors' salaries and for a per cent of the base schedule of vocational teachers' salaries for the operation of the program. The State also provides a calculated amount for capital outlay costs.

Hawaii:

The Hawaii State Board of Education is also the State Board for Vocational Education. The State Board consists of eleven members, the State Superintendent of Public Instruction serving as an ex officio member while the others are appointed by the Governor from a list submitted by local school advisory councils. The term for a State Board member

is four years. The State Superintendent is appointed by the State Board.

The State Board of Education has authority for supervising and accrediting programs through the fourteenth year of school in certain institutions.

The community colleges are under the authority of the University of Hawaii as well as their vocational and technical programs. The community colleges have been authorized by the Legislature to construct and operate area vocational-technical schools. State law definitely prohibits the awarding of transfer credit toward the baccalaureate degree, but, the associate degree may be awarded through the community colleges for vocational and technical programs.

While this may seem unusual, the fact that there are no local school districts in this State makes the plan more logical. Statutes also provide that technical programs will be limited to certain schools which are under the State Board of Education. The State pays for all education.

Idaho:

The Idaho State Board of Education is also the State Board for Vocational Education. The State Superintendent of Public Instruction is elected by the people, and serves as an ex officio member of the State Board of Education and, by statute, is the executive officer of the State Board for Vocational Education. The Governor appoints five other members to the State Board of Education for five-year terms.

The State Board of Education can supervise and administer educational programs through the fourteenth grade, and may operate community colleges or specialized schools. There are several area vocational-technical schools in operation as divisions of junior colleges or a division of the Idaho State University. High school students do not attend these schools as they are operated at the post-secondary level.

The area school may provide transportation for students and be reimbursed a small amount from the State. The State provides a per cent of funds to aid each approved vocational program.

As the area school programs are through the junior colleges or community colleges, the State does not participate as directly in financial aid as when vocational programs are offered at the secondary level.

It is possible to be awarded the associate degree by satisfactorily completing the community college technical programs. Transfer credit may not be awarded toward a professional degree.

Illinois:

The State Board for Vocational Education is an independent body in Illinois. The State Board is composed of twelve members, six ex officio--Superintendent of Public Instruction, Director of Registration and Education, Director of Agriculture, Director of Labor, Director of Mental Health, and the Director of Public Health; and six members appointed by the Governor.

The vocational and technical programs authorized under Title III of the George-Barden Act and Title VIII of the National Defense Education Act are organized and administered by the junior and community colleges in Illinois. The General Assembly approved a plan for a State Junior College Board to carry out the General Assembly approved master plan for a state-wide system of junior and community colleges. Each community college will have its own board of control and taxing unit. The community junior college of Class I rating must have fifteen per cent of its programs in vocational or technical education.

Very few high school students may enroll in vocational or technical courses at the junior colleges. They are for post-high school students or the more mature dropout students.

While the State Plan for Vocational Education provides no transfer credit shall be awarded in the vocational or technical courses, there are junior colleges awarding the associate degree to persons satisfactorily completing the technical programs.

State funds are provided for transportation, up to fifty per cent of the approved costs. For students in vocational or technical programs at the junior college level, $7.60 per semester hour in State funds is provided to the school. Separate vocational funds are supplied by the State for forty per cent of the approved costs of an approved program.

Indiana:

The 1965 General Assembly of Indiana enacted a law which made provisions for and appointed a new State Board for Vocational Education. The members include--the Governor, the State Superintendent of Public Instruction, a representative of the State Board of Education, a representative of the Board of Trustees of Indiana Vocational-Technical College, a representative of the vocational teachers, and four members appointed by the Governor.

This Act provides for high school vocational education to remain a function of the public schools. All post-secondary vocational and technical education is to be provided through the Indiana Vocational-Technical College Law.

Much of the adult education will remain in the public schools.

All vocational and technical programs are under the supervision of the State Director of Vocational and Technical Education. The Vocational-Technical College Law provides for the creation and operation of area vocational-technical schools, technical institutes, and community colleges.

There are presently nine area schools serving post-secondary and adult vocational and technical students with three technical center programs operating through Purdue University and its extension centers.

The State provides a per cent of the cost of approved vocational programs. Provisions are in the law for the awarding of the associate degree, but some work remains to be done before the degree is finally authorized.

Iowa:

The Iowa State Board of Public Instruction is also the State Board for Vocational Education. Eight of the members are elected for six-year terms from each of the congressional districts by delegates of individual boards of education within the district. The ninth member is appointed by the Governor, with the consent of the Senate.

Iowa has sixteen community or junior colleges and five of these have been designated as area vocational-technical schools with another five offering approved vocational courses. Each of the community colleges is currently expanding their vocational and technical programs to become approved as an area center.

Area schools are also being developed under a General Assembly provision for area schools and community and junior college districts. The plan calls for twenty schools of this type in the State.

Some of the schools are awarding the associate degree upon satisfactory completion of the technical programs. These courses are not transferable toward a baccalaureate degree.

The community colleges operate with an open-door policy. A high school graduate or an adult must pay some tuition, but high school dropouts or other special students are not required to pay. The local area levies three-fourths of a mill to pay for the area vocational or technical programs.

The State Board of Public Instruction can supervise and administer education programs through the fourteenth year.

The school district can provide transportation for vocational and technical students but the State will only provide aid up to thirty dollars per student per year, and this on a formula basis.

