AN ANALYSIS OF THE UNDERSTANDING OF AUTHORITY RELATIONSHIPS
BETWEEN CHIEF DISTRICT ADMINISTRATORS AND CHIEF CAMPUS
ADMINISTRATORS IN MULTICAMPUS JUNIOR COLLEGE SYSTEMS

THESIS

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By

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One of the newest organizational developments in the junior college world is the multicampus junior college system.

The purpose of this study was to determine whether there is a difference in the understanding of authority relationships between chief district administrators and chief campus administrators in multicampus junior college systems. This information should be valuable to junior college administrators who are now, or will be, faced with the problem of clarifying this authority relationship in daily activities and future planning.

The semantic differential was the measuring instrument used in this study. Its use required that a questionnaire be developed to include functions to be differentiated against a set of corresponding bi-polar adjectives. The functions selected were evaluated by several individuals experienced in multicampus junior college administration. The nine pairs of bi-polar descriptive adjectives selected were from general adjectives previous factorial studies showed to have high factor loadings on either the evaluative, potency, or activity dimensions of connotative meaning.
Questionnaires were sent to forty-three chief district administrators and one hundred sixteen chief campus administrators. These administrators were asked to indicate their perception of current district (central office) participation in these functions: (1) textbook selection, (2) recruitment of new staff members, (3) in-service training, (4) physical facility planning, (5) budget preparation, (6) public information services, (7) student personnel services, (8) curriculum development, and (9) community service development. Perceptions of the performance of these functions were analyzed for each function and all functions combined to represent a "system of functions."

In response to questionnaire requests, 76.7 per cent of the chief district administrators and 82.8 per cent of the chief campus administrators returned questionnaires.

The generalized distance formula (D statistic) from solid geometry provided the means for actual interpretation and application of the semantic differential to questionnaire responses. Students' t test then was applied to determine significant differences at the five per cent level.

The study was organized into five chapters. Chapter I contains information about the background and significance of the study. Chapter II includes an overview of the growth of the junior college movement. Chapter III contains a discussion of the semantic differential. Chapter IV presents the results of the study. Chapter V includes a summary,
general conclusion, recommendations, and some suggestions for additional research.

The conclusions are related to the hypothesis stated as follows:

In multicampus junior college systems the degree of delegated authority perceived by chief district administrators differs significantly from that perceived by chief campus administrators.

According to the analysis of the data, this hypothesis is accepted. Further analysis revealed that, of the nine functions which constitute the "system of functions," general accord in perception was found only on central office participation in textbook selection and recruitment of new staff members. The greatest difference was found in public information services and the least difference in textbook selection.

In view of the findings of this study the following recommendations appear to be justified:

1. Periodic sessions between the chief campus administrators and the chief district administrator in every multicampus junior college system which focuses on authority relationships between them.

2. Better defined policies and procedures pertaining to responsibilities within functional areas of multicampus junior college systems.

3. Development of a consortium, composed of chief campus and chief district administrators, to focus on authority relationships in multicampus junior college systems.
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CHAPTER I

INTRODUCTION

Background and Significance of the Study

The American junior college is rapidly emerging on the higher education scene. At the beginning of the present century there were only about one hundred junior college students. However, by 1960, there were more than six hundred thousand and, by 1970, over two million junior college students. As Edmund Gleazer, executive director of the American Association of Junior Colleges, states:

Five hundred new community junior colleges have sprung up in the last ten years. During a time called 'the age of education' by the President of the United States, this was one of the big stories. But it is more than a story of explosive growth, for here was a new kind of college. Higher education was one parent; secondary education was the other. But the product of the union claimed recognition in its own right, had an identity of its own—as robust offspring are wont to do.

Junior college students currently account for nearly thirty per cent of all undergraduate students of higher education.

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3 Edmund J. Gleazer, Jr., *This Is the Community College* (Boston, 1968), p. 4.
education in the United States. Based on a projected fifteen per cent annual growth rate, by 1975, there will be more than five million persons enrolled in 1,125 junior colleges located in every state in America.

The successful establishment of the junior college is attributed by Thornton to three primary motivating forces:

1. The penetrating educational statesmanship of a succession of university presidents and deans stimulated discussion and gave the first impetus to the establishment of junior colleges in several areas of the nation.

2. The rising productivity, which enabled the country to support more students in college, required at the same time a constantly increasing supply of workers with education to control and improve the productive apparatus.

3. 'The American Dream'--the belief inbred in every stratum of society that education is a social and individual good and that society is obligated to provide as much of it as any individual desires and can profit from.

The most significant, recent organizational development in the junior college movement is the establishment of the multicampus system. Previous to 1962 this type of organization structure was found in the following five junior college systems: (1) City Colleges of Chicago, Chicago, Illinois; (2) Los Angeles Community College District, Los Angeles, California; (3) New York City Community College, New York, New York; (4) Maricopa County Community College District, Phoenix, Arizona; and (5) City Colleges of San Francisco, San Francisco, California.

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4 The Carnegie Commission on Higher Education, p. 34.
Angeles, California; (3) San Antonio Junior College District, San Antonio, Texas; (4) Contra Costa Junior College District, Martinez, California; and (5) Del Mar College, Corpus Christi, Texas. Since 1962, thirty-eight additional junior colleges have become multicampus systems.7

As the junior college becomes a multicampus system the relationship between the chief administrator of the multicampus system and each chief campus administrator becomes crucial. While answers are seldom absolute, many decisions related to leadership and authority must be made if the multicampus system is to operate in the best interests of students.8 One approach toward clarifying this relationship between the chief administrator of the multicampus system and each chief campus administrator is to compare their current perceptions of authority.

Survey of the Literature

Examination of the Bibliography of Dissertation Abstracts and the Educational Research Information Clearinghouse provides evidence of the pioneering nature of this research. Only a few writings have been found which discuss authority relationships in multicampus junior college systems. However, none of these research studies involves a comparison

of perceptions of authority between chief district administrators and chief campus administrators in multi-campus junior college systems.

Jensen conducted case studies of ten multicampus junior college districts in six states. His major conclusions are as follows:

1. There is a trend toward each junior college district operating each campus as an individual comprehensive college.

2. Administrators, faculty members, and students on individual campuses favor the aforementioned trend because of increased 'local autonomy' as a result.

3. The colleges or campuses within a district lack fixed internal geographical boundaries.

4. The curriculum policies and procedures are set by the district.

5. No district has a person at that level in charge of student personnel services. There is agreement among all respondents that this should continue to remain as an individual campus responsibility.

6. All districts have a central personnel office which, in most cases, restricts to some extent the individual campus employment processes.

7. New campus planning is done at the district level. The majority of respondents felt that this planning needed improvement to better reflect the future needs of a campus.

8. All agreed that the business affairs should be handled at the district level.

9. All but one district treated community services as an individual campus function.

Jensen made these basic recommendations from his study.
(a) Each campus should be allowed by the district as much autonomy as possible. (b) Every multicampus junior college system should be independent with its own governing board. (c) The central office should be centrally located in the system and independently located from the campuses. (d) Only the chief district administrator should be at a level higher than the chief campus administrators.\(^{10}\)

Kintzer, Jensen, and Hansen\(^{11}\) studied forty-five multi-institution junior college districts to obtain opinions on which functions and responsibilities should be retained by the district office and which should be performed by the individual campuses. These researchers also investigated uniform practices performed either by the district office or the individual campuses. The major findings of their study indicate that

1. There is a trend toward giving the chief district administrator the title of chancellor.

2. Other titles at the central office were generally vice-chancellor, vice-president, or director. The title of director is the most common.

3. There is no relationship between the number of district administrators to the numbers of students enrolled. The number of administrators varies widely both at the central office and each campus so that no pattern can be established.


\(^{11}\)Kintzer, Jensen, and Hansen, pp. 49-50.
4. There are no fixed geographical boundaries for any component colleges or campuses.

5. Communications is the weakest aspect of staff working relationships within multicampus junior college systems. This particularly is a problem between the lower divisions on the individual campuses and the central office.

Coultas\(^{12}\) suggests that multicampus junior college systems face many problems growing out of size and complexity. For example, the Los Angeles Junior College District maintains a policy of maximum autonomy for its seven campuses. However, this very noble statement creates one of its most difficult administrative problems: as the district develops, more and more procedures and practices require standardization. The Los Angeles Junior College District uses the committee structure of administration to cope with these problems.

Block\(^{13}\) recommends that a junior college board considering a multicampus system needs to consider how much authority to give to the central office and the individual campuses. He suggests that a board facing this problem needs to find answers to the following questions before being able to make an intelligent decision:

1. What is the relation of the board to each unit and to each president?


2. How much local autonomy should each unit have? How much control does the central staff have? How large a central staff? What administrative structure?

3. What is the relation of the local administrative staff to the central staff?

4. What about the admission of students—to the local campus or to the overall district? What about the mobility of students among campuses?

5. Should student services be central or local?

6. What should be the faculty relations among units? What is the role of the faculty councils?

7. Should curriculum and instruction matters be localized or centralized?

8. What about catalogs and other publications—local or district-wide?

9. What about budgeting, purchasing, maintenance, etc.?

10. Are academic policies made locally or on a district-wide basis?

11. What about faculty and staff personnel policies—local or central?

12. What is the optimum size of each campus?

13. How does one maintain good communications with the community as well as good communications between the campus units?

La Vire identifies forty-nine critical tasks of junior college administration and compares those critical tasks with those reported by the Southern States Co-operative Program in Educational Administration. He gathered this data from three groups: (1) a panel consisting of seven of

the public junior college administrators in a selected state; (2) a panel of eighty public junior college chief administrators; and (3) a jury of public junior college administrators. He lists the critical task areas and critical tasks as follows:

A. Instruction and Curriculum Development

1. Providing for the formulation of curriculum objectives.
2. Providing for the determination of curriculum content and organization.
3. Relating the desired curriculum to available time, physical facilities, and personnel.
4. Providing materials, resources, and equipment for the instructional program.
5. Providing for the supervision of instruction.

B. Pupil Personnel

1. Initiating and maintaining a system of pupil accounting and attendance.
2. Instituting measures for the orientation of pupils.
3. Providing counseling services.
4. Providing health services.
5. Providing for individual inventory service.
6. Providing occupational and educational information services.
7. Providing placement and follow-up services for pupils.
8. Arranging systematic procedures for the continual assessment and interpretation of student growth.
10. Developing and co-ordinating student activity progress.

C. School Plant

1. Determining the physical plant needs of the community and the resources which can be marshalled to meet those needs.
2. Developing a comprehensive plan for the orderly growth and improvement of school plant facilities.
3. Initiating and implementing plans for the orderly growth and improvement of school plant facilities.

4. Developing an efficient program of operation and maintenance of the physical plant.

D. Staff Personnel

1. Providing for the formulation of staff personnel policies.
2. Providing for the recruitment of staff personnel.
3. Selecting and assigning staff personnel.
4. Promoting the general welfare of the staff.
5. Developing a system of staff personnel records.
6. Stimulating and providing opportunities for professional growth of staff personnel.

E. School Finance and Business Management

1. Organizing the business staff.
2. Determining sources of school revenues.
3. Formulating a salary schedule.
4. Preparing the school budget.
5. Administering capital outlay and debt service.
6. Administering school purchasing.
7. Accounting for school monies.
8. Accounting for school property.
9. Providing for a school insurance program.

The critical tasks as defined by La Vire provide much of the framework for the development of the questionnaire in this study.

Definitions

Certain frequently used terms are defined as follows:

1. Junior College. A school offering instruction that may include, but not be limited to, programs in one or more of the following categories:

a. Standard freshman and sophomore collegiate courses for transfer to higher institutions.
b. Technical and vocational fields leading to employment or the upgrading of employment.

c. Liberal arts courses or programs in general education culminating in the associate degree.

d. Adult education courses.

e. Educational and vocational guidance.

The junior college often is referred to as "community" college.

2. Multicampus Junior College System. A junior college system that operates two or more campuses within its service area under one governing board. This system has a chief district administrator and each of its campuses has a separate chief campus administrator. This does not include state-wide systems or university operated systems.

3. Chief District Administrator. Chief administrator of a multicampus junior college system. This person often is called "chancellor," "president," or "superintendent."

4. Chief Campus Administrator. Chief administrator of a campus who is responsible to the chief district administrator within a multicampus junior college system. This person is often referred to as "president," "dean," or "provost."

5. Central Office. Location of chief district administrator and staff who work with chief campus administrators in the development of individual campuses within the multicampus junior college system. The central office sometimes is called the "district" office.
Statement of the Problem

The multicampus junior college system is one of the newest and most significant organizational developments in the junior college world. In 1962 there were five multicampus junior college systems whereas in 1970 there are forty-three. One problem created by this tremendous growth is the lack of understanding of the authority relationship between the district office and the college campuses.

The purpose of this thesis was to determine if there is a difference in the understanding of authority relationships between chief district administrators and chief campus administrators in multicampus junior college systems. An attempt was made also to determine to what degree these perceptions were based on current practices. This information should be valuable to junior college administrators who are now, or will be, faced with the problem of clarifying this authority relationship in multicampus junior college systems in daily activities and in planning long-range growth and development.

Hypothesis

In multicampus junior college systems the degree of delegated authority perceived by chief district administrators differs significantly from that perceived by chief campus administrators.
Scope of the Study

The scope of this dissertation was limited to a consideration of multicampus junior college authority delegated by the chief district administrator to the college campuses. More specifically, this research was limited to a consideration of the authority delegation relationships as perceived by the chief district administrators and the chief campus administrators in multicampus junior college systems. Then, an attempt was made to determine whether these perceptions are in accord with the system so that some models pertaining to delegated authority may be developed.

Only those forty-three multicampus junior college systems listed in the 1971 Junior College Directory were included in this study. No state-wide or university branch systems were included.

Methodology

Both primary and secondary sources of information were used. The literature was reviewed extensively to document junior college multicampus development throughout the United States and to determine how it could enhance the effectiveness of this study. Some data were gathered by means of a questionnaire. Other data were gathered from current multicampus college catalogs and other official sources to determine and evaluate current practices against ascertained perceptions.
Instruments and techniques developed for this study were evaluated by several individuals experienced in the field of multicampus junior college administration. A tentative questionnaire was used in a pilot study at the Dallas County Junior College District and Tulsa Junior College. Revisions were made according to suggestions of these individuals.

The questionnaire in Appendix A shows the nine functions which were used in this study. These functions are (1) textbook selection, (2) recruitment of new staff members, (3) in-service training, (4) physical facility planning, (5) budget preparation, (6) public information services, (7) student personnel services, (8) curriculum development, and (9) community service development. Perceptions of how these functions were accomplished were analyzed for each function and all the functions combined to represent a "system of functions." These functions were considered representative of all functions performed in multicampus junior college systems.

Questionnaires were sent to forty-three chief district administrators and one hundred sixteen chief campus administrators. The accompanying cover letter served three functions: (1) explained the nature of the research project, (2) asked for their cooperation, and (3) explained what cooperation in the study would entail. In order to obtain the most usable information possible, each participant was assured in advance that neither he nor the institution would
be directly related to material cited in this study. Twenty-nine chief district and eighty-five chief campus administrators responded to the initial request.

The follow-up letter in Appendix B was sent to those who failed to return the completed questionnaire. This letter was sent within three weeks of the initial request. An additional four chief district and eleven chief campus administrators returned completed questionnaires.

In response to these requests, 76.7 per cent of the chief district administrators and 82.8 per cent of the chief campus administrators returned completed questionnaires. From these returns, two chief district and nine chief campus administrators' responses contained insufficient data so their questionnaires were deleted from the study. This response of usable questionnaires was considered sufficient to provide representative data.

The semantic differential, developed by Osgood of the University of Illinois, was the measuring instrument used in this study. This psychological technique or process measures the connotative meaning which words and concepts have for different individuals or groups of individuals. Essentially the semantic differential is a combination of controlled association and scaling procedures. In this study the meaning of a stimulus concept (function) was determined by judging the function against a seven gradient continuum scale which was defined by a pair of bi-polar adjectives.¹⁵

¹⁵Chapter III discusses in considerable detail the procedures of the semantic differential.
The nine pairs of bi-polar descriptive adjectives for this study were selected from general descriptive adjectives generated and evaluated by Osgood and his associates. Three pairs each were used for the evaluative, potency, and activity dimensions of connotative meaning. The ultimate selection of these nine pairs of bi-polar adjectives was based also on opinions of selected multicampus chief district and chief campus administrators who evaluated the relevance to this study of approximately fifty bi-polar adjectives.

The descriptive adjectives chosen and the dimensions of connotative meaning which they represent are as follows:

**Evaluative**: successful-unsuccessful; good-bad; clear-hazy.

**Potency**: deep-shallow; strong-weak; large-small.

**Activity**: active-passive; fast-slow; complex-simple.

The use of the semantic differential process can determine whether the same concept actually has a different meaning for different individuals. It is based on the fact that effective communication is difficult if there is much differentiation in meaning through the learning history of the individuals involved. Often people talk about the same concept, yet they have a different connotation or perception of its meaning.

The generalized distance formula (D statistic) in solid geometry provided the means for actual interpretation and application of the semantic differential to measure
objectively the relative meaning of central office participation in functions performed in multicampus junior college systems. A relative difference in connotative meaning indicates that the chief district administrators as compared to the chief campus administrators have a different meaning for a particular function or "system of functions." Since the semantic differential fails to measure absolute meaning, this technique will not indicate which meaning is correct. Instead, a significant difference in meaning indicates a communication problem exists which could hinder the effectiveness of a multicampus junior college system in its attainment of stated objectives.

An attempt was made also to determine to what degree these perceptions were based on current practices. As a result, there should be a better understanding of current authority patterns and perceptions for those junior college systems that are presently, or will be, confronted with the problem of clarifying authority relationships between the district office and the college campuses.

Limitations of the Study

As with all research studies, this study has several limitations. One primary limitation is the control of the environmental variables. Because this is a practical study conducted in a dynamic educational environment, it is difficult to identify and consider all variables which may influence the study results.
The use of the semantic differential technique may have resulted in some bias. This generalized technique measures the connotative meaning which words and concepts have for individuals or groups of individuals. This technique must be adapted to the requirements of the research problem and it is still undergoing refinement. However, there have been numerous research studies using the semantic differential to indicate its value as a satisfactory instrument to measure meaning.¹⁶

This study is intended to be representative only of selected junior college systems with current multicampus operations. In no way is it intended to be representative of all junior colleges or other institutions of higher education.

The uniqueness of the different cities that the multicampus junior college system is designed to serve means that all the information accumulated and evaluated in this study will not fit, nor is it intended to fit, all multicampus junior college systems.

Organization of the Study

Chapter I contains information about the background and significance of the study. A hypothesis is developed involving the postulate that the degree of delegated authority

¹⁶Chapter IV discusses several of these studies.
perceived by chief district administrators differs significantly from that perceived by chief campus administrators in multi-campus junior college systems. This chapter also includes a survey of the literature, definition of terms, scope of the study, methodology, and limitations of the study.

Chapter II includes an overview of the growth of the junior college movement. This chapter covers a discussion of the origins of the two-year college, changing conceptions of junior college education, the present status and current philosophy of junior colleges, and the development of multi-campus junior college systems.

Chapter III contains a discussion of the semantic differential as used in this study. This chapter is devoted to a presentation of the semantic differential technique as a satisfactory method in measuring meaning. This chapter is divided into the following major areas: (1) why the semantic differential was developed; (2) how the semantic differential was developed; (3) how this technique is used and interpreted; and (4) evaluation of the semantic differential as a measure of meaning. Past studies which have used the semantic differential are presented to support the use of this technique in this study.

Chapter IV presents the results of the study. It contains an analysis of understanding of authority relationships between chief district administrators and campus administrators in multicampus junior college systems. This
chapter also includes an attempt to determine to what degree these perceptions are based on current practices.

Chapter V includes a summary, general conclusion, recommendations, and some suggestions for additional research. The summary and general conclusion relate to the hypotheses developed in Chapter I.

Summary

The American junior college is rapidly emerging on the higher education scene. At the beginning of the present century there were only about one hundred junior college students. However, by 1960, there were more than six hundred thousand and, by 1970, over two million junior college students.

The most significant, recent organizational development in the junior college movement is the establishment of the multicampus system. Previous to 1962 this type of organization structure was found in only five junior college systems. Since 1962, thirty-eight additional junior colleges have become multicampus systems.

As the junior college becomes a multicampus system the role of the central office becomes crucial. Other than policy implementation, the central office responsibility is complicated and often confused.

The purpose of this study was to determine whether there is a significant difference in the perception of the chief district administrators and the chief campus administrators
as to the degree of authority delegated by the district office to the college campuses. An attempt was also made to determine to what degree these perceptions were based on current practices.

A few writings were found which discuss authority relationships in multicampus junior college systems. However, none of these research studies involve a comparison of perceptions of authority between chief district administrators and chief campus administrators in multicampus junior college systems.

The semantic differential, developed by Osgood of the University of Illinois, was the measuring instrument used in this study. This psychological technique or process measures the connotative meaning which words and concepts have for different individuals or groups of individuals. The use of the semantic differential process can determine whether the same concept actually has a different meaning for different individuals.
CHAPTER II

THE GROWTH AND DEVELOPMENT OF JUNIOR COLLEGES

Introduction

The rapid growth of junior colleges in the United States has been one of the most significant developments in higher education. There were only a few junior college students at the beginning of the present century. However, as shown in Figure 1, by 1960, more than six hundred thousand students were enrolled and, by 1970, nearly two million students were being served through this two-year institution of higher education. Currently, junior college students account for almost thirty per cent of all undergraduate students and twenty-five per cent of all students in higher education in America.¹ As Edmund Gleazer points out:

Ten years ago, one out of five students in the nation began his work in a community college. Now the number is more than one out of three. Soon it will be one out of two.²

²Edmund J. Gleazer, Jr., This Is the Community College (Boston, 1968), p. 4.
Fig. 1--Enrollment in two-year colleges, United States, 1930-1970.


This chapter covers an overview of the growth of the junior college movement, and includes a discussion of the origins of the two-year college, changing conceptions of junior college education, the present status, current philosophy, and multicampus junior college systems.

Origins of the Two-Year College

The Carnegie Commission on Higher Education in 1970 points out that a major influence on junior college development was the advocacy of the bifurcated university at the beginning of the twentieth century.\(^3\) Such university leaders as William Rainey Harper of Chicago, Henry P. Tappan

\(^3\)The Carnegie Commission on Higher Education, p. 9.
of Michigan, William Folwell of Illinois, Richard H. Jesse of Missouri, and Alexis F. Lange of California "were striving for the establishment of upper-division and graduate education as the ideal of higher education." These educators were influenced strongly by the German system and sought to free the universities to perform their primary functions of research to advance knowledge and provide graduate education. Also, these educational statesmen sought to increase educational opportunities beyond high school. They foresaw the transfer of the most capable junior college students to universities.

In 1892, William Harper, President of the University of Chicago, was able to separate the first and last two years at the university into the "academic college" and the "university college." These titles were changed four years later to "junior college" and "senior college." That was perhaps the first time these terms were used. Thus Harper was able to achieve a compromise between the American four-year college and the German ideal. Later he succeeded in influencing the establishment of public junior colleges in the surrounding area. Harper is credited with strongly

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7 Blocker, Plummer, and Richardson, p. 24.
influencing the establishment of the oldest public junior college still in existence at Joliet, Illinois, in 1901. Also, he helped establish another at about the same time in Goshen, Indiana, but it has been discontinued.

Harper "foresaw institutional benefits if a large number of struggling four-year colleges should consolidate their resources by becoming two-year colleges." There was, however, a real difference between the outlook of the university and that of the four-year college on this point. The university, with its emphasis on specialization, had long operated on the principle that it was desirable for the student to get at that specialization as early as possible. Thus the job of preparing students during the lower-division years was looked upon as a necessary chore. The promise of the rise of a new institution that would perform this function and then transfer the student to the university at the proper time was welcome. For the four-year college, on the other hand, committed to the task of educating the person, not the specialist, the proposal posed a threat rather than a promise. The history of the junior college movement has been to some extent the story of the struggle between these two conceptions of the primary function of the early years of higher education. Many other factors have contributed to the development of junior colleges, but within education the major influence had been the quality of the relationships among the junior colleges and the university, the four-year college, and the high school.

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9 Leonard V. Koos, The Junior College Movement (Boston, 1925), p. 4.
10 Gleazer, This Is the Community College, p. 5.
Previous to the establishment of public junior colleges or junior colleges on university campuses, several private junior colleges were established. Monticello College was established in 1835, and Susquehanna University in 1858. Both provided education similar to the first two years of traditional college. By 1900, there were eight private junior colleges with an enrollment of about one hundred students.

The following reasons have been cited for the organization of private junior colleges:

1. To provide opportunities for higher education under church control.
2. To provide a completion school for those who cannot go further.
3. Financial difficulty of maintaining a four-year course.
4. Desire of students for college to be near home.
5. To meet the entrance requirements for professional schools.

While there were advantages to developing either private or public junior colleges, both types of junior colleges had sporadic beginnings. A substantial number actually failed or became four-year colleges or branches of colleges and universities. In the meantime, other types of institutions,

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13 Gleazer, editor, American Junior Colleges, p. 4.

14 Fields, p. 23.

15 Blocker, Plummer, and Richardson, p. 25.
such as normal schools and institutes contributed to the junior college movement by assuming the "junior college" name or by developing programs similar to the junior colleges.\textsuperscript{16}

One of the primary contributors to the further development of junior colleges was the American secondary school. Until the 1920's the three and four-year high school failed to stabilize as an institutional form. Consequently, between 1900 and 1921, the upward extension of high school began in several mid-Western states: California, Arizona, and Texas. As Blocker, Plummer, and Richardson state

these early colleges were true extensions of secondary education. They were housed in high school buildings, had closely articulated curricula, and shared faculty and administrative staffs. They encountered difficulty during their early years because, as a deviation from the trend toward the four-year high school, they were not recognized as an essential part of secondary education.\textsuperscript{17}

Changing Conceptions of Junior College Education

Between 1850 and 1920 the acceptable practice of the junior college was to offer the first two years of baccalaureate curriculums.\textsuperscript{18} During the 1920's innovations took place in education which encouraged the further

\textsuperscript{16}Fields, p. 23.
\textsuperscript{17}Blocker, Plummer, and Richardson, p. 25.
\textsuperscript{18}Thornton, p. 45.
development of two-year colleges. Again, according to Blocker, Plummer, and Richardson,

the emergence of the concept of the comprehensive high school, the enactment of pertinent legislation (e.g., the Smith-Hughes Act), and later progress in vocational education provided the historical base for the broadening of the college curriculum. Furthermore, the acceptance of the principle of publicly supported secondary education for all stimulated new thinking about the needs of those students who could not or would not complete the conventional college preparatory program. As larger numbers of students completed four years of high school, increasing numbers sought admission to college. Although many states attempted to provide more adequate opportunities for these high school graduates, it became apparent that something other than the traditional college campus educational plan would have to be developed.¹⁹

By 1925, the American Association of Junior Colleges felt compelled to expand its definition of the functions of a junior college as follows:

The junior college is an institution offering two years of instruction of strictly collegiate grade. This curriculum may include those courses usually offered in the first two years of the four-year college, in which case these courses must be identical, in scope and thoroughness, with corresponding courses of the standard four-year college. The junior college may, and is likely to, develop a different type of curriculum suited to the larger and ever-changing civic, social, religious, and vocational needs of the entire community in which the college is located. It is understood that in this case also the work offered shall be on a level appropriate for high school graduates.²⁰

This addition of occupational programs added an entirely new dimension to the development of junior colleges.

¹⁹ Blocker, Plummer, and Richardson, pp. 25-26.
²⁰ Thorton, p. 51.
The next additional function the junior colleges assumed resulted from the outbreak of World War II. This war stimulated colleges to engage in adult education and community activities which proved so valuable that junior colleges have continued to engage in these activities.\(^2\)

The junior college movement gained greater impetus after World War II. Particularly after Sputnik, education became everyone's business in America.\(^2\) One of the greatest forces for the current development of junior colleges is aptly described by Gleazer:

In a democratic nation which holds that any citizen can become President, or chairman of the board of General Motors, or the pilot of a spacecraft on a voyage to the moon, or can achieve greater status than his father, education is the means. Thus educational opportunity is more than a privilege; it is a citizen's right. And if the great variety of people who exercise this right are to benefit, a broad range of educational experiences is demanded. The population which moves into the nation's colleges will be a cross section of the American people, possessing a wide spectrum of interests, aptitudes, backgrounds, aims, achievements, and cultural determinants. By this reasoning, diversification of educational opportunity is urgently required to match a multitude of individual needs. The community (junior) college emerged to meet needs that other institutions could not or would not meet.\(^2\)

Thus, the current role of the junior college has evolved to meet the needs of the community in which it is

\(^{21}\) Ibid., p. 53.

\(^{22}\) Gleazer, *This Is the Community College*, pp. 5-6.

\(^{23}\) Ibid., p. 14.
located. This role includes preparation for institutions of higher learning, vocational training for particular occupations usually designated as semi-professional, and short courses for adults with special interests.

Present Status of the Junior College

In this country there are 1,000 junior colleges.\(^{24}\) During the past ten years these colleges have opened at a rate of approximately one per week.\(^{25}\) An analysis of Table I below indicates that the enrollment in junior colleges is over two million representing an increase of more than threefold over a decade ago.

