TOWARD A CARNEGIE-STYLE CLASSIFICATION SYSTEM FOR PUBLICLY CONTROLLED COMMUNITY COLLEGES

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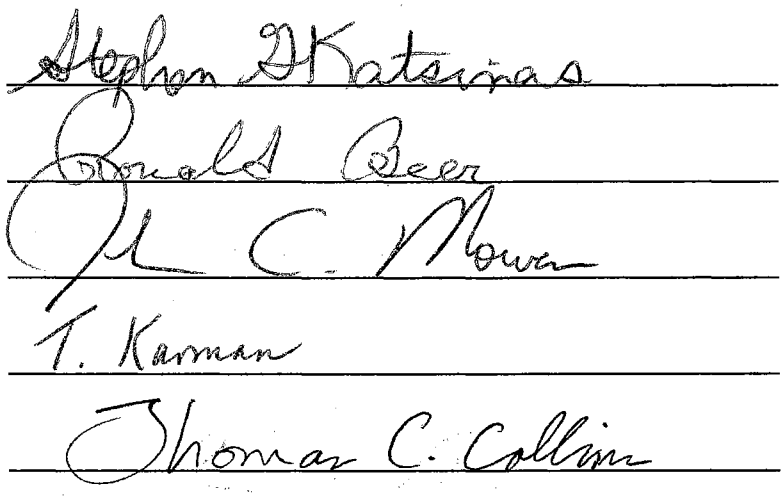

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CHAPTER I

INTRODUCTION

The Carnegie Foundation for the Advancement of Teaching's classification system of institutions of higher education is the most widely accepted method of categorizing colleges and universities. Used extensively by researchers and policy makers, Carnegie's classifications have helped Americans to conceptualize the rich diversity of institutions by specific type. As such, the Carnegie classifications have played an important role in the development of the literature of higher education. For example, thousands of dissertations and studies use this taxonomy each year.

Community colleges represent the largest single institutional classification within the Carnegie listing, yet there currently exists no sub-category to further define and classify characteristics associated with these institutions. This has inhibited the general understanding of the diversity among and between community colleges. On its face, it does not seem logical to compare an institution like Miami-Dade Community College, a community college that

served in 1990 over 130,000 people on five campuses and four outreach centers, with Northern Oklahoma College, a small rural institution with an enrollment of a little over 1,000 full-time equivalent (FTE) students. Northern Oklahoma College does not possess large programs in English as a Second Language like Miami-Dade and many other urban institutions, yet the landscape of community colleges advanced by the Carnegie Foundation for the Advancement of Teaching would assume that these two institutions possess the same exact missions and functions.

Just as the Carnegie classifications have helped our general understanding of four-year institutions, the phenomenon of lumping all 1,300 two-year institutions together has inhibited our understanding of what we know about community colleges. A good deal of the in-depth research conducted on the subject of community colleges is performed by doctoral students engaged in dissertation research. Between 1985 and 1992, 2,436 published doctoral dissertations could be accessed in the *Dissertation Abstracts International* data base using the keywords, "community colleges." This research addressed critical issues such as missions, functions, curricula, students, and faculty; yet no distinctions were made to confront the diversity which exists in these colleges. Given the incremental way we add to our general knowledge base of higher education, the lack of a generally accepted classification scheme for two-year institutions has significantly inhibited our understanding of what these

institutions do and the practical dissemination of effective practice.

In 1920, the United States government, through the Higher Education General Information System (HEGIS), began compiling data on institutions for higher education (N. Shantz personal communications, October, 1994). This data was collected nationally for the United States government and was later made available to the United States public for the purpose of private research. For research purposes, no real distinctions were made for two-year institutions other than by control (public, private non-profit and for profit).

In that same year, the first meeting of the American Association of Junior Colleges (AAJC), the forerunner of today's American Association of Community Colleges (AACC), occurred. The AAJC was founded to assist junior colleges to provide a forum for issues that cut across institutions in the various states, as well as to provide a vehicle for representation in Washington, D.C.. The organization evolved and now hosts the largest annual convention in the United States for of higher education, providing professional development opportunities specifically oriented to two-year institutional faculty and staff.

The American Association of Community Colleges had a membership of 1,050 institutions as of October, 1994 (M. Rivera personal communication, October, 1994). Institutions that choose to join AACC pay their dues according to a sliding scale formula that uses full-time equivalent enrollment plus part-time student enrollment. As a

membership organization, the AACC has therefore categorized its institutions on the basis of the fee structure. This categorization will be presented in detail in Chapter II, along with an in-depth analysis of the Carnegie classifications. However, the AACC was unable to tell this researcher how many institutions fit within each membership category; thus its own membership-based classifications are of little use to the public policy and research communities.

The existence of AACC has provided community college practitioners the opportunity to meet and share valuable information on effective programs and services for community colleges. The organization acknowledges nineteen affiliated councils, mostly organized along the lines of functional responsibilities within the institution (i.e., councils for chief student affairs officers, chief financial officers, chief institutional officers, resource development specialists, etc.). These councils include formal associations such as the National Institute for Staff and Organizational Development (NISOD). The AACC Board of Directors renews the affiliation of these councils every three years. Status as an affiliated council allows that council to have meetings coinciding with the AACC Convention. However, despite a plethora of practitioner-based councils, the AACC does not promote institutional affiliation as such, making it difficult to have consistency needed for research and longitudinal studies.

The AACC classification system was developed as a simple method for collecting dues. In this system, the

community colleges identify themselves based only on their perception as Urban, Suburban, or Rural; yet in the AACC directory the institutions are organized by type of control rather than geographic location. This system is of little value to researchers or funding agencies.

In general, the Carnegie classification system has been a significant contribution to the development of the literature of higher education. The Carnegie classifications group institutions into the following sub-categories: Research Universities, Doctoral-Granting Universities, Comprehensive/Master's Degree Granting Universities and Colleges, Baccalaureate/Liberal Arts Colleges, Two-Year Institutions, and Specialized/Professional Institutions. Other smaller categories have come and gone since initial publication in 1973; however, these categories have remained constant.

The Carnegie classifications were initially developed by Clark Kerr, who chaired the Carnegie Commission on Higher Education (1968-1975) and its successor, the Carnegie Council for Policy Studies in Higher Education from 1975 to 1980. Over the seven years of its life, the Carnegie Commission produced more than 80 sponsored research projects and 21 policy reports, including books, monographs, and technical reports on a variety of aspects related to U.S. higher education (Carnegie Commission on Higher Education, 1975). To this day, the Carnegie Commission on Higher Education represents the most comprehensive series of reports ever developed on American higher education.

Of the many reports dealing with a variety of aspects of United States higher education, there was only one study in the Carnegie series that dealt specifically with community colleges. That commissioned study, written in 1971 by Leland Medsker and Dale Tillery, projected that two-year college enrollments by 1980 would be between 3.0 and 4.4 million students (Medsker and Tillery, 1971). By 1980, this figure was in fact 4.8 million students, well above the predicted number. More than five million students enrolled at two-year institutions in the fall of 1992, and approximately 7 million students were projected to enroll at the community college in 1995 (personal interview with Margaret Rivera, 1995).

Certainly, for a greater number of Americans the community colleges will be their first experience in higher education. Yet for those who desire to direct their research to aspects related to community colleges, clearly there is a loss of precision when the Carnegie classifications are applied.

Two basic criticisms have emerged from this "lumping" of community colleges into one large category. The first is that the Carnegie classifications miss important types of two-year institutions completely. Does it make sense to compare the vast Dallas County Community College District (TX) with Carl Albert State College, in the rural community of Poteau, Oklahoma? The second criticism centers on the undercounted or miscounted. The four-year institutions are well defined and represented within the Carnegie categories,

yet community colleges, who are thought of by many research university faculty as less desirable, are not adequately represented. With only a single classification type for two-year institutions, it could be logically inferred that there is but a single function for the nation's 1,200 community colleges. This clearly is not the case.

Statement of the Problem

The public policy community--including state higher education agency officials private funders, and university based researchers and concerned individuals--have a very inadequate taxonomy by which to understand community colleges. The classifications developed and periodically updated by the Carnegie Foundation for the Advancement of Teaching are surprisingly inadequate for the two-year colleges. Unfortunately, the AACC classifications are too inexact and undocumented to assist in meaningful research or policy issues.

Thus, there is no generally accepted classification system of publicly controlled community colleges by which practitioners at the institutions themselves, as well as public policy makers and researchers, can readily identify the type of institutions they can compare themselves to. A classification system would be very useful to researchers and the policy making community, including the various foundations that support education, as well as public entities including but not limited to the United States

Department of Education and the higher education coordinating agencies of the various states. It would also be useful for community college practitioners themselves to facilitate the sharing of good practice at like institutions.

As the debate on the social function of the community college sharpens, such a classification system would be extremely useful--for example, how best to integrate the nation's largest delivery system of formal education to adults--the community colleges, with the development of new work force development initiatives, GED training for all who desire it, and the development of European-style apprenticeship programs as proposed by the Clinton Administration would be most advanced and better understood. However, like their predecessors, these policy makers are inhibited in part due to the diversity among and between two-year colleges and the general lack of understanding regarding their missions, functions, and funding.

Perhaps most important, at the institutional level, the community college practitioners themselves need measurement tools by which to evaluate, discuss, compare, and improve institutional practice in a number of areas. An authentic, meaningful set of institutional comparisons is needed if practitioners are to address basic concerns such as improving student financial aid delivery for a specific type of institution dealing with a specific type of population. No set of institutions deals on a daily basis with a more diverse set of students than do America's publicly

controlled community colleges.

Practitioners need comparable institutional data to compare peer institutions to peer institutions; for example, salaries: what is the average salary of chief academic officers for specific types of community colleges? It makes no sense to compare the multi-campus City of Chicago Colleges' chief academic officer to that of Independence Community College in rural Kansas. How do average FTE per student instructional expenditures compare to similar urban institutions with similar socioeconomic student clientele? The distinguished community college researcher Arthur M. Cohen reported in a presentation of his work with the Transfer Assembly that "community colleges that were good at transfer were good at transfer," which meant it did not matter if the community college was in a rural, suburban, or urban area: the key was whether the institution was organized to positively promote transfer. If we assume Cohen is right, without a good taxonomy, there is no basis to understand why what works at one institution works at another of similar type. The challenge to share practical program data that promotes student success is made infinitely more difficult by the lack of existence of comparable peer data.

The lack of good comparable, easily accessible institutional data has led to some of the worst criticisms in any sector of what is widely regarded to be the most successful mass system of higher education on the planet. Are community colleges all things to all people at all

times? Probably not, but without a taxonomy, there is no basis not to compare East Los Angeles Community College with its large English as a Second Language Programs with Hazard Community College in rural Appalachia.

In an environment beset with institutional assessment and accountability, practitioners would likely welcome a useable set of institutional classifications. Clearly, there is obviously no single type of community college, and there is a high degree of variability among state assigned missions and functions across the states.
And with the institutional outcomes assessment/K-12 accountability movement building strength at the community college level, these institutions are particularly vulnerable in the current institutional architecture.

The United States Department of Education for many decades has collected information on two-year institutions. The Department defines two-year programs to mean *any and all* two- and four-year colleges and universities that might offer a program that terminates with an associate's degree (Integrated Postsecondary Education Data System Directory, 1995). This is distinguished from the information distributed by AACC, which includes only those two-year associate degree granting institutions that have been accredited by one of the six regional accrediting bodies and the Carnegie classifications. The Carnegie classifications, while complex and descriptive of the architecture of four-year institutions, are quite inadequate in describing two-year institutions.

Purpose of the Study

The purpose of this study was to improve the precision of community college research by advancing efforts to develop an authentic, meaningful, readily useable classification system of community colleges. This will be accomplished by examining the identifiable general types of community college sub-categories proposed by Stephen G. Katsinas which cluster community colleges by geography, governance, size of institution and comprehensive curriculum. This study will also propose a method to sub-categorize rural institutions by degrees awarded.

In 1993, Katsinas received a grant from the Ford Foundation to support research that might lead to a classification system for community colleges. Katsinas' work was presented to the 1993 and 1994 meetings of the Council of Universities and Colleges, the nation's most significant annual meeting of individuals involved in research related to community colleges. It was also presented to the Annual Convention of the American Association of Community Colleges in 1993, in a session comprised mostly of practitioners. This study will attempt to validate the general urban and suburban classifications developed by Katsinas and actually to propose authentic classifications for publicly controlled rural community colleges.

The specific objective of this study was to test criteria of widely known institutional characteristics

(e.g., degrees completed, enrollment, and institutional budget) that would be relatively easy for practitioners in the field, as well as public policy makers, and higher education coordinating agencies to obtain, to assist institutions in the self-identification the college's institutional classification. The idea was to verify Katsinas' classifications of urban and suburban while also, choosing a criterion for the rural institutions that could easily be discerned by the wider campus community.

This study, therefore, builds upon the earlier work of the Carnegie Foundation, Katsinas, and others to identify groups of community colleges with like characteristics to appropriately categorize them to improve the precision of community college research. This study was designed to provide answers to the following research questions:

1. Are there significant differences among and between community colleges on the basis of geography, along the lines of rural, suburban, and urban, as proposed by Katsinas?

2. Are there significant differences among and between community colleges on the basis of governance along the lines of multi-campus and single campus suburban and urban community colleges, as proposed by Katsinas?

3. There are significant differences based upon key institutional characteristics within the rural sub-

classifications, as proposed by Katsinas?

4. Can the two-year branch campuses of four-year colleges that award associate degrees be meaningfully incorporated into such a classification scheme?

Significance of the Study

The need for accountability to the public it serves, new standards of accreditation, and the student outcomes assessment movement have increased the need for the development of a classification scheme for the community colleges that compares peer institutions to one another. Since the American system of higher education is far and away the world's largest and most diverse, comparative analysis is often difficult. This study attempts to provide a practical application tool for those involved in all aspects of research related to the two-year college.

This study specifically attempts to validate the initial classifications developed by Katsinas and others, with the objective of proposing a Carnegie-style classification scheme for public community colleges. It specifically attempts to develop homogeneous subsets of institutions that can be identified for a variety of institutional, policy, and research purposes. Do community colleges vary by geography, governance, and size? A number of states have developed sets of peer institutions. Oklahoma's coordinating board, the Oklahoma State Regents

for Higher Education, has recently developed peer groups for its rural community colleges.