The State provides funds for twenty-four per cent of the cost of day school programs and fifty per cent of the cost of evening or adult programs.

Kansas:

The Kansas State Board of Education is also the State Board for Vocational Education. There are seven members appointed by the Governor for three-year terms. At least one member must be from each legislative district and no more than four may be from the same political party.

The State Board may supervise and administer programs of education through the fourteenth year. This includes junior and community colleges. The local voters must approve the extension of the school program for the thirteenth and fourteenth years.

At all times, the State Board of Education and the Director of the State Department of Vocational Education must cooperate with the Kansas Board of Regents in establishing and accrediting vocational and technical programs.

Area vocational-technical courses must be so designated by the State Board for Vocational Education.

A county community college is controlled by a local Board of Regents.

Specific technical programs are not under the same provisions of the law as area school programs. Kansas has one technical institute under the State Board of Regents currently operating.

The master plan indicates a maximum of twenty-two community junior colleges for the State. Considerable effort has been exhibited to develop a state-wide system for vocational and technical education.

There are high school students enrolled in the area school but most of the curricula are designed for the post-secondary or community college type students.

The State assists in financing vocational programs on a percentage basis. The junior college programs are aided by three dollars per credit hour, along with other State funds.

Kentucky:

The State Board of Education in Kentucky is also the State Board for Vocational Education. The State Board consists of eight members, the State Superintendent of Public Instruction, as an ex officio member, and seven members appointed for four-year terms by the Governor.

Kentucky has city area vocational-technical schools, county area schools, joint-district area schools and some eleven area vocational-technical schools operated directly by the State Board for Vocational Education.

High school students may attend the schools as well as post-high school students but transfer credit or degrees are not awarded at the post-secondary level. High school students may receive credit toward graduation at the area school.

Louisiana:

The State Board of Education is also the State Board for Vocational Education. The State Board consists of eleven members, all elected by the people from certain districts. Three are elected for six-year terms and eight are elected for eight-year terms.

The State Board, by constitutional provision, supervises and administers all of the free public schools and all higher education, except Louisiana State University. The State Board of Education is a corporate body.

The State Board of Education supervises thirty-two area vocational-technical schools, five of which are junior colleges designated as area schools. The voters of Louisiana approved a constitutional amendment in 1965 which requires that all junior colleges remain as junior colleges and may never become four-year colleges.

Each of the area schools offer trade and industrial occupations and more than one technical program. High school credit may be given, but no transfer credit or associate degrees are currently being awarded in the designated area vocational-technical programs.

The State provides aid at a fixed amount per vocational program. This, however, varies in conjunction to the total State appropriation for vocational education.

Maine:

The State Board of Education in Maine is also the State Board for Vocational Education. The State Board consists of

ten members appointed by the Governor for five-year terms of office.

Maine has some area vocational-technical schools operating at the post-secondary level. Regulations will not permit junior colleges being designated as area schools. There are vocational-technical institutes which are, in effect, area schools. The area vocational-technical schools that are to serve the secondary students have not received legislative approval. The Legislature feels the local school should provide vocational and technical education in the comprehensive type school programs.

The State Board has the authority to supervise and administer school programs through the fourteenth grade. They do not provide for an associate degree but do offer diplomas and certificates.

The State Board provides for part-time or part-time continuation classes for persons between fourteen and eighteen who are employed. These classes are to improve their reading, writing, and arithmetic.

The vocational-technical institutes are so organized that a local district, which is a part of the tax supporting unit, may send eligible students at little or no cost to the student.

The State provides fifty per cent of the approved vocational teacher's salary and fifty per cent of an adult teacher's salary.

Maryland:

The Maryland State Board of Education is also the State Board for Vocational Education. The seven member board is appointed by the Governor. Each member's term of office is seven years.

Maryland uses the community colleges, the comprehensive high schools, and the Polytechnical Institute to carry out a program of vocational and technical education. The present programs are operating at the post-secondary level. Provisions were not found authorizing the associate degree to be awarded for the completion of a technical program.

A new State law provides area school funds and permits two or more counties to join together to build and operate a community college. The State provides $2,000 times the proposed building capacity, but not over fifty per cent of the cost of the building construction. The State further provides one-third of the operating costs of a community college up to a maximum of $225 per enrolled student.

One hundred per cent of all approved funds for adult education programs are provided by the State.

Massachusetts:

The Massachusetts State Board for Vocational Education consists of the State Board of Education (nine members with nine-year terms and appointed by the Governor), the Commissioner of Education, and one person, appointed by the Governor, who must be an active local union member or affiliated with a national or international union.

The area schools are called regional vocational-technical schools and are developing rapidly in Massachusetts. There are at least seven in operation or under construction along with three technical institutes.

The associate degree may be awarded for successfully completing the technical programs at the technical institutes through an agreement with the Board of Collegiate Authority.

There are community colleges in Massachusetts but they are not extensively involved in vocational or technical education programs.

The State pays fifty per cent of the maintenance cost of vocational programs and two-thirds of the teacher's salary. A student attending a vocational school in another district will have fifty per cent of his tuition and transportation costs paid by the State.

High school students may attend the regional vocational-technical schools if they are over sixteen and have the aptitude to be successful.

Michigan:

The Michigan State Board of Education has authority over all education in the State except in those institutions offering the baccalaureate or graduate degrees. The State Board for Vocational Educations is composed of--the State Superintendent of Schools, the President of the State Board of Education, the President of the University of Michigan, the President of Michigan State University, and three members who must represent employers, employees and agriculture interests. The last three members are appointed by the Governor for two-year terms.