**TABLE I**

**GROWTH IN NUMBER AND ENROLLMENT OF JUNIOR COLLEGES, 1959-1969**

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Colleges</th>
<th>Enrollment</th>
<th>Per Cent of Increase of Enrollment Over Preceding Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>1959</td>
<td>663</td>
<td>640,527</td>
<td>.....</td>
</tr>
<tr>
<td>1960</td>
<td>678</td>
<td>660,216</td>
<td>3.07</td>
</tr>
<tr>
<td>1961</td>
<td>678</td>
<td>748,619</td>
<td>13.39</td>
</tr>
<tr>
<td>1962</td>
<td>704</td>
<td>818,869</td>
<td>9.38</td>
</tr>
<tr>
<td>1963</td>
<td>694</td>
<td>927,534</td>
<td>13.27</td>
</tr>
<tr>
<td>1964</td>
<td>719</td>
<td>1,043,963</td>
<td>12.55</td>
</tr>
<tr>
<td>1965</td>
<td>771</td>
<td>1,292,753</td>
<td>23.83</td>
</tr>
<tr>
<td>1966</td>
<td>837</td>
<td>1,464,099</td>
<td>13.25</td>
</tr>
<tr>
<td>1967</td>
<td>912</td>
<td>1,671,440</td>
<td>14.16</td>
</tr>
<tr>
<td>1968</td>
<td>993</td>
<td>1,954,116</td>
<td>16.91</td>
</tr>
<tr>
<td>1969</td>
<td>1,038</td>
<td>2,186,272</td>
<td>11.88</td>
</tr>
</tbody>
</table>


\(^{24}\)The Carnegie Commission on Higher Education, p. 12.

An analysis of Tables II and III clearly indicates that during the past ten years this tremendous growth in junior college enrollment and new institutions is found in the public rather than the private two year institutions. The number of public junior colleges has increased from 390 to 794. Also, enrollment has increased from 551,760 to 2,051,493. In contrast, the number of private junior colleges has declined from 273 to 244 even though enrollment has increased from 88,767 to 134,779. Interestingly enough, enrollment in the private institutions declined modestly between 1966 and 1969.

TABLE II
PUBLIC TWO-YEAR COLLEGES, GROWTH IN NUMBER AND ENROLLMENT, 1959-1969

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Colleges</th>
<th>Enrollment</th>
<th>Per Cent of Increase of Enrollment Over Preceding Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>1959</td>
<td>390</td>
<td>551,760</td>
<td>.....</td>
</tr>
<tr>
<td>1960</td>
<td>405</td>
<td>566,224</td>
<td>2.62</td>
</tr>
<tr>
<td>1961</td>
<td>405</td>
<td>644,968</td>
<td>13.90</td>
</tr>
<tr>
<td>1962</td>
<td>426</td>
<td>713,334</td>
<td>10.59</td>
</tr>
<tr>
<td>1963</td>
<td>422</td>
<td>816,244</td>
<td>14.14</td>
</tr>
<tr>
<td>1964</td>
<td>452</td>
<td>912,993</td>
<td>13.12</td>
</tr>
<tr>
<td>1965</td>
<td>503</td>
<td>1,152,086</td>
<td>25.07</td>
</tr>
<tr>
<td>1966</td>
<td>565</td>
<td>1,316,980</td>
<td>14.31</td>
</tr>
<tr>
<td>1967</td>
<td>648</td>
<td>1,528,220</td>
<td>16.03</td>
</tr>
<tr>
<td>1968</td>
<td>739</td>
<td>1,810,964</td>
<td>18.50</td>
</tr>
<tr>
<td>1969</td>
<td>794</td>
<td>2,051,493</td>
<td>13.28</td>
</tr>
</tbody>
</table>

As shown in Table IV, public junior colleges constitute almost fifty-five per cent of all junior colleges. These public institutions also have over eighty-five per cent of all two year college enrollment.

TABLE IV

TWO-YEAR INSTITUTIONS OF HIGHER EDUCATION
BY TYPE AND ENROLLMENT, FALL, 1968

<table>
<thead>
<tr>
<th>Institutions</th>
<th>Number</th>
<th>Per Cent</th>
<th>Enrollment* Number</th>
<th>Per Cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public junior colleges</td>
<td>584</td>
<td>54.6</td>
<td>1,599,500</td>
<td>85.5</td>
</tr>
<tr>
<td>Private junior colleges</td>
<td>258</td>
<td>24.0</td>
<td>123,100</td>
<td>6.6</td>
</tr>
</tbody>
</table>
TABLE IV--Continued

<table>
<thead>
<tr>
<th>Institutions</th>
<th>Number</th>
<th>Per Cent</th>
<th>Enrollment</th>
<th>Number</th>
<th>Per Cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Two-year branches of universities</td>
<td>127</td>
<td>11.8</td>
<td>78,700</td>
<td>4.2</td>
<td></td>
</tr>
<tr>
<td>Specialized two-year institutions</td>
<td>103</td>
<td>9.6</td>
<td>69,700</td>
<td>3.7</td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>1,072</td>
<td>100.0</td>
<td>1,871,000</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

*Includes all full-time and part-time students.


Among the explanations for this current "boom" in public junior college development are

1. Open admission policies.
2. Wide geographic distribution in many cities.
3. Low tuition policies.
4. More varied programs for a greater variety of students than any other segment of higher education.
5. Provide a chance for many who are not fully committed in advance to a four-year college career to try out higher education without great risks of time or money.
6. Appeal to students who are undecided about their future careers and unprepared to choose a field of specialization.
7. Provide an opportunity for continuing education to working adults seeking to upgrade their skills and training. 26

Gleazer, in reference to the current junior college "boom," points out that

26The Carnegie Commission on Higher Education, p. 3.
these colleges recognize that if they are to broaden opportunity for college experience, programs must relate to the needs, aspirations, abilities, and interests of large numbers of people. Thus, the public junior colleges offer a wide spectrum of courses of study—ranging from those that prepare young people to eventually complete baccalaureate programs to those that provide education and training for positions of a semi-professional and technical nature.27

These public junior colleges are locally controlled, generally as part of separate college districts. However, some are still a part of local public school districts. These two-year institutions derive their financial support through various means. Some depend primarily on local tax sources and student tuition. Others derive primary support from the state.28

The private junior colleges have played a significant role in past junior college development. As shown on Table V, there are 135 church related, private junior colleges. These schools offer predominantly liberal arts and general education courses. The Roman Catholic Church operates forty-six of these institutions. Other denominations with a sizable number of junior colleges are the Methodists, Baptists, Presbyterians, Church of Christ, and Lutherans. About twenty denominations provide the major support for the development of these two-year institutions. Most are

27Gleazer, editor, American Junior Colleges, p. 10.
characteristically small and average about one thousand dollars yearly in tuition. Table V shows also that there are 109 non-church related, non-profit, private junior colleges, approximately half coeducational. Most are residential colleges and the cost of attendance is about two thousand dollars annually.

The population served by the public and private junior colleges indicates the broad range of two-year college involvement in the various communities. The median age of all junior college students is approximately twenty-five years. About half are adults ranging in age from twenty-two to seventy. Forty-five per cent of the students attend on a part-time basis, including both regular college-age students and adults who are seeking to qualify for better jobs. Also, junior college students tend to be equally divided between above average and below average ability students.

The Carnegie Commission for Higher Education reports that

the development of community colleges and the growth of enrollment has been very uneven from state to state. There were 10 states in 1968 in which 30 percent or more of all undergraduates were enrolled in two-year colleges. In another 14 states, students in two-year institutions accounted

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30 Ibid., p. 8.
32 Ibid., p. 3.
<table>
<thead>
<tr>
<th>Type of Control or Affiliation</th>
<th>Number of Colleges</th>
</tr>
</thead>
<tbody>
<tr>
<td>Independent, Nonprofit</td>
<td>109</td>
</tr>
<tr>
<td>African Methodist Episcopal</td>
<td>1</td>
</tr>
<tr>
<td>Assemblies of God</td>
<td>1</td>
</tr>
<tr>
<td>Baptist</td>
<td>20</td>
</tr>
<tr>
<td>Byzantine Catholic</td>
<td>0</td>
</tr>
<tr>
<td>Christian Church</td>
<td>1</td>
</tr>
<tr>
<td>Church of Christ</td>
<td>11</td>
</tr>
<tr>
<td>Church of God</td>
<td>2</td>
</tr>
<tr>
<td>Church of Jesus Christ</td>
<td>1</td>
</tr>
<tr>
<td>Church of the New Jerusalem</td>
<td>0</td>
</tr>
<tr>
<td>Episcopal</td>
<td>1</td>
</tr>
<tr>
<td>Evangelical United Brethren</td>
<td>0</td>
</tr>
<tr>
<td>Free Methodist</td>
<td>1</td>
</tr>
<tr>
<td>Lutheran</td>
<td>11</td>
</tr>
<tr>
<td>Mennonite</td>
<td>2</td>
</tr>
<tr>
<td>Methodist</td>
<td>22</td>
</tr>
<tr>
<td>Pentecostal Holiness</td>
<td>2</td>
</tr>
<tr>
<td>Pilgrim Holiness</td>
<td>0</td>
</tr>
<tr>
<td>Presbyterian</td>
<td>12</td>
</tr>
<tr>
<td>Roman Catholic</td>
<td>46</td>
</tr>
<tr>
<td>Seventh Day Adventist</td>
<td>1</td>
</tr>
</tbody>
</table>

**TOTAL**                  **244**

for from 20 to 30 percent of undergraduate enrollment. A dozen states had from 10 to 20 percent of their undergraduates enrolled in two-year colleges, while in the remaining states the proportion was less than 10 percent. Seven states—California, Florida, Illinois, Michigan, New York, Texas, and Washington—accounted for more than two-thirds of all enrollments and over one-third of all public community colleges in 1968.33

As shown on Table VI, California leads all states in both enrollment and number of public and private junior colleges. It has a total of 717,130 students enrolled in 97 two-year institutions. Thus, California with approximately ten per cent of all junior colleges enrolls approximately thirty per cent of all junior college students. Other states with large numbers of junior colleges are North Carolina with 66, New York with 60, Illinois with 57, Texas with 56, and Pennsylvania with 47. These aforementioned states account for about thirty per cent of the two-year institutions and approximately eighty-two per cent of these institutions are public.

The junior colleges still are comparatively small institutions in many parts of the country. Table VII shows the distribution of size of enrollment, and it will be noted that there is a wide range in enrollment. Almost eighty-three per cent of the private institutions have fewer than 800 students each. In contrast, only about thirty per cent of the public institutions had fewer than 800 students each. The mode for private institutions is between 100 and 200

33Ibid., p. 11.
<table>
<thead>
<tr>
<th>State</th>
<th>Number of Junior Colleges</th>
<th>Enrollment October, 1970</th>
</tr>
</thead>
<tbody>
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</tr>
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<tr>
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<td>Enrollment October, 1970</td>
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<td>Utah</td>
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<td>Vermont</td>
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<tr>
<td>Canal Zone</td>
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<td>1</td>
</tr>
<tr>
<td>Puerto Rico</td>
<td>3</td>
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</tr>
<tr>
<td>TOTAL</td>
<td>847</td>
<td>244</td>
</tr>
</tbody>
</table>

students whereas the mode for public two-year institutions is between 1,000 and 2,000.

Current Philosophy

The current junior college philosophy has evolved over a relatively short period of time—little more than a half century. Some of its early advocates, such as William Rainey Harper, saw its role as limited to providing the first two years of a baccalaureate program. However, many things have happened since then to modify the purposes of most junior colleges. Many of our rapidly expanding populace have demanded college opportunities for all in light of new social and economic needs. Occupational programs have been added to junior college curricula to prepare, in two years or less, men and women to function in jobs. Americans have recognized also that education is a continuous process. They look toward the junior college to provide adult education and community service courses to meet the current challenges of our dynamic, changing society.34

The comprehensive view of the junior college as it currently exists is stated explicitly by Crawford in terms of the purposes it should serve:

34Gleazer, editor, American Junior Colleges, pp. 3-4.
### TABLE VII

**DISTRIBUTION OF SIZE OF ENROLLMENT IN JUNIOR COLLEGES, 1970**

<table>
<thead>
<tr>
<th>Enrollment</th>
<th>Public</th>
<th>Private</th>
<th>Total</th>
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<tbody>
<tr>
<td>1 - 99</td>
<td>2</td>
<td>22</td>
<td>24</td>
</tr>
<tr>
<td>100 - 199</td>
<td>9</td>
<td>43</td>
<td>52</td>
</tr>
<tr>
<td>200 - 299</td>
<td>30</td>
<td>42</td>
<td>72</td>
</tr>
<tr>
<td>300 - 399</td>
<td>30</td>
<td>27</td>
<td>57</td>
</tr>
<tr>
<td>400 - 499</td>
<td>48</td>
<td>27</td>
<td>75</td>
</tr>
<tr>
<td>500 - 599</td>
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<td>54</td>
</tr>
<tr>
<td>700 - 799</td>
<td>40</td>
<td>5</td>
<td>45</td>
</tr>
<tr>
<td>800 - 899</td>
<td>25</td>
<td>5</td>
<td>30</td>
</tr>
<tr>
<td>900 - 999</td>
<td>31</td>
<td>2</td>
<td>33</td>
</tr>
<tr>
<td>1000 -1999</td>
<td>217</td>
<td>24</td>
<td>241</td>
</tr>
<tr>
<td>2000 -2999</td>
<td>93</td>
<td>3</td>
<td>96</td>
</tr>
<tr>
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<td>72</td>
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<td>73</td>
</tr>
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<td>4000 -4999</td>
<td>40</td>
<td>3</td>
<td>43</td>
</tr>
<tr>
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<td>26</td>
<td>1</td>
<td>27</td>
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</tr>
<tr>
<td>7000 -7999</td>
<td>18</td>
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<td>18</td>
</tr>
<tr>
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<td>12</td>
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<tr>
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</tr>
<tr>
<td>10000 -Over</td>
<td>40</td>
<td>0</td>
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</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>847</strong></td>
<td><strong>243</strong></td>
<td><strong>1090</strong></td>
</tr>
</tbody>
</table>

1. The need for programs of liberal arts and science courses, usual to the first and second years of college, which will provide sound general and preprofessional education . . .

2. The need for vocational and technical programs in the trades, industrial, agricultural, and semiprofessional fields . . .

3. The need for programs of courses for adults and other community college students . . . designed to provide general education and to improve self-government, healthful living, understanding of civic and public affairs, avocational growth, constructive use of leisure time, personal and family living satisfactions, cultural depth, and to facilitate occupational advancement.

4. The need for individual services to students including guidance and counseling, assistance in career selection, removal of deficiencies in preparation for college programs, personality and health improvement.

5. The need for programs and services for individuals and groups interested in cultural, civic, recreational, or other community betterment projects.35

The Multicampus Junior College Systems

The multicampus junior college system is primarily an outgrowth of economic and social trends of the 1960's. The principal reasons for its establishment are

1. To compensate for district geographical size which prohibits one campus from servicing the district adequately.

2. To equalize educational opportunities through making the college accessible to the residents of the district.

3. To meet the differing educational needs of the various communities located within the district.

4. To accommodate applicants after the district's only campus has reached its maximum capacity.

5. To keep each campus to a reasonable and functional size.\(^{36}\)

The first multicampus systems were developed in Chicago and Los Angeles. Chicago opened three campuses during 1934, after suspending classes at Crane High School for one year. Los Angeles added a second campus to its junior college system in 1945. However, during the 1950's and early 1960's, the development of multicampus junior college systems remained fairly dormant while the number of single unit junior colleges rapidly increased.\(^{37}\) Now there are forty-three multicampus junior college systems with two or more campuses in operation.\(^{38}\)

As shown in Table VIII, the forty-three multicampus junior college systems, with two or more campuses in operation, are divided among only sixteen states. California, with thirteen of these systems, is the leader in this type of organizational structure. Next are Texas with five and Iowa with four. And each of seven states have one multicampus junior college district.

\(^{36}\) Kintzer, Jensen, and Hansen, p. 8.

\(^{37}\) Ibid., p. 6.

### TABLE VIII

**NUMBER OF MULTICAMPUS JUNIOR COLLEGE SYSTEMS WITH TWO OR MORE CAMPUSES IN OPERATION BY STATE, 1970**

<table>
<thead>
<tr>
<th>States with Multicampus Systems</th>
<th>Number of Systems</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arizona</td>
<td>1</td>
</tr>
<tr>
<td>California</td>
<td>13</td>
</tr>
<tr>
<td>Colorado</td>
<td>2</td>
</tr>
<tr>
<td>Delaware</td>
<td>1</td>
</tr>
<tr>
<td>Florida</td>
<td>2</td>
</tr>
<tr>
<td>Illinois</td>
<td>3</td>
</tr>
<tr>
<td>Iowa</td>
<td>4</td>
</tr>
<tr>
<td>Maryland</td>
<td>1</td>
</tr>
<tr>
<td>Michigan</td>
<td>2</td>
</tr>
<tr>
<td>Mississippi</td>
<td>1</td>
</tr>
<tr>
<td>Missouri</td>
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</tr>
<tr>
<td>Ohio</td>
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<td>Pennsylvania</td>
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</tr>
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<td>Texas</td>
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</tr>
<tr>
<td>Virginia</td>
<td>1</td>
</tr>
<tr>
<td>Washington</td>
<td>3</td>
</tr>
</tbody>
</table>

**TOTAL**  43

Table IX shows the student enrollment as of Fall, 1970, in multicampus junior college districts. Los Angeles Community College District has the largest enrollment with 97,025 students and Colorado Mountain College the smallest enrollment with 631 students. The mean average enrollment is 14,973 while the median average enrollment is 11,884. Table IX shows also that eighteen multicampus junior college systems enrolled less than 10,000 students, fifteen systems enrolled between 10,000 and 20,000 students, seven systems enrolled between 20,000 and 30,000 students, and three systems enrolled over 30,000 students. Thus, seventy-nine per cent of the multicampus junior college systems enrolled less than 20,000 total students.

As shown on Table IX, the number of campuses per multicampus junior college system ranges from two to eight. Twenty-five junior college systems have two campuses, fourteen systems have three campuses, and four systems have more than three campuses. There appears to be little relationship between student enrollment and the number of campuses per multicampus junior college system. For example, Miami-Dade Junior College enrolled over 33,000 students on two campuses whereas Eastern Iowa Community College District enrolled 1,752 on three campuses. Perhaps the composition and location of the population within a multicampus junior college system plays a significant role in the determination of the number of campuses needed within a given system.
<table>
<thead>
<tr>
<th>Multicampus Junior College System</th>
<th>Student Enrollment</th>
<th>Number of Campuses</th>
<th>Average enrollment per campus</th>
<th>Year with two or more campuses</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARIZONA</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Maricopa County Junior College District</td>
<td>28,827</td>
<td>5</td>
<td>5,765</td>
<td>1965</td>
</tr>
<tr>
<td>CALIFORNIA</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Coast Community College District</td>
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<td>16,521</td>
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<td>1967</td>
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<tr>
<td>Colorado Mountain College</td>
<td>631</td>
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<td>316</td>
<td>1967</td>
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<td>5,670</td>
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<td>1,890</td>
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</table>
### TABLE IX--Continued

<table>
<thead>
<tr>
<th>Multicampus Junior College System</th>
<th>Student Enrollment</th>
<th>Number of Campuses</th>
<th>Average enrollment per campus</th>
<th>Year with two or more campuses</th>
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<td>St. Petersburg Junior College</td>
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<td>7</td>
<td>5,593</td>
<td>1934</td>
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<td>3</td>
<td>1,008</td>
<td>1968</td>
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<tr>
<td><strong>IOWA</strong></td>
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</tr>
<tr>
<td>Des Moines Area Community College</td>
<td>2,226</td>
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<td>584</td>
<td>1966</td>
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<td>Multicampus Junior College System</td>
<td>Student Enrollment</td>
<td>Average enrollment per campus</td>
<td>Year with two or more campuses</td>
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<td>-----------------------------</td>
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<tr>
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<td>1969</td>
<td></td>
</tr>
<tr>
<td>MISSOURI</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Metropolitan Junior College District of St. Louis County</td>
<td>18,696</td>
<td>2,617</td>
<td>1963</td>
<td></td>
</tr>
<tr>
<td>OHIO</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cuyahoga Community College District</td>
<td>16,300</td>
<td>8,150</td>
<td>1966</td>
<td></td>
</tr>
<tr>
<td>PENNSYLVANIA</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Community College of Allegheny County</td>
<td>10,722</td>
<td>3,574</td>
<td>1966</td>
<td></td>
</tr>
<tr>
<td>TEXAS</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dallas County Junior College District</td>
<td>12,292</td>
<td>4,097</td>
<td>1970</td>
<td></td>
</tr>
<tr>
<td>Del Mar College</td>
<td></td>
<td>5,523</td>
<td>1970</td>
<td></td>
</tr>
<tr>
<td>Multicampus Junior College System</td>
<td>Student Enrollment</td>
<td>Number of Campuses</td>
<td>Average enrollment per campus</td>
<td>Year with two or more campuses</td>
</tr>
<tr>
<td>-----------------------------------------------------------</td>
<td>--------------------</td>
<td>--------------------</td>
<td>--------------------------------</td>
<td>--------------------------------</td>
</tr>
<tr>
<td><strong>TEXAS--Continued</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Permian Junior College System</td>
<td>3,562</td>
<td>2</td>
<td>1,781</td>
<td>1969</td>
</tr>
<tr>
<td>San Antonio Junior College District</td>
<td>16,921</td>
<td>2</td>
<td>8,461</td>
<td>1945</td>
</tr>
<tr>
<td>Tarrant County Junior College District</td>
<td>10,647</td>
<td>2</td>
<td>5,324</td>
<td>1968</td>
</tr>
<tr>
<td><strong>VIRGINIA</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Northern Virginia Community College</td>
<td>9,779</td>
<td>2</td>
<td>4,890</td>
<td>1965</td>
</tr>
<tr>
<td><strong>WASHINGTON</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Community College District V</td>
<td>8,079</td>
<td>2</td>
<td>4,040</td>
<td>1967</td>
</tr>
<tr>
<td>Community College District XVII</td>
<td>5,805</td>
<td>2</td>
<td>2,903</td>
<td>1967</td>
</tr>
<tr>
<td>Seattle Community College District</td>
<td>14,092</td>
<td>3</td>
<td>4,697</td>
<td>1969</td>
</tr>
</tbody>
</table>

Table IX portrays multicampus junior college systems by average student enrollment per campus. Miami-Dade Junior College has the greatest average student enrollment per campus with 16,912 and Colorado Mountain College the least with an average of 316 students per campus. The median average student enrollment per campus is 5,005 while the mean average is 5,633. Eleven multicampus junior college systems have an average student enrollment per campus of less than 2,500; eleven systems average between 2,500 and 5,000 students per campus; seven systems average between 5,000 and 7,500 students per campus; ten systems average between 7,500 and 10,000 students per campus; and four systems have over 10,000 students per campus. These figures indicate that there is a lack of any predominant campus size based on student enrollment.

As shown in Table IX, the first junior college system with at least two campuses in operation was the City Colleges of Chicago in 1934. Between 1934 and 1962, only four additional junior college systems operated two or more campuses. Since 1962, however, thirty-eight junior college systems have become multicampus operations. This means that eighty-eight per cent of the current multicampus junior college systems implemented their multicampus operations within the past ten years.
Kintzer, Jensen, and Hansen completed a study on current practices in multicampus junior college systems in 1969.39 These researchers asked forty-five chief district administrators of multicampus junior college districts and seventy-five chief on-campus administrators of junior colleges in the same systems for factual responses relating to current practices in these multicampus systems. A statistical summary of these responses is shown in Table X.

As indicated in Table X, the campus has assumed the primary responsibility for performance of the following functions: (1) evaluation and supervision of both certificated and classified personnel, (2) in-service training of certificated personnel, (3) course content and organization, (4) textbook and library book selection, (5) student activities program, (6) counseling, (7) health services, (8) scholarships and loans, (9) discipline, (10) housing, (11) faculty committees, and (12) business functions pertaining to student body funds.40

Areas where the campus assumed the major responsibility, but without the clear consensus of the preceding group, are (1) selection and assignment of certificated and classified

40 Ibid., pp. 23-24.
### TABLE X

CURRENT PRACTICES IN MULTICAMPUS JUNIOR COLLEGE SYSTEMS AS INDICATED BY MULTICAMPUS JUNIOR COLLEGE CHIEF ADMINISTRATORS

<table>
<thead>
<tr>
<th>Area of Primary Responsibility</th>
<th>College</th>
<th>District</th>
<th>Shared</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Certificated Personnel:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Selection and Assignment</td>
<td>45</td>
<td>1</td>
<td>22</td>
<td>1</td>
</tr>
<tr>
<td>Evaluation and Supervision</td>
<td>67</td>
<td>0</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>In-service Training</td>
<td>55</td>
<td>4</td>
<td>10</td>
<td>0</td>
</tr>
<tr>
<td><strong>Classified Personnel:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Selection and Assignment</td>
<td>39</td>
<td>6</td>
<td>22</td>
<td>2</td>
</tr>
<tr>
<td>Evaluation and Supervision</td>
<td>61</td>
<td>1</td>
<td>7</td>
<td>0</td>
</tr>
<tr>
<td>In-service Training</td>
<td>45</td>
<td>9</td>
<td>14</td>
<td>1</td>
</tr>
<tr>
<td><strong>Curriculum Planning and Development</strong></td>
<td>32</td>
<td>3</td>
<td>31</td>
<td>2</td>
</tr>
<tr>
<td><strong>Approval of Curricular Proposals Prior to Board Presentation:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transfer Curriculums</td>
<td>34</td>
<td>13</td>
<td>30</td>
<td>3</td>
</tr>
<tr>
<td>Terminal, Occupational Curriculums</td>
<td>17</td>
<td>12</td>
<td>38</td>
<td>4</td>
</tr>
<tr>
<td><strong>Course Content and Organization:</strong></td>
<td>56</td>
<td>3</td>
<td>8</td>
<td>1</td>
</tr>
<tr>
<td>Textbook Selection</td>
<td>62</td>
<td>1</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>Library Book Selection</td>
<td>17</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Library Book Processing</td>
<td>43</td>
<td>15</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td><strong>Student Activities Program, including clubs, athletics, and student government</strong></td>
<td>63</td>
<td>0</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td><strong>Other Student Personnel Functions:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Admissions and Records</td>
<td>45</td>
<td>5</td>
<td>19</td>
<td>1</td>
</tr>
<tr>
<td>Counseling</td>
<td>69</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Health Services</td>
<td>64</td>
<td>0</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Bookstore</td>
<td>49</td>
<td>9</td>
<td>7</td>
<td>1</td>
</tr>
<tr>
<td>Food Services</td>
<td>42</td>
<td>15</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>Scholarships and Loans</td>
<td>52</td>
<td>4</td>
<td>13</td>
<td>1</td>
</tr>
<tr>
<td>Function</td>
<td>Area of Primary Responsibility</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-----------------------------------------------</td>
<td>-------------------------------</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>College</td>
<td>District</td>
<td>Shared</td>
<td>Other</td>
</tr>
<tr>
<td><strong>Discipline</strong></td>
<td>67</td>
<td>0</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td><strong>Housing</strong></td>
<td>38</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td><strong>Research Relative to:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Physical Facility Planning</strong></td>
<td>5</td>
<td>29</td>
<td>32</td>
<td>1</td>
</tr>
<tr>
<td><strong>Student Personnel Services</strong></td>
<td>43</td>
<td>6</td>
<td>20</td>
<td>0</td>
</tr>
<tr>
<td><strong>Instructional Improvement</strong></td>
<td>45</td>
<td>2</td>
<td>21</td>
<td>0</td>
</tr>
<tr>
<td><strong>Educational Planning</strong></td>
<td>19</td>
<td>7</td>
<td>41</td>
<td>1</td>
</tr>
<tr>
<td><strong>Other</strong></td>
<td>2</td>
<td>0</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td><strong>Faculty Committees</strong></td>
<td>53</td>
<td>1</td>
<td>15</td>
<td>1</td>
</tr>
<tr>
<td><strong>Accreditation Activities</strong></td>
<td>40</td>
<td>2</td>
<td>27</td>
<td>0</td>
</tr>
<tr>
<td><strong>Community Services</strong></td>
<td>38</td>
<td>6</td>
<td>22</td>
<td>1</td>
</tr>
<tr>
<td><strong>Publicity</strong></td>
<td>12</td>
<td>10</td>
<td>45</td>
<td>2</td>
</tr>
<tr>
<td><strong>Administrative Data Processing</strong></td>
<td>7</td>
<td>41</td>
<td>20</td>
<td>0</td>
</tr>
<tr>
<td><strong>Business Functions (tax funds):</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Purchasing</strong></td>
<td>3</td>
<td>44</td>
<td>20</td>
<td>2</td>
</tr>
<tr>
<td><strong>Accounting</strong></td>
<td>3</td>
<td>46</td>
<td>18</td>
<td>2</td>
</tr>
<tr>
<td><strong>Budget Development</strong></td>
<td>6</td>
<td>11</td>
<td>50</td>
<td>2</td>
</tr>
<tr>
<td><strong>Budget Administration</strong></td>
<td>13</td>
<td>19</td>
<td>34</td>
<td>1</td>
</tr>
<tr>
<td><strong>Business Functions (student body funds)</strong></td>
<td>53</td>
<td>4</td>
<td>11</td>
<td>0</td>
</tr>
<tr>
<td><strong>Maintenance, Buildings, and Grounds</strong></td>
<td>20</td>
<td>19</td>
<td>25</td>
<td>2</td>
</tr>
<tr>
<td><strong>Warehousing and Supplies</strong></td>
<td>14</td>
<td>32</td>
<td>18</td>
<td>1</td>
</tr>
<tr>
<td><strong>Other</strong></td>
<td>3</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

**TOTALS**                                    | 1491    | 383      | 679    | 44    

personnel, (2) selection, assignment, and in-service training of classified personnel, (3) library book processing, (4) admissions and records, (5) bookstore, (6) food services, (7) student personnel services, (8) instructional improvement, (9) accreditation activities, and (10) community services.  \[^{41} \]

About half the administrators placed primary responsibility at the institution level and about half said that the responsibilities were shared in the areas of curriculum planning and development and transfer curriculums.  \[^{42} \]

The administrators reported that primary responsibility was shared between the district and the campus in occupational curricula development, physical facility planning, research relative to educational planning, publicity, budget development and administration, and maintenance of building and grounds. However, it should be noted that almost as many administrators indicated that the district had primary responsibility for physical facility planning and utilization. Also, the respondents were almost equally divided between college, district, and shared responsibilities in who had the primary responsibility for maintenance of buildings and grounds.  \[^{43} \]

Only in the areas of administrative data processing, purchasing, accounting, and warehousing and supplies was

\[^{41} \text{Ibid.}, \text{p. 25.}\]
\[^{42} \text{Ibid.}\]
\[^{43} \text{Ibid.}\]
the responsibility placed at the district level by the respondents.\textsuperscript{44}

**Summary**

American junior colleges are a phenomenon of the twentieth century. From a sporadic beginning, these two-year institutions of higher education have grown to serve an enrollment of over two million, which represents an increase of more than threefold since 1960. Currently, junior college students account for almost thirty per cent of all undergraduate students and twenty-five per cent of students in higher education in the United States.