A generally accepted classification system for community colleges might make it possible to detect relationships between higher education institutional characteristics and student characteristics. A meaningful, universally accepted classification system for two-year institutions would also legitimize and enhance the value of all published statistics that can be used by researchers to develop highly effective sampling designs and to initiate generalized sampling variances. For example, in the early 1990s, the Carnegie Foundation for the Advancement of Teaching surveyed some 80,000 faculty in the United States as to their satisfaction in their jobs and careers. Are some types of community college faculty more satisfied than others? There are significant research and public policy implications in such a classification system.

It is now more important than ever for the two-year colleges to become involved in government policy at the formation stage in both the federal and state capitals. It is essential on these issues that two-year colleges have a "voice on Capitol Hill," according to AACC officials interviewed for this study (personal interview with Margaret Rivera, 1994). Many issues that do not affect four-year institutions greatly affect two-year schools, for example the issue of "ability to benefit" from postsecondary education for student eligibility in the Pell Grant program, pr attempt to accredit vocational programs at community

colleges in the Department of Labor as opposed to the Department of Education. The implications for changes in urban community colleges that serve large numbers of students with limited English proficiency in this policy are significant.

For the American Association of Community Colleges to play an effective advocacy role, precise research is needed. The United States Departments of Education and Labor would surely benefit from more accurate information concerning the missions and accomplishments of two-year colleges when assessing the effectiveness of programs such as Perkins vocational education grants or the School-to-Work institutions. It is simpler to understand the complexities of higher education when accurately differentiating between diversified institutions. In practice, a meaningful classification system would provide the opportunity to compare like institutions with each other, thus avoiding inaccurate conclusions concerning faculty, administration, and organizations that result from lumping large urban community colleges like the Houston Community College District and Seminole Junior College, a rural institution in Oklahoma. Certainly, the landscape of two-year colleges is richer and more diverse than the Carnegie classifications show.

Definition of Terms

For the purpose of this study, the following definitions

were used:

Classification: Arranging persons or things by groups by reason of common attributes, characteristics, qualities or traits; sort (*Webster's Dictionary*, 1984).

Integrated Postsecondary Education Data System (IPEDS) Survey: A survey sent out each year by the National Center for Education Statistics of the United States Department of Education to collect data to update several annual publications as well as to monitor changes in postsecondary education in the nation and to promote research.

Branch Campus: A campus or site of an educational institution that is not temporary, is located in a community beyond a reasonable commuting distance from its parent institution, and offers organized programs of study, not just courses (IPEDS, 1994).

Assumptions and Limitations of the Study

It was assumed in this study that researchers in the private and public sectors could benefit from defining and classifying community colleges and that this would in turn benefit the community colleges themselves. An assumption was made that the United States Department of Education's Integrated Postsecondary Education Data Survey (IPEDS) questionnaire, administered by the National Center for Education Statistics, was adequate for the purpose of this

study. It was also assumed that the colleges answered with a clear understanding of what the IPEDS questions required and that these questions were answered as accurately as possible. It was assumed that IPEDS data would be readily accessible, and with a reasonable effort on the part of this researcher, could be manipulated and then analyzed to accomplish the proposes of this study.

The study was limited to the scope of the inquiry of the research questions outlined in the statement of the problem. A key limitation of the study was related to the final assumption listed above and that all of the colleges answered every question in the IPEDS survey, which meant that some institutions--many institutions in some cases--would have to be excluded from a specific data run that would attempt to flush out certain issues. An additional limitation was the inability to resurvey the non-responding institutions with the IPEDS tool. The practical implication of this limitation of using IPEDS data encountered by the researcher will be discussed in detail in Chapter III, below.

The study also excluded private junior colleges and proprietary institutions which were not included in Katsinas's original study for the purpose of classifications. Also, due to the fact that this study built on the work of Katsinas, it was assumed that no human errors were made by Katsinas and his associates when analyzing United States Census data, Zip Code Directories, and multi-campus status using AACC Annual Directories. Due

to the fact that the AACC uses self-identification for membership, it was also assumed that no errors were made in the AACC directory used by Katsinas. Thus, the study is limited to an analysis of IPEDS data for public community colleges.

In the following chapters, the researcher will attempt to adequately identify and classify two-year institutions. The study will begin with an review of the literature on community colleges from their conception until today, highlighting those areas that will be focused upon in the methodology. The data will be described in detail and presented to the reader so that final conclusions can be clearly drawn and the possibility of further research can be realized.

CHAPTER II

REVIEW OF SELECT LITERATURE

In performing this review of select literature, several related areas emerged that are relevant to the classification of colleges generally, and to community colleges specifically. This chapter is subdivided into six sections which reflect the major issues encountered: (1) Introduction: 1892 to World War II; (2) The Founding Period Following World War II; (3) The Carnegie Classification System; (4) Other Attempts at Developing Classifications; (5) Katsinas' Attempt at Classifying Community Colleges; and (6) Summary.

Introduction: 1892 to World War II

The community college, as with the college movement itself, grew out of the Americans' insatiable need for expansion of knowledge beyond that of the traditional high schools. Community college historians disagree regarding when the first junior college was established. It is generally accepted, however, that the first public *junior* college was proposed in October of 1892 by William Rainey

Harper. As the founding President of the University of Chicago, Harper included the junior college as part of his new suggested model for the American university. Harper's model divided the traditional four-year undergraduate baccalaureate degree education into two equal parts. The first of these parts, to be known as *the junior college*, would carry the spirit of the collegiate atmosphere and provide preparatory education. The second, the senior college or university, would carry a more advanced and scholarly spirit where one subject could be studied in depth and include graduate education. In this way, the role of the new junior college was to sift and sort, thus preserving and protecting the higher function of the upper division and graduate level programs (Rudolph, 1962).

The first two-year colleges were established around the turn of the century and were privately supported and operated. By 1900, there were about eight junior colleges, all privately owned with an enrollment of about 100 students each. There was little research on the subject performed at this time, and most colleges worked independently of each other (Rudolph, 1962).

The first *public* junior college was established in 1901 at Joliet, Illinois, founded when President Harper and the Superintendent of the Joliet Public Schools organized Joliet Junior College. By 1930, there were more than 400 public colleges (American Association of Junior Colleges, 1967). The first two decades saw a growing interest for sharing information about these types of institutions, which

culminated in the founding in 1920 of the American Association of Junior Colleges. The Association's mission was described at the time as promoting the sound growth of America's community and junior colleges (American Association of Junior Colleges, 1920). Promoting growth has since led to a need for research concerning educational needs.

By the mid-1920's, enrollments at American institutions of higher education had increased four to seven times faster than had the general population (Bartlett, 1926). This era of expansion led to a re-naming of many institutions from colleges to universities, to account for their expanded missions. In fact, many two-year colleges at the time were founded by individuals who expected their institutional missions to grow into baccalaureate and even graduate education status. For example, Wayne State University in Detroit, Michigan was started as a junior college in the 1930s, as was Cameron State University in Lawton, Oklahoma.

In these early days, quality varied greatly. Some institutions that called themselves colleges were more like academies. In the State of Oklahoma, for example, there were 33 municipal junior colleges operating during the pre-Depression 1930s (Nutter, 1974). Regionally, the junior colleges developed in response to local or community influences and varied greatly in their relationships to secondary schools and to colleges and universities. This led to continued diversity in purpose and organization and made the task of classifying and defining them difficult

(Thorton, 1960).

New technologies brought increased need for the colleges to provide a technically trained work force, and the American population itself would rely on education as an instrument for mobility (Rudolph, 1962). In the midwest and far western United States, where private institutions were few and state funds limited, the response to this call for higher education led to the less expensive (and often municipally funded) and more convenient junior college alternatives to the great university (Eells, 1931). At this time, the junior college became a convenient agency for meeting the needs of the "non-academically minded high-school graduate" (Snyder, 1930). As the need for postsecondary education grew in all aspects of life, so did the need for specialized missions at colleges and universities. Over time, a hierarchy of institutions from research universities to community colleges and technical institutions emerged. Today, the community colleges, many of whom are vast in size and administrative complexity, challenge the traditional liberal arts colleges in answering an ever-increasing and undiminished need for the collegiate experience for a greater number of Americans each year. Community colleges are also building meaningful partnerships with businesses to provide a well-trained, intelligent work force.

A study of the major significant writings dealing with criteria for establishing two-year colleges in the past was made to identify and examine criteria for classifying

Community Colleges and to learn how the initial promoters of Community Colleges considered the subject for possible inclusion in the study. A 1929 study summarized the results of a questionnaire completed by 266 high school administrators for the North Central Association of Schools and Colleges. Presenting criteria which could serve as a basis for determining the feasibility of organizing the two-year college of that day:

1. Minimum enrollment of 150 students for a public junior college.
2. High school enrollment of at least 900 to provide the minimum junior college enrollment.
3. City population of 17,000 for a city considering establishing a junior college.
4. Per student cost of approximately $400.
5. A level of approximately 50 percent of cost, or at least $30,000 borne by the district.
6. A 2-mill levy on taxable property valuation of $15,000,000.
7. An assessed valuation of at least $30,000,000 if local district is to provide the total cost of operation. (Holy, 1929)

In a 1936 by Stuart Allen, a revision was made listing four main criteria to be considered with several subtopics. These criteria began to create a general theme regarding the necessary conditions for the creation and effective establishment of the junior college. The 1936 study can be summarized as follows:

1. Community ability to support a public junior college as indicated by sufficient taxable wealth to raise 50 percent of total costs (estimated by $350 per student).

2. Community need for a public junior college as indicated by 1,000 in average daily attendance in the high schools of the community.

3. Approval by State authority, acting on the basis of a survey by the State Department of Education. (Allen, 1936)

The 1936 study also addressed the failure of community colleges to survive. Stuart found that many were closed during the Great Depression and that a high correlation between institutional failure and the suggested minimum enrollment criteria existed.

Between 1905 and 1967, American higher education was gradually transformed from a privilege of the elite to a right of all Americans. At the turn of the century, only four percent of American youths pursued higher education, yet seventy years later that number had increased by forty percent (Lagemann, 1993). This great increase in enrollment was due in large measure to the increase in opportunities provided by two-year institutions that many states had organized as the first rung of their publicly supported post-secondary education systems. Many states in the late 1950s and early 1960s developed systems similar to the California Master Plan, with research assigned to the University of California, which awarded doctoral degrees; master's level and baccalaureate study assigned to the California State University system and the foundation of open access through the California Community College System. By the 1950's and 1960's, two-year colleges had become the fastest growing segment of the higher education population (Lagemann, 1993). Enrollments increased at two-year

colleges by 180 percent from 1966 to 1977, and again by 19 percent from 1976 to 1987 (El-Khawas, Carter, and Ottinger, 1988). This trend of community college growth has continued unabated into the 1990s.

The Founding Period Following World War II

President Harry S Truman was very interested in extending the right of all Americans to a higher education, as evidenced by his strong support for extending educational benefits to veterans through the G.I. Bill. In 1947, Truman appointed the Commission of Higher Education (commonly known as the Truman Commission), which concluded that education was "an American birthright" and recommended fourteen years of free schooling (Zook, 1947). Truman appointed his old friend, George F. Zook, the co-organizer of the founding conference of the American Association of Junior Colleges, now known as the American Association of Community Colleges (AACC), to chair the commission. Zook had written widely on the junior college and addressed looking at the junior college from the perspective of four-year colleges and universities (Brint & Karabel, 1989). Critics of vocational programs at community colleges, such as Brint and Karabel, would describe Zook as holding a conservative view of the mission of the junior college, seeing them primarily as transfer vehicles. Yet, by any account, the final report of the Truman Commission, *Higher Education in American*

Democracy, was a remarkably liberal document recommending federal aid, lower tuition and free education through the first two years of college, and improvement in high school and college curricula. Truman and his commission can be credited with beginning an effort to pass a federal aid-to-education bill, and also with the first reported usage of the term "community college" (*Encyclopedia of the American Presidency*, 1994).

Prior to this time, a junior college typically meant the existence of general education/liberal arts transfer-oriented programs, along the lines of the University of Chicago model. Gradually, the two-year institutions assumed vocational functions along the lines of the German *gymnasium*, and vocational programs grew in size and scope (Martorana & Morrison, 1961). The gradual use of the phrase "community college" indicated the greater diversity in mission beyond only liberal arts general education. It also indicates that as an institution, a community college is to be responsive to its community, which is generally assigned by the state to mean a set, defined geographic area or locality (Martorana & Morrison, 1961).

In 1947, the American Association of Junior Colleges drew up principles to govern and establish a two-year college. These included the following:

1. A minimum secondary school enrollment of 1,000.
2. Assurance of an enrollment of at least 200 students.
3. A taxable assessed valuation sufficient to provide the needed capital outlay.

4. Financial support level from local, state, or both.

5. A vote of confidence from the community which supports the college. (Bogue, 1950).

This minimum enrollment requirement was supported in a 1953 study by August Eberle and again in a 1957 study by Jack Rodgers for the Phi Delta Kappan, which stated that college success was highly correlated to high school enrollment and community support surrounding the proposed college.

By 1965, the Johnson Administration proposed and the 89th Congress passed the landmark Higher Education Act, which included the first federal student financial grant aid program for non-veterans. Prior to that time, some two dozen similar bills had been introduced to various Congresses (*Encyclopedia of the American Presidency*, 1994). The Truman Commission's efforts spawned national interest in expansion of the present system of higher education and subsequent further research in higher education, specifically that dealing with two-year institutions. For this reason, Harry S Truman is widely considered to be the "father" of the open-access community colleges we commonly know today. The AACC in 1984 named a major lecture at its annual convention "The Harry S Truman Distinguished Lecture" in honor of his contributions.

In 1970, the Carnegie Commission on Policy Studies in Higher Education published a list of criteria it suggested for policy and establishment of the community college,

recommending 2,000 to 5,000 students for minimum enrollment for a *comprehensive* two-year college to properly service the community. This study also recommended that financing should be increased and equitably shared by federal, state, and local governments and suggested that community services be included as part of the criteria (Carnegie Commission, 1970). Table I "Criterion for Creation of the Community College", summarizes the criterion that was historically significant in the success of the community college.