Area school districts may be formed in Michigan; however, the State has nineteen community colleges which are currently operating vocational and technical programs. Five

new community colleges are under construction and plan to offer vocational and technical programs. The State Board designated some of the large city vocational schools as area schools. The community colleges offer some programs for high school students within the area who are interested and have the aptitude for certain vocational or technical programs.

While transfer credit is not being given, some of the community colleges are preparing to offer the associate degree in technical programs.

The State awards each community college $40,000 for capital outlay at the outset of a building program and then an amount per enrolled student for additional construction. The State furnishes fifty per cent of the operating costs of the community college, up to a maximum share of $224 per student. The State supports the vocational programs on a scheduled amount per program.

Minnesota:

The Minnesota State Board of Education and the State Board for Vocational Education are the same members. They are seven in number, appointed for seven-year terms by the Governor, with the consent of the Senate, and they, in turn, appoint the Commissioner of Education.

Minnesota has twenty-four area vocational-technical schools which geographically serve the entire State. St. Paul has one area school with a $7 million plant. The State has financially assisted local bond funds to construct many classrooms and laboratories in the area schools. These schools are operating at the high school and post-high school level.

There are fourteen junior colleges under the Minnesota State Board for Junior Colleges offering approved vocational and technical programs. They are not granting transfer credit nor are they awarding the associate degree.

The State will provide $48 per student to assist in out-of-district transportation for the vocational student. The junior college receives $300 per student in state aid. Vocational programs receive a per cent of approved expenditures reimbursement from the State.

Mississippi:

The State Superintendent of Public Instruction, the Attorney General, and the Secretary-of-State compose the State Board of Education and the State Board for Vocational Education.

Mississippi is concentrating its vocational and technical programs in the junior colleges. Seventeen junior colleges have constructed buildings and developed new programs to provide post-secondary education programs in vocational and technical education.

The technical institute's programs are a part of higher education, beyond the junior colleges. The institutes operate under the Chancellor of the University of Mississippi and have their own appropriation as well as federal matching funds.

The State furnishes one-half of the operating and construction costs of the junior colleges in addition to fifty per cent of the vocational teacher's salary.

Missouri:

The Missouri State Board of Education also serves as the State Board for Vocational Education. The State Board is composed of eight members appointed for eight-year terms by the Governor.

Missouri has sixteen area vocational schools operating at the high school and post-high school level as well as serving adult groups.

A provision of school law allows school districts to join together to form junior college districts. There are seven junior colleges in operation with others in the planning stages. These junior colleges are controlled by the local school boards and the State Board of Education. They offer vocational and technical programs. While these courses are not for baccalaureate degree credit, some are being offered toward an associate degree, as well as, preparing the student for immediate employment.

The vocational programs are reimbursed from the State on a percentage of the approved expenditures' basis, depending on total appropriations and number of programs. The junior colleges are partially financed by the State on the basis of $200 for each thirty credit hours completed.

Montana:

The State Board of Education is also the State Board for Vocational Education. The State Board consists of eleven members. The Governor, the State Superintendent of Public Instruction and the Attorney General are ex officio members of the State Board. Eight other members are appointed by the Governor, with the consent of the Senate--four from each congressional district with no more than four from the same

political party. The State Board has authority for secondary education and higher education supervision through the University of Montana.

An area school is in operation in Helena. Two junior colleges and two units of the University are offering vocational and technical courses. All of these programs are at the high school or post-high school level with no credit toward the baccalaureate degree.

The State provides only a part of the expenses of an approved vocational program.

Nebraska:

The State Board of Education is also the State Board for Vocational Education. The six members are elected for six-year terms, one from each of the congressional districts.

Area schools are being operated at the local level, for secondary and post-secondary students. Other area schools are operating through the University of Nebraska--the Curtis Area Agricultural Technological School. The State is establishing five area vocational-technical schools to be operated by the State Board. There is a State operated school, the Nebraska Vocational-Technical School, at Milford, with dormitory facilities. All of the State schools are post-secondary.

Nevada:

The State Board of Education is also the State Board for Vocational Education. The Board consists of eight members, six elected by the people, one from each educational supervisory district, and these six appoint two others--one representing labor and the other agriculture.

The State Board of Education may supervise and administer educational programs through the fourteenth grade.

There is only one area school in operation in Nevada, the Southern Nevada Vocational Technical Center in Las Vegas. At present, this school is operating at the secondary and post-secondary level. The University of Nevada is operating a two-year technical training program.

The State provides $5,100 for each approved vocational or technical program.

New Hampshire:

The State Board of Education is the State Board for Vocational Education. The State Board consists of seven members appointed by the Governor for five-year terms.

The State Board has established one State technical institute with dormitory facilities.

New Hampshire has five vocational institutes. There are five comprehensive high schools which have broad vocational and technical programs, in addition to the institutes.

The programs which are not in the comprehensive high schools are post-secondary. The associate degree is not awarded.

The State pays all costs of tuition and necessary transportation for high school students taking vocational or technical courses outside of their home district.

New Jersey:

The twelve member State Board of Education is also the State Board for Vocational Education. The members of the State Board are appointed by the Governor, with the consent of the Senate, for six-year terms.

The area vocational-technical schools in New Jersey are on a county basis. Some counties have more than one area school, for example, Middlesex County has four vocational-technical high schools. These school programs are at the secondary level, but they do have full-time post-secondary and adult programs.