The current junior college philosophy has developed to meet certain social and economic needs demanded by the populace. Some of the early junior college advocates saw its role as limited to providing the first two years of a baccalaureate program. However, many things have happened to modify the purposes of most junior colleges. Occupational programs have been added to prepare persons in two years or less to function in a job. Americans also look toward the junior college to provide adult education and community service courses to meet the current challenges of a dynamic, changing society.

During the past ten years this tremendous growth in junior college enrollment is found in the public rather than

\textsuperscript{44}Ibid.
the private two-year institutions. While public junior colleges constitute only fifty-five per cent of all junior colleges, these public institutions have over eighty-five per cent of all two-year college enrollment.

The median age of all junior college students is approximately twenty-five years. About half are adults ranging in age from twenty-two to seventy. Forty-five per cent of these students attend on a part-time basis.

California leads all states in both enrollment and number of public and private junior colleges. It has a total of 717,130 students enrolled in ninety-seven two-year institutions. Other states with large numbers of junior colleges are North Carolina, New York, Illinois, Texas, and Pennsylvania. These states, including California, account for about thirty per cent of the two-year institutions and approximately eighty-two per cent of these institutions are public.

Multicampus junior college systems are primarily a product of the 1960's. There are forty-three of these systems, with two or more campuses in operation, divided among only sixteen states. California, with thirteen of these systems, is the leader in this type of organizational structure. Next are Texas with five and Iowa with four.

Los Angeles Community College District has the largest enrollment with 97,025 students and Colorado Mountain College the smallest enrollment with 631 students. The mean average enrollment is 14,973 while the median average
enrollment is 11,884. Seventy-nine per cent of the multi-campus junior college systems enrolled less than 20,000 total students.

The number of campuses per multicampus junior college system ranges from two to eight. Twenty-five junior college systems have two campuses, fourteen systems have three campuses, and four systems have more than three campuses. There appears to be little relationship between student enrollment and the number of campuses per multicampus junior college system.

Miami-Dade Junior College has the greatest average student enrollment per campus with 16,912 and Colorado Mountain College the least with an average of 316 per campus. The median average student enrollment per campus is 5,005 while the mean average is 5,633.

City Colleges of Chicago developed the first multicampus junior college system in 1934. Between 1934 and 1962, only four additional multicampus junior college systems were developed. Since 1962, thirty-eight junior college systems have become multicampus operations.

The only comprehensive study found on current practices in multicampus junior college systems was completed by Kintzer, Jensen, and Hansen, and was published in 1969. In Chapter V the results of their study are discussed in relation to the functions which were used in this thesis. Kintzer, Jensen, and Hansen found that the campus assumed
the primary responsibility for in-service training, textbook selection, and student personnel services. Areas in which the campus assumed the major responsibility, but without as clear a consensus, were community service development and recruitment of new staff members. In curriculum development these researchers discovered that about one half of the campuses assumed the primary responsibility and the other one half shared the responsibility between the district and the campuses. They found that primary responsibility was shared between the district and the campus in budget preparation and public information services. Only in the area of physical facility planning was the responsibility about equally divided between shared and district responsibility.
CHAPTER III

THE SEMANTIC DIFFERENTIAL

Introduction

The semantic differential is the measuring instrument used in this study. This psychological technique or process measures the connotative meaning which words and concepts have for different individuals or groups of individuals. As Osgood, Suci, and Tannenbaum explain,

the semantic differential is essentially a combination of controlled association and scaling procedures. We provide the subject with a concept to be differentiated and a set of bipolar adjectival scales against which to do it, his only task being to indicate, for each item (pairing of a concept with a scale), the direction of his association and its intensity on a seven-step scale. The crux of the method, of course, lies in selecting the sample of descriptive polar terms. Ideally, the sample should be as representative as possible of all the ways in which meaningful judgments can vary, and yet be small enough in size to be efficient in practice. In other words, from the myriad of linguistic and non-linguistic behaviors mediated by symbolic processes, we select a small but carefully devised sample, a sample which we shall try to demonstrate is chiefly indicative of the ways that meanings vary, and largely insensitive to other sources of variation.¹

The use of the semantic differential process can determine whether the same stimulus word, concept, or function actually has a different meaning for different individuals.

This technique is based on the fact that effective communication is difficult if there is much differentiation in meaning through the learning history of the individuals involved.

During the past twenty years the semantic differential technique has come to play an increasingly important role as an objective method by which meaning can be measured. It is currently being used in almost all of the behavioral sciences as well as in many applied areas. The semantic differential technique is still undergoing refinements in its development. However, in recent years, hundreds of articles using this technique have been published in a variety of professional journals to suggest its use as a valid and reliable instrument to measure meaning.2 As Snider states,

many techniques of measurement are proposed in psychology, but few are chosen for consistent use. The semantic differential has been apparently one of those chosen, probably because it was designed to get at a very important variable in human behavior--meaning--and because it is extremely flexible in application. . . .3

This chapter is divided into the following major areas: (1) why the semantic differential was developed, (2) how the semantic differential was developed, (3) logic behind the development of the semantic differential, (4) how the


3Ibid., p. vi.
semantic differential is used and interpreted, and (5) evaluation of the semantic differential as a measure of meaning.

Why the Semantic Differential Was Developed

The semantic differential technique was developed by Osgood after he concluded that previous studies in the area of the measurement of meaning failed to meet the basic criteria of a satisfactory measuring instrument. Some of these earlier attempts to measure meaning used physiological methods, learning methods, perceptual methods, association methods, and scaling methods.

In relationship to the earlier attempts of measuring meaning, Osgood felt that the primary drawback of the physiological methods was the cumbersomeness of the measurements since the subject had to be tied to the use of many "gadgets." Another weakness found in this approach was the relative insensitiveness of these peripheral components as measures of meaning. One example of the use of this method was a salivary reaction test conducted by Razran on himself during 1935 and 1936. He concluded that salivation was greatest in his childhood language (Russian), next in his most proficient one (English), and less in some of his lesser known languages.

4 Charles Osgood is Research Professor and Director of the Institute of Communications Research at the University of Illinois.

5 Osgood, Suci, and Tannenbaum, pp. 11-17.
Osgood found learning measurements, such as semantic
generalization and transfer methods, inadequate as measures
of meaning primarily because they lack comparability as
indices of meaning. They also were somewhat cumbersome
procedurally. As Osgood, Suci, and Tannenbaum elaborate,
this is because any measure of generalization or
interference is necessarily made relative to the
original learning of some standard, which, of course,
varies from case to case. We can feel that HAPPY
is more similar in meaning to JOYFUL than is SMOOTH,
but this cannot be compared in any way with other
such relations. The chief value of these learning
methods, therefore, lies in the testing of specific
hypotheses about meaningful processes deriving from
learning theory.?

The major shortcoming of perceptual methods used to
measure meaning was that these methods measure the habit
strength of alternate meaningful responses rather than the
meaning. Osgood and associates illustrate this weakness
as follows:

The fact that a religious person perceives VESPERS
with a shorter presentation time than a theoretically
oriented person says nothing about how the meaning
of this term differs for them; the fact that the
religious person perceives VESPERS more quickly
than THEORY says nothing about the difference in
meaning of these two words to this individual.8

Methods of association, which "allow one idea to lead
to another," have been found by Osgood to be sensitive to
differences in the mode of the stimulus sign. Association
methods also are sensitive to the context in which the

7 Ibid., p. 14.
8 Ibid., p. 15.
stimulus word appears. However, Osgood points out that this approach used to measure meaning is inadequate for two reasons. First, it lacks comparability because the responses of two individuals to the same stimulus are essentially unique as data bits. Secondly, word associations depend on other factors than just the meaning of the stimulus word. For example, bread does not mean butter because these words are the most common associates.9

Osgood felt that of all the previous approaches used to measure meaning that scaling methods had the most promise. In his opinion, Mosier completed the most useful scaling study. Mosier used an eleven-point scale in terms of their favorableness and unfavorableness. However, Osgood criticized Mosier's technique because Mosier measured only the important evaluative dimension of meaning.10 Osgood's evidence that meaning does vary multidimensionally is offered later in this chapter.

How the Semantic Differential Was Developed

The semantic differential as a technique to measure meaning developed from several experimental research studies other than those previously mentioned.

Research on synesthesia by Karwoski and Odbert in 1934 led to the notion of using polar adjectives. An example of their use is as follows:

9 Ibid., pp. 15-17.
10 Ibid., p. 17.
These researchers found that color-music synesthesia was a fairly common phenomenon. Odbert, Karwoski, and Eckerson in 1942 found that there were consistent relations between color, mood, and music. These results indicate that visual, auditory, emotional, and verbal stimuli may have shared significances or meanings, which can be referred to as "cross-modality stimulus equivalence."\(^{11}\)

In 1942, Karwoski, Odbert, and Osgood showed that the cross-modality stimulus equivalence displays continuity along dimensions of experience. These researchers found that students drew similar pictures when exposed to the same music whether or not these students ever thought of "seeing things."\(^{12}\)

In another experiment, 100 unselected college sophomores were given a purely verbal metaphor test in which the auditory-mood and visual-spatial characteristics, observed in synesthetes, translated into adjectives and presented as pairs (e.g., LOUD-SOFT; SMALL-LARGE), were combined in all possible ways and judged (by circling that member of the second pair which seemed to go best with the first, capitalized member of the first pair). Here again relations utilized by complex synesthetes were regularly chosen by unselected subjects and 96 per cent, for example, linking LOUD and LARGE in the example above.\(^{13}\)

Osgood found that such cross-modality stimulus equivalence was based on some fundamental determinants.

\(^{11}\)Ibid., pp. 20-21.

\(^{12}\)Ibid., pp. 21-23.

\(^{13}\)Ibid., p. 23.
operating in the human species rather than relying entirely on culture. His study of five widely separated, primitive cultures found a generality of certain relationships. For instance, good things were almost always up and light.\footnote{14}{Ibid.}

These studies clearly suggested some kind of semantic frame of reference. As a result, Stagner and Osgood measured social stereotypes by making explicit the idea of a continuum between polar terms and by using these terms to define the ends of seven-step scales. Stagner and Osgood asked subjects to check that place on the scale which best represented their judgment of the concept. Some of the social stereotype concepts evaluated were pacifist, Russian, dictator, and neutrality. These researchers tested successive samples of subjects during the period of the United States' gradual involvement in World War II. Osgood and Stagner not only demonstrated the feasibility of the semantic differential approach, but also found that semantic scales fell into highly intercorrelated clusters. They conclude that for example, fair-unfair, high-low, kind-cruel, valuable-worthless, Christian-antiChristian, and honest-dishonest were all found to correlate .90 or better. Such a cluster represents the operation of a single, general factor in social judgments, obviously here an evaluative factor. Scales like strong-weak, realistic-unrealistic, and happy-sad were independent of this evaluative group and pointed to the existence of other dimensions of the semantic framework.\footnote{15}{Ibid., pp. 24-25.}
The researches previously described plus others led Osgood to state three hypothesis from which the semantic differential technique was perfected to measure meaning. These hypothesis are as follows:

1. The process of description or judgment can be conceived as the allocation of a concept to an experiential continuum, definable by a pair of polar terms.

2. Many different experiential continua, or ways in which meanings vary, are essentially equivalent and hence may be represented by a single dimension.

3. A limited number of such continua can be used to define a semantic space within which the meanings of any concept can be specified.  

Osgood believed that research leading to his development of the first and second hypothesis was sufficient. However, he felt additional research was needed to demonstrate that a limited number of dimensions or factors were sufficient to differentiate among the meaning of randomly selected concepts. Consequently, Osgood conducted a factor analysis of judgments made by 100 students of 20 different concepts to be differentiated by 50 bipolar descriptive scales. These scales were selected on the basis of usage frequency. A sample of how one concept with one scale appeared is as follows:

LADY rough smooth

A factor analysis of the results revealed three primary dimensions or factors (evaluative, potency, and activity) account for almost half of the total variance in meaningful judgments.\textsuperscript{17}

Osgood's study and others suggest that the evaluative factor plays a significant role in extracting meaningful judgments. This factor accounts for approximately 70 per cent of the common variance and is exemplified by the scale "good-bad." The potency dimension accounts for about 17 per cent of the common variance and is exemplified by the scale "strong-weak." The activity dimension accounts for approximately 15 per cent of the common variance. This dimension is exemplified by the scale "active-passive."

These studies show that it is possible to select a minimum number of descriptive scales to measure meaning.\textsuperscript{18} However, according to Osgood, Suci, and Tannenbaum, it is also evident the functional semantic space is to some degree modifiable in terms of what kinds of concepts are being judged, i.e., the relative importance and relationship among factors may vary with the frame of reference of judgment.\textsuperscript{19}

Yet, it has been demonstrated repeatedly that meanings do vary multidimensionally with the evaluative, potency, and activity factors appearing in roughly the same order of magnitude. Other minor dimensions have appeared in nearly

\textsuperscript{17}Osgood, Suci, and Tannenbaum, pp. 33-38.

\textsuperscript{18}Ibid.

\textsuperscript{19}Ibid., p. 72.
all factor analysis studies, but these dimensions have failed to emerge as significant, meaningful dimensions.  

How the Semantic Differential Is Used and Interpreted

The semantic differential is a generalized technique of measurement which must be adapted to the requirements of each research problem. "There are no standard concepts and no standard scales; rather the concepts and scales used in a particular study depend upon the purpose of the research."\(^{21}\)

This approach to the measurement of meaning can be described as similar to a game of "Twenty Questions." For example, the word sophisticated may be chosen and various subjects asked, "Is it hard or soft?" "Is it pleasant or unpleasant?" "Is it fast or slow?" Osgood, Suci, and Tannenbaum state that just as in 'Twenty Questions' the selection of successive alternatives gradually eliminates uncertainty as to the object being thought about, so selection among successive pairs of common verbal opposites should gradually isolate the 'meaning' of the stimulus sign. To increase the sensitivity of our instrument, we may insert a scale between each pair of terms, so that the subject can indicate both the direction and the intensity of each judgment.\(^ {23}\)

The basis of the semantic differential approach is "semantic space." Osgood has found that the division of semantic space into a seven gradient scale defined by a pair

\(^{20}\textit{Ibid.}, pp. 72-75.\)
\(^{21}\textit{Ibid.}, p. 20.\)
\(^{22}\textit{Ibid.}, p. 19.\)
\(^{23}\textit{Ibid.}, pp. 19-20.\)
of bipolar adjectives is generally the best approach. He states that "over a large number of different subjects in many different experiments it has been found that with seven alternatives all of them tend to be used as with roughly, if not exactly, equal frequencies."\textsuperscript{24} There has been some criticism of a seven-point scale as discussed later in this chapter; however, sufficient evidence is lacking to cause this researcher to change to another numbered scale.

Initially the researcher must develop a questionnaire which includes the concepts or functions to be differentiated and a set of bipolar scales against which to do it. Then the subject checks the direction of his association and its intensity for a given concept or function on each gradient descriptive scale. The key to this particular method lies in the selection of representative concepts or functions and representative descriptive polar adjectives. Yet, the sample should be small enough in size to be efficiently disseminated and interpreted.\textsuperscript{25}

Figure 2 shows an example of how the semantic differential is used. In this example the word \textit{university} is the stimulus or concept under investigation. Seven gradient descriptive steps between nine bipolar adjectives have been selected on the basis of being representative for the concept to be measured. The bipolar adjectives shown in Figure 2 below

\begin{footnotesize}
\begin{enumerate}
\item Ibid., p. 76.
\item Ibid., p. 8.
\end{enumerate}
\end{footnotesize}
were randomly selected for purposes of illustration. The selection of the nine bipolar adjectives used in this study was explained in Chapter I.

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UNIVERSITY:

- clear ___:___:___:X:___:___:___ hazy
- successful ___:X:___:___:___:___:___ unsuccessful
- good ___:X:___:___:___:___:___ bad
- strong ___:___:___:___:___:___:___ weak
- large ___:X:___:___:___:___:___ small
- deep ___:X:___:___:___:___:___ shallow
- fast ___:___:___:___:___:___:___ slow
- active ___:___:___:___:___:___:___ passive
- complex ___:___:___:___:___:___:___ simple

---

Fig. 2--Example of how the semantic differential is used.

The subjects might receive instructions as follows:

On the following page you will find a concept to be judged and beneath this concept a set of scales. You are to rate this concept on each of these scales in order. Please make your judgments strictly on the basis of what you believe.

Here is how you are to use these scales:

If you feel that the concept is very closely related to one end of the scale, you should place your check-mark as follows:

- good ___:___:___:___:___:___:___ bad
  OR
- good ___:___:___:___:___:___:___ X bad
If you feel that the concept is quite closely related to one or the other end of the scale (but not extremely), you should place your check-mark as follows:

strong ___: X:___:____:____:____: weak

OR

strong ____:____:____:____:____: X:____: weak

If the concept seems only slightly related to one side as opposed to the other side (but is not really neutral), then you should check as follows:

active ____:____:____:____:____: X:____: passive

OR

active ____:____:____:____:____: X:____: passive

If you consider the concept to be neutral on the scale (both sides of the scale equally associated with the concept), or if the scale is not relevant (unrelated to the concept), you should place your check-mark in the middle space:

large ____:____:____:____:____: X:____:____: small

Please check the questionnaire and assure yourself that you have responded to every pair of adjectives for each question. 26

The closer to each end of the bipolar scale that the subject checks, the greater the subject believes that particular adjective to be representative of the concept university. In the aforementioned example, the subject has indicated that university is slightly clear, very successful, very good, slightly weak, very large, extremely slow, very passive, and neither complex or simple.

After the questionnaire is returned to the investigator, values are arbitrarily assigned to the seven step scales.

26 Ibid., pp. 83-84.
One common method is to assign values from one to seven from the "favorable" adjective to the "unfavorable" adjective. However, other value schemes are usually just as effective, such as a range of plus three to minus three.\(^\text{27}\) In this study, the values of a typical scale (semantic space) are assigned as follows:

\[
\text{good} \quad 1 : 2 : 3 : 4 : 5 : 6 : 7 \quad \text{bad}
\]

The respondent's check-marks for each of the seven possible positions on each gradient scale generate "factor scores." Osgood, Suci, and Tannenbaum state that "the meaning of a concept to an individual subject is defined operationally as a set of factor scores in the column representing that concept."\(^\text{28}\)

In the example of the concept university, the mean average of the first three bipolar adjectives represents the evaluative factor, the mean average of the second three adjectives represents the potency factor, and the mean average of the last three adjectives represents the activity factor. The overall mean average of these factors represents the factor analysis of the total concept. Osgood, Suci, and Tannenbaum add that "the meaning of a concept in the culture is defined operationally as the set of averaged factor scores in the column representing that concept."\(^\text{29}\)

\(^{27}\)Ibid., pp. 85-86.

\(^{28}\)Ibid., p. 87.

\(^{29}\)Ibid., p. 88.
To further understand how the semantic differential is interpreted, it is necessary to discuss three additional points: (1) use of the generalized distance formula, (2) assumptions involved in the use of the D statistic, and (3) graphic profiles.

**Use of the Generalized Distance Formula**

The generalized distance formula of solid geometry provides the means for actual interpretation and application of the semantic differential to various measuring situations. This formula is

\[ D_{il} = \sqrt{\sum_{i} d_{il}^2} \]

"\( D_{il} \) is the linear distance between the points in the semantic space representing concepts i and l and \( d_{il} \) is the algebraic difference between the coordinates of i and l on the same dimension or factor."\(^{30}\) This formula takes into account both the profile convariation and discrepancies between the means of the factors. The D score measures the absolute difference between factors. It normally does not measure the direction of the difference because the factors often intersect. After the D score is determined, it may be used in normal statistical manipulations with either parametric or non-parametric tests of hypothesis.\(^{31}\)

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The D statistic is used primarily to index the distance between concepts as judged either by an individual or a group. Another common use of the D statistic is to compare how two subjects, or two groups of subjects, perceive the same concept. In this study the D statistic is used to compare how two groups of subjects perceive the same concept. The D statistic was substituted for the differences between means used in students' t test. This methodology is discussed further in the next chapter.

Assumptions Involved in the Use of the D Statistic

There are two primary assumptions involved in the use of the D statistic. Osgood, Suci, and Tannenbaum state that "it is assumed that the intervals both within a single scale and between different scales are equal." Messick investigated the validity of this assumption by applying the psychometric method of successive intervals to nine of the most frequently used scales in the semantic differential. He concludes:

Considering this and the other indications of the present study, i.e., an approximate equality of corresponding interval lengths from scale to scale and a similar placement of origins across scales, it seems reasonable to conclude that the scaling properties implied by the semantic differential procedures have some basis other than assumption.  

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32 Ibid., p. 92.  
33 Ibid., p. 93.  
Another assumption made when the D statistic is used is that the scales or factors are independent when used to compare differences. Osgood and his associates add,

if the scales are not essentially independent, the investigator may conclude that a large D between two variables represents a large psychological discrimination between them in the total semantic space, when in reality the discrimination is mainly in one dimension which happens to be magnified by summing over correlated variables. This, incidentally, is also the reason why we must use an equal number of scales to represent each factor in constructing any form of the differential. . . .35

In this study this assumption will be satisfied by choosing scales shown to be essentially independent by factor analytic studies previously completed.

**Graphic Profiles**

Graphic profiles of meaning will be presented to provide visual comparisons in the connotative measurement of meaning. However, these profiles are limited in their analysis to only visual comparisons. For example, we can visually compare how two subjects (A and B) judge the concept university against the nine bipolar adjectives as shown in Figure 3. It is often assumed that the correlation coefficient is the index to use to compare the similarity between two profiles. Yet, the correlation coefficient fails to give a valid representation of semantic relations because the correlation coefficient could 1.00 and two subjects' meaning of the concept university differ significantly. Figure 3 shows the correlation

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35Osgood, Suci, and Tannenbaum, p. 93.
coefficient between A and B to be 1.00; however, their meaning of the concept university is significantly different. Consequently, a measure had to be found that takes into account both the profile covariation and the discrepancies between the means of the profiles. This is the generalized distance formula of solid geometry which has been previously discussed.  

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**UNIVERSITY:**

- clear: A: B: hazy
- successful: unsuccessful
- good: bad
- strong: weak
- large: small
- deep: shallow
- fast: slow
- active: passive
- complex: simple

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Fig. 3--Example of graphic factor score profile analysis.

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**Evaluation of the Semantic Differential as a Measure of Meaning**

The semantic differential is still being evaluated against the standard criteria for measuring instruments which

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36 Ibid., pp. 90-91.
are objectivity, reliability, validity, sensitivity, comparability, and utility. However, there have been numerous research studies using the semantic differential to indicate its value as a satisfactory instrument to measure meaning. Some of these research studies will be related to the afore-mentioned criteria to point out possible strengths and weaknesses in the use of the semantic differential technique.

Objectivity

The semantic differential meets the criteria of objectivity to the extent that the operations of measurement and means of arriving at conclusions can be made explicit and reproducible. As Osgood, Suci, and Tannenbaum aptly state:

The means of arriving at results, from the collection of check-marks on scales to the location of concept points in semantic space and the production of conceptual structures, are completely objective—two investigators given the same collection of check-marks and following the rules must end up with the same meaning of concepts and patterns of conceptual structures. It is true that how one interprets these results is a subjective matter, but so is the engineer's interpretation of objective data on the stress which a bridge will stand... Objectivity concerns the role of the observer, not the observed.37

Reliability

The reliability of the semantic differential is based on the degree to which the same scores can be reproduced when the same objects are measured repeatedly. There are three

37Ibid., p. 125.
basic types of reliability which must be evaluated with the use of this measuring instrument. These types are item reliability, factor-score reliability, and concept meaning reliability.

Item reliability refers to the reproducibility of basic scores obtained from the semantic differential which are the digit values that correspond to a subject's check-mark of a particular concept against a particular scale. Osgood and associates believe that their study of item reliability indicates that their instrument is satisfactory for all but the most exacting measuring situations.

As part of our first factor analytic study, 40 items sampled from the total 1000 items were repeated on a single page at the end of the form; this sample included 40 different scales and all 20 concepts, each appearing twice. None of the 100 subjects gave any indication of having noticed that certain items were repeated (presumably because they had been judging so many similar items). Test and retest were correlated across the 100 subjects and the 40 items, producing an N of 4000. The resulting coefficient was .85.30

Gulliksen believes that Osgood's use of the seven category scale achieves an item reliability that results in far too coarse groupings. Gulliksen suggests that it may prove feasible to use a twenty or thirty point semantic differential scale rather than the traditional seven step scale. However, he recognizes the danger of non-cooperation from subjects if there are too many steps on a given scale.

38 Ibid., pp. 125-127.
Consequently, he suggests that it may be better to design a completely different type of scaling device.\textsuperscript{39}

Any decrease in reliability through time can be interpreted as either increasing unreliability or increasing unstability of the concept being measured. Osgood, Suci, and Tannenbaum conducted a reliability experiment to check these possibilities by measuring the relationship between absolute deviation and time over a sufficiently long period. They selected eight groups of subjects with approximately twenty-five persons in each group. Each group was given a 100-item semantic differential test at two different times. These time intervals for the test varied for the different groups as follows: three, six, twelve, twenty, and thirty minutes; one day; one week, and three weeks. These researchers found that the average error of measurement with the semantic differential is less than one scale unit. They also discovered that the average error of measurement for the shortest time difference between test-retest varies only about one-third of a scale unit. These researchers concluded that this accuracy within a single scale on test-retest data is satisfactory.\textsuperscript{40}

Factor-score reliability refers to the averaging of item scores within factors, such as evaluative, potency, and activity, and the reproducing of these values under retest


\textsuperscript{40}Osgood, Suci, and Tannenbaum, pp. 131-138.
conditions. Osgood and his associates expected and found average errors of measurement for factor scores to be smaller than for individual items. This results because random errors tend to cancel out in the averaging process.  

Concept meaning reliability refers to the averaging of the factor scores for a single concept and reproducing these scores under retest conditions. This type of reliability depends upon the factor score reliability which has had a satisfactory record of reproducibility as previously stated.  

Validity

The semantic differential can be considered valid only when it measures what it is supposed to measure. In other words, it can be considered valid to the extent that its scores correlate with an agreed-upon criterion of that being measured. Ideally, semantic differential scores should be correlated with some independent criterion of meaning. However, no quantitative criterion of meaning is commonly accepted. Instead, "face validity" has been used, which means that the distinctions provided through the semantic differential process should correspond with the results to be expected by common sense.  

The data collected on the "face validity" of the semantic differential offers convincing evidence that it is a valid
instrument to measure connotative meaning. Reeves found that the evaluative locations of thematic apperception test (TAT) pictures judged by subjects through the semantic differential approach correlate significantly with the clinical judgments of the pictures told by the same subjects. Osgood and his associates studied political groupings in terms of analyzing supporters of Taft, Stevenson, and Eisenhower. These supporters were studied as to their reaction to such concepts as McCarthy, General MacArthur, policy on China, price controls, and labor unionism. These researchers found that the results of the semantic differential approach to the measurement of meaning were consistent with those of any competent observer of politics.44

Sensitivity

The sensitivity of the semantic differential should render discriminations commensurate with the natural units of the material being studied for it to be a valid and reliable instrument. Ideally, it should yield distinctions at least as fine or finer than those made by common sense.45

Osgood, Suci, and Tannenbaum have tested the semantic differential for sensitivity by taking sets of closely similar, but discriminately different, word meanings and showing that the distinctions made by the semantic differential correspond to those that were made independently by language users.

44 Ibid., pp. 142-143. 45 Ibid., p. 166.
Take, for example, the words GOOD and NICE: Most people who were asked accepted them as synonymous, yet agreed that there was a difference, somehow, in their 'feeling-tone'—most respondents were unable to verbalize this difference, however. Analysis with the differential indicates a marked difference between these two words on the potency factor, and when we investigate the linguistic contexts in which they are appropriate we find that GOOD is a 'masculine' word and NICE a 'feminine' word. Speakers of English agree that 'nice man' differs from 'good man' in that the former is rather soft, weak, and effeminate; on the other hand, while 'nice girl' is appropriately feminine, 'good girl' has a decidedly moral tone.46

Comparability

The most serious questions arising in the evaluation of this instrument against the criteria of measurement are in the area of comparability.