Table I
Criterion for Creation of the Community College

Criterion	1929	1936	1947	1970
Enrollment	150		200	
High School Population	900	1,000	1,000	2,000-5,000
City Population	17,000			
Cost to the District	50%	50%		
Primary Financial Support	District	State	State Local	Federal State Local
Student costs	$400.	$350.		

Since the 1970's, postsecondary educational institutions have undergone a profound organizational change. Many campuses have merged into a system so that campuses could collectively create a strong financial and

enrollment base. Beginning in 1971, researchers began to analyze issues facing leaders and faculty in multi-campus structures. This directed national attention to multi-campus systems as a distinct unit of analysis. The topology of development is vast. In 1982, Berdahl and Grove studied twenty states that had a single multi-campus system board called a "governing" board that exercised jurisdiction over at least all public institutions. This board assumed the powers of the single campus board over fiscal affairs, program review, and policy development (Berdahl & Grove, 1982). Lee and Bowen found that multi-campus institutions were "segmental" campuses or "college" campuses or "comprehensive" campuses (made up of university and colleges campuses (Lee & Bowen, 1971). Lee and Bowen also found that the types of campuses within a system often related to the type of administrative structure for the entire system.

Creswell, Roskins, and Henry referred to the two most basic organizational structures as the heterogeneous system and the homogeneous system. The heterogeneous group had autonomy at each individual campus, and the homogenous group had centralized control at the state level (Creswell, Roskins & Henry 1985). Cohen and Brawer discuss the types of community colleges specifically and found three common structures for community colleges. The first, the multi-unit independent district system, is not new, dating back to the 1930's (Lee & Bowen, 1971). Figure 1, "Organization Chart for a Multi-college District" on page 33, illustrates this form of governance. This structure allows for

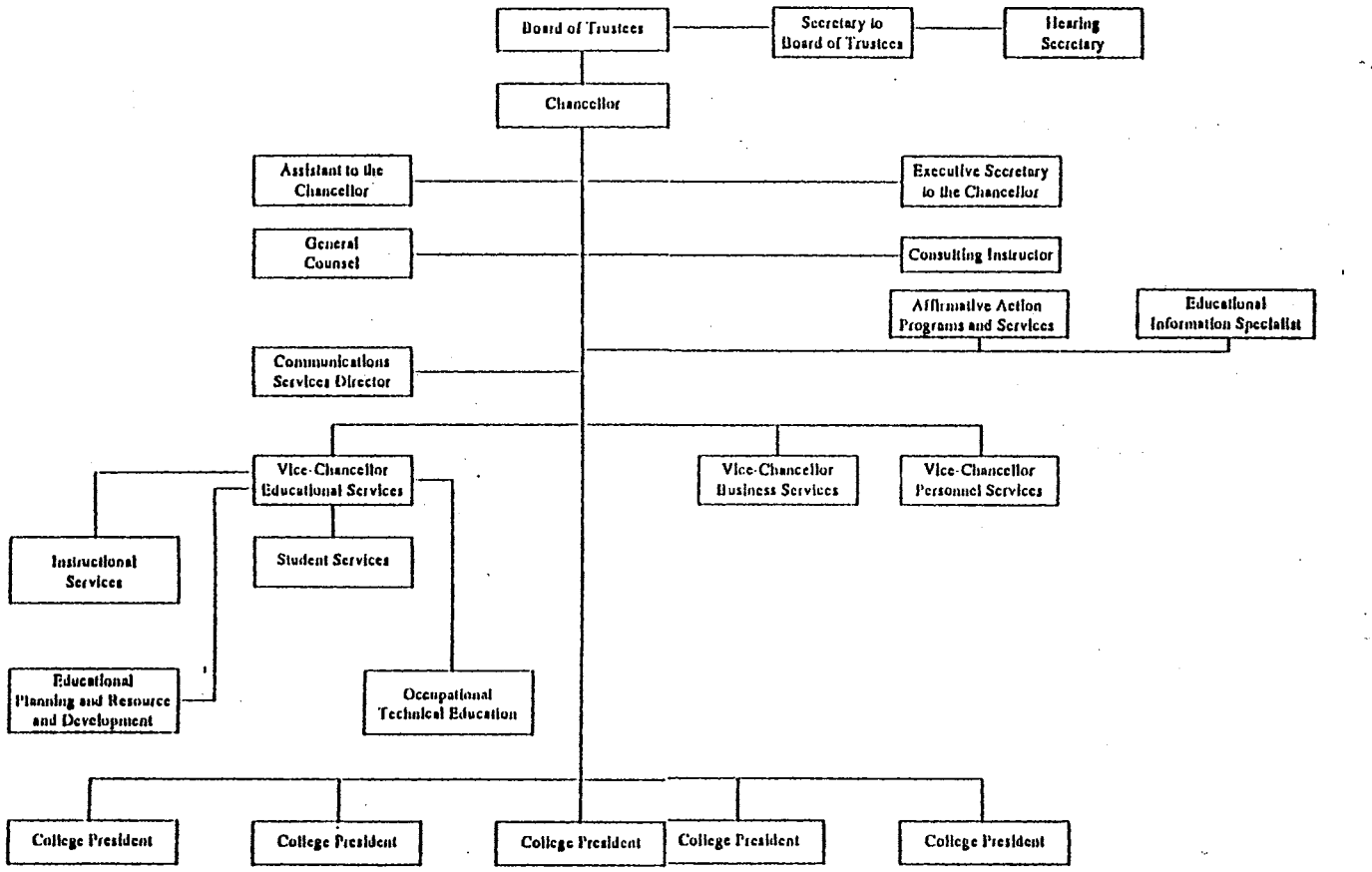

Figure 1. Organization Chart for a Multi-Campus District

Source: The American Community College, Cohen & Brawer, 1991

centralization of purchasing, data processing, facilities planning, personnel research, finance, physical plant, and contracting. This also allows for centralized collective bargaining and formation of advisory committees for vocational programs. In this structure, the decision making occurs mainly at the district level (Cohen & Brawer, 1991).

The second most common structure for multi-campus colleges is illustrated in Figure 2, "Organization of a State Community College System," on page 34. This trend for state control was accelerated with the federal Higher Education Act Amendments of 1972, which led to the creation of coordinating commissions for higher education at the state level (Cohen & Brawer, 1991). This organization maximized the decision making for funding and operation and allowed for statewide bargaining and budgeting. A variation on this theme is shown in Figure 3, "Organization of a University-Controlled Community College System," on page 35. Here the community college is under the state control of a state university. The community college presidents answer to the university executives rather than a state coordinating board. An example of this system can be found in Kentucky, where the 17 community college presidents report to an individual with the title Vice President of the University of Kentucky Community College System. In theory, this organization is beneficial because the state community college board can exert influence on the legislature, compete with the university for funding, and ensure quality of education and equal treatment of faculty as well as

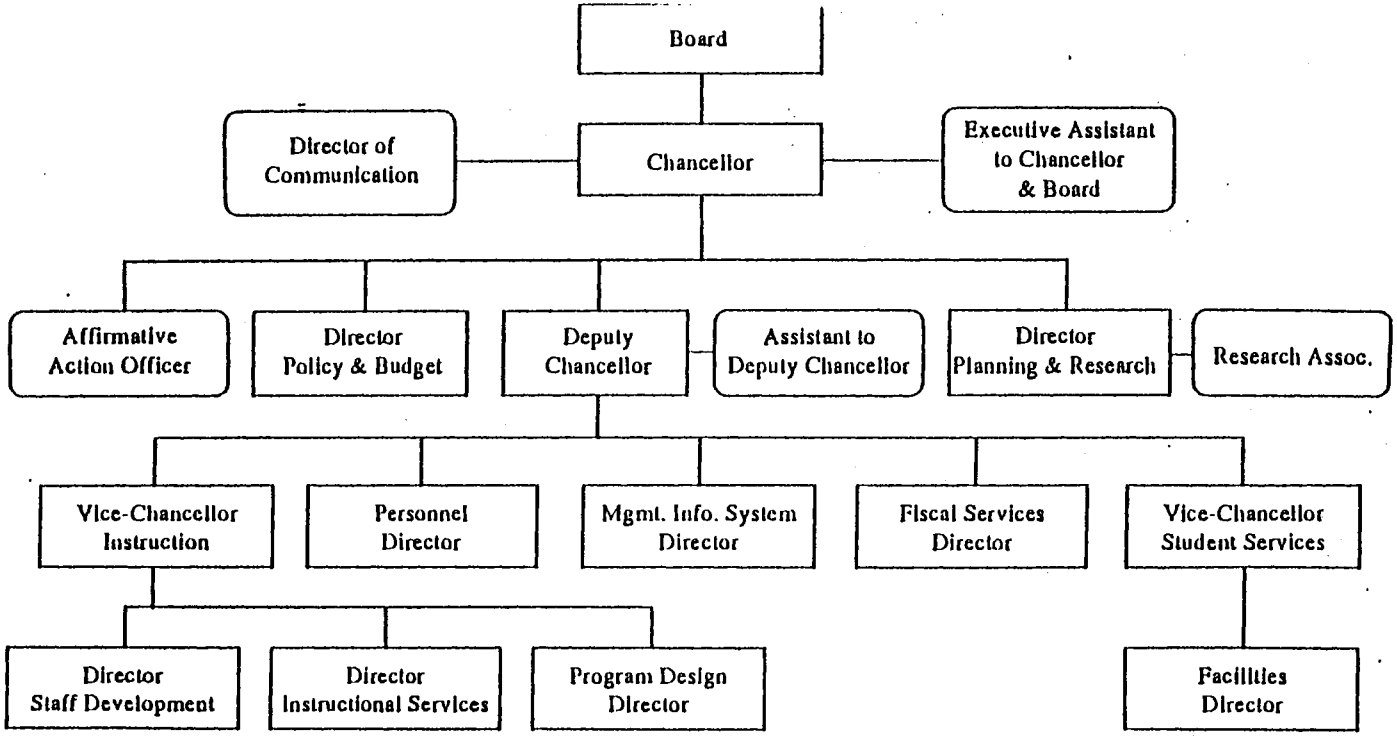

Figure 2. Organization of a State Community College System

Source: The American Community College, Cohen & Brawer, 1991

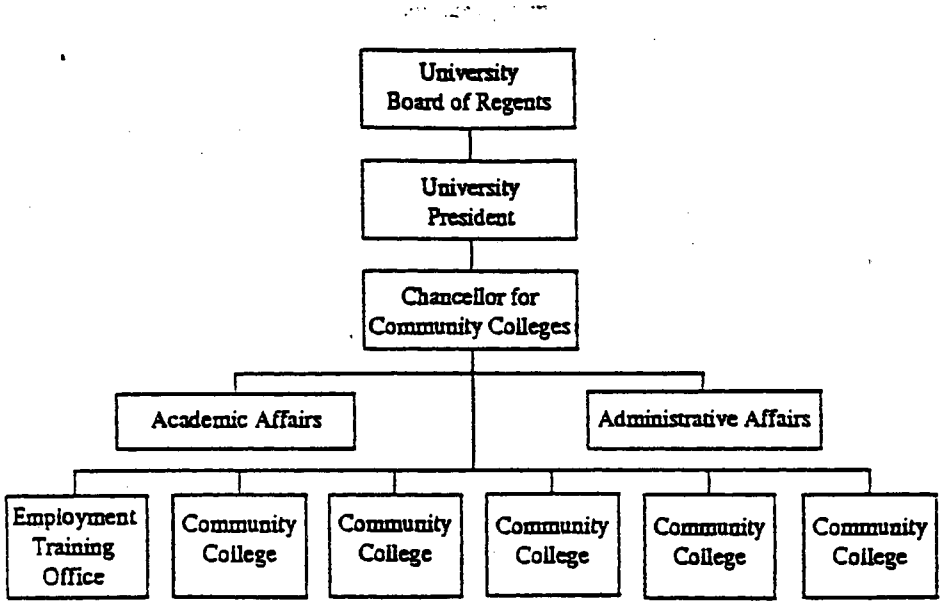

Figure 3. Organization of a University Controlled Community College System

Source: The American Community College, Cohen & Brawer, 1991

coordinating statewide multi-campus district (Cohen & Brawer, 1982). Competition, however, is the problem with this plan. Kintzer studied the power struggles of collective bargaining and pressures for budget and personnel accountability when this structure is in use and found that the competition among colleges was counter productive (Kintzer, 1980).

In the quarter of a century following World War II, with the growth of the U.S. population and the approach by the so-called "baby boom" of their traditional college attending years (18-24), interest in the community college as a low-cost vehicle to reduce access pressures grew. During the early part of the 20th century, the suburban areas surrounding the large cities were considered "bedroom" communities. Individuals and families living in these areas typically worked in the central city and did not depend on their suburban communities for social and educational support.

In recent years, however, the suburbs have changed. New cities have sprung up in suburbia that have attracted high-tech laboratories and industrial parks, huge shopping malls, gourmet restaurants, and firm headquarters. According to the United States Census data from 1990, nearly half of America's population now lives in suburbia compared to the 23 percent recorded in 1950 (Norris, Delaney, & Billingsly, 1990). In the new information-age economy, workers no longer travel to the central city for employment. This independence of suburban communities has challenged

existing political arrangements and has produced new challenges for higher education. Since no one institution may be able to serve the full range of needs in these communities, it has become necessary for suburban community colleges in particular to be linked with established universities of the older central cities.

The rapidly changing population mix has fostered new models for cooperative metropolitan education. One of the most important of these is the Branch Campus. In 1970, the Federation of Regional Accrediting Commissions of Higher Education (FRACHE), the umbrella group for all regional and professional accreditation in the United States at the time, began to promulgate standards of accreditation for these Branch Campuses. These standards gave the parent institution much latitude when defining the branch site (Caldwell & Cote, 1993).