New Jersey has county technical institutes which are post-secondary schools. All of these institutions are under the State Board of Education and only high school credit is awarded.

The State assists in the out-of-district transportation costs for the vocational or technical students by paying seventy-five per cent of the approved costs. The State pays thirty dollars per pupil in average daily enrollment for school building capital outlay and debt service. The State matches, up to a maximum of $30,000, local funds for industrial schools; and $10,000 per school for part-time and evening vocational programs.

New Mexico:

The New Mexico State Board of Education is also the State Board for Vocational Education. The State Board has

ten members, one elected from each of the State's judicial districts for six-year terms.

There are numerous vocational-technical organizations providing training programs in New Mexico. The emphasis is placed on the post-secondary programs. Any county may set up a vocational or technical institute district and operate a school. Two technical institutes have been designated as area schools. There are two-year technical institutes operating on three of the State University campuses.

In addition to the junior colleges offering approved vocational area programs, there are four community colleges offering vocational and technical programs.

The associate degree is not being awarded for the technical programs. They are post-secondary and are not on the same level as the first two years of a professional college degree program.

The State provides some matching funds for the vocational programs on a percentage of available funds-per-program basis.

New York:

The Board of Regents, University of the State of New York, is also the State Board for Vocational Education. The Board of Regents is composed of fourteen members selected by the Legislature for fourteen-year terms of office. The Board of Regents is a constitutional corporate body charged with the responsibility for all secondary and higher education in New York.

School districts are not permitted to join together to form multi-district area schools but some of the larger schools have been designated as area vocational schools and serve a large area by transfers.

The most prevalent programs are at the secondary level in the area schools with some post-secondary and adult programs.

There were several vocational and technical centers and technical institutes in New York. These are, or have become, community junior colleges. The technical institutes were not, nor are they now, offering transfer credit for technical courses or programs. There is a provision for the community colleges to grant the associate degree, without specific mention of technical education.

The State pays ninety per cent of the approved transportation costs for vocational or technical students at the high

school level. They provide $1,990 per student in construction of buildings and twenty-five per cent of costs of fees, sites, furnishings, and equipment.

North Carolina:

The State Board of Education is the State Board for Vocational Education. The State Board is composed of thirteen members; the Lieutenant-Governor, the State Treasurer, and the Superintendent of Public Instruction, as ex officio members, and ten members appointed by the Governor for eight-year terms.

The General Assembly gave the State Board of Education the authority to "control all industrial centers, community colleges, and technical institutes." (Article I, Section 11f-A-1, North Carolina Statutes).

The State Board of Education appointed a Board of Community Colleges and authorized them to supervise and control the community colleges of North Carolina.

There are twelve community colleges and fourteen technical institutes along with the industrial centers. Practically all of these programs are at the post-secondary level. The secondary programs are expanding but in the form of comprehensive school programs. State funds have increased about three hundred per cent for post-secondary vocational and technical programs since the coordinating of authority under the State Board of Community Colleges.

There is no mention of the associate degree being granted, but vocational and technical courses are not for transfer credit toward the baccalaureate programs.

The State pays seventy-five per cent of the day school vocational teacher's salary and one hundred per cent of the adult teacher's salary.

North Dakota:

The State Board of Education is also the State Board for Vocational Education. The State Board consists of seven members, six appointed for six-year terms, by the Governor, and the State Superintendent of Public Instruction.

The State Board of Higher Education is responsible for all accrediting of junior colleges and for the "occupational" courses in the junior colleges being accredited. (Chapter 15, Article XX, Section 10, North Dakota Statutes). The 1965 Legislature assigned the establishing of standards for vocational education in the junior colleges to the State Board for Vocational Education.

There is only one vocational-technical school in the State and its programs are post-secondary. The associate degree is awarded at this institution the vocational and technical programs are terminal, with a certificate.

The State pays a percentage of the costs for all approved programs of vocational and technical education.

Ohio:

The State Board of Education is the State Board for Vocational Education. There are twenty-three members on the Ohio State Board of Education. They are elected by the people by individual congressional districts (23) and serve six-year terms.

The State Board of Education has the responsibility for six area vocational centers in joint school districts. There are fourteen joint school districts in Ohio. There are twelve post-secondary technical education centers in operation under the State Board of Education. All programs are terminal without college credit awarded.

The State will pay for one vocational teacher for each eight teachers in the basic program. In addition, they pay twenty-five per cent of the basic schedule for supplementary service and twelve per cent for salary allowance.

The State pays for transportation for vocational or technical high school students to out-of-district schools at a rate of fourteen dollars per-pupil up to twenty-eight dollars per-pupil per approved mile per day, for the school year.

Oklahoma:

The State Board of Education is also the State Board for Vocational Education. The State Superintendent of Public Instruction is ex officio and the Governor, with Senate consent, appoints the other six members of the State Board of Education.

The four area schools are operating under the State Board offering high school and post-high school classes. There are technical programs in the junior colleges and they may lead to the associate degree.

The two technical institutes, one in Oklahoma City and the other on campus at Oklahoma State University, also offer the associate degree for the technical programs. The junior colleges and technical institutes are supervised and administered by the Oklahoma State Regents for Higher Education.

The School of Technical Training, Okmulgee, a division of Oklahoma State University, offers only terminal programs with a certificate of accomplishment.