Suci compared the semantic structures of the American Southwest culture groups which include the Spanish, Hopi, Zuni, and Navaho subjects. The methodology of the research consisted of constructing a semantic differential to administer to a select sample of thirty-two Spanish, twenty-eight Hopi, twenty-six Zuni, and twenty-seven Navaho subjects. Ten concepts and fifteen scales were used. Suci found a high degree of semantic similarity among all groups with the exception of the Navaho group. Suci suggested that further research needs to be done to determine the Navaho deviation from the other groups.47

46 Ibid., p. 167.

Kumata and Schramm conducted a pilot study of cross-cultural meaning using the semantic differential. Twenty scales and thirty concepts were chosen. The scales were selected from the original Osgood study of fifty scales to include high loadings on each of the evaluative, potency, and activity factors. Twenty-five Japanese, twenty-two Koreans, and twenty-four Americans were chosen as subjects. The scales and concepts were translated by three persons for each of the chosen languages. These researchers found a remarkable correspondence across cultures. They suggest that possibly there is a pervasive semantic frame of reference for all humans. 48

Osgood also evaluated the comparability of the semantic differential technique by studying the cross-cultural generality of visual-verbal synesthetic tendencies. This experiment included four groups of subjects with each group having a different language/culture base. These four groups were represented as follows: (1) forty Navajos, (2) ten Mexican-Spanish, (3) twenty-seven Anglos, and (4) twenty Japanese subjects. These subjects were shown cards which contained two visual alternatives. The subjects were asked to point to which alternative for a given card seemed most

appropriate to that concept. Osgood found that the overall similarities in synesthetic tendencies across these four groups were impressive. 49

Utility

The semantic differential has been found to be extremely flexible in application. It has been administered effectively to a wide range of people, from individual patients in clinical psychology to large groups in communications studies. This measuring instrument has been used in communications research, experimental psychology, social psychology, and personality and clinical psychology. The results from a few of these studies, not previously cited, are presented to indicate the flexibility of the semantic differential as a measuring instrument.

The purpose of Mindak's study was to determine beer drinkers' reactions to the personalities of three local brands of beer as compared with three national brands in a sizable midwest city. Subjects were asked to rate these beers on several factors. The scales were chosen from depth interview responses as well as advertisements for the various beer brands. Mindak found that local Brands X and Y rated more favorably than Brand Z in product, company, and advertising image. Brand X was thought of more as a home-consumed beer.

Brand Y was drunk more in bars, and Brand Z was consumed by less discriminant beer drinkers, according to the subjects' perceptions.\textsuperscript{50}

Tannenbaum and Osgood studied the effect of color on the meaning of advertised products. Advertisements were selected for five nationally advertised products to determine if color used in advertising had any emotional and meaningful effects. The respondents were asked to judge a product advertisement against a series of twenty scales.\textsuperscript{51} The findings of this study may be summarized as follows:

1. On several scales, typically non-evaluative ones such as warm-cool, heavy-light, and exciting-dull, overall significant differences between colors were obtained, e.g., red invariably made the product appear warmer, blue and green shifted the judgment toward cool. Evaluative scales, however, failed to show such consistent effects.

2. Particularly on the evaluative scales, it was the interaction between color and product that proved to be statistically significant, testifying for one thing, to the importance of selecting appropriate, culturally accepted colors to go with particular concepts—a violet auto was favorably judged, but not so a violet cake.

3. Pastel colors on products, as well as in the backgrounds, produced small but consistently more favorable judgments than intense colors. . . .

4. Similarly, color-in-background was somewhat more favorable than color-in-product on the evaluative dimensions—again, on a general, overall basis.\textsuperscript{52}


\textsuperscript{51}Osgood, Suci, and Tannenbaum, pp. 299-301.

\textsuperscript{52}Ibid., p. 300.
Triandis tested the hypothesis that if two persons have similar "semantic spaces" they should be able to communicate more effectively. One hundred fifty-five subjects responded to twelve triads of people and twelve triads of jobs. These subjects then rated five jobs and six people through the semantic differential technique. Triandis concludes that "correlational analysis and analyses of variance showed an association between categoric similarity based on people and syndetic similarity based on jobs and communication effectiveness and liking within the pair." 53

Jakobovits and Osgood studied the connotations of twenty psychological journals to their professional readers. The profession as a whole felt that the most valuable journals are Psychological Bulletin, American Psychologist, Psychological Review, and Contemporary Psychology; the most rigorous scientifically are Psychometrika, Psychological Review, and Journal of Comparative and Physiological Psychology; the most interesting are Contemporary Psychology and American Psychologist; and the most theoretical in orientation are Psychometrika, Psychological Bulletin, Journal of Experimental Psychology, Psychological Review, and Journal of Comparative and Physiological Psychology. Jakobovits and Osgood conclude:

The fact that connotative distances between journals do generally fit the expectations of those familiar with their contents testifies to overall agreement among psychologists on journal images, regardless of their personal preferences as determined by divisional, occupational, educational, or other differences.54

Endler studied the changes in meaning during psychotherapy using the semantic differential technique. Twenty-two patients rated the meaning of their "self," their "father," and their "mother" before and after therapy. These perceived relationships were correlated with the therapists' estimation of the improvement in personal adjustment during the therapy periods of the patients.

The results indicated that there were significant changes in the evaluative meaning of the self (me) concept, and that changes in the evaluative and activity meanings of the self concept were significantly related to estimated improvement. Changes in the potency meaning of the mother concept and the activity meaning of the father concept were significantly related to estimated improvement.55

Prothro and Keehn applied the semantic differential approach to study the ratings which English-speaking Arab students gave to Germans, Italians, and Turks. These researchers found it possible to describe the stereotypes of these subjects in considerably greater detail than would have been possible using other approaches.56

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Rachel studied the meanings of personnel policies held by employees at various levels and at varying functions within an industrial organization against the standard established by the Industrial Relations Policy Committee. Seven personnel policies were evaluated through a ten-step scale utilizing the semantic differential technique. Rachel concludes:

1. In general the results indicated that the relative differences of meanings become progressively greater as one follows the organization structure downward from top management, with the non-management level usually having the largest relative difference of meaning.

2. Significant differences of meanings usually occurred between the non-management level and the other levels of the organization, and between the production oriented functions and the staff and service oriented functions. These differences were considered significant at the five per cent level according to Student’s t distribution.

3. The relative meaning of the two employee groups, union officers and the employee club officers, compared very favorably with the relative meaning of lower and middle management levels. In cases of particular personnel policies, the union officers occasionally compared very favorably with top management.

4. The lower levels of the organization generally had a "less favorable" meaning than did the upper levels, and the production oriented functions generally had less favorable meanings than the staff and service or office functions.

5. Those individual personnel policies which resemble the union contract are better understood than the broad, basic policies.

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Maltz made a study of the connotative meaning of concepts to students in the second grade, fourth grade, sixth grade, and college. The respondents were asked to rate seven concepts along nine scales. Maltz found that the connotative meaning of the concepts changes with age in such a way that the change becomes more apparent as the age difference increases. He concludes that the meaning of concepts is less consistent in the youngest children. The results of this study are what logically would be expected and give the semantic differential an aura of validity for measuring the meaning of concepts to children.58

These aforementioned studies indicate a broad range of application for the semantic differential in the measurement of meaning.

Summary

The semantic differential is the measuring instrument used in this study. This psychological technique or process measures the connotative meaning which words and concepts have for different individuals or groups of individuals. The use of the semantic differential process can determine whether the same stimulus word or concept actually has a different meaning for different individuals.

The semantic differential technique was developed by Osgood after he concluded that previous studies in the area of the measurement of meaning failed to meet the basic criteria of a satisfactory measuring instrument. Some of these earlier attempts to measure meaning used physiological methods, learning methods, perceptual methods, association methods, and scaling methods.

The semantic differential is essentially a combination of controlled association and scaling procedures. Initially the researcher must develop a questionnaire which includes the concepts or functions to be differentiated and a set of bipolar scales against which to do it. Then the subject checks the direction of his association and its intensity for a given concept on each gradient descriptive scale. The key to this particular method lies in the selection of representative concepts and representative descriptive polar adjectives. Yet, the sample should be small enough in size to be efficiently disseminated and interpreted.

Factor analysis of the results of semantic differential studies reveal that three primary factors (evaluative, potency, and activity) account for almost half of the total variance in meaningful judgments. The evaluative factor accounts for approximately seventy per cent of the common variance and is exemplified by the scale "good-bad." The potency dimension accounts for about seventeen per cent of the common variance and is exemplified by the scale "strong-weak." The activity
dimension accounts for approximately fifteen per cent of the common variance. This dimension is exemplified by the scale "active-passive." Other minor dimensions have appeared in nearly all factor analysis studies, but these dimensions have failed to emerge as significant, meaningful factors.

The semantic differential technique is still being evaluated against the standard criteria for measuring instruments which are objectivity, reliability, validity, sensitivity, comparability, and utility. However, there have been numerous research studies using the semantic differential process to indicate its value as a satisfactory instrument to measure meaning.
CHAPTER IV

RESULTS OF THE STUDY

Introduction

This chapter specifically contains an analysis of whether there is a significant difference in the perception of the chief campus administrators and the chief district administrators as to the central office participation in the following functions: (1) textbook selection, (2) recruitment of new staff members, (3) in-service training, (4) physical facility planning, (5) budget preparation, (6) public information services, (7) student personnel services, (8) curriculum development, and (9) community service development. Perceptions of the performance of these functions are analyzed for each function and for all functions combined to represent a "system of functions."

Thirty-one chief district administrators accurately completed the semantic differential questionnaire. The standard meanings for this study were the mean raw scores of these administrators for each of the nine descriptive scales for each of the aforementioned functions.

The first section of this chapter contains a discussion of the mean raw score data on the chief district administrators to provide an understanding of the "standard" to which chief campus administrators were compared.
In the second section, comparisons between the "standard" and the perceptions of the chief campus administrators are analyzed for each function and the "system of functions."

An attempt is made in the third section of this chapter to relate these perceptions to current practices.

The "Standard" for the Study

The mean raw scores of the chief district administrators were the "standard" for this study. Table XI shows their mean raw scores for each of the descriptive scales on the semantic differential questionnaire for each of the nine functions chosen for this study. These administrators indicate that central office participation in the "system of functions" is slightly successful, slightly good, slightly clear, neither deep nor shallow, neither large nor small, neither strong nor weak, neither active nor passive, neither fast nor slow, and neither clear nor hazy. However, there is considerable variation between these overall means as compared to the individual means by function. For example, these administrators view central office participation in textbook selection as very successful, slightly good, very clear, slightly shallow, extremely small, slightly weak, very passive, neither fast nor slow, and very simple.

As shown by Table XII, the overall mean for the "system of functions" is 3.04 while the overall means for the individual functions range from 1.94 for central office participation in physical facility planning to 4.06 for central office participation in in-service training.
<table>
<thead>
<tr>
<th>Functions</th>
<th>successful - unsuccessful</th>
<th>good - bad</th>
<th>clear - hazy</th>
<th>deep - shallow</th>
<th>large - small</th>
<th>strong - weak</th>
<th>active - passive</th>
<th>fast - slow</th>
<th>complex - simple</th>
</tr>
</thead>
<tbody>
<tr>
<td>Textbook Selection</td>
<td>1.74</td>
<td>2.12</td>
<td>1.70</td>
<td>4.54</td>
<td>6.32</td>
<td>4.70</td>
<td>5.70</td>
<td>3.32</td>
<td>5.87</td>
</tr>
<tr>
<td>Staff Member Recruitment</td>
<td>1.87</td>
<td>2.12</td>
<td>1.87</td>
<td>3.58</td>
<td>4.35</td>
<td>4.00</td>
<td>3.74</td>
<td>3.32</td>
<td>4.45</td>
</tr>
<tr>
<td>In-service Training</td>
<td>3.51</td>
<td>3.41</td>
<td>3.22</td>
<td>4.45</td>
<td>4.77</td>
<td>4.25</td>
<td>4.25</td>
<td>4.38</td>
<td>4.32</td>
</tr>
<tr>
<td>Physical Facility Planning</td>
<td>2.06</td>
<td>1.87</td>
<td>1.45</td>
<td>1.51</td>
<td>1.70</td>
<td>1.87</td>
<td>1.32</td>
<td>2.80</td>
<td>2.93</td>
</tr>
<tr>
<td>Budget Preparation</td>
<td>2.16</td>
<td>2.19</td>
<td>2.16</td>
<td>2.09</td>
<td>2.00</td>
<td>2.00</td>
<td>1.90</td>
<td>3.19</td>
<td>2.22</td>
</tr>
<tr>
<td>Public Information Services</td>
<td>2.41</td>
<td>2.25</td>
<td>2.41</td>
<td>2.64</td>
<td>2.51</td>
<td>2.35</td>
<td>2.12</td>
<td>2.51</td>
<td>3.64</td>
</tr>
<tr>
<td>Student Personnel Services</td>
<td>2.38</td>
<td>2.83</td>
<td>2.35</td>
<td>4.41</td>
<td>4.51</td>
<td>4.29</td>
<td>4.03</td>
<td>3.45</td>
<td>3.45</td>
</tr>
<tr>
<td>Curriculum Development</td>
<td>2.45</td>
<td>2.54</td>
<td>2.54</td>
<td>3.22</td>
<td>3.38</td>
<td>2.96</td>
<td>3.22</td>
<td>3.87</td>
<td>2.74</td>
</tr>
<tr>
<td>Community Service Development</td>
<td>2.09</td>
<td>2.22</td>
<td>2.45</td>
<td>3.32</td>
<td>3.38</td>
<td>2.93</td>
<td>2.77</td>
<td>2.83</td>
<td>3.45</td>
</tr>
<tr>
<td>Overall</td>
<td>2.30</td>
<td>2.40</td>
<td>2.24</td>
<td>3.31</td>
<td>3.66</td>
<td>3.26</td>
<td>3.23</td>
<td>3.30</td>
<td>3.67</td>
</tr>
</tbody>
</table>
The standard deviations, revealed also on Table XII, suggest some variation in the individual perception as compared to the means for the evaluative, potency, activity, and overall factors for each of the nine functions. The standard deviation ranges from 1.06 to 2.38.

Overall Comparison Between the "Standard" and Chief Campus Administrators' Perceptions

All chief campus administrator comparisons with the "standard" were based on the mean D score for each factor and function. The overall D per function is found by taking the difference between the mean raw scores of the "standard" and chief campus administrators on each factor, squaring this difference, summing these squares, and taking the square root of the sum. For each participant there are forty D scores, four for each of the nine functions plus the overall. Table XIII illustrates the D scores for one chief campus administrator as compared to the "standard."

The formula for students' t test was applied to

$$z = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{\frac{s_1^2}{n_1} + \frac{s_2^2}{n_2}}}$$

to determine significant differences at the five per cent level. However, it was necessary to substitute the D statistic discussed in the previous chapter for the simple difference between means. It would be incongruous with the design of this study to have a significant test more sensitive than five per cent.
<table>
<thead>
<tr>
<th>Functions</th>
<th>Evaluative</th>
<th>Potency</th>
<th>Activity</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>s</td>
<td>Mean</td>
<td>s</td>
</tr>
<tr>
<td>Textbook Selection</td>
<td>1.86</td>
<td>1.32</td>
<td>5.19</td>
<td>2.01</td>
</tr>
<tr>
<td>Staff Member Recruitment</td>
<td>1.95</td>
<td>1.26</td>
<td>3.97</td>
<td>2.08</td>
</tr>
<tr>
<td>In-service Training</td>
<td>3.38</td>
<td>1.79</td>
<td>4.49</td>
<td>1.71</td>
</tr>
<tr>
<td>Physical Facility Planning</td>
<td>1.79</td>
<td>1.27</td>
<td>1.69</td>
<td>1.06</td>
</tr>
<tr>
<td>Budget Preparation</td>
<td>2.17</td>
<td>1.42</td>
<td>2.03</td>
<td>1.29</td>
</tr>
<tr>
<td>Public Information Services</td>
<td>2.36</td>
<td>1.50</td>
<td>2.50</td>
<td>1.58</td>
</tr>
<tr>
<td>Student Personnel Services</td>
<td>2.52</td>
<td>1.50</td>
<td>4.40</td>
<td>1.82</td>
</tr>
<tr>
<td>Curriculum Development</td>
<td>2.51</td>
<td>1.44</td>
<td>3.19</td>
<td>1.59</td>
</tr>
<tr>
<td>Community Service Development</td>
<td>2.25</td>
<td>1.56</td>
<td>3.21</td>
<td>1.93</td>
</tr>
<tr>
<td>Overall</td>
<td>2.31</td>
<td>1.53</td>
<td>3.41</td>
<td>2.04</td>
</tr>
</tbody>
</table>

*s represents standard deviation.
TABLE XIII
EXAMPLE OF THE D SCORES FOR ONE CHIEF CAMPUS ADMINISTRATOR AS COMPARED TO THE "STANDARD"

<table>
<thead>
<tr>
<th>Functions</th>
<th>Evaluative Factor</th>
<th>Potency Factor</th>
<th>Activity Factor</th>
<th>All Factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Textbook Selection</td>
<td>0.53</td>
<td>1.81</td>
<td>0.70</td>
<td>2.01</td>
</tr>
<tr>
<td>Staff Member Recruitment</td>
<td>0.71</td>
<td>1.03</td>
<td>1.17</td>
<td>1.71</td>
</tr>
<tr>
<td>In-service Training</td>
<td>0.38</td>
<td>1.16</td>
<td>0.99</td>
<td>1.57</td>
</tr>
<tr>
<td>Physical Facility Planning</td>
<td>0.13</td>
<td>0.36</td>
<td>0.65</td>
<td>0.74</td>
</tr>
<tr>
<td>Budget Preparation</td>
<td>0.17</td>
<td>0.03</td>
<td>0.89</td>
<td>0.90</td>
</tr>
<tr>
<td>Public Information Services</td>
<td>0.64</td>
<td>0.50</td>
<td>0.57</td>
<td>0.98</td>
</tr>
<tr>
<td>Student Personnel Services</td>
<td>1.48</td>
<td>0.40</td>
<td>0.36</td>
<td>1.57</td>
</tr>
<tr>
<td>Curriculum Development</td>
<td>0.85</td>
<td>1.19</td>
<td>0.27</td>
<td>1.48</td>
</tr>
<tr>
<td>Community Service Development</td>
<td>0.08</td>
<td>0.21</td>
<td>0.02</td>
<td>0.20</td>
</tr>
<tr>
<td>Overall Mean</td>
<td>0.55</td>
<td>0.74</td>
<td>0.62</td>
<td>1.24</td>
</tr>
</tbody>
</table>
Where these comparisons of overall connotative meanings reveal significant differences, further reference was made to the evaluative, potency, and activity dimensions of meanings as illustrated through Tables in Appendix C. This further analysis helps to define the nature of the difference of meaning, particularly when it is understood that the evaluative factor accounts for about seventy per cent of the common variance, whereas the potency and activity factors account for about fifteen per cent each.

Figure 4 expresses a comparison of the composite mean raw scores of the chief district administrators with the composite mean raw scores of the chief campus administrators.

---

<table>
<thead>
<tr>
<th>successful</th>
<th>good</th>
<th>clear</th>
<th>deep</th>
<th>large</th>
<th>strong</th>
<th>active</th>
<th>fast</th>
<th>complex</th>
</tr>
</thead>
<tbody>
<tr>
<td>unsuccessful</td>
<td>bad</td>
<td>hazy</td>
<td>shallow</td>
<td>small</td>
<td>weak</td>
<td>passive</td>
<td>slow</td>
<td>simple</td>
</tr>
</tbody>
</table>

*represents the "standard" which are represented by line.

**represents chief campus administrators which are represented by line.

Fig. 4--Graphic profile of a comparison between the mean raw scores of chief campus administrators with the "standard."
This comparison reveals that, in every case, the mean raw scores of the chief district administrators were lower than those of the chief campus administrators. Thus, chief district administrators (the "standard") indicated that central office participation was more successful, better, clearer, deeper, larger, stronger, more active, faster, and more complex as compared to chief campus administrators' perceptions.

Table XIV shows that chief campus administrators as compared to the "standard" have a significantly different perception of central office participation in the "system of functions" chosen for this study. Further analysis reveals that, of the nine functions which constitute the "system of functions," general accord in perception was found only on central office participation in textbook selection and in-service training. The greatest difference was found in public information services and the least difference in textbook selection. The z value of 5.16 for public information services represents an unusually large difference in perception between chief campus administrators and the "standard."

As shown in Table C 1, Appendix C, the evaluative factor primarily accounted for this overall significant difference. On this factor alone, there was found to be a significant difference in perception in six of the nine functions. However, the 1.89 z value on the evaluative overall failed to be significant. Only perceptions of central office participation in physical facility planning and public information services
### TABLE XIV

COMPARISONS OF PERCEIVED AUTHORITY OF CHIEF CAMPUS ADMINISTRATORS WITH CHIEF DISTRICT ADMINISTRATORS TO DETERMINE SIGNIFICANT DIFFERENCES*

<table>
<thead>
<tr>
<th>Functions</th>
<th>D**</th>
<th>s₁</th>
<th>s₂</th>
<th>z</th>
<th>Significant at 5%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Textbook Selection</td>
<td>0.27</td>
<td>2.38</td>
<td>2.20</td>
<td>0.55</td>
<td>---</td>
</tr>
<tr>
<td>Staff Member Recruitment</td>
<td>0.89</td>
<td>2.04</td>
<td>1.86</td>
<td>2.10</td>
<td>YES</td>
</tr>
<tr>
<td>In-service Training</td>
<td>0.45</td>
<td>1.82</td>
<td>1.66</td>
<td>1.19</td>
<td>---</td>
</tr>
<tr>
<td>Physical Facility Planning</td>
<td>0.94</td>
<td>1.40</td>
<td>1.62</td>
<td>3.04</td>
<td>YES</td>
</tr>
<tr>
<td>Budget Preparation</td>
<td>1.26</td>
<td>1.49</td>
<td>1.74</td>
<td>3.81</td>
<td>YES</td>
</tr>
<tr>
<td>Public Information Services</td>
<td>1.83</td>
<td>1.62</td>
<td>1.82</td>
<td>5.16</td>
<td>YES</td>
</tr>
<tr>
<td>Student Personnel Services</td>
<td>0.97</td>
<td>1.87</td>
<td>1.77</td>
<td>2.48</td>
<td>YES</td>
</tr>
<tr>
<td>Curriculum Development</td>
<td>0.92</td>
<td>1.67</td>
<td>1.75</td>
<td>2.57</td>
<td>YES</td>
</tr>
<tr>
<td>Community Service Development</td>
<td>1.26</td>
<td>1.88</td>
<td>1.68</td>
<td>3.25</td>
<td>YES</td>
</tr>
<tr>
<td>Overall</td>
<td>0.94</td>
<td>1.95</td>
<td>1.87</td>
<td>2.30</td>
<td>YES</td>
</tr>
</tbody>
</table>

*N represents 31 chief district administrators and 87 chief campus administrators.

**D represents D statistic; s₁ represents standard deviation for chief district administrators; s₂ represents standard deviation for chief campus administrators; and z represents z score.
were significantly different on the potency factor and only public information services on the activity factor.

Chief campus administrators were divided into several different groupings to compare against the "standard." This was done to provide some additional insight into the overall perception of differences in the amount of delegated authority. Chief campus administrators were sub-grouped on the following basis:

1. student enrollment in the multicampus junior college system,
2. number of campuses per multicampus junior college system,
3. average student enrollment per campus,
4. California chief campus administrators,
5. when junior college system had two campuses in operation, and
6. number of years that chief campus administrator served in current capacity.

Comparison Between Chief Campus Administrators and the "Standard" by Total Student Enrollment Per Multicampus Junior College System

As shown on Table IX, eighteen multicampus junior college systems enrolled less than 10,000 students, fifteen systems enrolled between 10,000 and 20,000 students, seven systems enrolled between 20,000 and 30,000 students, and three systems enrolled over 30,000 as of Fall, 1970. Comparisons
will be made between chief campus administrators who fit within these groupings with the "standard."

Table XV reveals that chief campus administrators employed in multicampus junior college systems with less than 10,000 total students have similar overall perceptions with the "standard." Yet, chief campus administrators differ significantly on central office participation in the recruitment of new staff members, physical facility planning, public information services, and curriculum development. As disclosed by Table C 2, Appendix C, there is general agreement on chief campus administrator perceptions with the "standard" on the evaluative, potency, and activity dimensions individually. However, a significant perception difference exists for each of these three factors for central office participation in public information services.

For multicampus junior college systems with between 10,000 and 20,000 total students, Table XVI reveals a similar perception on the overall even though five out of nine individual functions show significant differences. As disclosed through Table C 3, Appendix C, significant differences in perception exist for both the evaluative and potency factors as pertains to central office participation in budget preparation. Otherwise, significant differences on the individual factors are limited.

As shown through Table XVII, there is no overall significant difference in perception for multicampus junior college systems with between 20,000 and 30,000 total enrollment.
<table>
<thead>
<tr>
<th>Functions</th>
<th>D**</th>
<th>s1</th>
<th>s2</th>
<th>z</th>
<th>Significant at 5%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Textbook Selection</td>
<td>0.48</td>
<td>2.38</td>
<td>2.08</td>
<td>0.85</td>
<td>---</td>
</tr>
<tr>
<td>Staff Member Recruitment</td>
<td>1.07</td>
<td>2.04</td>
<td>1.88</td>
<td>2.17</td>
<td>YES</td>
</tr>
<tr>
<td>In-service Training</td>
<td>0.45</td>
<td>1.82</td>
<td>1.69</td>
<td>1.02</td>
<td>---</td>
</tr>
<tr>
<td>Physical Facility Planning</td>
<td>1.08</td>
<td>1.40</td>
<td>1.70</td>
<td>2.79</td>
<td>YES</td>
</tr>
<tr>
<td>Budget Preparation</td>
<td>0.78</td>
<td>1.49</td>
<td>1.76</td>
<td>1.92</td>
<td>---</td>
</tr>
<tr>
<td>Public Information Services</td>
<td>2.05</td>
<td>1.62</td>
<td>1.87</td>
<td>4.70</td>
<td>YES</td>
</tr>
<tr>
<td>Student Personnel Services</td>
<td>0.84</td>
<td>1.87</td>
<td>1.81</td>
<td>1.82</td>
<td>---</td>
</tr>
<tr>
<td>Curriculum Development</td>
<td>0.99</td>
<td>1.67</td>
<td>1.82</td>
<td>2.27</td>
<td>YES</td>
</tr>
<tr>
<td>Community Service Development</td>
<td>0.82</td>
<td>1.88</td>
<td>1.69</td>
<td>1.83</td>
<td>---</td>
</tr>
<tr>
<td>Overall</td>
<td>0.89</td>
<td>1.95</td>
<td>1.90</td>
<td>1.84</td>
<td>---</td>
</tr>
</tbody>
</table>

*N represents 31 chief district administrators and 35 chief campus administrators.

**D represents D statistic; s1 represents standard deviation for chief district administrators; s2 represents standard deviation for chief campus administrators; and z represents z score.
### TABLE XVI

**COMPARISONS OF PERCEIVED AUTHORITY OF CHIEF CAMPUS ADMINISTRATORS IN MULTICAMPUS JUNIOR COLLEGE SYSTEMS WITH BETWEEN 10,000 AND 20,000 STUDENTS WITH CHIEF DISTRICT ADMINISTRATORS**

<table>
<thead>
<tr>
<th>Functions</th>
<th>D**</th>
<th>$s_1$</th>
<th>$s_2$</th>
<th>z</th>
<th>Significant at 5%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Textbook Selection</td>
<td>0.18</td>
<td>2.38</td>
<td>2.29</td>
<td>0.28</td>
<td>---</td>
</tr>
<tr>
<td>Staff Member Recruitment</td>
<td>1.20</td>
<td>2.04</td>
<td>1.85</td>
<td>2.24</td>
<td>YES</td>
</tr>
<tr>
<td>In-service Training</td>
<td>0.22</td>
<td>1.82</td>
<td>1.74</td>
<td>0.45</td>
<td>---</td>
</tr>
<tr>
<td>Physical Facility Planning</td>
<td>0.57</td>
<td>1.40</td>
<td>1.53</td>
<td>1.39</td>
<td>---</td>
</tr>
<tr>
<td>Budget Preparation</td>
<td>1.77</td>
<td>1.49</td>
<td>1.82</td>
<td>3.79</td>
<td>YES</td>
</tr>
<tr>
<td>Public Information Services</td>
<td>1.24</td>
<td>1.62</td>
<td>1.60</td>
<td>2.78</td>
<td>YES</td>
</tr>
<tr>
<td>Student Personnel Services</td>
<td>0.99</td>
<td>1.87</td>
<td>1.72</td>
<td>2.00</td>
<td>---</td>
</tr>
<tr>
<td>Curriculum Development</td>
<td>1.30</td>
<td>1.67</td>
<td>1.74</td>
<td>2.74</td>
<td>YES</td>
</tr>
<tr>
<td>Community Service Development</td>
<td>1.53</td>
<td>1.88</td>
<td>1.74</td>
<td>3.06</td>
<td>YES</td>
</tr>
<tr>
<td>Overall</td>
<td>0.92</td>
<td>1.95</td>
<td>1.88</td>
<td>1.74</td>
<td>---</td>
</tr>
</tbody>
</table>

* $N$ represents 31 chief district administrators and 24 chief campus administrators.

**D** represents $D$ statistic; $s_1$ represents standard deviation for chief district administrators; $s_2$ represents standard deviation for chief campus administrators; and $z$ represents $z$ score.
TABLE XVII
COMPARISONS OF PERCEIVED AUTHORITY OF CHIEF CAMPUS ADMINISTRATORS IN MULTICAMPUS JUNIOR COLLEGE SYSTEMS WITH BETWEEN 20,000 AND 30,000 STUDENTS WITH CHIEF DISTRICT ADMINISTRATORS*

<table>
<thead>
<tr>
<th>Functions</th>
<th>D**</th>
<th>s₁</th>
<th>s₂</th>
<th>z</th>
<th>Significant at 5%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Textbook Selection</td>
<td>0.53</td>
<td>2.38</td>
<td>2.20</td>
<td>0.72</td>
<td>---</td>
</tr>
<tr>
<td>Staff Member Recruitment</td>
<td>0.37</td>
<td>2.04</td>
<td>1.80</td>
<td>0.61</td>
<td>---</td>
</tr>
<tr>
<td>In-service Training</td>
<td>0.43</td>
<td>1.82</td>
<td>1.60</td>
<td>0.79</td>
<td>---</td>
</tr>
<tr>
<td>Physical Facility Planning</td>
<td>1.38</td>
<td>1.40</td>
<td>1.68</td>
<td>2.67</td>
<td>YES</td>
</tr>
<tr>
<td>Budget Preparation</td>
<td>1.43</td>
<td>1.49</td>
<td>1.59</td>
<td>2.83</td>
<td>YES</td>
</tr>
<tr>
<td>Public Information Services</td>
<td>2.84</td>
<td>1.62</td>
<td>1.60</td>
<td>5.46</td>
<td>YES</td>
</tr>
<tr>
<td>Student Personnel Services</td>
<td>1.01</td>
<td>1.87</td>
<td>1.73</td>
<td>1.76</td>
<td>---</td>
</tr>
<tr>
<td>Curriculum Development</td>
<td>0.35</td>
<td>1.67</td>
<td>1.69</td>
<td>0.64</td>
<td>---</td>
</tr>
<tr>
<td>Community Service Development</td>
<td>1.67</td>
<td>1.88</td>
<td>1.61</td>
<td>3.03</td>
<td>YES</td>
</tr>
<tr>
<td>Overall</td>
<td>1.06</td>
<td>1.95</td>
<td>1.80</td>
<td>1.77</td>
<td>---</td>
</tr>
</tbody>
</table>

*N represents 31 chief district administrators and 15 chief campus administrators.