Today, each of the six regional accrediting boards (North Central Associations of Colleges and Schools, Southern, Middle States, New England, Western, and Atlantic Associations of Colleges and Schools) creates policies and procedures for accrediting branch campuses under its jurisdiction. Each region developed its own definition of what is considered a "branch" and what is considered a single campus. The FRACHE was eventually replaced by the Council for Postsecondary Accreditation in 1980, which itself was replaced by the Council of Recognition of Post Secondary Accreditation (CORPA) in 1991. The CORPA organization does not accredit institutions. Instead, CORPA

simply recognizes institutions as they are accredited by their regional board. In the 1960's there was a trend for institutions to accredit separate sites as autonomous branch campuses. This trend has begun to shift back to the single campus structure often recommended by the accrediting evaluation teams who are frustrated by the multi-site arrangement (T. Kirsch, personal communication, January, 1994).

The definitional standard used by FRACHE was different than the definition used by the Office of Education in the United States Department of Health, Education, and Welfare (HEW). In 1976, the administrative agency charged with collecting educational data for HEW, the National Center for Educational Statistics (NCES), defined and began to collect data on Branch Campuses based upon their Higher Education General Information Survey (HEGIS), the forerunner of today's United States Department of Education Integrated Postsecondary Education Systems (IPEDS) survey (N. Shantz, personal communication, November, 1994). Campuses are not required to complete the IPEDS Survey using their regional accrediting body's definition of "branch" campus. This has created confusion when attempting to gather data on branch campuses. A further complication is the start-up campus, typically called a "center." Many times because of political restraints at the state level and accounting problems, branch campuses are referred to as "institutes," "learning centers," or some similar title, and purposely not identified properly (T. Kirsch, personal communication,

January, 1994).

The branch campus can therefore be defined in multiple ways. The Department of Education's IPEDS defines a branch campus simply as a campus which offers programs of study that are permanently located beyond reasonable commuting distance of the parent institution (IPEDS, 1994). This may include a variety of situations for instruction. Branch campuses can be strictly upper level and graduate studies or two-year vocational programs or both. These campuses are far from homogenous. Campuses accredited as branch campuses fall under the requirements of regional accrediting associations which define branch campus individually. Two of these accrediting associations--the Commission on Higher Education of the Middle State Association of Colleges and Schools, and the Commission on Institutions of Higher Education of the New England Association of Schools and Colleges--indicate that a campus can negotiate requirements for individual accreditation (Middle State Association of Colleges and Schools, Commission on Higher Education, 1993; New England Association of Schools and Colleges, Commission on Institutions of Higher Education, 1993). The Accrediting Commission for Senior Colleges and Universities of the Western Association of Schools and Colleges makes the general statement that the Commission reserves the right to interpret the definition of separate units but that "rationally" separate units require separate accreditation (Western Association of Schools and Colleges Accrediting Commission for Senior Colleges and Universities, 1988).

There are few consistencies regarding branch campuses. The branch campus, a relatively new trend in education, has continued to grow in popularity, and as this growth occurs the need for standardization in terms of definition and policy has become apparent. The number of interested parties has continued to increase, making evaluation of extensions of collegiate education imperative for continued public confidence in educational accreditation.

The Carnegie Classifications

The Carnegie Foundation for the Advancement of Teaching eventually was the successor to the Carnegie Council for Higher Education Policy Studies. The Carnegie Council was one of the first to realize a need for a classification system for research in higher education. Established in 1905 by Andrew Carnegie, the original purpose of the Foundation was the provision of pensions for American and Canadian college teachers. Later research centered on the student and how education should be standardized using tests of aptitude and achievement, which later resulted in the College Board and the Scholastic Aptitude Examinations (Lagemann, 1988).

In January of 1967, the Carnegie Foundation announced the formation of a commission to "study the future structure and financing of United States higher education" (Lagemann, 1993). This group was called the Carnegie Commission on Higher Education Policy Studies and was chaired by Clark

Kerr. This commission held thirty-three town meetings in twenty-five different cities and authored over one-hundred books and reports on higher education (Lagemann, 1993). In 1973, the Commission was replaced by the Carnegie Council on Policy Studies in Higher Education, also headed by Kerr. This council became a prolific commentator on postsecondary education in the United States as well as abroad. Its successor, the Carnegie Foundation for the Advancement of Teaching, has since 1980 been headed by Ernest L. Boyer.

The Carnegie Council's charge would lead to a need for extensive research concerning faculty, institutions, and their needs. It was determined this institutional research could be improved and made more meaningful if categories were established specifying the type of institution served (M. J. Whitelaw, personal communication, October, 1994). This allowed the Commission to come up with better ways to serve the target populations. The Carnegie Commission developed its first classification categories in 1973 ostensibly to improve the quality and precision of their research. Other research organizations became interested in using this taxonomy and urged that it be published and widely disseminated. Over its seven-year life, the Carnegie Commission produced twenty-one policy reports and more than eight sponsored research projects which included books, monographs, and technical reports for a variety of aspects of higher education (*Carnegie Commission Policy Studies*, 1975). Interestingly, of the 19 members of the Carnegie Commission on Higher Education in 1975, not one listed a

community college affiliation. Joseph P. Cosand, who served as the Director of the Center for the Study of Higher Education at the University of Michigan, had previously served as President of the St. Louis Community College District. By contrast, there were six individuals who listed private university and college affiliations as well as three other individuals besides Cosand with public institutional affiliations.

Since the original publication in 1973, the *Carnegie Commission's Classification of Institutions of Higher Education* has become essential for research and analysis relating to higher education. This initial attempt at classification was based upon HEGIS data from 1970 collected by the United States Office of Education's National Center for Education Statistics (NECS). Table II,"The Carnegie Classification Systems, 1973" shows institutions divided in a hierarchial fashion beginning with Doctoral-Granting Institutions, Comprehensive Universities and Colleges, and Liberal Arts Colleges. Community, junior, and technical colleges were grouped into a single category, "Two-Year Colleges and Institutes." This was followed by the category, "Professional Schools and Other Specialized Institutions" (Carnegie Commission on Higher Education, 1973).

The 1973 classifications were published as an intermediate technical report and a revision with more precise definitions to flush out whatever discrepancies and problems that might have arisen with the initial report. It

TABLE II

CARNEGIE CLASSIFICATION SYSTEM, 1973

Category
Doctoral-Granting Institutions
Research Universities I
Research Universities II
Doctoral-Granting Universities I
Doctoral-Granting Universities II
Comprehensive Colleges and Universities
Comprehensive Universities & Universities I
Comprehensive Universities & Universities II
Liberal Arts Colleges
Liberal Arts Colleges I
Liberal Arts Colleges II
Two-Year Colleges & Institutions
Professional Schools & Other Specialized Institutions
Theological Schools
Medical Schools & Medical Centers
Other Separate Health Professional Schools
Schools of Business & Management
Schools of Art, Music & Design
Schools of Law
Teachers' Colleges
Other Specialized Institutions (e.g., Maritime Institutions)

Source: El-Khwas, E., Carter, D., & Hinger C., (1992). Community college fact book Divisions of Policy analysis and research: Macmillian Series on Higher Education.

is interesting to note that the major groupings of institutions of public higher education, "Doctoral Granting," "Comprehensive," and "Two-Year Colleges and Institutes" largely mirrored the organization described in the California Master Plan, a document written in 1957, at a time when Clark Kerr served as President of the University of California. In 1976, the Carnegie Council on Policy Studies in Higher Education, the successor to the

Commission, revised the 1973 version. The changes were minimal, however, in order to "not to disturb the continuity of categories for purposes of research concerned with changes over time" (Carnegie Council, 1976). The major changes in the 1976 classifications were directed at tightening the restrictions regarding which institutions could be classified as research universities by increasing the required minimum number of Ph.D.'s awarded.

Other changes were also related to how institutions would be defined within the 1973 system. A major change was the addition of the new category of Institutions for Nontraditional Study. This category was added because of the rise in the number of institutions oriented to nontraditional study, usually without a campus in the conventional sense (Carnegie Council on Policy Studies, 1976).

In 1987, the Carnegie Foundation for the Advancement of Teaching published another update of Clark Kerr's classifications. This was followed by the most recently published revision to the Carnegie Classification which occurred in 1994. In the 1987 classification listed in Table IV, "Carnegie Classification System, 1987," the two-year institutions are the largest category, recording 1,367 institutions. There are no subdivision or subcategories, for community colleges. There were no subcategories for community colleges in 1994 either.

TABLE III

CARNEGIE CLASSIFICATION SYSTEM, 1976

Category
Doctoral-Granting Institutions
Research Universities I
Research Universities II
Doctoral-Granting Universities I
Doctoral-Granting Universities II
Comprehensive Colleges and Universities
Comprehensive Universities & Universities I
Comprehensive Universities & Universities II
Liberal Arts Colleges
Liberal Arts Colleges I
Liberal Arts Colleges II
Two-Year Colleges & Institutions
Professional Schools & Other Specialized Institutions
Theological Schools
Medical Schools & Medical Centers
Other separate Health Professional Schools
Schools of Engineering & Technology
Schools of Business & Management
Schools of Art, Music, & Design
Schools of Law
Teachers' Colleges
Other Specialized Institutions (e.g., Maritime Institutions)
Institutions for Nontraditional study

Source: Carnegie Council on Policy Studies in Higher Education. (1976). Introduction A classification of institutions of higher eduation, (pp. xv-xxi) The Carnegie Foundation for the Advancement of Teaching.

Notes: For Doctoral-Granting Institutions, the four sub-categories were determined by numbers of Ph.D. degrees awarded and federal research grants received.

The 1994 updated classifications indicated that "there is now more higher education than ever in history" (Evangelauf, 1994). This update included 450 additional

institutions that were not a part of the 1987 publication; of these, 300 were two-year colleges (most likely proprietary schools). Table IV, "Carnegie Classification Systems Comparison, 1987-1994," illustrates the continued increase in enrollment at the two-year college from 1,367 in 1987 to 1,480 in 1994. This increased the percent of two-year colleges to 41.1% of the total population (Evangelauf, 1994), and the classification made minor changes of the previously conceived system to exclude that of the two-year colleges. These institutions were still joined in a loosely defined group with few distinctions. The Associate of Arts Colleges category was defined as including community, junior, and technical colleges which were for both profit and non-profit. However, this classification revision, although meaningful for those institutions who were well suited in their positions, has little meaning for the two-year colleges.

Table V, "A Summary of the Carnegie Classifications of Institutions of Higher Education, 1987-1994," also displays the institutional types over a twenty one year period. The remarkable stability of the Carnegie classifications is readily discernible and allows researchers to accomplish longitudinal studies. It also gives meaningful and clearly defined criterion for each of the classifications so that each college will know its stature.

TABLE IV

CARNEGIE CLASSIFICATION SYSTEM, 1987

Category	Number of Institutions
Doctoral-Granting Institutions	**213**
Research Universities I	70
Research Universities II	34
Doctoral-Granting Universities I	51
Doctoral-Granting Universities II	58
Comprehensive Colleges and Universities	**595**
Comprehensive Universities I	424
Comprehensive Universities II	171
Liberal Arts Colleges	**572**
Liberal Arts Colleges I	142
Liberal Arts Colleges II	430
Two-Year Institutions	**1,367**
Specialized Institutions	**642**
Medical Schools	56
Other Health Professions	40
Teachers	7
Engineering and Technology	31
Business and Management	44
Arts, Music, and Design	63
Theological	309
Law	10
Corporate Colleges	21
Other Specialized	52

Source: Evangelauf J. (1994). A new 'carnegie classification ': Academe is 'healthy and expanding,' the updated edition shows. The Chronicle of Higher Education.

TABLE V

A SUMMARY OF THE CARNEGIE CLASSIFICATIONS OF INSTITUTIONS OF HIGHER EDUCATION, 1987-1994

Category	1987	1994	Change
Doctoral-Granting Institutions	236	259	+23
Research Universities I	88	106	+18
Research Universities II	37	40	+3
Doctoral Universities I	52	53	+1
Doctoral Universities II	59	60	+1
Master's Granting Institutions	532	469	-63
Master's Comprehensive Universities & Colleges I	439	454	+15
Master's Comprehensive Universities & Colleges II	93	15	-78
Baccalaureate-Granting Institutions	633	794	+61
Baccalaureate Liberal Arts Colleges I	163	184	+21
Baccalaureate Liberal Arts Colleges II	470	510	+40
Associate of Arts Colleges	1,367	1,480	+113
Professional Schools and Specialized Institutions	690	738	+48
Tribal Colleges	29	N/A	
Total	**3,600**	**3,811**	**+211**

Source: Evangelauf J. (1994). A new 'carnegie classification ': Academe is 'healthy and expanding,' the updated edition shows. The Chronicle of Higher Education.

Strengths and Weaknesses of the Carnegie Classifications

There are several general complaints concerning the Carnegie Classification System. Critics such as Makowski have suggested suggest that Carnegie falls short in the following stability of the system: (1) it is difficult to update because of its complexity; (2) it utilizes a number of diverse data sources; (3) it uses subjective judgements in classifying institutions; and (4) it uses nineteen categories in its taxonomy, causing problems in publishing summary data (Makowski, 1982).

In Table VI, "The Strengths and Weaknesses of the Carnegie Classifications," the relative strengths and weaknesses are compared. One of the most valuable strengths is the Carnegie system's establishment of a clear architecture for enhanced understanding of the largest system for higher education in the world. This allows for longitudinal studies to be accomplished, giving researchers vast information on an array of topics. Another apparent strength was that the criterion used by Carnegie was clearly documented and quantifiable at each institution. All institutions accurately recorded annual degrees awarded and research moneys coming into the institution.

The weaknesses are also depicted in Table VI. Due to the fact that Carnegie built the classification system based on highest level of degrees awarded, research money, and a selectivity in admissions, a distinct hierarchy or "pecking order" was established among institutions. There was no

Table VI
Strengths & Weaknesses of Carnegie

Strengths	Weaknesses
Stability	Created Hierarchy
Criterion Documented	No Commitment to Undergraduate Education
Quantifiable Measurement Tools	Does Not Include Training Grants
Standardized Tests and Minimum of Federal Research Grant Funding	Recognized Ph.D. but not Ed.D. which is Biased Against Major Function of Institutions of Higher Education

commitment to education at the undergraduate level and no recognition at the graduate level for the doctorate of education (Ed.D.) degree, only the doctorate of philosophy (Ph.D.). Alexander Astin has long criticized the emerging educational model based upon an authoritative resource model, which he argues has produced a "pecking order." Astin believes that the key for evaluation is the "value added" to students by institutions of higher education. Astin supports recognition of institutions based on traditional accreditation criteria such as test scores of entering students and student/faculty ratios (Astin, 1992). Overall, the Carnegie classifications do not classify based on excellence in terms of educational impact or effectiveness, and only use standardized test-based admissions criteria for classifying liberal arts institutions (selective as opposed to non-selective).