The State assists in funding vocational teachers' salaries through an increased teacher-pupil ratio of state aid. At the present time State funds are used to supplement vocational and technical programs through the State Board for Vocational Education.

Oregon:

The State Board of Education is the State Board for Vocational Education in Oregon. The seven members are appointed by the Governor for seven-year terms.

The State Board of Education has the authority over ten operating community colleges in Oregon. Each of these schools is designated as an area vocational-technical school. While the State Board may authorize the community colleges to award associate degrees, the State Board of Higher Education must approve the accrediting of the courses for transfer credit. Some of the community college technical programs are specifically designated as non-federally supported and, therefore, may be used as transfer credit toward the baccalaureate degree in the technologies.

There are three area vocational high schools in comprehensive high schools.

The State Board of Higher Education operates the Oregon Technical Institute for the semi-professional students.

The State pays seventy-five per cent of the approved construction costs for area school or community college capital construction. The State supplies two-thirds of the full-time student costs up to $433 maximum in the community colleges.

The State pays a per cent of the approved vocational program costs.

Pennsylvania:

The State Board of Education is also the State Board for Vocational Education. The State Board is composed of seventeen members appointed by the Governor, with the consent of the Senate, for six-year terms. The State Board of Education has authority for all education in Pennsylvania.

There are twenty-three area vocational-technical schools and four community colleges in operation in Pennsylvania. There is a provision in the law for creation of technical institutes.

The Area Vocational-Technical School Law has a provision that all vocational education in Pennsylvania must be less than college credit. This provision has kept vocational programs from the community colleges. Area vocational-technical schools are operated at the secondary and post-secondary levels.

The technical institutes are under the same law as the community colleges and may offer the associate degree for satisfactory completion of a two-year program. (Chapter 94, Article III, Section 408.1). State vocational aid is one hundred per cent of the calculated amount per approved class. Calculations are made on a program and student basis.

Rhode Island:

The State Board of Education is also the State Board for Vocational Education. The State Board consists of seven members appointed by the Governor for seven-year terms.

There are joint school districts serving as area vocational-technical schools. These schools are locally operated, with matching State and federal funds.

The State Board for Vocational Education operates some area vocational-technical schools. These schools function at the secondary and post-secondary level.

There are three technical institutes which operate within the framework of the State's junior college authority. While transfer credit is not provided in the technical institutes, the associate degree may be awarded.

The State pays twenty-five per cent of building construction costs.

South Carolina:

The State Board of Education is also the State Board for Vocational Education. The State Board is composed of fifteen members elected by the legislative delegations from each judicial district for a term of four years.

There is a separate State Advisory Committee for Technical Training which operates South Carolina's technical institutes and technical schools. This committee became subservient to the State Board of Education, July 1, 1965.

The technical institutes do not offer transfer credit nor do they award the associate degree.

There are nine area vocational schools operating at the secondary and post-secondary levels. The majority of secondary vocational education is conducted in local schools. The

State pays seventy-five per cent of the teacher's salary of an approved vocational class. They will pay all of the approved costs of adult programs. South Carolina pays all of the transportation costs for students desiring vocational and technical education.

South Dakota:

The State Board of Education is also the State Board for Vocational Education. The State Board consists of seven members appointed by the Governor, with the consent of the Senate, for terms of five years.

There are four area vocational-technical schools in South Dakota, operated by local school boards at the secondary and post-secondary level. There are technical programs at Southern State College. These programs are terminal with the associate degree.

The State furnishes funds for secondary schools on a "foundation program" basis.

Tennessee:

The State Board of Education is also the State Board for Vocational Education. The State Board is composed of twelve members which includes the Governor, the Commissioner of Education, and nine residents, appointed to six-year terms by the Governor.

There are twenty area vocational-technical schools operating at the secondary and post-secondary level. These schools are operated by the State Board of Education.

Tennessee has one technical institute and three community colleges offering preparatory and terminal programs with the associate degree programs. The technical institute is a regional school for the entire State and is financed by the State.

The State Board for Vocational Education may contract with the colleges to provide vocational courses for high school students.

Texas:

The Central Texas Education Agency is in control of all public education in Texas. The State Board of Education is a department of the Central Texas Education Agency, and is also the State Board for Vocational Education.

The area schools are on a county system. Many of the new area schools are on junior college campuses. There are

five senior colleges offering programs of vocational and technical education.

The area schools are operated by the State Board of Education and offer high school and post-high school programs.

The junior colleges and senior colleges may award associate degrees in the technologies if approval is given by the Coordinating Board of the Texas College and University System.

The State pays an average of $500 per program per month in state aid, supporting the vocational and technical programs.

Utah:

The State Board of Education is also the State Board for Vocational Education. The State Board consists of nine members elected by the people for four-year terms.

The State Board has control of, and the responsibility for, the technical institutes in Utah. The junior colleges have been offering post-secondary vocational and technical classes. These programs are coordinated with the Council for Higher Education. Students must be at least eighteen years old before enrolling in the vocational programs in the junior colleges. The associate degree may be awarded in approved programs.

Area vocational schools offer secondary and post-secondary programs; however, the emphasis is on the comprehensive high school to supply all of the secondary vocational and technical courses.

The State provides ten per cent of the approved costs of buildings or bonds per year for an area school or for area programs. Utah pays a portion of the vocational program costs.

Vermont:

The State Board of Education is also the State Board for Vocational Education. The State Board consists of seven members appointed by the Governor for six-year terms.