**D represents D statistic; s₁ represents standard deviation for chief district administrators; s₂ represents standard deviation for chief campus administrators; and z represents z score.
Further analysis discloses that the relative high z score of 5.46 for public information services failed to change the overall result. Table C4, Appendix C, indicates also that a significant difference in perception exists for each factor for public information services. Otherwise for each factor the chief campus administrators are in accord generally with the "standard."

Table XVIII reveals that chief campus administrators are in accord with the perceptions of the "standard" in those multicampus junior college systems with over 30,000 students. There is, however, a significant difference in perceptions of central office participation in six out of nine functions. General agreement is found only on perceptions of central office participation in textbook selection, recruitment of new staff members, and physical facility planning. As disclosed through Table C5, Appendix C, there is accord between chief campus administrators and the "standard" on all of the potency and activity factors. On the evaluative factor, significant differences in perception are found in central office participation in budget preparation, student personnel services, curriculum development, and community service development. There are no significant differences on the overall for the evaluative, potency, and activity factors individually.

As shown on Table XIX, comparison between the "standard" and chief campus administrators in multicampus junior college
### TABLE XVIII

**COMPARISONS OF PERCEIVED AUTHORITY OF CHIEF CAMPUS ADMINISTRATORS IN MULTICAMPUS JUNIOR COLLEGE SYSTEMS WITH MORE THAN 30,000 STUDENTS WITH CHIEF DISTRICT ADMINISTRATORS**

<table>
<thead>
<tr>
<th>Functions</th>
<th>D**</th>
<th>s₁</th>
<th>s₂</th>
<th>z</th>
<th>Significant at 5%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Textbook Selection</td>
<td>0.22</td>
<td>2.38</td>
<td>2.30</td>
<td>0.28</td>
<td>---</td>
</tr>
<tr>
<td>Staff Member Recruitment</td>
<td>0.85</td>
<td>2.04</td>
<td>1.76</td>
<td>1.35</td>
<td>---</td>
</tr>
<tr>
<td>In-service Training</td>
<td>1.20</td>
<td>1.82</td>
<td>1.41</td>
<td>2.28</td>
<td>YES</td>
</tr>
<tr>
<td>Physical Facility Planning</td>
<td>0.90</td>
<td>1.40</td>
<td>1.50</td>
<td>1.79</td>
<td>---</td>
</tr>
<tr>
<td>Budget Preparation</td>
<td>1.62</td>
<td>1.49</td>
<td>1.55</td>
<td>3.09</td>
<td>YES</td>
</tr>
<tr>
<td>Public Information Services</td>
<td>1.36</td>
<td>1.62</td>
<td>2.06</td>
<td>2.05</td>
<td>YES</td>
</tr>
<tr>
<td>Student Personnel Services</td>
<td>1.59</td>
<td>1.87</td>
<td>1.75</td>
<td>2.61</td>
<td>YES</td>
</tr>
<tr>
<td>Curriculum Development</td>
<td>1.35</td>
<td>1.67</td>
<td>1.54</td>
<td>2.50</td>
<td>YES</td>
</tr>
<tr>
<td>Community Service Development</td>
<td>1.66</td>
<td>1.88</td>
<td>1.47</td>
<td>3.04</td>
<td>YES</td>
</tr>
<tr>
<td>Overall</td>
<td>1.15</td>
<td>1.95</td>
<td>1.84</td>
<td>1.80</td>
<td>---</td>
</tr>
</tbody>
</table>

*N represents 31 chief district administrators and 13 chief campus administrators.

**D represents D statistic; s₁ represents standard deviation for chief district administrators; s₂ represents standard deviation for chief campus administrators; and z represents z score.*
systems of less than 10,000 students, between 10,000 and 20,000 students, between 20,000 and 30,000 students, and over 30,000 students reveals no overall significant difference of perception on each of these classifications. A breakdown of specific functions reveals general agreement in all four categories as compared to the "standard" in central office participation in textbook selection. In contrast, chief campus administrators in each of the categories have a perception of central office participation in public information services significantly different from the "standard."

Chief campus administrators of systems with less than 10,000 students are the only ones who found a common understanding with the "standard" on central office participation in budget preparation and community service development. Only chief campus administrators in systems of up to 20,000 students have a perception of central office participation in the recruitment of new staff members significantly different from the "standard." With the exception of chief campus administrators in systems with over 30,000 students, the perceptions are in accord with the "standard" on in-service training. On curriculum development, a significant perception difference exists for central office participation in all systems except those between 20,000 and 30,000 students.
TABLE XIX

SUMMARY OF COMPARISONS OF PERCEIVED AUTHORITY BETWEEN CHIEF CAMPUS ADMINISTRATORS BASED ON TOTAL STUDENT ENROLLMENT WITHIN JUNIOR COLLEGE SYSTEM WITH CHIEF DISTRICT ADMINISTRATORS*

<table>
<thead>
<tr>
<th>Functions</th>
<th>Total Student Enrollment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>under 10,000 students</td>
</tr>
<tr>
<td>Textbook Selection</td>
<td>---</td>
</tr>
<tr>
<td>Staff Member Recruitment</td>
<td>YES</td>
</tr>
<tr>
<td>In-service Training</td>
<td>---</td>
</tr>
<tr>
<td>Physical Facility Planning</td>
<td>YES</td>
</tr>
<tr>
<td>Budget Preparation</td>
<td>---</td>
</tr>
<tr>
<td>Public Information Services</td>
<td>YES</td>
</tr>
<tr>
<td>Student Personnel Services</td>
<td>---</td>
</tr>
<tr>
<td>Curriculum Development</td>
<td>YES</td>
</tr>
<tr>
<td>Community Service Development</td>
<td>---</td>
</tr>
<tr>
<td>Overall</td>
<td>---</td>
</tr>
</tbody>
</table>

*5% represents level of significance
Comparison Between the "Standard" and Chief Campus Administrators by Number of Campuses Per Multicampus Junior College System

The number of campuses per multicampus junior college system ranges from two to eight. Twenty-five junior college systems have two campuses, fourteen systems have three campuses, and four systems have more than three campuses. Comparisons are made between the "standard" and chief campus administrators who are grouped in the aforementioned categories to determine if perception differences, to some extent, may be based on number of campuses within a multicampus system.

As revealed on Table XX, there is no overall significant difference between chief campus administrators in junior college systems with two campuses and the "standard." However, there is a significant difference on central office participation in the following functions: (1) new staff member recruitment, (2) physical facility planning, (3) budget preparation, (4) public information services, (5) curriculum development, and (6) community service development. Table C 6, Appendix C, discloses that most of this perception difference is caused primarily by differences in the potency factor and to a lesser degree by differences in the evaluative factor. Noticeable also is the lack of any significant difference in the activity factor itself.

Table XXI reveals an overall z value of 1.95 which is not significant at the five per cent level for comparing
TABLE XX

COMPARISONS OF PERCEIVED AUTHORITY OF CHIEF CAMPUS ADMINISTRATORS IN JUNIOR COLLEGE SYSTEMS WITH TWO CAMPUS WITH CHIEF DISTRICT ADMINISTRATORS*

<table>
<thead>
<tr>
<th>Functions</th>
<th>D**</th>
<th>s_1</th>
<th>s_2</th>
<th>z</th>
<th>Significant at 5%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Textbook Selection</td>
<td>0.45</td>
<td>2.38</td>
<td>2.17</td>
<td>0.80</td>
<td>---</td>
</tr>
<tr>
<td>Staff Member Recruitment</td>
<td>0.98</td>
<td>2.04</td>
<td>1.80</td>
<td>2.07</td>
<td>YES</td>
</tr>
<tr>
<td>In-service Training</td>
<td>0.33</td>
<td>1.82</td>
<td>1.69</td>
<td>0.77</td>
<td>---</td>
</tr>
<tr>
<td>Physical Facility Planning</td>
<td>0.89</td>
<td>1.40</td>
<td>1.61</td>
<td>2.44</td>
<td>YES</td>
</tr>
<tr>
<td>Budget Preparation</td>
<td>1.23</td>
<td>1.49</td>
<td>1.81</td>
<td>3.07</td>
<td>YES</td>
</tr>
<tr>
<td>Public Information Services</td>
<td>1.42</td>
<td>1.62</td>
<td>1.78</td>
<td>3.44</td>
<td>YES</td>
</tr>
<tr>
<td>Student Personnel Services</td>
<td>0.70</td>
<td>1.87</td>
<td>1.81</td>
<td>1.55</td>
<td>---</td>
</tr>
<tr>
<td>Curriculum Development</td>
<td>1.37</td>
<td>1.67</td>
<td>1.80</td>
<td>3.25</td>
<td>YES</td>
</tr>
<tr>
<td>Community Service Development</td>
<td>0.98</td>
<td>1.88</td>
<td>1.63</td>
<td>2.26</td>
<td>YES</td>
</tr>
<tr>
<td>Overall</td>
<td>0.88</td>
<td>1.95</td>
<td>1.87</td>
<td>1.88</td>
<td>---</td>
</tr>
</tbody>
</table>

*N represents 31 chief district administrators and 39 chief campus administrators.

**D represents D statistic; s_1 represents standard deviation for chief district administrators; s_2 represents standard deviation for chief campus administrators; and z represents z score.
perceptions between chief campus administrators in systems with three campuses with the "standard." Yet, in individual functions, there are perception differences for central office participation in physical facility planning, budget preparation, public information services, student personnel services, and community service development. It should be noted that public information services is particularly significant with a 5.28 z value, and, as shown by Table C 7, Appendix C, is significant on the evaluative, potency, and activity factors individually. Otherwise, there is little significant difference for the individual factors.

When comparing chief campus administrators in systems with more than three campuses with the "standard," the results are similar to those in systems with three campuses. Table XXII indicates that significant differences occur on the same functions as in systems with three campuses. However, the perception difference of central office participation is much less in systems with more than three campuses. Table C 8, Appendix C, shows that the overall significance by function is mostly generated through significant differences in the evaluative factor. Outside of a significant difference for public information services in the potency factor, neither the potency nor the activity factors have additional significant differences per se.

A comparison of systems with two campuses, three campuses, and more than three campuses, as shown on Table
TABLE XXI

COMPARISONS OF PERCEIVED AUTHORITY OF CHIEF CAMPUS
ADMINISTRATORS IN JUNIOR COLLEGE SYSTEMS WITH
THREE CAMPUSES WITH CHIEF DISTRICT
ADMINISTRATORS*

<table>
<thead>
<tr>
<th>Functions</th>
<th>D**</th>
<th>s₁</th>
<th>s₂</th>
<th>z</th>
<th>Significant at 5%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Textbook Selection</td>
<td>0.19</td>
<td>2.38</td>
<td>2.20</td>
<td>0.32</td>
<td>---</td>
</tr>
<tr>
<td>Staff Member Recruitment</td>
<td>0.98</td>
<td>2.04</td>
<td>1.94</td>
<td>1.91</td>
<td>---</td>
</tr>
<tr>
<td>In-service Training</td>
<td>0.44</td>
<td>1.82</td>
<td>1.71</td>
<td>0.97</td>
<td>---</td>
</tr>
<tr>
<td>Physical Facility Planning</td>
<td>0.97</td>
<td>1.40</td>
<td>1.68</td>
<td>2.43</td>
<td>YES</td>
</tr>
<tr>
<td>Budget Preparation</td>
<td>1.35</td>
<td>1.49</td>
<td>1.73</td>
<td>3.24</td>
<td>YES</td>
</tr>
<tr>
<td>Public Information Services</td>
<td>2.29</td>
<td>1.62</td>
<td>1.74</td>
<td>5.28</td>
<td>YES</td>
</tr>
<tr>
<td>Student Personnel Services</td>
<td>1.03</td>
<td>1.87</td>
<td>1.80</td>
<td>2.17</td>
<td>YES</td>
</tr>
<tr>
<td>Curriculum Development</td>
<td>0.64</td>
<td>1.67</td>
<td>1.73</td>
<td>1.46</td>
<td>---</td>
</tr>
<tr>
<td>Community Service Development</td>
<td>1.37</td>
<td>1.88</td>
<td>1.81</td>
<td>2.88</td>
<td>YES</td>
</tr>
<tr>
<td>Overall</td>
<td>0.97</td>
<td>1.95</td>
<td>1.90</td>
<td>1.95</td>
<td>---</td>
</tr>
</tbody>
</table>

*N represents 31 chief district administrators and 31 chief campus administrators.

**D represents D statistic; s₁ represents standard deviation for chief district administrators; s₂ represents standard deviation for chief campus administrators; and z represents z score.
<table>
<thead>
<tr>
<th>Functions</th>
<th>D**</th>
<th>s₁</th>
<th>s₂</th>
<th>z</th>
<th>Significant at 5%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Textbook Selection</td>
<td>0.13</td>
<td>2.38</td>
<td>2.26</td>
<td>0.18</td>
<td>---</td>
</tr>
<tr>
<td>Staff Member Recruitment</td>
<td>0.71</td>
<td>2.04</td>
<td>1.78</td>
<td>1.22</td>
<td>---</td>
</tr>
<tr>
<td>In-service Training</td>
<td>0.78</td>
<td>1.82</td>
<td>1.52</td>
<td>1.55</td>
<td>---</td>
</tr>
<tr>
<td>Physical Facility Planning</td>
<td>1.14</td>
<td>1.40</td>
<td>1.55</td>
<td>2.46</td>
<td>YES</td>
</tr>
<tr>
<td>Budget Preparation</td>
<td>1.29</td>
<td>1.49</td>
<td>1.60</td>
<td>2.67</td>
<td>YES</td>
</tr>
<tr>
<td>Public Information Services</td>
<td>2.00</td>
<td>1.62</td>
<td>1.95</td>
<td>3.51</td>
<td>YES</td>
</tr>
<tr>
<td>Student Personnel Services</td>
<td>1.79</td>
<td>1.87</td>
<td>1.62</td>
<td>3.38</td>
<td>YES</td>
</tr>
<tr>
<td>Curriculum Development</td>
<td>0.51</td>
<td>1.67</td>
<td>1.55</td>
<td>1.03</td>
<td>---</td>
</tr>
<tr>
<td>Community Service Development</td>
<td>1.94</td>
<td>1.88</td>
<td>1.47</td>
<td>3.86</td>
<td>YES</td>
</tr>
<tr>
<td>Overall</td>
<td>1.08</td>
<td>1.95</td>
<td>1.81</td>
<td>1.88</td>
<td>---</td>
</tr>
</tbody>
</table>

*N represents 31 chief district administrators and 17 chief campus administrators.

**D represents D statistic; s₁ represents standard deviation for chief district administrators; s₂ represents standard deviation for chief campus administrators; and z represents z score.
XXIII, reveals some interesting data. Only in the two campus systems are there significant differences of perception with central office participation in recruitment of new staff members and curriculum development. Conversely, two campus systems are the only ones with no significant difference in perception of central office participation in student personnel services.

Multicampus junior college systems, whether they be two, three, or more than three-campus systems, have significant differences between chief campus administrators and the "standard" on central office participation in physical facility planning, budget preparation, public information services, and community service development. Yet, overall, there is general accord in perceptions between the chief campus administrators and the "standard" based on the number of campuses per multicampus junior college system.

**Comparisons Between the "Standard" and Chief Campus Administrators by Average Students Per Campus Per Multicampus Junior College System**

Comparisons are made in perceptions based on the average students per campus to determine if significant differences exist. There are eleven multicampus systems with an average student enrollment per campus of less than 2,500; eleven systems average between 2,500 and 5,000 students per campus; seven systems average between 5,000 and 7,500 students per campus; ten systems average between
TABLE XXIII

SUMMARY OF COMPARISONS OF PERCEIVED AUTHORITY BETWEEN CHIEF CAMPUS ADMINISTRATORS BASED ON NUMBER OF CAMPUSES WITHIN JUNIOR COLLEGE SYSTEM WITH CHIEF DISTRICT ADMINISTRATORS*

<table>
<thead>
<tr>
<th>Functions</th>
<th>Number of Campuses</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Two Campuses</td>
</tr>
<tr>
<td>Textbook Selection</td>
<td>---</td>
</tr>
<tr>
<td>Staff Member Recruitment</td>
<td>YES</td>
</tr>
<tr>
<td>In-service Training</td>
<td>---</td>
</tr>
<tr>
<td>Physical Facility Planning</td>
<td>YES</td>
</tr>
<tr>
<td>Budget Preparation</td>
<td>YES</td>
</tr>
<tr>
<td>Public Information Services</td>
<td>YES</td>
</tr>
<tr>
<td>Student Personnel Services</td>
<td>---</td>
</tr>
<tr>
<td>Curriculum Development</td>
<td>YES</td>
</tr>
<tr>
<td>Community Service Development</td>
<td>YES</td>
</tr>
<tr>
<td>Overall</td>
<td>---</td>
</tr>
</tbody>
</table>

*5% represents level of significance
7,500 and 10,000 students per campus; and four systems have over 10,000 students per campus.

There is a similar overall perception between the "standard" and chief campus administrators in multicampus systems with an average student enrollment per campus of less than 2,500. As Table XXIV indicates, a significant difference of perception exists between the two groups only in central office participation in physical facility planning, budget preparation, and public information services. On the evaluative, potency, and activity factors, as shown in Table C 9, Appendix C, a significant difference of perception is found on each of the factors with central office participation in public information services. On the other hand, with the exception of the potency factor on physical facility planning, there is general accord on each of the individual factors.

For multicampus junior college systems with between 2,500 and 5,000 average students per campus, Table XXV discloses a similar perception on the overall. Four of nine individual functions show significant perception differences. These functions are staff member recruitment, budget preparation, public information services, and community service development. As indicated by Table C 10, Appendix C, differences of perception on the individual factors are sparse.

Table XXVI shows that chief campus administrators in systems with between 5,000 and 7,500 average students per
## Table XXIV

### Comparisons of Perceived Authority of Chief Campus Administrators in Junior College Systems with Under 2,500 Average Enrollment Per Campus with Chief District Administrators

<table>
<thead>
<tr>
<th>Functions</th>
<th>D**</th>
<th>(s_1)</th>
<th>(s_2)</th>
<th>z</th>
<th>Significant at 5%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Textbook Selection</td>
<td>0.35</td>
<td>2.38</td>
<td>2.13</td>
<td>0.55</td>
<td>---</td>
</tr>
<tr>
<td>Staff Member Recruitment</td>
<td>1.02</td>
<td>2.04</td>
<td>1.81</td>
<td>1.88</td>
<td>---</td>
</tr>
<tr>
<td>In-service Training</td>
<td>0.33</td>
<td>1.82</td>
<td>1.81</td>
<td>0.64</td>
<td>---</td>
</tr>
<tr>
<td>Physical Facility Planning</td>
<td>1.39</td>
<td>1.40</td>
<td>1.76</td>
<td>3.01</td>
<td>YES</td>
</tr>
<tr>
<td>Budget Preparation</td>
<td>0.98</td>
<td>1.49</td>
<td>1.76</td>
<td>2.08</td>
<td>YES</td>
</tr>
<tr>
<td>Public Information Services</td>
<td>2.33</td>
<td>1.62</td>
<td>1.80</td>
<td>4.74</td>
<td>YES</td>
</tr>
<tr>
<td>Student Personnel Services</td>
<td>0.96</td>
<td>1.87</td>
<td>1.80</td>
<td>1.85</td>
<td>---</td>
</tr>
<tr>
<td>Curriculum Development</td>
<td>0.86</td>
<td>1.67</td>
<td>1.76</td>
<td>1.75</td>
<td>---</td>
</tr>
<tr>
<td>Community Service Development</td>
<td>0.47</td>
<td>1.88</td>
<td>1.64</td>
<td>0.95</td>
<td>---</td>
</tr>
<tr>
<td>Overall</td>
<td>0.90</td>
<td>1.95</td>
<td>1.90</td>
<td>1.65</td>
<td>---</td>
</tr>
</tbody>
</table>

* \(N\) represents 31 chief district administrators and 22 chief campus administrators.

**D** represents D statistic; \(s_1\) represents standard deviation for chief district administrators; \(s_2\) represents standard deviation for chief campus administrators; and \(z\) represents z score.
<table>
<thead>
<tr>
<th>Functions</th>
<th>D**</th>
<th>$s_1$</th>
<th>$s_2$</th>
<th>z</th>
<th>Significant at 5%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Textbook Selection</td>
<td>0.42</td>
<td>2.38</td>
<td>2.19</td>
<td>0.64</td>
<td>---</td>
</tr>
<tr>
<td>Staff Member Recruitment</td>
<td>1.18</td>
<td>2.04</td>
<td>1.98</td>
<td>2.04</td>
<td>YES</td>
</tr>
<tr>
<td>In-service Training</td>
<td>0.43</td>
<td>1.82</td>
<td>1.68</td>
<td>0.86</td>
<td>---</td>
</tr>
<tr>
<td>Physical Facility Planning</td>
<td>0.67</td>
<td>1.40</td>
<td>1.64</td>
<td>1.50</td>
<td>---</td>
</tr>
<tr>
<td>Budget Preparation</td>
<td>1.02</td>
<td>1.49</td>
<td>1.83</td>
<td>2.08</td>
<td>YES</td>
</tr>
<tr>
<td>Public Information Services</td>
<td>1.68</td>
<td>1.62</td>
<td>1.88</td>
<td>3.27</td>
<td>YES</td>
</tr>
<tr>
<td>Student Personnel Services</td>
<td>0.97</td>
<td>1.87</td>
<td>1.94</td>
<td>1.76</td>
<td>---</td>
</tr>
<tr>
<td>Curriculum Development</td>
<td>1.01</td>
<td>1.67</td>
<td>1.85</td>
<td>1.97</td>
<td>---</td>
</tr>
<tr>
<td>Community Service Development</td>
<td>1.79</td>
<td>1.88</td>
<td>1.94</td>
<td>3.24</td>
<td>YES</td>
</tr>
<tr>
<td>Overall</td>
<td>0.96</td>
<td>1.95</td>
<td>1.98</td>
<td>1.69</td>
<td>---</td>
</tr>
</tbody>
</table>

*N represents 31 chief district administrators and 21 chief campus administrators.

**D represents D statistic; $s_1$ represents standard deviation for chief district administrators; $s_2$ represents standard deviation for chief campus administrators; and z represents z score.
Chief campus administrators in systems with an average campus enrollment of between 7,500 and 10,000 hold a common overall perception with the "standard." Table XXVII reveals that the two groups differ at the five per cent level on central office involvement in budget preparation, public information services, curriculum development, and community service development. As exposed by Table C 12, Appendix C, there are few significant differences in perception on each of the individual factors.

If Table XXVIII is compared to Table XXVII, it becomes apparent that the overall perception differences by function and the "system of functions" are identical for systems with an average student enrollment per campus of between 7,500 and 10,000 students with those of over 10,000 students.

An overall comparison of these five categories of chief campus administrators with the "standard," as shown on Table XXIX, reveals general accord in perception. On the specific
### TABLE XXVI

**COMPARISONS OF PERCEIVED AUTHORITY OF CHIEF CAMPUS ADMINISTRATORS IN JUNIOR COLLEGE SYSTEMS WITH BETWEEN 5,000 AND 7,500 AVERAGE ENROLLMENT PER CAMPUS WITH CHIEF DISTRICT ADMINISTRATORS**

<table>
<thead>
<tr>
<th>Functions</th>
<th>D**</th>
<th>s₁</th>
<th>s₂</th>
<th>z</th>
<th>Significant at 5%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Textbook Selection</td>
<td>0.24</td>
<td>2.38</td>
<td>2.22</td>
<td>0.34</td>
<td>---</td>
</tr>
<tr>
<td>Staff Member Recruitment</td>
<td>0.89</td>
<td>2.04</td>
<td>1.66</td>
<td>1.60</td>
<td>---</td>
</tr>
<tr>
<td>In-service Training</td>
<td>0.65</td>
<td>1.82</td>
<td>1.48</td>
<td>1.31</td>
<td>---</td>
</tr>
<tr>
<td>Physical Facility Planning</td>
<td>1.47</td>
<td>1.40</td>
<td>1.60</td>
<td>3.10</td>
<td>YES</td>
</tr>
<tr>
<td>Budget Preparation</td>
<td>1.67</td>
<td>1.49</td>
<td>1.67</td>
<td>3.35</td>
<td>YES</td>
</tr>
<tr>
<td>Public Information Services</td>
<td>1.79</td>
<td>1.62</td>
<td>1.79</td>
<td>3.34</td>
<td>YES</td>
</tr>
<tr>
<td>Student Personnel Services</td>
<td>1.37</td>
<td>1.87</td>
<td>1.38</td>
<td>2.82</td>
<td>YES</td>
</tr>
<tr>
<td>Curriculum Development</td>
<td>0.16</td>
<td>1.67</td>
<td>1.28</td>
<td>0.36</td>
<td>---</td>
</tr>
<tr>
<td>Community Service Development</td>
<td>1.87</td>
<td>1.88</td>
<td>1.43</td>
<td>3.77</td>
<td>YES</td>
</tr>
<tr>
<td>Overall</td>
<td>1.07</td>
<td>1.95</td>
<td>1.70</td>
<td>1.93</td>
<td>---</td>
</tr>
</tbody>
</table>

*N represents 31 chief district administrators and 17 chief campus administrators.

**D represents D statistic; s₁ represents standard deviation for chief district administrators; s₂ represents standard deviation for chief campus administrators; and z represents z score.*
TABLE XXVII
COMPARISONS OF PERCEIVED AUTHORITY OF CHIEF CAMPUS ADMINISTRATORS IN JUNIOR COLLEGE SYSTEMS WITH BETWEEN 7,500 AND 10,000 AVERAGE ENROLLMENT PER CAMPUS WITH CHIEF DISTRICT ADMINISTRATORS*

<table>
<thead>
<tr>
<th>Functions</th>
<th>$D^{**}$</th>
<th>$s_1$</th>
<th>$s_2$</th>
<th>$z$</th>
<th>Significant at 5%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Textbook Selection</td>
<td>0.67</td>
<td>2.38</td>
<td>2.19</td>
<td>0.94</td>
<td>---</td>
</tr>
<tr>
<td>Staff Member Recruitment</td>
<td>0.87</td>
<td>2.04</td>
<td>1.94</td>
<td>1.39</td>
<td>---</td>
</tr>
<tr>
<td>In-service Training</td>
<td>0.74</td>
<td>1.82</td>
<td>1.64</td>
<td>1.37</td>
<td>---</td>
</tr>
<tr>
<td>Physical Facility Planning</td>
<td>0.56</td>
<td>1.40</td>
<td>1.48</td>
<td>1.22</td>
<td>---</td>
</tr>
<tr>
<td>Budget Preparation</td>
<td>1.37</td>
<td>1.49</td>
<td>1.74</td>
<td>2.61</td>
<td>YES</td>
</tr>
<tr>
<td>Public Information Services</td>
<td>1.61</td>
<td>1.62</td>
<td>1.68</td>
<td>3.07</td>
<td>YES</td>
</tr>
<tr>
<td>Student Personnel Services</td>
<td>0.74</td>
<td>1.87</td>
<td>1.71</td>
<td>1.33</td>
<td>---</td>
</tr>
<tr>
<td>Curriculum Development</td>
<td>1.61</td>
<td>1.67</td>
<td>1.98</td>
<td>2.71</td>
<td>YES</td>
</tr>
<tr>
<td>Community Service Development</td>
<td>1.28</td>
<td>1.88</td>
<td>1.51</td>
<td>2.46</td>
<td>YES</td>
</tr>
<tr>
<td>Overall</td>
<td>0.98</td>
<td>1.95</td>
<td>1.88</td>
<td>1.63</td>
<td>---</td>
</tr>
</tbody>
</table>

*N represents 31 chief district administrators and 16 chief campus administrators.