When referring specifically to the two-year

institutions, the Carnegie classifications lose precision due to the consistent grouping of all institutions in a single category, even though it is this category that is most clearly the fastest growing. In short, the Carnegie System can be vague, inhibiting the value of the statistical manipulation it produces, especially with regard to two-year colleges.

Other Attempts at Classifications

One of the largest publishers of postsecondary-education data is the National Center for Education Statistics (NCES) (Makowski, Wulfsber, 1982). The NCES is an agency of the United State Department of Education. The NCES classifies institutions into three categories: universities, other four-year institutions, and two-year institutions. Institutions are also separated as public and private (non-profit and proprietary) for the purposes of its data collection surveys and publications. This method of classification, though very simplistic and somewhat stable, has no objective criteria for placing an institution into a more discrete and descriptive category. Thus, many of the same criticisms that community college researchers, policy makers, and practitioners would level against the indiscrete lumping of all two-year institutions in the Carnegie classifications also applies to the U.S. Department of Education's data retrieval system.

Other attempts have been made to classify institutions of higher education that have been less widely accepted. In 1977, the National Center on Higher Education Management Systems (NCHEMS), a non-profit higher education consulting organization based in Denver, Colorado, developed a taxonomy of postsecondary-education institutions comparable to the Carnegie system. Four categories were developed using this system in an attempt to identify homogenous subsets of institutions and to compare an institution with its empirically determined peers. The majority of the data were obtained from four-year institutional longitudinal files that merged the finance, faculty, enrollment, and institutional characteristics survey of the Higher Education General Information Survey from the National Center for Educational Statistics (NCES) for the years 1975 to 1987 (Korb, 1982). Again, the NCHEMS methodology concentrated on the four-year institutions for the purpose of clarifying homogeneous subsets so that comparing institutions would be feasible on a one-to-one basis, making analysis relevant in higher education. The NCHEMS study centered primarily on types of degrees awarded at various institutions. The results of the study provided four categories, listed below in Table VII, "National Center on Higher Education Management Systems Classifications, 1977," on which institutions of higher education were grouped that did not include a category for two-year institutions, citing that these institutions "have no real need for significant institutional research" (J. W. Minter, personal

communication, August, 1994). This study resulted in the following categories listed in Table VII:

TABLE VII

NATIONAL CENTER ON HIGHER EDUCATION MANAGEMENT SYSTEMS CLASSIFICATIONS, 1977

Major Doctoral Institutions/Research
Major Doctoral Institutions/Non-Research
Comprehensive Universities
General Baccalaureate Institutions

Source: Korb, R. (1982). Clusters of colleges and universities: An empirically determined system (Report No. HE-016-051). Washington D.C.: National Center for Educational Statistics. (ERIC Document reproduction service No. ED 227 797).

In 1982, a review was initiated to improve the earlier taxonomy of the National Center for Higher Education Management Systems (NCHEMS). The NCHEMS revisions attempted to clarify a more effective method of classification. In this study great care was taken to minimize the possibility of institutions changing their classification so that longitudinal studies and trend analysis could be done. The criteria for this taxonomy are listed in Table VIII, "NCHENS' Criteria of an Effective Classification System."

The actual numerical criteria for the NCES taxonomy were types of degrees awarded. Five major categories described in this study were subdivided and defined to describe further distinguishing characteristics. This system was

Table VIII

NATIONAL CENTER FOR HIGHER EDUCATION MANAGEMENT SYSTEM'S CRITERIA OF AN EFFECTIVE CLASSIFICATION SYSTEM

Full-Range of Institutional Diversity: The classification scheme should be designed to encompass the full range of postsecondary-education institutions.
Objective: The categories for classifying institutions into categories should be objective so that institutions will clearly be aware of where groups should be placed.
Statistically significant: The classification scheme should categorize institutions into groupings that would be statistically efficient.
Meaningful to practitioners: The categories should have meaning for the typical user by being descriptive and well understood.
Based in Research Literature: The classification scheme should serve as a common basis for publication of data at the state and national levels.
Stability: The classification scheme should provide relative stability over a period of years in the assignment of institutions to categories to provide for analysis of trends.
Compatibility: The classification scheme should be as compatible as possible with the current NCES scheme in order to provide some continuity to facilitate trend analysis.

Source: Makowski, D. & Wulfsberg, R.M. (1982). An improved taxonomy of postsecondary institutions. (Report No. HE 017 555). Washington D.C.: National Institute of Educational Policy and Organization Program. (ERIC Document service No. ED 246 807)

based on several criteria: the number of degrees earned by type of degree, the number of fields in which degrees were earned, and the ratio of degree completions in several specific fields to total degree completions. Table IX, "National Center on Education Management Systems Second

Classification, 1982," shows the NCHEMS classifications.

Although two-year colleges were identified with subcategories, little consideration was given to any other criteria aside from degree completion. This system again views two-year colleges with the same criteria as the four-year institutions with little regard for the great diversity which exits among these groups.

TABLE IX

NATIONAL CENTER ON EDUCATION MANAGEMENT SYSTEMS SECOND CLASSIFICATION, 1982

Major Doctoral-Granting Institutions
Major Research Institutions
Other Major Doctoral Institutions
Comprehensive Institutions
General Baccalaureate Institutions
Professional and Specialized Institutions
Divinity Institutions
Medical Institutions
Other Health Institutions
Engineering Schools
Business and Management Schools
Art, Music, and Design Schools
Law Schools
Education Schools
Other Specialized or Professional Schools
U.S. Service Schools
Two-Year Institutions
Comprehensive Two-Year Institutions
Academic Two-Year Institutions
Multi-Program Occupational Two-Year Institutions

Source: Makowski, D. & Wulfsberg, R.M. (1982). An improved taxonomy of postsecondary institutions. (Report No. HE 017 555). Washington D.C.: National Institute of Educational Policy and Organization Program. (ERIC Document service No. ED 246 807)

The NCHEMS classification systems do not facilitate longitudinal or trend analysis by minimizing the number of institutions that change categories from one year to another by emphasizing program characteristics. Many of these institutions were on the borderline and will tend to change categories each year. Other institutions may change categories because of significant shifts in their program characteristics, such as increased enrollments or new program offerings. New program offerings particularly will affect the two-year institutions who attempt to stay ahead of occupational trends with new, innovative vocational programs. This study should be acknowledged, however, for recognizing the need to sub-categorize the two-year institutions and its classification criteria.

The American Association of Community Colleges' current membership as of 1994 was 1,050 members, which AACC officials estimate to represent between 85 and 95 percent of the total two-year college population. This membership also included 35 or 40 state administrative units who take an active part in promoting the two-year colleges in their states (M. Rivera, personal communications, October, 1994). The Association classifies their members as rural, suburban, and urban institutions as defined by the institutions themselves. These distinctions are designed to provide the AACC with an efficient method for dues collection. These groups are subjective, and records are not well kept--a point well known within the research community. In fact, AACC officials were unable to provide this researcher with

current membership listings for any of their institutional groupings. The AACC publishes a directory each year, which organizes community colleges according to type of control, as shown in Table X, "American Association of Community Colleges' Classification System."

This categorization touches on an additional issue at two-year colleges: those who have single campuses as opposed to those who have multiple campuses. The multiple campus colleges tend to have a greater bureaucracy to contend with, and diversity frequently occurs within the campuses themselves. Activities are campus wide, where governance and ultimate control is at the district level. The AACC recognizes the unique configuration for these colleges and their campuses.

TABLE X
AMERICAN ASSOCIATION OF COMMUNITY COLLEGES'
CLASSIFICATION SYSTEM

Multi-College Districts
Colleges within Multi-Colleges Districts
Multi-Campus Colleges
Campuses of Multi-Campus Colleges
University Branch Campuses Offering the Associate Degree
Single Institutions

Source: (AACC Office of Research, 1993; in Katsinas, 1993)

There are also nineteen additional AACC-affiliated councils which provide administrators, faculty, staff, and

others the opportunity to participate with the AACC beyond official institutional representation. Affiliated councils are recognized by the AACC Board for three-year periods, after which time a request for renewal is submitted. With this recognition, the AACC includes their meetings during its annual convention.

However, AACC's scheme of classifying members is of little value to researchers other than desegregating by governing bodies for each category. The categories are not very discrete, and even the AACC-affiliated councils are not sure of their current membership at any point in time. The current form of self-categorization based on location has proved meaningless even for the AACC, which anticipated disbanding several of these groups in the near future (M. Rivera personal communications, October,1994). Using self-identification for membership of the councils is meaningless when there is little clarity for criteria for these categories. The AACC plans to form councils based on current issues that affect the community colleges; but here, again, how will these issues be decided? It will be difficult to provide leadership in this area when no formal committees are organized within the Association by institutional type.

Katsinas' Attempt at Classifications

Dr. Stephen Katsinas, with financial support provided by

the Ford Foundation, began developing a classification system in 1993 that would accurately identify the community colleges in sub-categories. The initial paper that was attached to his Ford grant request, "Toward a Classification System of Community Colleges," was presented to the 1993 Annual Meeting of the Council of Universities and Colleges (CUC) and has recently been added to the ERIC data base. The CUC is an AACC-affiliated council comprised primarily of university-based professors of higher education who have a research interest in community colleges. The same paper was also presented to a session at the AACC Annual Convention that same year. In Table XI, "Institutionally Distinctive Types of Community Colleges," Katsinas's first attempt at classification of two-year colleges he proposed 15 different classes of community colleges.

Katsinas determined that the development of a community college classification system would expedite the creation of more explicit measurements by which to assess institutional transfer and social mobility. Those who criticize community colleges as places that impede social mobility or as places that do not do all they can to promote it, would thus have a method by which to measure accomplishments and failures of the community colleges. Katsinas defends Kerr and the Carnegie Foundation, however, citing that in a personal communication with Clark Kerr, he was informed that including the community college system was considered "too complicated for us"; Kerr stated his belief that the development of a classification would be beneficial

Table XI
Institutionally Distinctive Types of Community Colleges

BY GEOGRAPHIC LOCATION:
Rural
Suburban
Urban/Inner City
Metropolitan Area District, centralized and decentralized
Adjacent to a residential university
Mix

BY TYPE OF SPECIAL USE
Hispanic-Serving Institutions
Historically Black Two-Year Colleges
Tribally Controlled Community Colleges
Technical Only
Transfer/General Education Only

BY TYPE OF GOVERNANCE
Single campus governing board
Multi-Campus, > 1 campus reporting w/out system CEO to a single governing board,
Multi-Campus, > 1 campus reporting to a system CEO to single governing board,
Multi-Campus, multi-level, decentralized
Multi-Campus, multi-level, centralized
Community College as directly administered college at a University

BY TYPE OF CONTROL
Public
Private, non-profit
Private, proprietary

MEASUREMENT TOOLS:
By Type of Student Served (affixed number and percent)
Economically disadvantaged (Pell/Title IV recipients)
First-time-in-college
Historically under-represented racial, ethnic, or gender group

By Type of Degree Awarded by the Institution (affixed number and percent)
Associate in Arts, Associate in Science, Associate in Applied Science, Certificates, GED/High School Equivalency, TOEFL

By Assigned Academic Program and Function (affixed number and percent)
General Education/Transfer only,
Technical/Occupational/Vocational only,
Developmental Education, Continuing Education, community Services,
Career Education/Job Training, Adult Literacy, and affixed mix thereof

Source: Katsinas, S. (1993) Toward a classification for community colleges. Paper presented at the meeting of colleges and universities.

(Katsinas, 1993). With the lowered cost of student access tohigher education and the continued demand for lifelong learning since the Vietnam Era, Katsinas concludes that "the time is ripe for the development of a classification system of two-year colleges" (Katsinas, 1993).

Later, in an unpublished 1994 presentation to the Council of Universities and Colleges (CUC), Katsinas presented an update of his work. He proposed the following principles of a sound classification system, based upon his analysis of Carnegie:

1. Stability (could last for ten years)
2. Accuracy (accurately depicting the population)
3. Meaningfulness (capturing data and informing the public)

Table XII, "Katsinas' Criterion for Classification of Community Colleges," illustrates the criteria used by Katsinas in his 1994 study.Katsinas began developing his classification system by obtaining the following documentation: (1) U.S. Department of Education Directory of Accredited Postsecondary Institutions, 1991, (2) U.S. Zip Code Directory; (3) List of 100 largest cities in the United States from U.S. Department of Commerce, Bureau of the Census, *Current Population Reports*, 1990 Census; (4) List of 100 largest metropolitan areas in the US., same as above, (5) AACJC Membership Directory, 1991. Katsinas geographically place the institutions, by using the official institutional

TABLE XII

Katsinas' Criterion of Classifications

Geographic Location: The taxonomy included geographic location which is paramount in the institutional mission. The word 'community' when used with colleges, means postsecondary educational programs delivered to a specific geographic area. Typically, these colleges have service areas determined by the legislature and support the community by offering relevant curricula.
Encourage Comprehensive Curriculum: The taxonomy system included encouragement for a comprehensive curriculum. The analysis of the Carnegie classification system indicated that the Carnegie Foundation was clearly concerned with outcomes: number and types of degrees awarded, curricular comprehensiveness, and the nature and natural groupings of work the institutions perform (research universities versus selective liberal arts institutions).
Institutional Size: The taxonomy system included institutional size. Size is perhaps the most obvious of all measurement yardsticks. Two determinants are most commonly used by practitioners wishing to compare institutions, as well as by the research community: enrollment (either FTE or head count) and budget. It is my view the classification system that is developed should use a size determinant.
Proprietary Colleges: The taxonomy system included all two-year colleges, including proprietary institutions. The proprietary classification is the fastest-growing sector among two-year degree granting institutions. Whatever classification system is developed, it must include this specific institutional type.
Diversity in Governance: The taxonomy system included provisions for diversity in governance. Power and control in any organization will always be a consideration, and the consolidation of power at a location other than the campus itself, as is the case with multi-campus colleges, must be addressed.