The area vocational-technical schools in Vermont are a part of comprehensive high schools. They are designated to best serve the population centers. Their programs are for secondary students, but new programs are being developed for post-secondary and adult students.

The State supplies building funds, up to thirty per cent of the approved cost. Twenty-five per cent of the approved teachers' salaries, plus all travel and operating expenses for vocational classes are supplied by the State.

Virginia:

The State Board of Education is also the State Board for Vocational Education. The State Board consists of seven members appointed to four-year terms by the Governor.

The area vocational-technical schools are operated at the local level by the combining of school districts for vocational and technical training only. The area schools are for secondary students with post-secondary courses offered in vocational training.

The General Assembly has created the State Board for Technical Education to supervise and administer all technical education at the post-secondary level. The technical institutes operate on a regional level and may serve statewide. They are operated directly through the State Board for Technical Education and may award the associate degree.

Two-thirds of the teacher's salary in an approved program is supplied by the State.

Washington:

The State Board of Education is also the State Board for Vocational Education. The State Board consists of twelve members elected by the board of directors of the school districts, by congressional districts, for six-year terms. The State Board of Education has the responsibility for education through the fourteenth grade.

There are ten area vocational-technical institutes and twenty-two community colleges offering post-secondary vocational and technical programs in Washington. These schools are not authorized to award the associate degree.

The State pays for capital construction on a per cent basis, determined by the local district valuation. Vocational programs are financed on a one hundred per cent teacher's salary basis and sixty per cent of pupil transportation costs.

West Virginia:

The State Board of Education is also the State Board for Vocational Education. The State Board consists of nine members appointed by the Governor, with the consent of the Senate, for nine-year terms. The State Board has the supervisory and administrative control of the State's junior college program. The colleges and vocational schools offer only post-secondary vocational and technical programs while the comprehensive high schools are offering secondary and post-secondary vocational and technical classes with only the high school level programs receiving school credit.

The State supplies a per cent of the approved costs for the operation of vocational and technical programs.

Wisconsin:

There is no State Board of Education for the control of elementary and secondary education in Wisconsin. There is a State Board for Vocational and Adult Education which consists of the State Superintendent of Public Instruction, a member of the State Industrial Commission, and nine members appointed by the Governor. This board has control of state-aid given to schools for vocational, technical, and adult education. The State Board of Higher Education sets the standards and approves the programs for the awarding of the associate degree in two-year technical programs.

All areas of the State must be in an area vocational-technical school district by 1970. Within the local district, a two mill levy may be used to support the area school programs. A student must be eighteen years old to attend part-time, but high school students may attend on a shared-time or a full-time basis.

The State pays thirty-five per cent of the vocational teacher's salary, and thirty cents per student per period enrolled. They also pay $36 per student per year for transportation to an area school.

Wyoming:

The State Board of Education is also the State Board for Vocational Education. The State Board of Education consists of the State Superintendent of Public Instruction and six members he appoints, with the Governor's approval, for six-year terms of office.

There are community colleges which offer vocational and technical courses and are under the State Board of Education. These institutions offer the associate degree but not for vocational programs, which are only post-secondary.

The secondary level programs are offered in local high schools. There are few post-secondary and adult programs offered by the local high schools.

The State supplies a part of the vocational teacher's salary, based on a per cent of the total State appropriations for vocational education.

APPENDIX F

BACKGROUND DATA OF SELECTED LEADERS

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BACKGROUND DATA OF SELECTED LEADERS

Dr. Kenneth E. Carl:

Dr. Carl received a Bachelor of Science Degree in Industrial Education from the Pennsylvania State University in 1936; he completed his D. Ed. in Educational Administration at P. S. U. in 1959.

For three years, before, during, and after college, he was an engineering draftsman for Avco Manufacturing Corp. From 1937-1941, he was instructor of drafting at the Williamsport Adult School. When the school became the Williamsport Technical Institute in 1941, he was head of the drafting department until 1945. He was Vocational Coordinator of the Technical Institute from 1945 to 1952, when he was named Director of the Williamsport Technical Institute. In 1965, the Institute became the Williamsport Area Community College and Dr. Carl was named President, the position he presently holds.

Dr. Carl is a member of numerous educational organizations, as well as P.R.A. and N.R.A. where he was awarded a life membership by P.R.A. He received the 1966 Bell Greve Award at the N.R.A. Convention; is a member of Kiwanis International; member of the advisory committee to the State Board of Vocational Education; has been an educational consultant to the Pennsylvania Rehabilitation Center since its beginning; is a member of the Council of Presidents of Community Colleges in Pennsylvania; and is a past-president of the Lycoming County Association for the Blind.

Dr. H. B. Ellis:

Attended Washington State University and was awarded a Bachelor of Science Degree in Electrical Engineering; received Master of Science in Chemical Engineering from Massachusetts Institute of Technology.

Dr. Ellis served as an officer in the Army in World War II.

He received Ph. D. from Iowa State University in 1963.

He is currently Head of the Technical Institute at Iowa State University in Ames, Iowa, and Professor of Civil Engineering.

Dr. Ellis is a member of:

American Society of Civil Engineers
American Society for Engineering Education
American Road Builders Association
Iowa Engineering Society
National Society of Professional Engineers

He has written many articles for professional magazines, the latest being: "Engineering Technicians Enjoy Expanding Opportunities," The Exponent, Vol. 79, No. 1, Iowa Engineering Society, January, 1967.