**$D^{**}$ represents $D$ statistic; $s_1$ represents standard deviation for chief district administrators; $s_2$ represents standard deviation for chief campus administrators; and $z$ represents $z$ score.
**TABLE XXVIII**

**COMPARISONS OF PERCEIVED AUTHORITY OF CHIEF CAMPUS ADMINISTRATORS IN JUNIOR COLLEGE SYSTEMS WITH OVER 10,000 AVERAGE ENROLLMENT PER CAMPUS WITH CHIEF DISTRICT ADMINISTRATORS**

<table>
<thead>
<tr>
<th>Functions</th>
<th>D**</th>
<th>S₁</th>
<th>S₂</th>
<th>z</th>
<th>Significant at 5%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Textbook Selection</td>
<td>0.72</td>
<td>2.38</td>
<td>2.26</td>
<td>0.86</td>
<td>---</td>
</tr>
<tr>
<td>Staff Member Recruitment</td>
<td>1.05</td>
<td>2.04</td>
<td>1.77</td>
<td>1.56</td>
<td>---</td>
</tr>
<tr>
<td>In-service Training</td>
<td>0.95</td>
<td>1.82</td>
<td>1.54</td>
<td>1.61</td>
<td>---</td>
</tr>
<tr>
<td>Physical Facility Planning</td>
<td>0.60</td>
<td>1.40</td>
<td>1.45</td>
<td>1.14</td>
<td>---</td>
</tr>
<tr>
<td>Budget Preparation</td>
<td>1.70</td>
<td>1.49</td>
<td>1.53</td>
<td>3.06</td>
<td>YES</td>
</tr>
<tr>
<td>Public Information Services</td>
<td>1.60</td>
<td>1.62</td>
<td>1.92</td>
<td>2.37</td>
<td>YES</td>
</tr>
<tr>
<td>Student Personnel Services</td>
<td>1.26</td>
<td>1.87</td>
<td>1.92</td>
<td>1.81</td>
<td>---</td>
</tr>
<tr>
<td>Curriculum Development</td>
<td>1.52</td>
<td>1.67</td>
<td>1.70</td>
<td>2.46</td>
<td>YES</td>
</tr>
<tr>
<td>Community Service Development</td>
<td>1.43</td>
<td>1.88</td>
<td>1.55</td>
<td>2.39</td>
<td>YES</td>
</tr>
<tr>
<td>Overall</td>
<td>1.12</td>
<td>1.95</td>
<td>1.86</td>
<td>1.63</td>
<td>---</td>
</tr>
</tbody>
</table>

*N represents 31 chief district administrators and 11 chief campus administrators.

**D represents D statistic; s₁ represents standard deviation for chief district administrators; s₂ represents standard deviation for chief campus administrators; and z represents z score.*
functions of textbook selection and in-service training there is general accord in perception between the five categories and the "standard." In contrast, there is a significant difference in perception between all categories of chief campus administrators and the "standard" on central office participation in budget preparation and public information services. With the exception of those systems with an average campus enrollment of less than 2,500 students, a significant perception difference exists on community service development.

Only in systems with an average campus enrollment of between 5,000 and 7,500 students is there a significant difference in perception on central office involvement in student personnel services. In curriculum development, a significant perception difference exists only in systems with an average campus enrollment of over 7,500 students. In recruitment of new staff members, a significant difference occurs only in systems with an average campus enrollment of between 2,500 and 5,000 students. Finally, significant perception differences are found in central office involvement in physical facility planning between the "standard" and chief campus administrators with average campus enrollments up to 2,500 students and between 5,000 and 7,500 students.
TABLE XXIX

SUMMARY OF COMPARISONS OF PERCEIVED AUTHORITY BETWEEN CHIEF CAMPUS ADMINISTRATORS BASED ON AVERAGE ENROLLMENT PER CAMPUS WITHIN JUNIOR COLLEGE SYSTEM WITH CHIEF DISTRICT ADMINISTRATORS*

<table>
<thead>
<tr>
<th>Functions</th>
<th>Average Enrollment Per Campus</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>under 2,500 students</td>
</tr>
<tr>
<td>Textbook Selection</td>
<td>---</td>
</tr>
<tr>
<td>Staff Member Recruitment</td>
<td>---</td>
</tr>
<tr>
<td>In-service Training</td>
<td>---</td>
</tr>
<tr>
<td>Physical Facility Planning</td>
<td>YES</td>
</tr>
<tr>
<td>Budget Preparation</td>
<td>YES</td>
</tr>
<tr>
<td>Public Information Services</td>
<td>YES</td>
</tr>
<tr>
<td>Student Personnel Services</td>
<td>---</td>
</tr>
<tr>
<td>Curriculum Development</td>
<td>---</td>
</tr>
<tr>
<td>Community Service Development</td>
<td>---</td>
</tr>
<tr>
<td>Overall</td>
<td>---</td>
</tr>
</tbody>
</table>

*5% represents level of significance
Comparison Between Chief Campus Administrators of California Multicampus Junior College Systems with the "Standard"

California, with one-third of the current multicampus junior college systems, is chosen for separate analysis. The number of responses from chief campus administrators in other individual states are insufficient to make additional breakdown comparisons by state with the "standard."

There is a significant difference in perception between chief campus administrators in California as compared to the "standard." As Table XXX shows, the overall z score of 2.06 is beyond significance at the five per cent level. Further analysis discloses that California chief campus administrators have a significantly different perception from the "standard" on central office participation in five out of nine individual functions. These functions are (1) physical facility planning, (2) budget preparation, (3) public information services, (4) curriculum development, and (5) community service development. The greatest difference in perception is in public information services, which has a 3.83 z score, and the least difference is in textbook selection, which has a 1.08 z score. Table C 13, Appendix C, discloses that the difference in perception in public information services is significant for the evaluative and potency factors. Otherwise, it appears that most of the other major differences are caused by differences in the evaluative factor.
TABLE XXX
COMPARISONS OF PERCEIVED AUTHORITY OF CHIEF CAMPUS ADMINISTRATORS OF CALIFORNIA MULTICAMPUS JUNIOR COLLEGE SYSTEMS WITH CHIEF DISTRICT ADMINISTRATORS*

<table>
<thead>
<tr>
<th>Functions</th>
<th>D**</th>
<th>$s_1$</th>
<th>$s_2$</th>
<th>z</th>
<th>Significant at 5%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Textbook Selection</td>
<td>0.69</td>
<td>2.38</td>
<td>2.18</td>
<td>1.08</td>
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</tr>
<tr>
<td>Staff Member Recruitment</td>
<td>0.93</td>
<td>2.04</td>
<td>1.75</td>
<td>1.76</td>
<td>---</td>
</tr>
<tr>
<td>In-service Training</td>
<td>0.72</td>
<td>1.82</td>
<td>1.53</td>
<td>1.55</td>
<td>---</td>
</tr>
<tr>
<td>Physical Facility Planning</td>
<td>0.85</td>
<td>1.40</td>
<td>1.50</td>
<td>2.08</td>
<td>YES</td>
</tr>
<tr>
<td>Budget Preparation</td>
<td>1.51</td>
<td>1.49</td>
<td>1.56</td>
<td>3.51</td>
<td>YES</td>
</tr>
<tr>
<td>Public Information Services</td>
<td>1.83</td>
<td>1.62</td>
<td>1.76</td>
<td>3.83</td>
<td>YES</td>
</tr>
<tr>
<td>Student Personnel Services</td>
<td>0.95</td>
<td>1.87</td>
<td>1.78</td>
<td>1.86</td>
<td>---</td>
</tr>
<tr>
<td>Curriculum Development</td>
<td>1.62</td>
<td>1.67</td>
<td>1.82</td>
<td>3.28</td>
<td>YES</td>
</tr>
<tr>
<td>Community Service Development</td>
<td>1.34</td>
<td>1.88</td>
<td>1.45</td>
<td>2.90</td>
<td>YES</td>
</tr>
<tr>
<td>Overall</td>
<td>1.08</td>
<td>1.95</td>
<td>1.80</td>
<td>2.06</td>
<td>YES</td>
</tr>
</tbody>
</table>

*N represents 31 chief district administrators and 23 chief campus administrators.

**D represents D statistic; $s_1$ represents standard deviation for chief district administrators; $s_2$ represents standard deviation for chief campus administrators; and z represents z score.
When Table XXX is compared to Table XIV, it becomes apparent that there is general agreement between California chief campus administrators with all chief campus administrators as compared to the "standard." The overall z scores of 2.06 and 2.30 respectively are similar and both groups differ with the "standard" on the same five functions. The only difference is that the chief campus administrators combined have additional differences of perception with the "standard" on central office participation in recruitment of new staff members and student personnel services.

Comparison Between Chief Campus Administrators and the "Standard" by Year When Multicampus Junior College System Had at Least Two Campuses in Operation

An analysis of perception comparisons between the "standard" and chief campus administrators by year when the junior college system had at least two campuses provides illuminating information.

As shown in Table XXXI, there is general accord between the "standard" and chief campus administrators in systems that had at least two campuses prior to 1965. There are, however, significant perception differences in central office participation in four out of nine individual functions. These functions are physical facility planning, budget preparation, public information services, and community service development. A review of Table C 14, Appendix C, indicates almost total agreement of perception on the individual factors.
TABLE XXXI
Comparisons of Perceived Authority of Chief Campus Administrators in Junior College Systems That Had At Least Two Campuses Prior to 1965 with Chief District Administrators*

<table>
<thead>
<tr>
<th>Functions</th>
<th>D**</th>
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<th>$s_2$</th>
<th>$z$</th>
<th>Significant at 5%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Textbook Selection</td>
<td>0.43</td>
<td>2.38</td>
<td>2.26</td>
<td>0.66</td>
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</tr>
<tr>
<td>Staff Member Recruitment</td>
<td>0.47</td>
<td>2.04</td>
<td>1.82</td>
<td>0.87</td>
<td>---</td>
</tr>
<tr>
<td>In-service Training</td>
<td>0.58</td>
<td>1.82</td>
<td>1.52</td>
<td>1.25</td>
<td>---</td>
</tr>
<tr>
<td>Physical Facility Planning</td>
<td>0.91</td>
<td>1.40</td>
<td>1.53</td>
<td>2.20</td>
<td>YES</td>
</tr>
<tr>
<td>Budget Preparation</td>
<td>1.24</td>
<td>1.49</td>
<td>1.65</td>
<td>2.79</td>
<td>YES</td>
</tr>
<tr>
<td>Public Information Services</td>
<td>1.64</td>
<td>1.62</td>
<td>1.77</td>
<td>3.42</td>
<td>YES</td>
</tr>
<tr>
<td>Student Personnel Services</td>
<td>0.98</td>
<td>1.87</td>
<td>1.77</td>
<td>1.93</td>
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</tr>
<tr>
<td>Curriculum Development</td>
<td>0.77</td>
<td>1.67</td>
<td>1.78</td>
<td>1.58</td>
<td>---</td>
</tr>
<tr>
<td>Community Service Development</td>
<td>1.35</td>
<td>1.88</td>
<td>1.34</td>
<td>3.02</td>
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</tr>
<tr>
<td>Overall</td>
<td>0.86</td>
<td>1.95</td>
<td>1.82</td>
<td>1.63</td>
<td>---</td>
</tr>
</tbody>
</table>

*N represents 31 chief district administrators and 23 chief campus administrators.

**D represents D statistic; $s_1$ represents standard deviation for chief district administrators; $s_2$ represents standard deviation for chief campus administrators; and $z$ represents $z$ score.
Table XXXII shows agreement on overall perception between the "standard" and chief campus administrators in those systems with two campuses in operation for the first time in 1965. Of the individual functions, significant perception differences are found in public information services, student personnel services, and community service development. Further analysis through Table C 15, Appendix C, reveals a significant difference in the evaluative and potency factors for public information services and in the evaluative factor for student personnel services.

As revealed through Table XXXIII, the chief campus administrators of systems which had two or more campuses in operation starting in 1966 agreed with the perceptions of the "standard" on central office participation in the "system of functions." On the individual functions, significant differences in perception are found in central office involvement in physical facility planning, budget preparation, public information services, and student personnel services. A review of Table C 16, Appendix C, indicates that on the individual factors a large 3.81 z score exists for budget preparation on the evaluative factor. Otherwise, significant differences are found only for public information services on the evaluative factor and student personnel services on the activity factor.

A comparison of chief campus administrators, who are part of a system which had two campuses in operation for
TABLE XXXII

COMPARISONS OF PERCEIVED AUTHORITY OF CHIEF CAMPUS ADMINISTRATORS IN JUNIOR COLLEGE SYSTEMS THAT HAD TWO CAMPUSES INITIALLY IN 1965 WITH CHIEF DISTRICT ADMINISTRATORS*

<table>
<thead>
<tr>
<th>Functions</th>
<th>D**</th>
<th>s₁</th>
<th>s₂</th>
<th>z</th>
<th>Significant at 5%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Textbook Selection</td>
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<td>2.38</td>
<td>2.14</td>
<td>0.53</td>
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</tr>
<tr>
<td>Staff Member Recruitment</td>
<td>1.20</td>
<td>2.04</td>
<td>1.91</td>
<td>1.94</td>
<td>---</td>
</tr>
<tr>
<td>In-service Training</td>
<td>0.80</td>
<td>1.82</td>
<td>1.55</td>
<td>1.54</td>
<td>---</td>
</tr>
<tr>
<td>Physical Facility Planning</td>
<td>0.90</td>
<td>1.40</td>
<td>1.47</td>
<td>1.97</td>
<td>---</td>
</tr>
<tr>
<td>Budget Preparation</td>
<td>0.53</td>
<td>1.49</td>
<td>1.57</td>
<td>1.09</td>
<td>---</td>
</tr>
<tr>
<td>Public Information Services</td>
<td>2.39</td>
<td>1.62</td>
<td>1.85</td>
<td>4.25</td>
<td>YES</td>
</tr>
<tr>
<td>Student Personnel Services</td>
<td>1.38</td>
<td>1.87</td>
<td>1.72</td>
<td>2.46</td>
<td>YES</td>
</tr>
<tr>
<td>Curriculum Development</td>
<td>0.62</td>
<td>1.67</td>
<td>1.54</td>
<td>1.24</td>
<td>---</td>
</tr>
<tr>
<td>Community Service Development</td>
<td>1.38</td>
<td>1.88</td>
<td>1.63</td>
<td>2.54</td>
<td>YES</td>
</tr>
<tr>
<td>Overall</td>
<td>0.99</td>
<td>1.95</td>
<td>1.83</td>
<td>1.67</td>
<td>---</td>
</tr>
</tbody>
</table>

*N represents 31 chief district administrators and 16 chief campus administrators.

**D represents D statistic; s₁ represents standard deviation for chief district administrators; s₂ represents standard deviation for chief campus administrators; and z represents z score.
TABLE XXXIII

COMPARISONS OF PERCEIVED AUTHORITY OF CHIEF CAMPUS ADMINISTRATORS IN JUNIOR COLLEGE SYSTEMS THAT HAD TWO CAMPUSES INITIALLY IN 1966 WITH CHIEF DISTRICT ADMINISTRATORS*

<table>
<thead>
<tr>
<th>Functions</th>
<th>D**</th>
<th>s₁</th>
<th>s₂</th>
<th>Z</th>
<th>Significant at 5%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Textbook Selection</td>
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<td>2.38</td>
<td>2.43</td>
<td>0.58</td>
<td>---</td>
</tr>
<tr>
<td>Staff Member Recruitment</td>
<td>0.90</td>
<td>2.04</td>
<td>2.09</td>
<td>1.23</td>
<td>---</td>
</tr>
<tr>
<td>In-service Training</td>
<td>1.17</td>
<td>1.82</td>
<td>1.88</td>
<td>1.76</td>
<td>---</td>
</tr>
<tr>
<td>Physical Facility Planning</td>
<td>1.51</td>
<td>1.40</td>
<td>2.02</td>
<td>2.29</td>
<td>YES</td>
</tr>
<tr>
<td>Budget Preparation</td>
<td>2.19</td>
<td>1.49</td>
<td>1.76</td>
<td>3.67</td>
<td>YES</td>
</tr>
<tr>
<td>Public Information Services</td>
<td>2.15</td>
<td>1.62</td>
<td>1.91</td>
<td>3.32</td>
<td>YES</td>
</tr>
<tr>
<td>Student Personnel Services</td>
<td>1.70</td>
<td>1.87</td>
<td>1.99</td>
<td>2.46</td>
<td>YES</td>
</tr>
<tr>
<td>Curriculum Development</td>
<td>1.22</td>
<td>1.67</td>
<td>2.03</td>
<td>1.78</td>
<td>---</td>
</tr>
<tr>
<td>Community Service</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Development</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall</td>
<td>1.28</td>
<td>1.95</td>
<td>2.05</td>
<td>1.79</td>
<td>---</td>
</tr>
</tbody>
</table>

*N represents 31 chief district administrators and 12 chief campus administrators.

**D represents D statistic; s₁ represents standard deviation for chief district administrators; s₂ represents standard deviation for chief campus administrators; and z represents z score.
the first time in 1967, with the "standard" discloses general accord in perceptions on the "system of functions" as portrayed through Table XXXIV. The individual functions of recruitment of new staff members, physical facility planning, student personnel services, and curriculum development have significant differences. Table C 17, Appendix C, discloses that four out of thirty individual factors showed significant differences.

General accord in perception between the "standard" and chief campus administrators is found also in systems which had two campuses in operation for the first time in 1968. Table XXXV reveals that on the individual functions significant differences exist on central office participation in budget preparation, public information services, and curriculum development. As disclosed through Table C 18, Appendix C, only two significant perception differences occur on the individual factors.

Table XXXVI shows that multicampus systems that had at least two campuses initially after 1968 have chief campus administrators that agree with the "standard" on central office involvement in the "system of functions." However, on the individual functions, a large significant difference is found in community service development, which has a 4.40 z score. Other functions with significant perception differences are budget preparation, public information services, student personnel services, and curriculum
### Table XXXIV

Comparisons of Perceived Authority of Chief Campus Administrators in Junior College Systems That Had Two Campuses Initially in 1967 With Chief District Administrators*

<table>
<thead>
<tr>
<th>Functions</th>
<th>D**</th>
<th>s₁</th>
<th>s₂</th>
<th>z</th>
<th>Significant at 5%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Textbook Selection</td>
<td>0.94</td>
<td>2.38</td>
<td>2.11</td>
<td>1.22</td>
<td>---</td>
</tr>
<tr>
<td>Staff Member Recruitment</td>
<td>1.68</td>
<td>2.04</td>
<td>1.73</td>
<td>2.62</td>
<td>YES</td>
</tr>
<tr>
<td>In-service Training</td>
<td>0.63</td>
<td>1.82</td>
<td>1.48</td>
<td>1.13</td>
<td>---</td>
</tr>
<tr>
<td>Physical Facility Planning</td>
<td>1.44</td>
<td>1.40</td>
<td>1.67</td>
<td>2.55</td>
<td>YES</td>
</tr>
<tr>
<td>Budget Preparation</td>
<td>0.82</td>
<td>1.49</td>
<td>1.74</td>
<td>1.39</td>
<td>---</td>
</tr>
<tr>
<td>Public Information Services</td>
<td>1.00</td>
<td>1.62</td>
<td>1.65</td>
<td>1.73</td>
<td>---</td>
</tr>
<tr>
<td>Student Personnel Services</td>
<td>1.35</td>
<td>1.87</td>
<td>1.71</td>
<td>2.18</td>
<td>YES</td>
</tr>
<tr>
<td>Curriculum Development</td>
<td>1.95</td>
<td>1.67</td>
<td>1.73</td>
<td>3.23</td>
<td>YES</td>
</tr>
<tr>
<td>Community Service Development</td>
<td>0.64</td>
<td>1.88</td>
<td>1.59</td>
<td>1.09</td>
<td>---</td>
</tr>
<tr>
<td>Overall</td>
<td>1.07</td>
<td>1.95</td>
<td>1.84</td>
<td>1.62</td>
<td>---</td>
</tr>
</tbody>
</table>

*N represents 31 chief district administrators and 12 chief campus administrators.

**D represents D statistic; s₁ represents standard deviation for chief district administrators; s₂ represents standard deviation for chief campus administrators; and z represents z score.
TABLE XXXV

COMPARISONS OF PERCEIVED AUTHORITY OF CHIEF CAMPUS ADMINISTRATORS IN JUNIOR COLLEGE SYSTEMS THAT HAD TWO CAMPUSES INITIALLY IN 1968 WITH CHIEF DISTRICT ADMINISTRATORS*

<table>
<thead>
<tr>
<th>Functions</th>
<th>D**</th>
<th>s₁</th>
<th>s₂</th>
<th>z</th>
<th>Significant at 5%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Textbook Selection</td>
<td>0.95</td>
<td>2.38</td>
<td>1.84</td>
<td>1.35</td>
<td>---</td>
</tr>
<tr>
<td>Staff Member Recruitment</td>
<td>0.93</td>
<td>2.04</td>
<td>1.38</td>
<td>1.67</td>
<td>---</td>
</tr>
<tr>
<td>In-service Training</td>
<td>0.78</td>
<td>1.82</td>
<td>1.67</td>
<td>1.29</td>
<td>---</td>
</tr>
<tr>
<td>Physical Facility Planning</td>
<td>1.07</td>
<td>1.40</td>
<td>1.56</td>
<td>2.00</td>
<td>---</td>
</tr>
<tr>
<td>Budget Preparation</td>
<td>2.08</td>
<td>1.49</td>
<td>1.88</td>
<td>3.31</td>
<td>YES</td>
</tr>
<tr>
<td>Public Information Services</td>
<td>1.69</td>
<td>1.62</td>
<td>1.75</td>
<td>2.79</td>
<td>YES</td>
</tr>
<tr>
<td>Student Personnel Services</td>
<td>1.03</td>
<td>1.87</td>
<td>1.44</td>
<td>1.87</td>
<td>---</td>
</tr>
<tr>
<td>Curriculum Development</td>
<td>1.11</td>
<td>1.67</td>
<td>1.32</td>
<td>2.21</td>
<td>YES</td>
</tr>
<tr>
<td>Community Service Development</td>
<td>1.05</td>
<td>1.88</td>
<td>1.50</td>
<td>1.85</td>
<td>---</td>
</tr>
<tr>
<td>Overall</td>
<td>1.13</td>
<td>1.95</td>
<td>1.68</td>
<td>1.83</td>
<td>---</td>
</tr>
</tbody>
</table>

*N represents 31 chief district administrators and 12 chief campus administrators.

**D represents D statistic; s₁ represents standard deviation for chief district administrators; s₂ represents standard deviation for chief campus administrators; and z represents z score.
### TABLE XXXVI

COMPARISONS OF PERCEIVED AUTHORITY OF CHIEF CAMPUS ADMINISTRATORS IN JUNIOR COLLEGE SYSTEMS THAT HAD TWO CAMPUSES INITIALLY AFTER 1968 WITH CHIEF DISTRICT ADMINISTRATORS*

<table>
<thead>
<tr>
<th>Functions</th>
<th>D**</th>
<th>S1</th>
<th>S2</th>
<th>z</th>
<th>Significant at 5%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Textbook Selection</td>
<td>0.47</td>
<td>2.38</td>
<td>2.25</td>
<td>0.58</td>
<td>---</td>
</tr>
<tr>
<td>Staff Member Recruitment</td>
<td>1.11</td>
<td>2.04</td>
<td>2.00</td>
<td>1.57</td>
<td>---</td>
</tr>
<tr>
<td>In-service Training</td>
<td>0.89</td>
<td>1.82</td>
<td>1.71</td>
<td>1.45</td>
<td>---</td>
</tr>
<tr>
<td>Physical Facility Planning</td>
<td>0.45</td>
<td>1.40</td>
<td>1.52</td>
<td>0.86</td>
<td>---</td>
</tr>
<tr>
<td>Budget Preparation</td>
<td>1.35</td>
<td>1.49</td>
<td>1.75</td>
<td>2.27</td>
<td>YES</td>
</tr>
<tr>
<td>Public Information Services</td>
<td>2.28</td>
<td>1.62</td>
<td>1.86</td>
<td>3.60</td>
<td>YES</td>
</tr>
<tr>
<td>Student Personnel Services</td>
<td>1.61</td>
<td>1.87</td>
<td>1.94</td>
<td>2.38</td>
<td>YES</td>
</tr>
<tr>
<td>Curriculum Development</td>
<td>1.75</td>
<td>1.67</td>
<td>1.61</td>
<td>3.05</td>
<td>YES</td>
</tr>
<tr>
<td>Community Service Development</td>
<td>3.17</td>
<td>1.88</td>
<td>2.10</td>
<td>4.40</td>
<td>YES</td>
</tr>
<tr>
<td>Overall</td>
<td>1.38</td>
<td>1.95</td>
<td>2.00</td>
<td>1.97</td>
<td>---</td>
</tr>
</tbody>
</table>

*N represents 31 chief district administrators and 12 chief campus administrators.

**D represents D statistic; s₁ represents standard deviation for chief district administrators; s₂ represents standard deviation for chief campus administrators; and z represents z score.
development. Most of the significant difference in the individual factors, as shown in Table C 19, Appendix C, is caused by significant perception differences in the potency and activity factors.

As shown on Table XXXVII, a comparison of the six groups of chief campus administrators from these aforementioned categories with the "standard" shows general accord. A further comparison by individual functions indicates that each group of chief campus administrators agrees perception-wise with the "standard" on central office participation in textbook selection and in-service training. Only chief campus administrators in systems which established two campuses in 1967 show a perception difference in recruitment of new staff. Each group, with the exception of the 1967 category, disagrees with the "standard" on central office involvement in public information services, while, with the exception of the pre-1965 and 1968 categories, this is true also for student personnel services. For the other individual functions there is a mixture of results.

Comparison Between Chief Campus Administrators and the "Standard" by Number of Years the Chief Campus Administrator Has Served in His Current Role

Perception comparisons are made between the "standard" and chief campus administrators based on the number of years that the chief campus administrators have functioned in their current role.
TABLE XXXVII

SUMMARY OF COMPARISONS OF PERCEIVED AUTHORITY BETWEEN CHIEF CAMPUS ADMINISTRATORS BASED ON YEAR WHEN JUNIOR COLLEGE SYSTEM HAD AT LEAST TWO CAMPUSES IN OPERATION WITH CHIEF DISTRICT ADMINISTRATORS*

<table>
<thead>
<tr>
<th>Functions</th>
<th>Year With At Least Two Campuses</th>
<th>Prior 1965</th>
<th>1965</th>
<th>1966</th>
<th>1967</th>
<th>1968</th>
<th>After 1968</th>
</tr>
</thead>
<tbody>
<tr>
<td>Textbook Selection</td>
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<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Staff Member Recruitment</td>
<td></td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>YES</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>In-service Training</td>
<td></td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Physical Facility Planning</td>
<td></td>
<td>YES</td>
<td>---</td>
<td>YES</td>
<td>YES</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Budget Preparation</td>
<td></td>
<td>YES</td>
<td>---</td>
<td>YES</td>
<td>---</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>Public Information Services</td>
<td></td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>---</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>Student Personnel Services</td>
<td></td>
<td>---</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>---</td>
<td>YES</td>
</tr>
<tr>
<td>Curriculum Development</td>
<td></td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>Community Service Development</td>
<td></td>
<td>YES</td>
<td>YES</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>YES</td>
</tr>
<tr>
<td>Overall</td>
<td></td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
</tbody>
</table>

*5% represents level of significance
Those chief campus administrators who have served more than seven years in their current capacity agree with the "standard" on central office participation in the "system of functions." The relatively low z score of 0.91, as shown in Table XXXVIII, indicates that a good understanding exists between these two groups of the role of each. The only specific function where a significant perception difference exists is in public information services.

A comparable situation exists for chief campus administrators who have served in their present capacity for four, six, and seven years. As shown in Table XXXIX, Table XL, and Table XLI, not only is there general agreement on the overall, but also there is general accord on each of the individual functions.

Table XLII reveals that similar perceptions exist between the "standard" and chief campus administrators who have served in their present capacity for five years. However, on the individual functions, a significant difference in perception is found on central office involvement in physical facility planning and public information services. As disclosed in Table C 24, Appendix C, these significant differences between the two individual functions represent a culmination of difference on the evaluative, potency, and activity factors because each factor individually shows no significant difference.
TABLE XXXVIII

COMPARISONS OF PERCEIVED AUTHORITY OF CHIEF CAMPUS ADMINISTRATORS WHO HAVE SERVED OVER SEVEN YEARS IN THEIR CURRENT RULE WITHIN A JUNIOR COLLEGE SYSTEM WITH CHIEF DISTRICT ADMINISTRATORS*

<table>
<thead>
<tr>
<th>Functions</th>
<th>D**</th>
<th>s1</th>
<th>s2</th>
<th>z</th>
<th>Significant at 5%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Textbook Selection</td>
<td>1.13</td>
<td>2.38</td>
<td>2.33</td>
<td>1.00</td>
<td>---</td>
</tr>
<tr>
<td>Staff Member Recruitment</td>
<td>0.42</td>
<td>2.04</td>
<td>2.01</td>
<td>0.43</td>
<td>---</td>
</tr>
<tr>
<td>In-service Training</td>
<td>1.05</td>
<td>1.82</td>
<td>1.14</td>
<td>1.73</td>
<td>---</td>
</tr>
<tr>
<td>Physical Facility Planning</td>
<td>0.57</td>
<td>1.40</td>
<td>1.37</td>
<td>0.86</td>
<td>---</td>
</tr>
<tr>
<td>Budget Preparation</td>
<td>0.82</td>
<td>1.49</td>
<td>1.74</td>
<td>0.99</td>
<td>---</td>
</tr>
<tr>
<td>Public Information Services</td>
<td>1.38</td>
<td>1.62</td>
<td>1.13</td>
<td>2.36</td>
<td>YES</td>
</tr>
<tr>
<td>Student Personnel Services</td>
<td>1.24</td>
<td>1.87</td>
<td>1.60</td>
<td>1.56</td>
<td>---</td>
</tr>
<tr>
<td>Curriculum Development</td>
<td>0.71</td>
<td>1.67</td>
<td>1.83</td>
<td>0.81</td>
<td>---</td>
</tr>
<tr>
<td>Community Service Development</td>
<td>0.43</td>
<td>1.88</td>
<td>1.44</td>
<td>0.59</td>
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</tr>
<tr>
<td>Overall</td>
<td>0.77</td>
<td>1.95</td>
<td>1.72</td>
<td>0.91</td>
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</tr>
</tbody>
</table>

*N represents 31 chief district administrators and 7 chief campus administrators.