Source: Katsinas, S. (1994) Toward a classification for community colleges. Unpublished paper.

address supplied by the institutions themselves to the U.S. Department of Education. He then determined if that address fit within the central city or metropolitan area of the city using the U.S. Zip Code Directory if needed. If it did not, the institution was rural. If the institution was rural, Katsinas then examined enrollment listed in the US Department of Education's Directory of Accredited Postsecondary Institutions (again, supplied by the institutions themselves); if the enrollment was above 2,500, it was classified as Rural Comprehensive I; if between 2,500 and 1,000, Rural Comprehensive II; if under 1,000, Rural Comprehensive III; if under 1,000 and all academic offerings, Rural IV; and if under 1,000 enrollment and all vocational offerings, Rural V. Katsinas obtained the following from the U.S. Directory of Postsecondary Institutions:

1. Zip code of college, which was compared to Zip Code Directory to determine geography
2. If it was rural, he examined enrollment data
3. He then recorded the IPEDS institutional designator
4. If it was rural, he then examined if it offered academic as well as occupational curricula

If the institution was urban or suburban, and it was not clear from the U.S. Directory of Accredited Postsecondary Institutions that it was a multi-campus system, Katsinas then consulted the 1991 AACJC Directory for additional direction.

In Katsinas' study, the primary criterion for classifying the community colleges was geographic location. Rural was defined as anything outside the 1990 Census data SMSAs, combined with our definition of urban.

Urbans, according to Katsinas made reference to the core of America's central cities using SMSA's definition. Urbans were defined as the inner cities of the 100 largest metropolitan areas, referred to as Standard Metropolitan Statistical Areas, SMSA's, Consolidated Metropolitan Statistical Areas, or CMSA's. The addresses of the central offices were used to determine the location of the multi-campus metropolitan community college districts. Two ways to categorize urban institutions were considered initially by Katsinas:

Method 1: Obtain a list of America's 100 largest cities from the 1990 Census.

Method 2: Use population density to determine urban areas.

Method One was deemed preferable. The problem with Method Two was how to define what was urban and what was suburban in the nation's two most densely populated areas--the Boston to Washington, D.C.,corridor, and the Los Angeles Basin (Santa Barbara to the Mexican Border). Population density by itself would not differentiate urban from suburban. Again, the objective was to define urban as inner city/core area of the 100 major metropolitan areas. Suburban community colleges were defined to be within the

SMSA's the CMSA's, but not within the central cities of the 100 largest metropolitan areas in the nation. To distinguish the suburban areas from the rural, it was decided that if the institution was located within the SMSA, it would be classified suburban, again using the U.S. Directory of Postsecondary Institutions. Further distinction was made to separate the multi-campus from single-campus institutions within the urban and suburban grouping using the American Association of Community and Junior Colleges (AACJC) Directory where not indicated in the U.S. Directory of Accredited Postsecondary Institutions. Rural institutions lie outside the 100 largest metropolitan areas in the nation, included all other institutions.

These categories as proposed by Katsinas are described as follows:

Urban Comprehensive I

> These institutions offer a full range of associate degrees in both liberal arts and occupational curricula as well as significant developmental education offerings. They are located in the central core of the nation's 100 largest cities, according to the SMSA census ratings and are multi-campus institutions. These institutions traditionally serve a significant number of financially needy and minority students. These institutions are governed at the district level.

Urban Comprehensive II

These institutions offer a full range of associate degrees in both liberal arts and occupational curricula as well as significant developmental education offerings. These colleges are also located in the central core of the nation's 100 largest cities, yet these institutions are single-campus institutions governed locally. Urban II institutions also serve significant numbers of financially needy and minority students.

Suburban Comprehensive I

These institutions offer a full range of associate degrees in both liberal arts and occupational curricula and offer significant developmental education offerings. These institutions are located in the suburban areas of the nation's 100 largest cities. These institutions are multi-campus institutions governed at the district level.

Suburban Comprehensive II

These institutions offer a full range of associate degrees in both liberal arts and occupational curricula and offer significant developmental education offerings. These institutions are located in the suburban areas of the nation's 100 largest cities. These institutions are single-campus

institutions governed locally.

Rural I

These institutions offering a full range of associate degrees in liberal arts and occupational curricula, and offer significant developmental offerings. Many of these colleges are multi-campus institutions. They have a large number of full-time students and serve a significant number of financially needy students. Their faculty-time faculty equivalent (FTE) enrollment is over 2,500 students.

Rural II

Rural II institutions offer a full range of associate degrees in liberal arts and occupational curricula, and offer some developmental education offerings. These institutions have an FTE that ranges from 1,000 to 2,500.

Rural III

Rural III institutions offer a range of associate degrees in liberal arts and occupational curricula, and offer some developmental education offerings. They are typically small, with an FTE of under 1,000.

Rural IV

Rural IV institutions offer primarily liberal arts programs leading to the Associate of

Arts degree, with limited developmental education offerings yet a high degree of transfer. Most of the institutions in this category are privately controlled non-profit junior colleges.

Rural V

These institutions are largely located within the urban and suburban areas. They typically award Associate of Science, Associate of Applied Science, and Associate of Applied Technology Degrees.

(Katsinas, 1993).

Summary

The purpose of a classification system is to explain phenomena through meaningful and precise research. Historically, categorization has guided research and policy development. According to the *Digest of Education Statistics*, over half of all college students began their postsecondary educations at the community college in 1993 (*Digest*, 1993). When there is no differentiation made for research and development of curriculum and student programs, each institution is forced to move further away from their students.

Table I, "Criterion for Creation of the Community College," on page 30 summarizes the criteria for the development of community colleges over time. General

enrollment has continued to play a major role in the success and development of sound community colleges as has the high school enrollment in the college district. Financial support also appears at issue. Who is willing to pay for the services a community college provides? Finally, we find student costs played less of a role as student aid became so prevalent in the 1960's. The following chapters will use these key issues that have historically affected the community colleges to propose a system for classification of rural colleges and to verify the urban and suburban classifications of works previously developed.

Student enrollment has greatly increased through the Cold War era, some commentators have argued, and the modern era for community colleges can be said to really have begun in earnest with the greatly expanded student aid programs resulting from the Higher Education Act of 1965 and the Education Amendments of 1972, which dramatically lowered the marginal cost for student access to higher education along with the coinciding return of Vietnam War veterans and societal demands for lifelong learning. An enhanced knowledge and understanding of current subcategories which exist for the two-year colleges will lead to the development of improved research and cooperation with federal agencies and private foundations which fund and support the two-year institutions.

CHAPTER III

METHODOLOGY

Introduction

The purpose of this study was to improve the precision of community college research by advancing efforts to authenticate a meaningful, readily useable Carnegie-style classification system for America's publicly controlled community colleges based on three important facets of community college development: total enrollment, degrees awarded, and budget based on state and local appropriations. This information was quantified using the responses to the Integrated Postsecondary Educational Statistics Survey (IPEDS) provided by the United States Department of Education's National Center for Educational Statistics. This chapter includes information regarding the components of the design of research through which the mission of this study was accomplished and the hypotheses were tested. This chapter is divided into the following sections: (1) Introduction; (2) Selection of Populations; (3) Research Criteria; (4) Procedure and Design; (5) Summary.

Selection of Populations

The methodology employed was to examine the work of Katsinas using the institutional characteristic data supplied by the United States Department of Education's National Center for Education Statistics (NCES). The NCES data retrieval surveys for higher education are called the Integrated Postsecondary Education Data System (IPEDS) Survey. Due to the scope of this study, the total universe of the population of two-year colleges participating in the IPEDS Survey was used. This universe is defined as approximately 1,300 institutions both public and private throughout the United States. To be included in the statistical analysis, these institutions must have done the following:

1. Have answered all relevant questions pertaining to the particular packet in question.
2. Have been defined by the National Center for Educational Statistics as a two-year, post-secondary, degree granting institution.
3. Have been included in Katsinas' 1994 classification scheme.

The number of respondents were limited to those colleges who answered each question in the survey relating to the identified variables to be used in the analysis. Out of the 1,300 community colleges surveyed, 482 colleges replied to each question required, generating a 37% overall rate of response.

Research Instrument

The IPEDS surveys are actually a series of three surveys. Certain surveys are distributed every other year (e.g., specific types of curricular data), others are distributed by NCES ever year. The IPEDS surveys are distributed by mail; institutions of postsecondary education that wish to receive federal funds, directly or indirectly through their students receiving federal student financial assistance, must fill out the IPEDS surveys. Yet, as shall be discussed below, not all institutions fill out each and every one of the IPEDS surveys.

The IPEDS Survey for 1990-1991 was distributed in packets to the colleges so that responsible individuals could answer questions in their specific area of expertise. For the study at hand, the researcher determined that the IPEDS survey packets for degrees completed, fall enrollment, and finance were most appropriate. The researcher obtained the IPEDS survey hard copies and the actual data on diskette after contacting NCES officials in Washington, D.C., by telephone. This information is available to any educational researcher or interested citizen in the country.

This study also excluded private junior colleges and proprietary institutions which were not included in Katsinas's original study for the purpose of classifications. It was also assumed that no human errors were made by Katsinas when analyzing United States Census data, zip codes, and multi-campus status using AACJC

directory and data from U.S. Directory of Postsecondary Institutions. The AACJC Directory uses self-identification for membership; therefore, it was also assumed that no errors were made in the AACJC directory used by Katsinas to identify multi-campus urban and suburban community colleges. Thus, the study is limited to an analysis of IPEDS data for public community colleges.

Obviously, if the institution did not answer all of the questions in the enrollment, degrees completed, and finance IPEDS packets, they were not included. For this reason, the researcher was forced to eliminate some community colleges that Katsinas had previously categorized. It is important to restate that the researcher was limited by the accuracy of the responses from the institutional officials to the IPEDS survey packets.

Data Collection Procedure

Data from the IPEDS 1990-1991 school year were requested by the researcher from the United States Department of Education's National Center for Educational Statistics. This data were found to be in encrypted form; therefore, the data were unencrypted, and relevant variables were extracted for use. Each institution's unique identifying number (UNITID) which had been categorized in the Katsinas study as Urban I, Urban II, Suburban I, Suburban II, Rural I, Rural II, Rural III, Rural IV and Rural V were placed in ASCII form in a file which was then

merged with the IPEDS F91FLATD.DAT file for Fall Enrollment data, the PARTC.DAT file for the Financial Data, and the COMP91.DAT file for the completion data into a SAS program. The resulting merged file contained the UNITID institutional designator codes and the relevant data for each institution.

Statistical Procedures

Since this study involved surveying multiple groups of institutions, the resulting data were described in terms of population or subgroup mean(s). There were six questions used to determine the numerical data to be used in the study: (1) degrees completed by males, (2) degrees completed by females, (3) total male enrollment, (4) total female enrollment, (5) total local appropriations, and (6) total state appropriations. The questions divided by gender were totaled into a total enrollment and total degrees completed variable and the state and local appropriations were totaled into a funding variable for analysis. Duncan's Multiple Range test was applied to address significant differences between the general categories, rural, urban and suburban. Multiple analysis of variance was used to determine the significance of difference between governance among the sub-categories urban and suburban. For the rural institutions, discriminant analysis was utilized to determine whether these groups were valid classifications.

Summary

This study used a review of the applicable literature, personal interviews, and analysis of responses from the IPEDS Surveys completed by knowledgeable individuals at each campus to comprise a classification system and develop matching profiles for this system. The key limitations of the study were the possibility of human error combined with the lack of control over the survey tool, restricting the researcher from resurveying the population for greater response. The results of this analysis is presented and interpreted in the following chapter, to which attention is now directed.

CHAPTER IV

ANALYSIS OF DATA

The purpose of this study was to improve the precision of community college research by advancing efforts to authenticate a meaningful, readily useable Carnegie-style classification system for America's publicly controlled community colleges. Data were analyzed manipulated to validate the urban, suburban and rural classifications developed by Katsinas. The primary components of the study were a review of the existing literature related to the classification of higher education and two-year colleges, historically and in recent years, and an attempt to prove or disprove a classification scheme proposed by Katsinas employing analysis of Department of Education IPEDS Survey data.

In order to analyze the proposed classification scheme, three major hypothesis and their related sub-hypotheses were tested:

1. There is no significant difference between community colleges on the basis of geography (i.e. whether they are rural, suburban or urban campuses).
    1a. There is no significant difference in rural, suburban and urban institutions based on total

enrollment.

1b. There is no significant difference in rural suburban and urban institutions based on state and local appropriations.

1c. There is no significant difference in rural, suburban and urban institutions based on degrees awarded.

2. There is no significant difference between community colleges on the basis of governance along the lines of multi-campus and single campus suburban and urban instituions.

2a. There is no significant difference between community colleges in multi-campus and single campus suburban instituions based on total enrollment.

2b. There is no significant difference between multi-campus and single campus suburban institutions based on state and local appropriations.

2c. There is no significant difference between multi-campus and single campus suburban institutions based on degrees awarded.

2d. There is no significant difference between community colleges in multi-campus and single campus urban instituions based on total enrollment.

2e. There is no significant difference between multi-campus and single campus urban institutions based on state and local appropriations.

2f. There is no significant difference between multi-campus and single campus urban institutions based on degrees awarded.

3. There are no significant differences between the rural subclassifications based upon key institutional characteristics.

2a. There is no significant difference between rural instituions based on total enrollment.

2b. There is no significant difference between rural institutions based on state and local appropriations.

2c. There is no significant difference between rural institutions based on degrees awarded.

In order to address the research hypotheses, the responces of the population of community colleges were assessed by means of a survey questionaire. The IPEDS was mailed to the institutions at the beginning of the 1990 academic year.

Populations

The total population of institutions of higher education was included in the original mailing of the IPEDS survey. Public, two-year instituions that answered each of the desired questions were included in the analysis. A total of 482 two-year institutions out of a possible 1,300 institutions were included in this study. This indicates an overall response rate of 37%. These institutions were then

grouped into nine populations according to the Katsinas classification system for the purpose of analysis:

Population One: A total of 27 institutions were identified as Urban Multi-Campus institutions by the Katsinas study and answered all the IPEDS questions.