Mr. Alfred S. Holt:

Received B. Ed., Keene State College, Keene, New Hampshire in 1929; was awarded Master of Education from Pennsylvania State University in 1938-39.

He was principal and headmaster of the New Hampshire Public Schools; served as principal of the Balboa Junior High School in the Canal Zone from 1935-1941; center director of National Youth Administration at West Chester, Pennsylvania; from 1942-1957 was executive director of the Public Service Institute, Harrisburg, Pennsylvania.

At the present time, Mr. Holt is Chief, Division of Continuing Education, State Department of Public Instruction, Harrisburg, Pennsylvania.

Mr. Thayne D. McCormick:

Received a Bachelor of Science in Industrial Arts at Oklahoma State University; was awarded Master of Science in Trade and Industrial Education at Oklahoma State University.

He has over twenty years of teaching and administrative experinece in the field of Industrial Arts and Vocational-Technical Education.

He spent four years as State Teacher Trainer of Trade and Industrial Education in the State of Kansas, Kansas State College of Pittsburg; for four years was State Director and Executive Officer for the Kansas State Board for Vocational Education.

He is now serving as Regional Representative, Bureau of Adult and Vocational Education, U. S. Office of Education, Kansas City, Missouri.

Mr. McCormick has membership in numerous professional and social organizations.

Dr. Joseph T. Nerden:

Graduated with diploma in Mechanical Engineering from evening college at Massachusetts Institute of Technology; took one year's additional work in Electrical Engineering at the Lowell Institute School at M.I.T.

Graduated Central Connecticut State College with Bachelor of Science degree in Vocational Education; awarded Master's degree at Yale University in 1948.

In 1954, he received Ph. D. at Yale in the field of educational administration.

Dr. Nerden taught three years in Boston at Boston Trade High School; 12½ years at Wilcox Regional Technical School of Meriden, Connecticut; graduate courses in education at Summer Sessions at University of Maine, University of Connecticut, University of Colorado, and North Carolina State College. He taught undergraduate courses at Teachers College of Connecticut from 1942-1955 as affiliated staff member (Extension Division), and graduate courses in Education at Trinity College, Hartford (1948, 1949, 1950).

He is presently Professor of Industrial and Technical Education, North Carolina State University at Raleigh, since being appointed in January, 1964.

Professional memberships include:

American Association of School Administrators
National Association of Industrial Teacher Educators
American Technical Education Association (Board of Trustees, 1958-1963)
American Vocational Association (Life Member)
North Carolina Vocational Association
Ad Hoc Committee of National Advisory Committee for Vocational Education (1963-1964).

Mr. Jack P. Nix:

Received Bachelor of Science from University of Georgia in 1943; Master's degree in 1952, University of Georgia; one year additional graduate work in school administration.

He was a vocational teacher for 11 years in Habersham and Banks Counties; Superintendent, Banks County Schools; Supervisor, Teacher Certification Service, Georgia Department of Education, 1959-60; State Director, Vocational Education, 1960-65; appointed State Superintendent of Schools, January, 1966, and elected to that position for four-year term in November, 1966.

Mr. Nix is a member of:

Georgia Educational Improvement Council
Georgia Science and Technology Commission
Georgia State Board for Children and Youth, ex-officio
Georgia Vocational Association, life member
American Vocational Association, life member
Georgia Education Association
National Education Association
American Association of School Administrators
Georgia Education Assistance Corporation and State Scholarship Commission
Hospital Advisory Committee, Georgia Department of Public Health
Education Commission of the States
Board of Trustees, State of Georgia Athletic Hall of Fame, ex-officio member
Inter-Agency Council on Mental Health and Mental Retardation
Former member of AVA Board of Directors and Executive Board of National Association of State Directors of Vocational Education.

Mr. Raymond V. Nord:

Graduate of the St. Cloud Teachers' College and has a Master's Degree from the University of Minnesota, with additional graduate work from the University of Minnesota.

Prior to becoming associated with the Minneapolis Public Schools, he taught industrial arts at New York Mills and International Falls. During the thirty-five years in Minneapolis, he served as a teacher at Folwell Junior High School, Director of the War Production Training Program, Assistant Director of Vocational Education, and principal of the Minneapolis Vocational High School and Technical Institute.

At the present time, Mr. Nord is Director of Vocational, Technical and Industrial Education of the Minneapolis Public Schools.

Mr. Nord has been a member of a number of national industrial arts and vocational education committees through the American Vocational Association and the National Council of

Local Administrators of Vocational Education and Practical Arts. He is a member of Phi Delta Kappa, and is a life member of all state and local groups in the field.

Mr. George M. Schaffer:

Received a Bachelor of Science and M. Ed. from Pennsylvania State University, and has done graduate study at Muhlenberg College, Allentown, Pennsylvania.

He spent two years in the naval service and was honorably discharged as Lt. Commander.

During an eight-year period, following naval service, he was employed as a State Area Coordinator of Industrial Education attached to the Division of Vocational Teacher Education, University of Pennsylvania, Philadelphia. He left the University to accept the position of Chief of Trade and Industrial Education in the Department of Public Instruction, Harrisburg. While in this capacity, he was invited to establish the first Area Technical School to be built in Pennsylvania and accepted his present position as Principal of the Bucks County Technical School, which began operation in 1958.