**D represents D statistic; s1 represents standard deviation for chief district administrators; s2 represents standard deviation for chief campus administrators; and z represents z score.
TABLE XXXIX
COMPARISONS OF PERCEIVED AUTHORITY OF CHIEF CAMPUS ADMINISTRATORS WHO HAVE SERVED FOUR YEARS IN THEIR CURRENT ROLE WITHIN A JUNIOR COLLEGE SYSTEM WITH CHIEF DISTRICT ADMINISTRATORS*

<table>
<thead>
<tr>
<th>Functions</th>
<th>D**</th>
<th>s1</th>
<th>s2</th>
<th>z</th>
<th>Significant at 5%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Textbook Selection</td>
<td>0.66</td>
<td>2.38</td>
<td>2.58</td>
<td>0.54</td>
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</tr>
<tr>
<td>Staff Member Recruitment</td>
<td>0.79</td>
<td>2.04</td>
<td>1.93</td>
<td>0.84</td>
<td>---</td>
</tr>
<tr>
<td>In-service Training</td>
<td>0.34</td>
<td>1.82</td>
<td>1.68</td>
<td>0.41</td>
<td>---</td>
</tr>
<tr>
<td>Physical Facility Planning</td>
<td>0.67</td>
<td>1.40</td>
<td>1.05</td>
<td>1.25</td>
<td>---</td>
</tr>
<tr>
<td>Budget Preparation</td>
<td>1.17</td>
<td>1.49</td>
<td>1.55</td>
<td>1.57</td>
<td>---</td>
</tr>
<tr>
<td>Public Information Services</td>
<td>0.40</td>
<td>1.62</td>
<td>1.53</td>
<td>0.54</td>
<td>---</td>
</tr>
<tr>
<td>Student Personnel Services</td>
<td>1.52</td>
<td>1.87</td>
<td>1.88</td>
<td>1.68</td>
<td>---</td>
</tr>
<tr>
<td>Curriculum Development</td>
<td>1.08</td>
<td>1.67</td>
<td>1.73</td>
<td>1.30</td>
<td>---</td>
</tr>
<tr>
<td>Community Service Development</td>
<td>1.19</td>
<td>1.88</td>
<td>1.51</td>
<td>1.57</td>
<td>---</td>
</tr>
<tr>
<td>Overall</td>
<td>0.79</td>
<td>1.95</td>
<td>1.89</td>
<td>0.86</td>
<td>---</td>
</tr>
</tbody>
</table>

*N represents 31 chief district administrators and 6 chief campus administrators.

**D represents D statistic; s1 represents standard deviation for chief district administrators; s2 represents standard deviation for chief campus administrators; and z represents z score.
<table>
<thead>
<tr>
<th>Functions</th>
<th>D**</th>
<th>s₁</th>
<th>s₂</th>
<th>z</th>
<th>Significant at 5%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Textbook Selection</td>
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<td>2.38</td>
<td>2.55</td>
<td>0.79</td>
<td>---</td>
</tr>
<tr>
<td>Staff Member Recruitment</td>
<td>1.93</td>
<td>2.04</td>
<td>2.20</td>
<td>1.66</td>
<td>---</td>
</tr>
<tr>
<td>In-service Training</td>
<td>1.23</td>
<td>1.82</td>
<td>2.11</td>
<td>1.11</td>
<td>---</td>
</tr>
<tr>
<td>Physical Facility Planning</td>
<td>1.75</td>
<td>1.40</td>
<td>1.98</td>
<td>1.71</td>
<td>---</td>
</tr>
<tr>
<td>Budget Preparation</td>
<td>1.49</td>
<td>1.49</td>
<td>1.80</td>
<td>1.58</td>
<td>---</td>
</tr>
<tr>
<td>Public Information Services</td>
<td>1.34</td>
<td>1.62</td>
<td>1.93</td>
<td>1.33</td>
<td>---</td>
</tr>
<tr>
<td>Student Personnel Services</td>
<td>2.01</td>
<td>1.87</td>
<td>2.09</td>
<td>1.83</td>
<td>---</td>
</tr>
<tr>
<td>Curriculum Development</td>
<td>1.27</td>
<td>1.67</td>
<td>2.01</td>
<td>1.21</td>
<td>---</td>
</tr>
<tr>
<td>Community Service Development</td>
<td>1.02</td>
<td>1.88</td>
<td>1.77</td>
<td>1.07</td>
<td>---</td>
</tr>
<tr>
<td>Overall</td>
<td>1.36</td>
<td>1.95</td>
<td>2.14</td>
<td>1.21</td>
<td>---</td>
</tr>
</tbody>
</table>

*N represents 31 chief district administrators and 5 chief campus administrators.

**D represents D statistic; s₁ represents standard deviation for chief district administrators; s₂ represents standard deviation for chief campus administrators; and z represents z score.
### TABLE XLI

COMPARISONS OF PERCEIVED AUTHORITY OF CHIEF CAMPUS ADMINISTRATORS WHO HAVE SERVED SEVEN YEARS IN THEIR CURRENT ROLE WITHIN A JUNIOR COLLEGE SYSTEM WITH CHIEF DISTRICT ADMINISTRATORS*

<table>
<thead>
<tr>
<th>Functions</th>
<th>D**</th>
<th>s1</th>
<th>s2</th>
<th>z</th>
<th>Significant at 5%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Textbook Selection</td>
<td>0.58</td>
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<td>2.37</td>
<td>0.46</td>
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</tr>
<tr>
<td>Staff Member Recruitment</td>
<td>0.81</td>
<td>2.04</td>
<td>2.01</td>
<td>0.76</td>
<td>---</td>
</tr>
<tr>
<td>In-service Training</td>
<td>1.13</td>
<td>1.82</td>
<td>1.83</td>
<td>1.16</td>
<td>---</td>
</tr>
<tr>
<td>Physical Facility Planning</td>
<td>0.50</td>
<td>1.40</td>
<td>1.27</td>
<td>0.73</td>
<td>---</td>
</tr>
<tr>
<td>Budget Preparation</td>
<td>1.44</td>
<td>1.49</td>
<td>1.49</td>
<td>1.82</td>
<td>---</td>
</tr>
<tr>
<td>Public Information Services</td>
<td>1.30</td>
<td>1.62</td>
<td>1.26</td>
<td>1.87</td>
<td>---</td>
</tr>
<tr>
<td>Student Personnel Services</td>
<td>0.80</td>
<td>1.87</td>
<td>1.62</td>
<td>0.91</td>
<td>---</td>
</tr>
<tr>
<td>Curriculum Development</td>
<td>1.05</td>
<td>1.67</td>
<td>1.72</td>
<td>1.15</td>
<td>---</td>
</tr>
<tr>
<td>Community Service Development</td>
<td>0.80</td>
<td>1.88</td>
<td>1.37</td>
<td>1.04</td>
<td>---</td>
</tr>
<tr>
<td>Overall</td>
<td>0.82</td>
<td>1.95</td>
<td>1.76</td>
<td>0.86</td>
<td>---</td>
</tr>
</tbody>
</table>

*N represents 31 chief district administrators and 5 chief campus administrators.

**D represents D statistic; s1 represents standard deviation for chief district administrators; s2 represents standard deviation for chief campus administrators; and z represents z score.
TABLE XLII

COMPARISONS OF PERCEIVED AUTHORITY OF CHIEF CAMPUS ADMINISTRATORS WHO HAVE SERVED FIVE YEARS IN THEIR CURRENT ROLE WITHIN A JUNIOR COLLEGE SYSTEM WITH CHIEF DISTRICT ADMINISTRATORS*

<table>
<thead>
<tr>
<th>Functions</th>
<th>D**</th>
<th>s₁</th>
<th>s₂</th>
<th>z</th>
<th>Significant at 5%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Textbook Selection</td>
<td>0.84</td>
<td>2.38</td>
<td>1.89</td>
<td>1.05</td>
<td>---</td>
</tr>
<tr>
<td>Staff Member Recruitment</td>
<td>0.84</td>
<td>2.04</td>
<td>1.67</td>
<td>1.20</td>
<td>---</td>
</tr>
<tr>
<td>In-service Training</td>
<td>1.08</td>
<td>1.82</td>
<td>1.69</td>
<td>1.58</td>
<td>---</td>
</tr>
<tr>
<td>Physical Facility Planning</td>
<td>1.90</td>
<td>1.40</td>
<td>2.07</td>
<td>2.45</td>
<td>YES</td>
</tr>
<tr>
<td>Budget Preparation</td>
<td>1.25</td>
<td>1.49</td>
<td>1.92</td>
<td>1.71</td>
<td>---</td>
</tr>
<tr>
<td>Public Information Services</td>
<td>1.95</td>
<td>1.62</td>
<td>2.35</td>
<td>2.21</td>
<td>YES</td>
</tr>
<tr>
<td>Student Personnel Services</td>
<td>0.84</td>
<td>1.87</td>
<td>1.74</td>
<td>1.19</td>
<td>---</td>
</tr>
<tr>
<td>Curriculum Development</td>
<td>1.25</td>
<td>1.67</td>
<td>1.86</td>
<td>1.72</td>
<td>---</td>
</tr>
<tr>
<td>Community Service Development</td>
<td>0.89</td>
<td>1.88</td>
<td>1.71</td>
<td>1.28</td>
<td>---</td>
</tr>
<tr>
<td>Overall</td>
<td>1.15</td>
<td>1.95</td>
<td>1.94</td>
<td>1.49</td>
<td>---</td>
</tr>
</tbody>
</table>

*N represents 31 chief district administrators and 9 chief campus administrators.

**D represents D statistic; s₁ represents standard deviation for chief district administrators; s₂ represents standard deviation for chief campus administrators; and z represents z score.
For those chief campus administrators who have served three years in their current capacity, an overall significant difference in perception occurs. Table XLIII reveals also a significant perception difference exists in the following individual functions: (1) in-service training, (2) physical facility planning, (3) budget preparation, (4) public information services, (5) curriculum development, and (6) community service development. Both public information services and community services have relatively high z scores, which are 5.42 and 3.92 respectively. Table C 25, Appendix C, discloses a significant perception difference for public information services in the evaluative, potency, and activity factors and in physical facility planning in the evaluative and potency factors.

As disclosed by Table XLIV and Table XLV, chief campus administrators who have served in their present capacity for two years or less are in agreement with the "standard" for the "system of functions." For the individual functions, those chief campus administrators with two years experience disagree with the "standard" for central office participation in budget preparation, public information services, curriculum development, and community service development. Those chief campus administrators with less than two years experience disagree on the same individual functions with the exception of curriculum development. In addition, this latter group disagrees with the "standard" for central office participation, in staff member recruitment, and in student personnel services.
TABLE XLIII
COMPARISONS OF PERCEIVED AUTHORITY OF CHIEF CAMPUS ADMINISTRATORS WHO HAVE SERVED THREE YEARS IN THEIR CURRENT ROLE WITHIN A JUNIOR COLLEGE SYSTEM WITH CHIEF DISTRICT ADMINISTRATORS*

<table>
<thead>
<tr>
<th>Functions</th>
<th>D**</th>
<th>s₁</th>
<th>s₂</th>
<th>z</th>
<th>Significant at 5%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Textbook Selection</td>
<td>0.27</td>
<td>2.38</td>
<td>2.24</td>
<td>0.36</td>
<td>---</td>
</tr>
<tr>
<td>Staff Member Recruitment</td>
<td>1.21</td>
<td>2.04</td>
<td>2.03</td>
<td>1.79</td>
<td>---</td>
</tr>
<tr>
<td>In-service Training</td>
<td>1.46</td>
<td>1.82</td>
<td>1.63</td>
<td>2.60</td>
<td>YES</td>
</tr>
<tr>
<td>Physical Facility Planning</td>
<td>1.85</td>
<td>1.40</td>
<td>1.73</td>
<td>3.40</td>
<td>YES</td>
</tr>
<tr>
<td>Budget Preparation</td>
<td>1.70</td>
<td>1.49</td>
<td>1.94</td>
<td>2.82</td>
<td>YES</td>
</tr>
<tr>
<td>Public Information Services</td>
<td>2.85</td>
<td>1.62</td>
<td>1.57</td>
<td>5.42</td>
<td>YES</td>
</tr>
<tr>
<td>Student Personnel Services</td>
<td>0.89</td>
<td>1.87</td>
<td>1.77</td>
<td>1.49</td>
<td>---</td>
</tr>
<tr>
<td>Curriculum Development</td>
<td>1.18</td>
<td>1.67</td>
<td>1.76</td>
<td>2.05</td>
<td>YES</td>
</tr>
<tr>
<td>Community Service Development</td>
<td>2.27</td>
<td>1.88</td>
<td>1.68</td>
<td>3.92</td>
<td>YES</td>
</tr>
<tr>
<td>Overall</td>
<td>1.48</td>
<td>1.95</td>
<td>1.89</td>
<td>2.34</td>
<td>YES</td>
</tr>
</tbody>
</table>

*N represents 31 chief district administrators and 14 chief campus administrators.

**D represents D statistic; s₁ represents standard deviation for chief district administrators; s₂ represents standard deviation for chief campus administrators; and z represents z score.
TABLE XLIV

COMPARISONS OF PERCEIVED AUTHORITY OF CHIEF CAMPUS ADMINISTRATORS WHO HAVE SERVED TWO YEARS IN THEIR CURRENT ROLE WITHIN A JUNIOR COLLEGE SYSTEM WITH CHIEF DISTRICT ADMINISTRATORS*

<table>
<thead>
<tr>
<th>Functions</th>
<th>D**</th>
<th>s₁</th>
<th>s₂</th>
<th>z</th>
<th>Significant at 5%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Textbook Selection</td>
<td>0.72</td>
<td>2.38</td>
<td>2.03</td>
<td>1.19</td>
<td>---</td>
</tr>
<tr>
<td>Staff Member Recruitment</td>
<td>0.86</td>
<td>2.04</td>
<td>1.66</td>
<td>1.69</td>
<td>---</td>
</tr>
<tr>
<td>In-service Training</td>
<td>0.44</td>
<td>1.82</td>
<td>1.49</td>
<td>0.97</td>
<td>---</td>
</tr>
<tr>
<td>Physical Facility Planning</td>
<td>0.74</td>
<td>1.40</td>
<td>1.62</td>
<td>1.75</td>
<td>---</td>
</tr>
<tr>
<td>Budget Preparation</td>
<td>1.04</td>
<td>1.49</td>
<td>1.69</td>
<td>2.34</td>
<td>YES</td>
</tr>
<tr>
<td>Public Information Services</td>
<td>1.83</td>
<td>1.62</td>
<td>1.94</td>
<td>3.65</td>
<td>YES</td>
</tr>
<tr>
<td>Student Personnel Services</td>
<td>1.00</td>
<td>1.87</td>
<td>1.86</td>
<td>1.94</td>
<td>---</td>
</tr>
<tr>
<td>Curriculum Development</td>
<td>0.99</td>
<td>1.67</td>
<td>1.61</td>
<td>2.18</td>
<td>YES</td>
</tr>
<tr>
<td>Community Service Development</td>
<td>1.22</td>
<td>1.88</td>
<td>1.66</td>
<td>2.50</td>
<td>YES</td>
</tr>
<tr>
<td>Overall</td>
<td>0.92</td>
<td>1.95</td>
<td>1.83</td>
<td>1.76</td>
<td>---</td>
</tr>
</tbody>
</table>

*N represents 31 chief district administrators and 24 chief campus administrators.

**D represents D statistic; s₁ represents standard deviation for chief district administrators; s₂ represents standard deviation for chief campus administrators; and z represents z score.
TABLE XLV

COMPARISONS OF PERCEIVED AUTHORITY OF CHIEF CAMPUS ADMINISTRATORS WHO HAVE SERVED UNDER TWO YEARS IN THEIR CURRENT ROLE WITHIN A JUNIOR COLLEGE SYSTEM WITH CHIEF DISTRICT ADMINISTRATORS*

<table>
<thead>
<tr>
<th>Functions</th>
<th>$D^{**}$</th>
<th>$s_1$</th>
<th>$s_2$</th>
<th>$z$</th>
<th>Significant at 5%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Textbook Selection</td>
<td>0.34</td>
<td>2.38</td>
<td>2.14</td>
<td>0.50</td>
<td>---</td>
</tr>
<tr>
<td>Staff Member Recruitment</td>
<td>1.28</td>
<td>2.04</td>
<td>1.73</td>
<td>2.28</td>
<td>YES</td>
</tr>
<tr>
<td>In-service Training</td>
<td>0.23</td>
<td>1.82</td>
<td>1.67</td>
<td>0.44</td>
<td>---</td>
</tr>
<tr>
<td>Physical Facility Planning</td>
<td>0.38</td>
<td>1.40</td>
<td>1.30</td>
<td>0.94</td>
<td>---</td>
</tr>
<tr>
<td>Budget Preparation</td>
<td>1.44</td>
<td>1.49</td>
<td>1.60</td>
<td>3.04</td>
<td>YES</td>
</tr>
<tr>
<td>Public Information Services</td>
<td>2.04</td>
<td>1.62</td>
<td>1.74</td>
<td>3.96</td>
<td>YES</td>
</tr>
<tr>
<td>Student Personnel Services</td>
<td>1.45</td>
<td>1.87</td>
<td>1.52</td>
<td>2.89</td>
<td>YES</td>
</tr>
<tr>
<td>Curriculum Development</td>
<td>1.03</td>
<td>1.67</td>
<td>1.70</td>
<td>2.01</td>
<td>---</td>
</tr>
<tr>
<td>Community Service Development</td>
<td>1.38</td>
<td>1.88</td>
<td>1.73</td>
<td>2.55</td>
<td>YES</td>
</tr>
<tr>
<td>Overall</td>
<td>1.00</td>
<td>1.95</td>
<td>1.81</td>
<td>1.77</td>
<td>---</td>
</tr>
</tbody>
</table>

*N represents 31 chief district administrators and 18 chief campus administrators.

**$D$ represents $D$ statistic; $s_1$ represents standard deviation for chief district administrators; $s_2$ represents standard deviation for chief campus administrators; and $z$ represents $z$ score.
From the aforementioned categories, as shown on Table XLVI, only those chief campus administrators who have served in their current capacity for three years have a significantly different perception of central office participation in the "system of functions" as compared to the "standard." Apparently the critical age for a significant breakdown of communications is when a chief campus administrator has served in his current capacity for three years. Perhaps, during the first couple of years chief campus administrators are vitally involved in learning their roles from the chief district administrator. Then, during the third year, chief campus administrators operate in a more autonomous manner, and, in the process, reject or resist central office participation in the "system of functions." However, after the third year, the chief campus administrators and the chief district administrators begin to work out these problems related to delegated authority so that mutual understanding again is achieved.

Relationship of Chief Campus and Chief Central Office Administrators' Perceptions to Current Practices

An attempt is made to relate previously discussed perceptions to current practices. Two studies, previously cited, have analyzed in some depth the current operations in multicampus junior college systems. Jensen\(^1\) in 1965

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### TABLE XLVI

**Summary of Comparisons of Perceived Authority Between Chief Campus Administrators Based on Chief Campus Administrator Tenure in Current Role Within the Junior College System with Chief District Administrators**

<table>
<thead>
<tr>
<th>Functions</th>
<th>Chief Campus Administrator Tenure in Current Role</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Under Two</td>
</tr>
<tr>
<td>Textbook Selection</td>
<td>---</td>
</tr>
<tr>
<td>Staff Member Recruitment</td>
<td>YES</td>
</tr>
<tr>
<td>In-service Training</td>
<td>---</td>
</tr>
<tr>
<td>Physical Facility Planning</td>
<td>---</td>
</tr>
<tr>
<td>Budget Preparation</td>
<td>YES</td>
</tr>
<tr>
<td>Public Information Services</td>
<td>YES</td>
</tr>
<tr>
<td>Student Personnel Services</td>
<td>YES</td>
</tr>
<tr>
<td>Curriculum Development</td>
<td>---</td>
</tr>
<tr>
<td>Community Service Development</td>
<td>YES</td>
</tr>
<tr>
<td><strong>Overall</strong></td>
<td>---</td>
</tr>
</tbody>
</table>

*5% represents level of significance*
investigated the administration of ten multicampus junior college systems through personal interviews with administrators, faculty, and community leaders. Kintzer, Jensen, and Hansen\textsuperscript{2} in 1969 were authors of a monograph of chief campus and chief central office administrators' opinions on current administrative practices in over forty multicampus junior college systems. These two studies provide the realistic data to relate to perception comparisons which have been discussed and analyzed in this study.

As previously discussed, there is no significant difference in perception between chief campus administrators compared to chief district administrators on central office participation in textbook selection.

Research conducted by Kintzer, Jensen, and Hansen shows that chief campus and district administrators believe that textbook selection is primarily a campus responsibility.\textsuperscript{3} Jensen reached a similar conclusion by finding that both groups of administrators feel that the faculty should assume a major role in choosing textbooks. The majority of these administrators indicate also that all faculty members on a campus should use the same textbook for a given course. However, there is a difference of opinion among these chief administrators as to whether all campuses should use the same textbook for a given course. It is


\textsuperscript{3}\textit{Ibid.}, p. 23.
interesting to note that in the majority of systems textbook selection must be approved by the central office. 4

On the recruitment of new staff members, a significant difference in perception exists between chief campus administrators compared to chief district administrators on central office involvement. Jensen, in his study of multi-campus systems, offered some illuminating information on recent administrative practices.

1. All chief administrators at central offices and individual campuses state very emphatically that staff personnel policies and procedures must be district wide.

2. All of the districts have a central personnel office, which in some cases imposes some control and restrictions upon the individual campus employment process.

3. In the majority of cases, the individual campuses have the final word on whom they will hire. A strong trend toward allowing department chairmen to have a more decisive voice in the selection and evaluation of new instructors was noted. 5

Kintzer, Jensen, and Hansen reported that their survey of chief campus and chief district administrators indicates that most of these administrators feel that the campus has the primary responsibility for recruitment of new staff members. 6

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5 Ibid., pp. 153-154.
6 Kintzer, Jensen, and Hansen, p. 23.
The third point of Jensen's analysis may provide the primary cause for the existence of this perception difference between the two groups of chief administrators: the push for a greater campus voice in the selection process.

Jensen reported that chief campus and chief district administrators have a limited concern for in-service training. In addition, Kintzer, Jensen, and Hansen found that the chief campus and district administrators believe that in-service training is primarily the responsibility of the individual campuses. Since there is general perception agreement on central office participation in this function, it can be concluded that both groups of chief administrators primarily give "lip-service" to in-service training. As a result, this function is placed at a somewhat low priority as a campus responsibility.

A significant difference in perception exists between chief campus administrators compared to chief district administrators on central office participation in physical facility planning. Related to this, Jensen found that site selection is a central office function and needs governing board approval. Also, he found that physical facility planning is a central office function. Yet, according to the majority of chief campus and district administrators

8 Kintzer, Jensen, and Hansen, p. 23.
interviewed, this planning is inadequate and needs more emphasis on long-range planning to adapt to changing societal needs.  

The results from Kintzer, Jensen, and Hansen's research disagreed to some extent with Jensen's earlier research. Kintzer, Jensen, and Hansen found that the chief campus and district administrators combined are split between approximately one-half viewing physical facility planning as a central office function and the other one-half viewing it as a shared responsibility between the campuses and the central office.

It is possible that previous dissatisfaction with physical facility planning is causing some upheaval within multi-campus junior college systems. As a result, new authority relationships are being developed which may account for the significant perception differences currently in existence.

According to Jensen, each of the ten multicampus junior college systems, included in his study, start their budget planning on the individual campus. However, he found that all systems handle the business affairs and finance primarily at the central office level. In addition, the majority of these systems employ a bursar or business manager on each campus, but these persons primarily are responsible for the more routine processing functions, such as student financial

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10 Kintzer, Jensen, and Hansen, p. 23.
aid, accounting, bookstore, and cafeteria. This information coincides with the results of Kintzer, Jensen, and Hansen's later study. These researchers found that chief administrators indicate that budget preparation is a shared responsibility between the central office and campuses.

There is a significant difference of perception between the chief campus administrators compared to chief district administrators on central office involvement in budget preparation. One of the possible explanations for these perception differences is that while the initial budget preparation does involve campus personnel, time pressures move the decision-making on budget priorities from the campus to the central office. In the meantime, the chief campus administrator believes that there is greater campus autonomy in budget development than actually exists. The result is a breakdown in communications.

As shown in Table XIV, the greatest significant perception difference between chief campus administrators compared to chief district administrators exists on central office participation in public information services. Kintzer, Jensen, and Hansen found that chief campus and district administrators view this area as a shared

12 Kintzer, Jensen, and Hansen, p. 23.
responsibility between the central office and the campuses. Also, interestingly enough, Jensen failed to include a discussion of public information services in his study. Perhaps one reason that this gap in communications exists between the two groups of chief administrators is the relatively recent emphasis being placed on public information services. Consequently, these administrators are involved with the determination of which publicity should be coordinated through the central office and which publicity should be coordinated through the college campuses.

Jensen found that all chief campus and chief district administrators agree that the person in charge of student personnel services should be a part of each individual campus within the multicampus junior college system. No multicampus system was found which has a person at the central office in charge of student personnel services per se. To further illustrate this campus emphasis, in all but one system which Jensen studied, the individual campuses have complete freedom in the determination of the role of counseling. The chief campus and district administrators, included in Kintzer, Jensen, and Hansen's research, concur with Jensen's study by indicating that all student

13 Ibid., p. 25.
personnel service functions are primarily the campus responsibility.\textsuperscript{15}

The only apparent explanation for this perception difference which exists between chief campus administrators and chief district administrators is that recent student turmoil has caused the chief district administrators to take a more active role in student personnel services than originally intended. It will be interesting to see if a special position will be created at the central office to coordinate student personnel services in the future.

From his study of ten multicampus junior college systems, Jensen learned that the policies and procedures for the formation of curriculum objectives are set by the central office. In addition, Jensen discovered the following information:

1. Faculty participation is encouraged by having faculty members serve on both campus and system-wide instructional committees.

2. Central office approval is necessary to add a new course to the curriculum.

3. No consistent pattern of responsibility exists on the procedure which courses are added or deleted from the curriculum.

4. The majority of chief campus administrators believe that the stimulus for adding or deleting courses should originate within an instructional department.\textsuperscript{16}

\textsuperscript{15}Kintzer, Jensen, and Hansen, p. 23.

\textsuperscript{16}Jensen, "Urban Community Colleges Go Multi-Campus," pp. 151-152.
Kintzer, Jensen, and Hansen found that chief campus and district administrators are about equally divided in their opinion concerning curriculum development as primarily the responsibility of the campus, and curriculum development as a shared responsibility between the central office and the campuses.\textsuperscript{17}

Perhaps the lack of a well defined set of procedures on curriculum development contributes to the significant difference of perception between the two groups of chief administrators on central office participation in curriculum development. Another cause for this perception difference may be the recent major emphasis placed on the development of technical-occupational programs, which represent a relatively new area of instruction for some junior colleges.

The majority of chief campus and district administrators included in Kintzer, Jensen, and Hansen's research indicate that community service development is primarily a campus responsibility. However, a large minority of these administrators view community service development as a shared responsibility between the central office and campuses.\textsuperscript{19}

A comparison of the results of these two aforementioned research studies may indicate why a significant perception

\textsuperscript{17}Kintzer, Jensen, and Hansen, p. 23.

\textsuperscript{18}Ibid.

\textsuperscript{19}Jensen, "Urban Community Colleges Go Multi-Campus," pp. 132-133.
difference currently exists between chief campus administrators and chief district administrators on central office participation in community service development. A trend may be developing to shift some of the delegated campus responsibility back to the central office to obtain greater coordination of the community service program within the multicampus system. If this is the case, more discussion needs to take place between chief campus and district administrators to alleviate communication problems.

Summary

Comparisons between the "standard" (chief central office administrators) and chief campus administrators' perceptions have been analyzed for each function and the "system of functions." These perceptions have been related to current practices. The next chapter, Chapter V, contains summaries of the analysis presented in this chapter and relates the results to the hypothesis developed in Chapter I.

Chief campus administrators as compared to the "standard" have a significantly different perception of central office participation in the "system of functions" chosen for this study. Further analysis reveals that, of the nine functions which constitute the "system of functions," general accord in perception was found only on central office participation in textbook selection and recruitment of new staff members.
The greatest perception difference was found in public information services and the least difference in textbook selection.

Chief campus administrators were divided into several different groupings to compare with the "standard." This was done to provide additional insight into overall perception differences. A detailed discussion of these comparisons is included in Chapter V.
CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

American junior colleges are a phenomenon of the twentieth century. From a sporadic beginning, these two-year institutions of higher education have grown to serve an enrollment of over two million, which represents an increase of more than three-fold since 1960. Junior college students currently account for almost thirty per cent of all undergraduate students and twenty-five per cent of students in higher education in the United States.

The most significant, recent organizational development in the junior college movement is the establishment of the multicampus system. There are forty-three of these systems, with two or more campuses in operation, divided among sixteen states. California, with thirteen multicampus systems, is the leader in this type of organizational structure. Next is Texas with five and Iowa with four.

As the junior college becomes a multicampus system, the role of the central office becomes crucial. The purpose of this study was to determine whether there is a significant difference in the perception of the chief district administrators and the chief campus administrators as to the degree of authority delegated by the district office to the
college campuses. An attempt was also made to determine to what degree these perceptions were based on current practices.

Central office participation was evaluated by chief campus administrators and chief district administrators on nine functions. These functions were (1) textbook selection, (2) recruitment of new staff members, (3) in-service training, (4) physical facility planning, (5) budget preparation, (6) public information services, (7) student personnel services, (8) curriculum development, and (9) community service development. Perceptions of the performance of these functions were analyzed for each function and all the functions combined to represent a "system of functions." These functions were considered representative of all functions performed in multicampus junior college systems.