Population Two: A total of 69 institutions were identified as Urban Single-Campus institutions by the Katsinas study and responded to all the IPEDS questions included in the current study.

Population Three: A total of 16 institutions were identified as Suburban Multi-Campus institutions by the Katsinas study and responded to all the IPEDS questions included in the current study.

Population Four: A total of 115 institutions were identified as Suburban Single-Campus institutions by the Katsinas study and responded to all the IPEDS questions included in the current study.

Population Five: A total of 72 institutions were identified as Rural I institutions by the Katsinas study and responded to all the IPEDS questions included in the current study.

Population Six: A total of 105 institutions were identified as Rural II institutions by the Katsinas study and responded to all the IPEDS questions included in the current study.

Population Seven: A total of 46 institutions were identified as Rural III institutions by the Katsinas study and responded to all the IPEDS questions included in the current study.

Population Eight: A total of 20 institutions were identified as Rural IV institutions by the Katsinas study and responded to all the IPEDS questions included in the current study.

Population Nine: A total of 12 institutions were identified as Rural V institutions by the Katsinas study and responded to all the IPEDS questions included in the current study.

Population One had a return of 27 institutions or 92 percent of the 52 Urban Multi-Campus Institutions included in the study responded to the IPEDS Survey questions.

Population Two had a return of 69 institutions or 38 percent of the 180 Urban Single-Campus Institutions responding to the IPEDS Survey questions. Population Three had a return of 16 institutions or 39 percent of the 41 Suburban Multi-Campus Institutions responding to the IPEDS Survey questions. Population Four had a return of 115 institutions or 44 percent of the 261 Suburban Multi-Campus Institutions responding to the IPEDS Survey questions. Population Five had a return of 72 institutions or 31 percent of the 231 Rural I Institutions responding to the IPEDS Survey questions. Population Six had a return of 105 institutions or 45 percent of the 233 Rural II Institutions responding to the IPEDS Survey questions. Population Seven had a return of 46 institutions or 28 percent of the 159 Rural III Institutions responding to the IPEDS Survey questions. Population Eight had a return of 20 institutions or 32 percent of the 61 Rural IV Institutions included in the study responded to the IPEDS Survey questions. Population Nine had a return of 22 institutions or 26 percent of the 82 Rural V Institutions included in the study responded to the IPEDS Survey questions. Again, a limitation of this study was that the use of the National Center for Educational Statistic's IPEDS surveys restricted the researcher from resurveying the non-responding institutions to increase response rates.

Presentation of Findings

In this study, community colleges were divided according to the Katsinas model and were assessed based on the three critical variables determined in the literature for validation. For the analysis of differnces between the main categories: Rural, Suburban and Urban mean scores, Analysis of Variance test was utilized. The means for each category means were analyzed for each of the dependent variables: total enrollment, local and state appropriations and degrees awarded. They are described in Table XIII, Summary of Analysis of Variance Procedure: Urban, Suburban and Rural.

The mean scores for the variable labeled "enrollment" showed significant differences between the Urban (M = 7875.2) and Suburban (M = 7068.1) categories and showed significance between Urban and Rural (M = 2139.9) and Suburban and Rural (Table XIII). The P value for all three populations was .001.

The mean scores for the variable labeled "appropriations" showed significant differences between the Urban (M = $16,305,736) and Suburban (M = $14,275,819) categories and showed significance between Urban and Rural (M = $2,603,201) and Suburban and Rural (Table XIII). The P value for all three populations was .001.

The mean scores for the variable labeled "degrees awarded" showed significant differences between the Urban (M = 234.95) and Suburban (M = 228.84) categories and showed

TABLE XIII

Summary of Analysis of Variance Procedure:
Urban, Suburban and Rural

Variable	Location	N	Mean	P Value
Enrollment	Urban	96	7875	.001
	Suburban	131	7068	.001
	Rural	255	2139	.001
Appropriations	Urban	96	$16,305,736	.001
	Suburban	131	$14,275,819	.001
	Rural	255	$2,603,201	.001
Degrees Awarded	Urban	96	234	.001
	Suburban	131	228	.001
	Rural	255	100	.001

Notes:
Alpha level = 0.05

P-Value = the extent to which the statistic disagrees with the null hypothesis

Source: National Center for Educational Statistics IPEDS Survey (1990-1991)

significant difference between Urban and Rural (M = 100.09) categories and significant differences between Suburban and Rural (Table XIII) categories. The P value for all three populations was .001.

To analyze differences between Urban and Suburban campus mean scores, the Duncan's Multiple Range Test was also employed to determine the significant differences between the multi-campus and single-campus institutions. The subgroup means were analyzed for each of the two types of governance structures, and these results appear in Table XIV "Summary of Analysis of Variance Procedure: Multi-Campus Versus Single-Campus".

The mean scores for the variable labeled "enrollment"

TABLE XIV

Summary of Analysis of Variance Procedure:
Multi-Campus Versus Single-Campus Governance

Variable	Location	N	Mean	Duncan Multiple Range Grouping
Enrollment				
	Multi	43	14,925	A
	Single	108	5,652	B
Appropriations				
	Multi	43	$27,441,319	A
	Single	126	$12,258,186	B
Degrees Awarded				
	Multi	43	312	A
	Single	126	212	B

Notes:
Alpha level = 0.05; degree of freedom = 477

P-Value = the extent to which the statistic disagrees with the null hypothesis

Means with the same letter are not significantly different.

Source: National Center for Educational Statistics IPEDS Survey (1990-1991)

showed significant differences between the multi-campus institutions (M = 14,925.5) and single-campus instutions (M = 5,652.9) (Table XIV).

The mean scores for the variable labeled "appropriations" showed significant differences between the Multi-Campus (M = $27,441,319) and Single-Campus (M = $12,258,186) categories (Table XIV). The P value for these two populations was .0001.

The mean scores for the variable labeled "degrees

awarded" showed significant differences between the Multi-Campus (M = 312.40) and Single-Campus (M = 212.50) categories (Table XIV). The P value for these two populations is .0001.

The second facet of the question concerning multi-campus versus single-campus was that of the relationship of location and governance. To identify whether the urban or suburban location was significant an anylsis of variance was performed using the null hypothesis: There is no significant relationship between location and governance. Table XV indicates the results of this test. For the variables Enrollment and Appropriations the P value is .0622 and .0638 respectively which would indicate an acceptance of the null hypothesis. For the variable Degrees Awarded the P value of .0001 would indicate a rejection of the null hypothesis; however, Figure 4, "Degrees Awarded by Location and Governance," shows how this value may be skewed to give an inaccurate conclusion. Urban and Suburban institutions show an inverse effect on degrees awarded making the area of measurement for the variance test inappropriate. This showed a disordinal interaction and therefore this test was not interpreted without considering the interaction effect to provide an accurate conclusion when used to test the hypothesis.

To further research the effects of location and the form of governance the researcher looked at the means of degrees awarded at urban multi-campus institutions, suburban multi-campus institutions, urban single-campus institutions

Table XV
Summary of Analysis of Variance Proceedure
Relationship Between Location and Governance

Variable	P Value
Enrollment	.0638
Appropriations	.0622
Degrees Awarded	.0001

Notes:
Alpha level = 0.05

P-Value = the extent to which the statistic disagrees with the null hypothesis

Source: National Center for Educational Statistics IPEDS Survey (1990-1991)

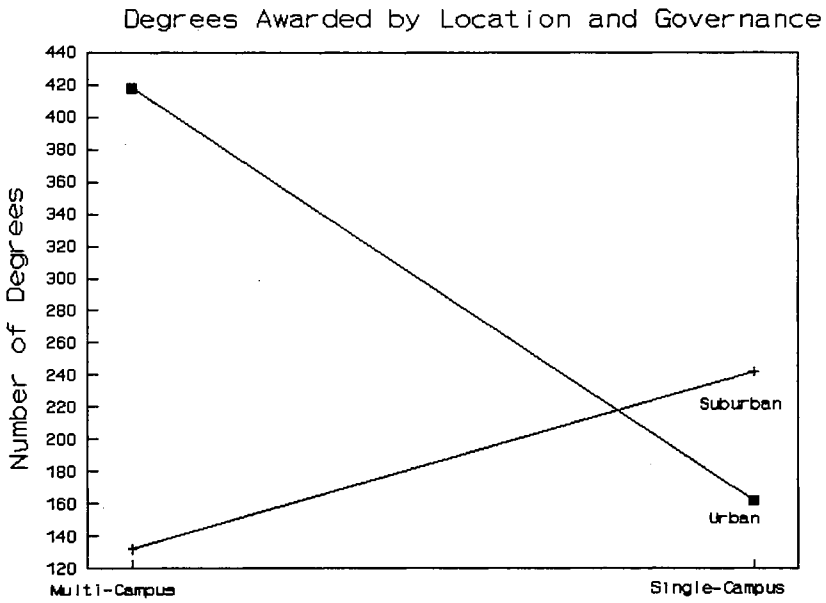

Figure 4. Degrees Awarded by Location and Governance

and suburban single-campus institutions. The null hypothesis for interaction was as follows:

> There is no interaction effect between the location of the institution and the type of governance of that institution on degrees awarded.

With two levels of factors at an alpha level of .05, the critical value for the interaction effect was determined to be 7.08. The f value of the location level was found to be 7.90 and the f value of the governance level was found to be 33.82 which gave the interaction f value of 155.9805, therefore the null hypothesis concerning the type of governance and the interaction effect must be rejected. It was concluded that the combination of location of the institution and the type of governance does effect the number of degrees awarded. Determining these significant interaction effects would caution the researcher from using the interpretation of the main effects.

The final analysis was performed using the Rural Instituions. Discriminate analysis was used to determine the posterior probablility of membership in each classification identified by Katsinas. Table XVI "Percent of Rural Institutions Showing Membership in Each Category," depicts the rate of valid classifications based on the variables: enrollment, appropriations and degrees awarded. The rates for matches along the diagnal line are high. For Category 1, 76%, for Category 2, 59%, for Category 3, 50% for Category 4, 80% for Category 5, 66%.

Table XVI
Percent of Rural Institutions
Classified Into Each Sub-Category

From Category	1	2	3	4	5	Total
1	73.61	2.78	1.39	22.22	0.00	100
2	0.95	59.05	26.67	11.43	1.90	100
3	0.00	8.70	50.00	26.09	15.22	100
4	0.00	0.00	20.00	80.00	0.00	100
5	0.00	0.00	25.00	8.33	66.67	100

Notes:
1. Rural I Institutions: full-time equivalent (FTE) student enrollment of over 2,500

2. Rural II Institutions: FTE student enrollment from 1,000 to 2,500

3. Rural III Institutions: FTE student enrollment of under 1,000

4. Rural IV Institutions: FTE student enrollment of under 1,000 and offer associate of arts degrees

5. Rural V Institutions: FTE student enrollment of under 1,000 and award degrees in occupational areas and limited general education offerings

Source: National Center for Educational Statistics IPEDS Survey (1990-1991)

Research Hypothesis

In order to analyze the proposed classification scheme, three major hypothesis and their related sub-hypotheses were tested:

1. There is no significant difference between community colleges on the basis of geography, along the lines of rural, suburban and urban.

    1a. There is no significant difference in rural, suburban and urban institutions based on total enrollment.

Based on the finding of the of the Multiple Analysis of Variance test reported in Table XIII there are significant differences in enrollment existed between the Rural, Urban and Suburban colleges based on enrollment. Hypothesis 1a was rejected. All three populations' mean scores showed significant differences based on enrollment.

    1b. There is no significant difference in rural, suburban and urban institutions based on state and local appropriations.

Based on the finding of the of the Multiple Analysis of Variance test reported in Table XIII, significant differences in appropriations existed between the Rural, Urban and Suburban community colleges based on appropriations. Hypothesis 1b was rejected. All three populations mean scores showed significant differences based on appropriations.

1c. There is no significant differences in rural, suburban and urban institutions based on degrees awarded.

Based on the finding of the of the Multiple Anaylsis of Variance test reported in Table XIII, significant differences in degrees awarded existed between the Rural, Urban and Suburban colleges based on degrees awarded. Hypothesis 1c was rejected. All three populations mean scores showed significant differences based on degrees awarded.

2. There is no significant differences between community colleges on the basis of governance along the lines of multi-campus and single campus suburban and urban instituions.

2a. There is no significant differences between community colleges in multi-campus and single campus suburban instituions based on total enrollment.

Based on the findings of the Duncan's Multiple Range test reported in Table XIV, significant differences did exist between the multi-campus and single-campus suburban institutions. Analysis of Variance showed no significant relationship between governance and location in the enrollment variable. Hypothesis 2a was rejected. In Suburban institutions there are significant differences based on enrollment.

2b. There is no significant difference between multi-campus and single campus suburban institutions

based on state and local appropriations.

Based on the findings of the Duncan's Multiple Range test reported in Table XIV, significant differences did exist between the multi-campus and single-campus suburban institutions. Analysis of Variance showed no significant relationship between governance and location in the appropriations variable. Hypothesis 2b was rejected. In Suburban institutions there are significant differences based on appropriations.

2c. There is no significant differences between multi-campus and single campus suburban institutions based on degrees awarded.

Based on the findings of the Duncan's Multiple Range test reported in Table XIV and the Analysis of Variance, which showed no significant relationship between governance and location in the variables of enrollment and appropriations, significant differences did exist between the multi-campus and single campus suburban campuses. The significant interaction of governance and location indicates that where governance is multi-campus then significantly more degress are conferred at urban compuses. When governance is single-campus, however, more degrees are conferred at suburban campuses.

2d. There is no significant differences between community colleges in multi-campus and single campus urban instituions based on total enrollment.

Based on the findings of the Duncan's Multiple Range

test reported in Table XIV, significant differences did exist between the multi-campus and single-campus suburban institutions. Analysis of Variance showed no significant interaction between governance and location in the enrollment variable. Hypothesis 2d was rejected. In Urban institutions there are significant differences based on enrollment.

2e. There is no significant difference between multi-campus and single campus urban institutions based on state and local appropriations.

Based on the findings of the Duncan's Multiple Range test reported in Table XIV, significant differences did exist between the multi-campus and single-campus suburban institutions. Analysis of Variance revealed no significant interaction between governance and location in the appropriations variable. Hypothesis 2e was rejected. In Urban institutions, there are significant differences based on appropriations.