Mr. Schaffer participates in various organizations:

Pennsylvania State Education Association
National Education Association
Pennsylvania Vocational Association
Pennsylvania School Directors Association
American Vocational Association
Kappa Phi Kappa, Phi Delta Kappa, and Iota Lambda Sigma
Morrisville Rotary Club
Director of the Chamber of Commerce
Advisor to State Board for Vocational Education
Consultant for many school districts throughout State and Country.

Dr. George A. Parkinson:

Received a Bachelor of Science in Education from Ohio State University in 1922; MA in Mathematics, Mechanics, and Astronomy in 1923.

Completed his Ph. D. Degree in Pure and Applied Mathematics in 1929 from the University of Wisconsin.

He was director and professor of Milwaukee Extension Division, University of Wisconsin from 1945 to merger in 1956; served as Vice-Provost, Director of Business Affairs, and Professor, University of Wisconsin, 1956-1958, and was also administrator of Evening Division Program during that time.

Dr. Parkinson is presently Director of Milwaukee Vocational Technical and Adult Schools, since 1958.

He served in the United States Navy during World War I and World War II; is presently Vice Admiral (Ret.), United States Naval Reserve.

Dr. Parkinson is a member of:

Great Plains Regional Instructional Television Library Policy Board
Technical Advisory Committee to the Division of Adult and Vocational Research of the Bureau of Research, Department of Health, Education, and Welfare, U. S. Office of Education
President's Committee on Juvenile Delinquency and Youth Crime, Citizens Advisory Council
Governor's Advisory Committee, Title I, Higher Education Act of 1965.

He is also listed in:

Who's Who in America
Who's Who in the Midwest
American Men of Science
Who's Who in American Men of Education
International Blue Book
Who's Who in Association of University Evening Colleges, 1959
National Social Directory
Phi Delta Kappa Directory of Men in Education.

Mr. H. J. Van Valkenburg:

Received his BA from Aurora College in Aurora, Illinois; BS from The Stout Institute (now Stout State University), Menomonie, Wisconsin. He was awarded his MS Degree from The Stout Institute.

At Fond du Lac Vocational and Adult School, he has held the following positions: Teacher of Sales, Woodworking, and Drafting from 1936-1941; Supervisor of National Defense and War Production Training from 1941-1945; Coordinator of Trade and Industry from 1945-1959.

Since 1959, Mr. Van Valkenburg has served as Administrator and Director of the School.

Two of the leaders did not wish to be identified because, in the words of one, "I am too busy in consultant work at the present time, therefore, please do not list my name."

One of the leaders is presently a president of a community college noted for its vocational and technical programs. This man is a member of the A.V.A. Board of Directors, served on the Education Commission of the States, and a member of the State Council of Presidents of Community Colleges.

This leader received his Bachelor of Science Degree in Industrial Education and his Ph. D. in Educational Administration from Pennsylvania State University. He has served as an advisory to the State Board for Vocational Education. He has written over twenty articles regarding vocational and technical education in the leading vocational and industrial arts education magazines.

He is presently serving as a consultant and an advisor to state departments of education and to several emerging community colleges. He has also been on federal panels and committees which helped draw up the guidelines for the technical training program in the community colleges. He is well respected in the academic community.

The second un-named leader is presently serving as a State Director of Vocational, Technical, and Continuing Education. He is well respected in the academic community for his writings regarding school district organization for the proper vocational and technical training opportunities.

He has written articles for the vocational magazines and for the adult education magazines. He has written one book on vocational education.

He is a graduate of Ohio State University with a degree in Vocational Education. He taught school for several years. He received his Master's degree in Industrial Education, also from Ohio State University. His Ph. D. is from Pennsylvania State University.

This leader has been very active in promoting area vocational-technical schools. The state in which he works is one of the recognized states in the area school movement. He has served as a consultant to technical education leadership workshops for two summers. He has served as a vocational education consultant to the Vocational Education Division of the U. S. Office of Education.

This leader holds many positions of responsibility in the state he represents, as well as in the A.V.A.

VITA

Scott Edward Tuxhorn

Candidate for the Degree of

Doctor of Education

Thesis: THE EDUCATIONAL UNIT FOR ADMINISTRATION, ORGANIZATION, AND SUPERVISION OF AREA VOCATIONAL-TECHNICAL SCHOOLS IN OKLAHOMA

Major Field: Educational Administration

Biographical:

Personal Data: Born at Enid, Oklahoma, March 4, 1928, son of Marvin B. and Edna M. Tuxhorn.

Education: Graduated from Helena, High School, Helena, Oklahoma, in 1946; after military service received Bachelor of Arts degree from Northwestern State College, Alva, Oklahoma, with major in social science and education in 1951; received Master of Teaching degree in 1958 from Northwestern State College with major in secondary education; completed requirements for the Doctor of Education degree in May, 1967.

Professional experience: Classroom teacher, Syracuse, Kansas, High School, 1951 to 1954; principal of Corwin, Kansas, Grade School, 1954 to 1956; principal of Helena Training School, 1956 to 1958; Superintendent of Helena Public Schools, Helena, Oklahoma, 1958 to 1962; State Representative for Alfalfa County in twenty-ninth session Oklahoma Legislature; Coordinator of Industrial Cooperative Program, Helena Public Schools, 1962 to 1963; Superintendent of Jet Public Schools, Jet, Oklahoma, 1963 to 1964.

Professional Organizations: Life member, National Education Association; American Association of School Administrators; Oklahoma Education Association; Oklahoma Association of School Administrators; Kappa Delta Pi; Phi Delta Kappa.