The semantic differential was the measuring instrument used in this study. This psychological technique or process measures the connotative meaning which words and concepts have for different individuals or groups of individuals. Factor analysis of the results of semantic differential studies revealed that three primary factors (evaluative, potency, and activity) account for almost half of the total variance in meaningful judgments. Other minor dimensions have appeared in nearly all factor analysis studies, but these dimensions have failed to emerge as significant, meaningful factors.
All chief campus administrator comparisons with the "standard" (chief district administrators) were based on the mean D score for each factor and function. The overall D per function was found by taking the difference between the mean raw scores of the "standard" and chief campus administrators on each factor, squaring this difference, summing these squares, and taking the square root of the sums. Students' t test was applied to determine significant differences at the five per cent level. It would be incongruous with the design of this study to have a significant test more sensitive than five per cent.

Conclusions

The conclusions are related to the hypothesis stated as follows:

In multicampus junior college systems the degree of delegated authority perceived by chief district administrators differs significantly from that perceived by chief campus administrators.

According to the analysis of the data, this hypothesis is accepted. Further analysis revealed that, of the nine functions which constitute the "system of functions," general accord in perception was found only on central office participation in textbook selection and recruitment of new staff members. The greatest difference was found in public information services and the least difference in textbook selection. The z value of 5.16 for public information services represented an unusually large
difference in perception between chief campus administrators and the "standard" (chief district administrators).

Chief campus administrators were divided into several different groupings to compare with the "standard." This was done to provide some additional insight into the overall perception differences. Chief campus administrators were sub-grouped on the following basis: (1) student enrollment in the multicampus junior college system, (2) number of campuses per multicampus junior college system, (3) average student enrollment per campus, (4) California chief campus administrators, (5) when junior college system had two campuses in operation, and (6) number of years that chief campus administrators had served in current capacity.

A comparison between the "standard" and chief campus administrators in multicampus junior college systems of less than 10,000 students, between 10,000 and 20,000 students, between 20,000 and 30,000 students, and over 30,000 students revealed no overall significant difference of perception in each of these classifications.

Multicampus junior college systems, whether they be two, three, or more than three-campus systems, found general agreement in perceptions between the chief campus administrators and the "standard."

Perception comparisons were made between the "standard" and chief campus administrators in multicampus junior college systems with an average student enrollment per campus of
less than 2,500, between 2,500 and 5,000, between 5,000 and 7,500, between 7,500 and 10,000, and over 10,000. These comparisons revealed general accord.

California, with one-third of the current multicampus junior college systems, was chosen for separate analysis. There was a significant difference in perception between chief campus administrators in California as compared to the "standard." For the individual functions, significant differences of perception were found in physical facility planning, budget preparation, public information services, curriculum development, and community service development.

An analysis of perception comparisons between the "standard" and chief campus administrators by year when the junior college system had at least two campuses showed general perception agreement.

Perception comparisons were made between the "standard" and chief campus administrators based on the number of years that the chief campus administrators had functioned in their current role. Only those chief campus administrators who had served in their current capacity for three years were found to have a significantly different perception from the "standard." Apparently the critical age for a significant breakdown of communications occurs when the chief campus administrator has served in his current capacity for three years. Perhaps during the first couple of years the chief campus administrators are vitally involved in learning
their roles from the chief district administrator. Then, during the third year the chief campus administrators begin to operate in a more autonomous manner. In the process they reject or resist central office participation in the "system of functions." However, after the third year, the chief campus administrators and the chief district administrators begin to work out these problems related to delegated authority so that mutual understanding is again achieved.

Recommendations

In view of the findings of this study the following recommendations appear to be justified:

1. Periodic sessions between the chief campus administrators and the chief district administrator in every multicampus junior college system which focus on authority relationships between them.

2. Better defined policies and procedures pertaining to responsibilities within functional areas in multicampus junior college systems.

3. Development of a consortium, composed of chief campus and chief district administrators, to focus on authority relationships in multicampus junior college systems.

During this investigation, problems warranting further study were identified. Specifically, the following suggestions are made:

1. A study of the chief campus and chief district administrator's roles at the different developmental stages of the multicampus junior college system.

2. A study to examine the channels of communication in a multicampus junior college system to determine how these channels can be interrelated and manipulated to better serve students.
3. A study of effective methods of involving the faculty and staff in the administration of multicampus junior college systems.

4. An in-depth study of current views regarding the proper balance of centralization and campus autonomy in multicampus junior college systems.
APPENDIX A

7338 East 59th Place South
Tulsa, Oklahoma 74145
October 20, 1971

Dr. Wayland P. Moody, President
San Antonio Junior College District
San Antonio, Texas 78212

Dear Dr. Moody:

The Tulsa Junior College System recently was established to be operated as a multi-college system. The first college is beginning its second year of operation with 3,924 students. Three additional campuses are projected in the near future.

I am in the process of evaluating progressive multi-college junior college systems to help us better prepare for our multicampus developments as well as help me complete my doctoral dissertation on "An Analysis of the Degree of Authority Delegated by the District Office to the College Campuses in Multi-Campus Junior College Districts."

Will you please complete and return the attached questionnaire in the enclosed self addressed stamped envelope. This form should take no more than 15 minutes of your time to complete. As Executive Vice President of the Tulsa Junior College System, I have answered many such requests, and, knowing something of the time and thought required, I will be doubly appreciative of your help.

If you come through Tulsa, please come by and visit.

Sincerely,

Dean P. VanTrease
Executive Vice President

DPV:mdw
QUESTIONNAIRE

Please place your check marks on the basis of current district (central office) participation in the following functions:

1. TEXTBOOK SELECTION:
   clear __:__:__:__:__:__:__ hazy
   small __:__:__:__:__:__:__ large
   complex __:__:__:__:__:__:__ simple
   bad __:__:__:__:__:__:__ good
   strong __:__:__:__:__:__:__ weak
   slow __:__:__:__:__:__:__ fast
   successful __:__:__:__:__:__:__ unsuccessful
   shallow __:__:__:__:__:__:__ deep
   active __:__:__:__:__:__:__ passive

2. RECRUITMENT OF NEW STAFF MEMBERS:
   strong __:__:__:__:__:__:__ weak
   small __:__:__:__:__:__:__ large
   successful __:__:__:__:__:__:__ unsuccessful
   slow __:__:__:__:__:__:__ fast
   clear __:__:__:__:__:__:__ hazy
   bad __:__:__:__:__:__:__ good
   active __:__:__:__:__:__:__ passive
   shallow __:__:__:__:__:__:__ deep
   complex __:__:__:__:__:__:__ simple
Please place your check marks on the basis of current district (central office) participation in the following functions:

### 3. IN-SERVICE TRAINING:

<table>
<thead>
<tr>
<th>Successful</th>
<th>Unsuccessful</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shallow</td>
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<tr>
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<td>Passive</td>
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<td>Large</td>
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<td>Strong</td>
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</tr>
<tr>
<td>Bad</td>
<td>Good</td>
</tr>
<tr>
<td>Complex</td>
<td>Simple</td>
</tr>
</tbody>
</table>

### 4. PHYSICAL FACILITY PLANNING:

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<th>Passive</th>
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</thead>
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<td>Deep</td>
</tr>
<tr>
<td>Clear</td>
<td>Hazy</td>
</tr>
<tr>
<td>Slow</td>
<td>Fast</td>
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<tr>
<td>Strong</td>
<td>Weak</td>
</tr>
<tr>
<td>Bad</td>
<td>Good</td>
</tr>
<tr>
<td>Complex</td>
<td>Simple</td>
</tr>
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<td>Small</td>
<td>Large</td>
</tr>
<tr>
<td>Successful</td>
<td>Unsuccessful</td>
</tr>
</tbody>
</table>
PERSONAL AND CONFIDENTIAL

Please place your check marks on the basis of current district (central office) participation in the following functions:

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<tr>
<th>5. BUDGET PREPARATION:</th>
</tr>
</thead>
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<tr>
<td>complex <em><strong>:</strong></em>:<em><strong>:</strong></em>:__ simple</td>
</tr>
<tr>
<td>bad <em><strong>:</strong></em>:<em><strong>:</strong></em>:___: good</td>
</tr>
<tr>
<td>strong <em><strong>:</strong></em>:<em><strong>:</strong></em>:___: weak</td>
</tr>
<tr>
<td>small <em><strong>:</strong></em>:<em><strong>:</strong></em>:___: large</td>
</tr>
<tr>
<td>clear <em><strong>:</strong></em>:<em><strong>:</strong></em>:___: hazy</td>
</tr>
<tr>
<td>slow <em><strong>:</strong></em>:<em><strong>:</strong></em>:___: fast</td>
</tr>
<tr>
<td>successful <em><strong>:</strong></em>:<em><strong>:</strong></em>:___: unsuccessful</td>
</tr>
<tr>
<td>shallow <em><strong>:</strong></em>:<em><strong>:</strong></em>:___: deep</td>
</tr>
<tr>
<td>active <em><strong>:</strong></em>:<em><strong>:</strong></em>:___: passive</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>6. PUBLIC INFORMATION SERVICES:</th>
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</thead>
<tbody>
<tr>
<td>strong <em><strong>:</strong></em>:<em><strong>:</strong></em>:<em><strong>:</strong></em>: weak</td>
</tr>
<tr>
<td>shallow <em><strong>:</strong></em>:<em><strong>:</strong></em>:<em><strong>:</strong></em>: deep</td>
</tr>
<tr>
<td>active <em><strong>:</strong></em>:<em><strong>:</strong></em>:<em><strong>:</strong></em>: passive</td>
</tr>
<tr>
<td>slow <em><strong>:</strong></em>:<em><strong>:</strong></em>:<em><strong>:</strong></em>: fast</td>
</tr>
<tr>
<td>complex <em><strong>:</strong></em>:<em><strong>:</strong></em>:<em><strong>:</strong></em>: simple</td>
</tr>
<tr>
<td>small <em><strong>:</strong></em>:<em><strong>:</strong></em>:<em><strong>:</strong></em>: large</td>
</tr>
<tr>
<td>successful <em><strong>:</strong></em>:<em><strong>:</strong></em>:<em><strong>:</strong></em>: unsuccessful</td>
</tr>
<tr>
<td>bad <em><strong>:</strong></em>:<em><strong>:</strong></em>:<em><strong>:</strong></em>: good</td>
</tr>
<tr>
<td>clear <em><strong>:</strong></em>:<em><strong>:</strong></em>:<em><strong>:</strong></em>: hazy</td>
</tr>
</tbody>
</table>
PERSONAL AND CONFIDENTIAL

Please place your check marks on the basis of current district (central office) participation in the following functions:

7. STUDENT PERSONNEL SERVICES:
   clear __________ hazy
   slow __________ fast
   successful __________ unsuccessful
   shallow __________ deep
   complex __________ simple
   bad __________ good
   active __________ passive
   small __________ large
   strong __________ weak

8. CURRICULUM DEVELOPMENT:
   active __________ passive
   shallow __________ deep
   clear __________ hazy
   bad __________ good
   strong __________ weak
   small __________ large
   successful __________ unsuccessful
   slow __________ fast
   complex __________ simple
Please place your check marks on the basis of current district (central office) participation in the following functions:

9. COMMUNITY SERVICE (SPECIAL PROGRAMS) DEVELOPMENT:
   complex ............ simple
   bad ................ good
   strong .............. weak
   small ............... large
   successful ........... unsuccessful
   shallow ............. deep
   clear ................ hazy
   slow ................ fast
   active ............... passive

HOW LONG HAVE YOU SERVED IN YOUR CURRENT CAPACITY WITHIN THE SYSTEM? ________ years
Dr. John K. Wells, President
East Los Angeles College
5357 East Brooklyn Avenue
Los Angeles, California  90022

Dear Dr. Wells:

My experiences as Executive Vice President of the Tulsa Junior College System and previously with the Dallas County Junior College District have convinced me that more effort needs to be expended on what is happening in multi-campus junior college systems.

Recently you were sent a letter asking for your cooperation in the completion of a questionnaire that will help us better prepare for our multi-college developments as well as help me complete my doctoral dissertation. The questionnaire focuses on chief administrator perceptions of how functions currently are performed in multi-college junior college systems.

Will you please complete and return the attached questionnaire in the enclosed envelope. The completion of this form should take no more than 15 minutes of your time. This will be the last time I will be asking for your cooperation in this project so your effort in returning the completed questionnaire will be greatly appreciated.

Please be assured that neither you nor your institution will be directly related to the results of this study.

Best of luck to a successful year!

Sincerely,

Dean P. Van Trease
Executive Vice President

DPV:mdw
<table>
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<tr>
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<th></th>
<th>Activity Factor</th>
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<tbody>
<tr>
<td></td>
<td>D     s     z     sig. at 5%</td>
<td>D     s     z     sig. at 5%</td>
<td>D     s     z     sig. at 5%</td>
<td></td>
<td></td>
<td></td>
</tr>
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<td>0.10  1.81  0.24  ---</td>
<td>0.16  1.89  0.38  ---</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Staff Member Recruitment</td>
<td>0.67  1.52  2.40  YES</td>
<td>0.45  1.74  0.96  ---</td>
<td>0.38  1.74  0.94  ---</td>
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<tr>
<td>In-service Training</td>
<td>0.35  1.73  0.94  ---</td>
<td>0.25  1.56  0.72  ---</td>
<td>0.12  1.51  0.34  ---</td>
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<td></td>
</tr>
<tr>
<td>Physical Facility Planning</td>
<td>0.63  1.57  2.22  YES</td>
<td>0.57  1.46  2.31  YES</td>
<td>0.40  1.81  1.11  ---</td>
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<tr>
<td>Budget Preparation</td>
<td>1.05  1.78  3.30  YES</td>
<td>0.55  1.45  1.97  ---</td>
<td>0.44  1.89  1.21  ---</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public Information Services</td>
<td>0.98  1.69  3.02  YES</td>
<td>1.22  1.96  3.46  YES</td>
<td>0.95  1.77  2.60  YES</td>
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</tr>
<tr>
<td>Student Personnel Services</td>
<td>0.68  1.77  2.06  YES</td>
<td>0.02  1.68  0.05  ---</td>
<td>0.69  1.62  1.91  ---</td>
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<td></td>
</tr>
<tr>
<td>Curriculum Development</td>
<td>0.33  1.49  1.09  ---</td>
<td>0.65  1.78  1.89  ---</td>
<td>0.56  1.77  1.48  ---</td>
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<tr>
<td>Community Service Development</td>
<td>0.71  1.52  2.31  YES</td>
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<td>0.73  1.69  1.81  ---</td>
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</tr>
<tr>
<td>Overall</td>
<td>0.62  1.68  1.89  ---</td>
<td>0.50  1.91  1.19  ---</td>
<td>0.49  1.85  1.19  ---</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

*N equals 87 chief campus administrators and 31 chief district administrators.

**D represents D statistic; s represents standard deviation for chief campus administrators; z represents z score; and 5% represents the level of significance.
**TABLE C.2**

**Comparisons of Perceived Authority on the Evaluative, Potency, and Activity Factors of Chief Campus Administrators for Multicampus Junior College Systems with Less Than 10,000 Students with Chief District Administrators**

<table>
<thead>
<tr>
<th>Functions</th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
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<td>z</td>
<td>sig. at 5%</td>
<td>D</td>
<td>s</td>
<td>z</td>
<td>sig. at 5%</td>
<td>D</td>
<td>s</td>
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<td>---</td>
<td>0.10</td>
<td>1.66</td>
<td>0.22</td>
<td>---</td>
<td>0.19</td>
<td>1.79</td>
</tr>
<tr>
<td>Staff Member Recruitment</td>
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<td>1.52</td>
<td>1.90</td>
<td>---</td>
<td>0.71</td>
<td>1.71</td>
<td>1.38</td>
<td>---</td>
<td>0.46</td>
<td>1.73</td>
</tr>
<tr>
<td>In-service Training</td>
<td>0.40</td>
<td>1.80</td>
<td>0.90</td>
<td>---</td>
<td>0.17</td>
<td>1.64</td>
<td>0.41</td>
<td>---</td>
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<td>1.45</td>
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<td>Physical Facility Planning</td>
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<td>1.64</td>
<td>1.76</td>
<td>---</td>
<td>0.77</td>
<td>1.66</td>
<td>2.27</td>
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<td>0.43</td>
<td>1.76</td>
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<td>Budget Preparation</td>
<td>0.55</td>
<td>1.75</td>
<td>1.41</td>
<td>---</td>
<td>0.42</td>
<td>1.58</td>
<td>1.19</td>
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<td>0.36</td>
<td>1.94</td>
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<td>Public Information Services</td>
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<td>1.73</td>
<td>2.06</td>
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<td>1.52</td>
<td>1.98</td>
<td>3.46</td>
<td>YES</td>
<td>1.10</td>
<td>1.78</td>
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<tr>
<td>Student Personnel Services</td>
<td>0.57</td>
<td>1.74</td>
<td>1.43</td>
<td>---</td>
<td>0.00</td>
<td>1.76</td>
<td>0.00</td>
<td>---</td>
<td>0.62</td>
<td>1.68</td>
</tr>
<tr>
<td>Curriculum Development</td>
<td>0.36</td>
<td>1.57</td>
<td>0.97</td>
<td>---</td>
<td>0.53</td>
<td>1.81</td>
<td>1.27</td>
<td>---</td>
<td>0.76</td>
<td>1.85</td>
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<tr>
<td>Community Service Development</td>
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<td>1.39</td>
<td>1.20</td>
<td>---</td>
<td>0.32</td>
<td>1.73</td>
<td>0.71</td>
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<td>0.62</td>
<td>1.79</td>
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<td>Overall</td>
<td>0.53</td>
<td>1.68</td>
<td>1.34</td>
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<td>0.50</td>
<td>1.95</td>
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<td>0.51</td>
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*N equals 35 chief campus administrators and 31 chief district administrators.

**D** represents **D** statistic; **s** represents standard deviation for chief campus administrators; **z** represents **z** score; and **5%** represents the level of significance.
TABLE C 3

COMPARISONS OF PERCEIVED AUTHORITY ON THE EVALUATIVE, POTENCY, AND ACTIVITY FACTORS OF CHIEF CAMPUS ADMINISTRATORS FOR MULTICAMPUS JUNIOR COLLEGE SYSTEMS WITH BETWEEN 10,000 AND 20,000 STUDENTS WITH CHIEF DISTRICT ADMINISTRATORS*

<table>
<thead>
<tr>
<th>Functions</th>
<th>Evaluative Factor</th>
<th>Potency Factor</th>
<th>Activity Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>D</td>
<td>s</td>
<td>z</td>
</tr>
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<td>Textbook Selection</td>
<td>0.15</td>
<td>1.53</td>
<td>0.38</td>
</tr>
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<td>Staff Member Recruitment</td>
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<td>2.08</td>
</tr>
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<td>In-service Training</td>
<td>0.06</td>
<td>1.79</td>
<td>0.12</td>
</tr>
<tr>
<td>Physical Facility Planning</td>
<td>0.37</td>
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<td>1.44</td>
<td>1.86</td>
<td>3.15</td>
</tr>
<tr>
<td>Public Information Services</td>
<td>0.95</td>
<td>1.53</td>
<td>2.30</td>
</tr>
<tr>
<td>Student Personnel Services</td>
<td>0.39</td>
<td>1.63</td>
<td>0.91</td>
</tr>
<tr>
<td>Curriculum Development</td>
<td>0.24</td>
<td>1.44</td>
<td>0.61</td>
</tr>
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<td>Community Service Development</td>
<td>0.68</td>
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<td>1.59</td>
</tr>
<tr>
<td>Overall</td>
<td>0.57</td>
<td>1.69</td>
<td>1.29</td>
</tr>
</tbody>
</table>

*N equals 24 chief campus administrators and 31 chief district administrators.

**D represents D statistic; s represents standard deviation for chief campus administrators; z represents z score; and 5% represents the level of significance.
### TABLE C 4

**COMPARISONS OF PERCEIVED AUTHORITY ON THE EVALUATIVE, POTENCY, AND ACTIVITY FACTORS OF CHIEF CAMPUS ADMINISTRATORS FOR MULTICAMPUS JUNIOR COLLEGE SYSTEMS WITH BETWEEN 20,000 AND 30,000 STUDENTS WITH CHIEF DISTRICT ADMINISTRATORS**

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<th>Activity Factor</th>
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*N equals 15 chief campus administrators and 31 chief district administrators.*

**D represents D statistic; s represents standard deviation for chief campus administrators; z represents z score; and 5% represents the level of significance.
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*N equals 13 chief campus administrators and 31 chief district administrators.

**D represents D statistic; s represents standard deviation for chief campus administrators; z represents z score; and 5% represents the level of significance.
TABLE C 6

COMPARISONS OF PERCEIVED AUTHORITY ON THE EVALUATIVE, POTENCY, AND ACTIVITY FACTORS OF CHIEF CAMPUS ADMINISTRATORS IN JUNIOR COLLEGE SYSTEMS WITH TWO CAMPUSES WITH CHIEF DISTRICT ADMINISTRATORS*

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*N equals 39 chief campus administrators and 31 chief district administrators.

**D represents D statistic; s represents standard deviation for chief campus administrators; z represents z score; and 5% represents the level of significance.
TABLE C 7

COMPARISONS OF PERCEIVED AUTHORITY ON THE EVALUATIVE, POTENCY, AND ACTIVITY FACTORS OF CHIEF CAMPUS ADMINISTRATORS IN JUNIOR COLLEGE SYSTEMS WITH THREE CAMPUSES WITH CHIEF DISTRICT ADMINISTRATORS*

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*N equals 31 chief campus administrators and 31 chief district administrators.

**D represents D statistic; s represents standard deviation for chief campus administrators; z represents z score; and 5% represents the level of significance.
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*N equals 17 chief campus administrators and 31 chief district administrators.

**D represents D statistic; s represents standard deviation for chief campus administrators; z represents z score; and 5% represents the level of significance.
### Table C 9

Comparisons of Perceived Authority on the Evaluative, Potency, and Activity Factors of Chief Campus Administrators in Systems with Less Than 2,500 Average Enrollment per Campus with Chief District Administrators*

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*N equals 22 chief campus administrators and 31 chief district administrators.

**D represents D statistic; s represents standard deviation for chief campus administrators; z represents z score; and 5% represents the level of significance.
TABLE C 10
COMPARISONS OF PERCEIVED AUTHORITY ON THE EVALUATIVE, POTENCY, AND ACTIVITY FACTORS OF CHIEF CAMPUS ADMINISTRATORS IN SYSTEMS WITH BETWEEN 2,500 AND 5,000 AVERAGE ENROLLMENT PER CAMPUS WITH CHIEF DISTRICT ADMINISTRATORS*

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*N equals 21 chief campus administrators and 31 chief district administrators.

**D represents $D$ statistic; $s$ represents standard deviation for chief campus administrators; $z$ represents $z$ score; and 5% represents the level of significance.
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*N equals 17 chief campus administrators and 31 chief district administrators.

**D represents D statistic; s represents standard deviation for chief campus administrators; z represents z score; and 5% represents the level of significance.
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*N equals 16 chief campus administrators and 31 chief district administrators.

**D represents D statistic; s represents standard deviation for chief campus administrators; z represents z score; and 5% represents the level of significance.
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*N equals 23 chief campus administrators and 31 chief district administrators.

**D represents D statistic; s represents standard deviation for chief campus administrators; z represents z score; and 5% represents the level of significance.
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<tr>
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<td>1.68</td>
<td>1.37</td>
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*N equals 23 chief campus administrators and 31 chief district administrators.

**D represents D statistic; s represents standard deviation for chief campus administrators; z represents z score; and 5% represents the level of significance.
TABLE C 15

COMPARISONS OF PERCEIVED AUTHORITY ON THE EVALUATIVE, POTENCY, AND ACTIVITY FACTORS OF CHIEF CAMPUS ADMINISTRATORS IN SYSTEMS THAT HAD TWO CAMPUSES INITIALLY IN 1965 WITH CHIEF DISTRICT ADMINISTRATORS*

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<td>1.53</td>
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</table>

*N equals 16 chief campus administrators and 31 chief district administrators.

**D represents D statistic; s represents standard deviation for chief campus administrators; z represents z score; and 5% represents the level of significance.
### TABLE C 16

COMPARISONS OF PERCEIVED AUTHORITY ON THE EVALUATIVE, POTENCY, AND ACTIVITY FACTORS OF CHIEF CAMPUS ADMINISTRATORS IN SYSTEMS THAT HAD TWO CAMPUSES INITIALLY IN 1966 WITH CHIEF DISTRICT ADMINISTRATORS*

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</table>

*N equals 12 chief campus administrators and 31 chief district administrators.

**D represents D statistic; s represents standard deviation for chief campus administrators; z represents z score; and 5% represents the level of significance.
TABLE C.17

COMPARISONS OF PERCEIVED AUTHORITY ON THE EVALUATIVE, POTENCY, AND ACTIVITY FACTORS OF CHIEF CAMPUS ADMINISTRATORS IN SYSTEMS THAT HAD TWO CAMPUSES INITIALLY IN 1967 WITH CHIEF DISTRICT ADMINISTRATORS*

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</tbody>
</table>

*N equals 12 chief campus administrators and 31 chief district administrators.

**D represents D statistic; s represents standard deviation for chief campus administrators; z represents z score; and 5% represents the level of significance.
**TABLE C 18**

COMPARISONS OF PERCEIVED AUTHORITY ON THE EVALUATIVE, POTENCY, AND ACTIVITY FACTORS OF CHIEF CAMPUS ADMINISTRATORS IN SYSTEMS THAT HAD TWO CAMPUSES INITIALLY IN 1968 WITH CHIEF DISTRICT ADMINISTRATORS*

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<td>1.82</td>
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</table>

*N equals 12 chief campus administrators and 31 chief district administrators.

**D represents D statistic; s represents standard deviation for chief campus administrators; z represents z score; and 5% represents the level of significance.
**TABLE C 19**

**COMPARISONS OF PERCEIVED AUTHORITY ON THE EVALUATIVE, POTENCY, AND ACTIVITY FACTORS OF CHIEF CAMPUS ADMINISTRATORS IN SYSTEMS THAT HAD TWO CAMPUSES INITIALLY AFTER 1968 WITH CHIEF DISTRICT ADMINISTRATORS**

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*N equals 12 chief campus administrators and 31 chief district administrators.

**D represents D statistic; s represents standard deviation for chief campus administrators; z represents z score; and 5% represents the level of significance.*
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*N equals 7 chief campus administrators and 31 chief district administrators.

**D represents D statistic; s represents standard deviation for chief campus administrators; z represents z score; and 5% represents the level of significance.
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*N equals 6 chief campus administrators and 31 chief district administrators.

**D represents D statistic; s represents standard deviation for chief campus administrators; z represents z score; and 5% represents the level of significance.
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*N equals 5 chief campus administrators and 31 chief district administrators.

**D represents D statistic; s represents standard deviation for chief campus administrators; z represents z score; and 5% represents the level of significance.*
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<td>0.54</td>
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*N equals 5 chief campus administrators and 31 chief district administrators.

**D represents D statistic; s represents standard deviation for chief campus administrators; z represents z score; and 5% represents the level of significance.
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<th>Functions</th>
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<th>Activity Factor</th>
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<td>1.85</td>
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</table>

*N equals 9 chief campus administrators and 31 chief district administrators.

**D represents D statistic; s represents standard deviation for chief campus administrators; z represents z score; and 5% represents the level of significance.
TABLE C 25

COMPARISONS OF PERCEIVED AUTHORITY ON THE EVALUATIVE, POTENCY, AND ACTIVITY FACTORS OF CHIEF CAMPUS ADMINISTRATORS WHO HAVE SERVED THREE YEARS IN THEIR CURRENT CAPACITY WITH CHIEF DISTRICT ADMINISTRATORS

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<td>1.81</td>
<td>1.73</td>
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*N equals 14 chief campus administrators and 31 chief district administrators.

**D represents D statistic; s represents standard deviation for chief campus administrators; z represents z score; and 5% represents the level of significance.
TABLE C 26

COMPARISONS OF PERCEIVED AUTHORITY ON THE EVALUATIVE, POTENCY, AND ACTIVITY FACTORS OF CHIEF CAMPUS ADMINISTRATORS WHO HAVE SERVED TWO YEARS IN THEIR CURRENT CAPACITY WITH CHIEF DISTRICT ADMINISTRATORS*

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<td>1.83</td>
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<tr>
<td>Overall</td>
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</table>

*N equals 24 chief campus administrators and 31 chief district administrators.

**D represents D statistic; s represents standard deviation for chief campus administrators; z represents z score; and 5% represents the level of significance.
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*N equals 18 chief campus administrators and 31 chief district administrators.

**D represents D statistic; s represents standard deviation for chief campus administrators; z represents z score; and 5% represents the level of significance."
APPENDIX D
### TABLE D.1
COMPOSITE MEAN RAW SCORES FOR CHIEF CAMPUS ADMINISTRATORS

<table>
<thead>
<tr>
<th>Functions</th>
<th>successful—unsuccessful</th>
<th>good—bad</th>
<th>clear—hazy</th>
<th>deep—shallow</th>
<th>large—small</th>
<th>strong—weak</th>
<th>active—passive</th>
<th>fast—slow</th>
<th>complex—simple</th>
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*s represents standard deviation.
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**Public Documents**


**Unpublished Materials**


Dean Paul VanTrease was born on September 5, 1938, in Lewiston, Idaho. He graduated from Clarkston High School in Clarkston, Washington, in 1956. He received his B. A. and M. B. A. from the University of Washington in 1961 and 1962 respectively. He moved to Moses Lake, Washington, where he worked for the Moses Lake School District and later Big Bend Community College as assistant business manager, business manager, and instructor in business. In 1966 he and his wife, Vesta, moved to Dallas, Texas, where he worked as instructor in economics and business, division chairman, and assistant dean of instruction at El Centro College. Before he moved to Tulsa, Oklahoma, to serve as executive vice president for the new Tulsa Junior College system, he served briefly as dean of instruction at Eastfield College in Dallas. He is currently serving as president of the Oklahoma Junior College Instructional Administrators Association as well as holding several professional memberships. He is also enjoying being Philip and Gayle's father.

In 1966 he began the doctoral program at North Texas State University in business administration. His major area of study is management with minors in economics, higher education administration, and marketing.