2f. There is no significant differences between multi-campus and single campus urban institutions based on degrees awarded.

Based on the findings of the Duncan's Multiple Range test reported in Table XIV and the Analysis of Variance, significant interaction exists between governance and location in the variable Degrees Awarded, and significant differences did exist between the multi-campus and single campus Urban campuses. Specifically, multi-campus institutions conferred more degrees than single campus

institutions when only urban campuses are considered. Therefore, Hypothesis 2f was rejected.

3. There are no significant difference between the rural subclassifications based upon key institutional characteristics.

   3a. There is no significant differences between rural instituions based on total enrollment.

   3b. There is no significant difference between rural institutions based on state and local appropriations.

   3c. There is no significant differences between rural institutions based on degrees awarded.

Based on the Discriminant Analysis testing depicted in Table XVI, hypothesises 3a, 3b and 3c were rejected. Clearly, based on the variables of enrollment, appropriations and degrees awarded, the high rate of hits on the Katsinas Rural categories 1 through 5 represented significant differences in the Rural categories 1 through 5.

Summary

The three research hypothesis and their related hypothesis for study in the first chapter were addressed in Chapter IV. The analysis of the populations based on the key variables: enrollment, appropriations and degrees awarded was assessed for this study and presented. Based on the IPEDS data and the analysis of the validity of the Katsinas classifications, the following chapter will

concentrate on presenting the findings, conclusions and recommendations of this study.

CHAPTER V

CONCLUSIONS, RECOMMENDATIONS, AND CLOSING REMARKS

The purpose of this study was to improve the precision of community college research by advancing efforts to develop an authentic, meaningful, readily useable Carnegie-style classification system for America's publicly controlled community colleges. It is important to note that this study served to validate the urban, suburban and rural classifications developed by Katsinas. Katsinas's Ford Foundation-sponsored work with classifications of community colleges that began in 1993 therefore served as a beginning point for the analysis of the United States Department of Education Integrated Postsecondary Education Data System (IPEDS) data that was presented in Chapter Four.

The specific objective of this study was to test criteria of widely known institutional characteristics, and degrees completed, that would be relatively easy for practitioners in the field, as well as public policy makers, higher education coordinating agencies, and data users to self-identify their institutional classification. The idea was to validate Katsinas' classifications of urban and suburban community colleges (single and multi-campus), and rural institutions.

An extensive review of the literature was conducted, focusing on the development of the community college and other accepted methods of classification such as Carnegie, and the criteria for establishing community colleges from their conception in the 1920's. It was demonstrated that the lack of clear methods for classification at the community college level reiterates the need for development of a meaningful method. Lumping all community colleges together and giving percentages of that total does little to gauge the effectiveness of programs that target two-year institutions of higher education. Perhaps the best case for the need for quality research at the community college level was offered by Cohen:

> Are community colleges worth what they cost? Have colleges overextended themselves? ... Although such questions have been asked from time to time, they have rarely been examined, mainly because during most of its history the community college has been unnoticed, ignored by writers about higher education.
>
> (Cohen, 1991, p.28)

The IPEDS research surveys were as selected for use in the study because of their applicability to the chosen populations and the high level of reliability in previous studies done by the National Center for Educational Statistics. There were 1,300 institutions who replied to various parts of the IPEDS Survey, and various percentages of those were included in data analysis based on which questions were analyzed. Again, IPEDS is a collection of numerous surveys concerning every facet of the institution. Of the three IPEDS Survey Packets obtained (fall enrolment,

degrees competed, and finance), degrees completed was selected because of close ties to the mission of the college and direct relationship of degrees awarded to enrollment.

Summary

The literature reviewed for this study substantiated the importance of awareness of the multiple missions for which community colleges have become responsible, and that it is the community itself that often dictates that mission. In the seventeenth and eighteenth centuries, American higher education was accepted by the general public as a right for only the privileged class. Since the 1960's these aristocratic ideas have changed (Bender, 1990). The idea of higher education has become a part of the American dream, and a majority of those taking advantage of that dream begin at the community college. It is evident that there are diverse groups among and within community college systems, and it is critical for planning purposes to understand what is actually going on based upon facts, when implementing programs. As the federal and state governments consider sweeping changes in student aid, welfare, and employment and training programs, precision among community colleges is all the more important. The support must come from adequate, significant research among purposeful categories.

The analysis of the data and information gathered from the review of literature and the IPEDS Survey revealed that the characteristics which should be used to test the

validaty of the Katsinas Classifications were: (1) state and local appropriations (2) degrees completed (3) total enrollment. It is hoped that an awareness of the differences in categories of two-year institutions will lead the federal funding agencies, researchers, and higher education academic administrators to develop meaningful policies and research which will be empathetic to the needs of the student population community colleges serve.

The mission at the community college closely ties it to its community, shaping its general focus toward student needs and its financial support through bond issues and tax appropriations. The literature review proved that community colleges from their beginnings relied heavily on community support through local appropriations and school enrollments (Bogue, 1950). A brief summary of this literature is presented in Table I on page 30 "Criterion for Creation of the Community College". The literature also proved that secondary consideration for categorizing community colleges should be related to degree completions, which reflects the general focus of the college as well as the type of students that college supports. Focusing on degrees completed also makes a classification system scheme consistent with those updated periodically by the Carnegie Foundation for the Advancement of Teaching.

Finally, the literature revealed variables that would be important in forming a community college in the categories created by Katsinas, and the IPEDS Surveys provided the data to characterize key differences between

the groups. These findings further substantiated previous findings in that the aforementioned categories were congruent with the characteristics that historically describe community colleges.

Based on the review of the literature and the analysis of the IPEDS surveys, there were nine institutional sub-categories confirmed for two-year colleges. The review of the literature substantiated the need for a meaningful taxonomy for the two-year college. The literature provided information which allowed a taxonomy to be validated based on the history of the development of community colleges and the problems and benefits of current methods of classification. The Katsinas studies of 1993 and 1994 provided a framework by which the researcher was able to outline fundamental differences which occurred in the community college. The following findings relate to the primary research hypotheses presented in Chapter I:

Research Question One: Are there significant differences among and between community colleges on the basis of geography, along the lines of rural, suburban and urban, as proposed by Katsinas?

The research data indicated that there was significant differences among and between community colleges based on geographic locations defined as Rural, Urban and Suburban. Two-year colleges should be defined by geographic location. Community colleges, from their beginning, have been closely

tied to the communities they serve. These colleges are supported, financially, by property taxes and bond issues effected by the college board members. Enrollment is also closely tied to the community size and willingness to support the college. It is for these reasons that the missions for these colleges reflect community desires and personalities. Many of the first two-year schools were financed and operated as part of public school districts, and were designed to augment an inferior public school college preparatory program (Nutter, 1974). Community colleges continue to provide convenient access to all individuals in the communities they serve.

As expected, data provided by the Integrated Postsecondary Education System (IPEDS) survey demonstrated significant differences in the total enrollment, state and local appropriations and degrees completed at different categories of community colleges.

Research Question Two: Are there significant differences among and between community colleges on the basis of governance along the lines of multi-campus and single campus community colleges as proposed by Katsinas?

Data indicated that there were significant differences between the multi-campus and single campus Urban and Suburban community colleges based on the variables of state and local appropriations, degrees completed, and total enrollment.

The literature review indicated that this may reflect the movement of the middle class to the suburbs. As the population moved outward, the urban institutions branched out and created multiple campuses with differing means of local support, population pools, and academic needs. The same holds true for the suburban institutions as the middle class continues to move outward and are no longer "bedroom" (pre-1960) communities but rather "independent" communities (Hartshorn & Muller, 1986). These have become, with high-technology research and development, areas which may require suburban institutions to "reach out" with multi-campus arrangements. Of the 315,000 new jobs created in the Washington, D.C., metropolitan area between 1980-1986, for example, 92 percent were located in the suburbs.

Research Question Three: There are significant differences based upon degrees awarded within the rural sub-classification, as proposed by Katsinas?

The analysis confirmed the division of the rural institutions based on the institutional characterisitics was a valid one. Data indicated that the Rural institutions should be subdivided based on key institutional characteristics identified in the literature review. Rural institutions represent a wide range of colleges, but dividing these institutions by associates degrees awarded, financial support both at the local and the state level and

enrollment clearly allowed the researcher to reveal significant differences through analysis. These differences likely reflect the size of the community and the focus of that community which have historically guided the development and success of the community college. These differences in characteristics would also influence the mission of those colleges which is fundamental to any and every post secondary institution. As urban and suburban colleges scramble to redefine themselves through creative governance and partnerships, the rural institutions remain constant and firm in their missions to serve, defined fundamentally by the differences in the key institution characteristics determined by this study.

Research Question Four: Can the two-year branch campuses of four-year colleges that award associate degrees be meaningfully incorporated into a classification scheme?

The Branch Campus idea, as discussed in Chapter Two, is relatively new. Problems arose when attempting to categorize these institutions with the definition provided by IPEDS and the definition as addressed by the six regional accrediting associations. Politics also plays an important role when dealing with the Branch Campus. Often, different sections on IPEDS surveys are filled out at different locations. For example, the financial data which is typically difficult to fill out by branch is typically done at the parent institution, even though on some sections the

branch provided autonomous information (Shantz, 1994). Another model which has emerged in the suburbs is that of the multi-institution centers which are technically branch campuses of several institutions which are not declared as such (Norris, Delany, & Billingsly, 1990). These centers are also described as "institutes," housing several institutions that might provide associates through graduate level degree programs. There are new problems created by these emerging changes and new patterns of financing to be developed. The founding of these inter-institutional colleges may eventually turn out to be a "new" Morrill Act, in terms of service to these fast-growing population areas. The Branch Campus is therefore a developing issue surrounding higher education; until standards emerge, there can be no meaningful classification system using IPEDS data.

Conclusions

On the basis of the previous findings, the following conclusions can be reached:

1. The Katsinas classification system was accurate to categorize community colleges based on the geographic locations of rural, suburban and urban. The communities that support these institutions differ in population, wealth and general educational needs, and this is reflected in the budgets, enrollment and numbers of degrees awarded by that institution. This further supports the notion that the

community college is a reflection of the community itself.

2. The Katsinas method of classifying community colleges based on goverance for Urban and Suburban institutions was proven valid. As populations expanded, some urban and suburban instutitions felt a need to expand to better service the community. The creation of multi-campus districts created a new type of institution which was inherently different from its predecessor.

3. As Katsinas proposed, there are natural subdivisions of institutions by degrees awarded in rural areas. Because of the significant differences discovered in the number of degrees awarded at the rural community colleges, rural community colleges can be meaningfully categorized by degrees awarded using the IPEDS data.

4. At this time there is no way to include the branch campuses in the categorizations. As shown in Chapter II, there is not a generally recognized definition of "branch campus" in the literature of higher education. It does not lie within the scope of this project to determine what constitutes a branch campus and how it could be included in the research in higher education.

Recommendations

The following recommendations were formulated and presented as a result of this study:

1. It is recommended that the aforementioned categories, based on geographic location, governance and

degrees awarded, be considered for inclusion in the Carnegie Commission Classification of Institutions of Higher Education so that two-year colleges can make use of the research generated at institutions of higher education and the federal funding agencies.

2. It is recommended that the National Center for Educational Statistics (NCES) should compile comprehensive lists of two-year institutions by degrees awarded. These data are more important to the field than some other data collected by the NCES. If necessary, internal staff within NCES should be reallocated to provide backup to compile complete and accurate degrees awarded data set for every two-year college in the United States. This should be updated every five years.

3. The researcher identified a need to accumulate more information concerning degrees awarded such as the types of degrees. This would assist in the research as to the relationship between the governance and Urban versus Suburban institutions and possibly more clearly define the focus of each institutional type. It is recommended that additional research be conducted to determine specific types of degree programs offered at the institutions to initiate further focus on academic or occupational philosophies in these two-year colleges. Additionally, it is suggested that further research be conducted to determine how enrollment and expenditures can be included, to determine the impact of those students at rural institutions who do not obtain a degrees.

4. It would have been beneficial if information concerning the general education versus vocation education transfers would have been available. An investigation into the general education versus the vocational education transfers would benefit in gaining an understanding of the characteristics of each category of community college. Again, focusing on the importance of mission in the classification of the community college which reflects the local district would improve the precision of community college research. Is is increasingly obvious that advances in technology are increasing the skill levels required for vocational degrees and more vocational two-year and four-year program transfers are occuring which may effect the number of graduates at the two year level. The old general education versus vocational education dichotomy may no longer be valid.

5. The Branch Campus will continue to impact higher education in every facet. The final recommendation is to follow the development of the Branch Campuses around the nation and move forward to encourage standardization of definitions of these institutions so that meaningful research can be done. The American Association of Community Colleges may be a leader in the process of standardizing this definition. It is recommended that the AACC should convene a special meeting of NCES officials who are familiar with the issues relating to the branch campus (IPEDS). This meeting should include full-time faculty and staff that represent the Council of Two-Year Colleges of Four-Year

Institutions and community college research experts to develop a useable and complete methodology by which to determine what constitutes a branch campus.

Closing Remarks

The review of the literature clearly demonstrated the need for an accepted classification of community colleges. The community college system is in need of appropriate methods of classification so that their efforts can be recognized. This classification system might aid in the policies being made and the funding appropriate to assist in their mission of supporting the communities they serve. A classification system might also support a movement forward towards the school-to-work ideas supported by the present administration, and could continue to encourage industry to get involved with the community college effort. As society looks toward educators to bear more of the burdens of education in general, community colleges need have a valuable means of identifying what is successful and what is not. Community colleges are continuously attempting to create new programs to better suit their clients' needs and develop new solutions for old problems (Cohen & Brawer, 1989). Bogue in 1950 reviewed the literature in higher education and found only a superficial treatment of junior colleges. While the literature has grown in recent decades, we know that many of our current college age students will

find their way into the "open access" doors of the local community college.

It is hoped that an awareness of the differences in the community colleges will lead to the affirmation of the Katsinas classification system to assist in meaningful longitudinal as well as short-term studies to promote policies and funding that will assist these institutions. This classification should account for the broad missions which the two-year colleges as community based institutions must fulfill.

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