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Administrative Motivations to Write Grants in Illinois Community Colleges

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LOYOLA UNIVERSITY OF CHICAGO

ADMINISTRATIVE MOTIVATIONS TO WRITE GRANTS
IN ILLINOIS COMMUNITY COLLEGES

A DISSERTATION SUBMITTED TO
THE FACULTY OF THE GRADUATE SCHOOL
IN CANDIDACY FOR THE DEGREE OF
DOCTOR OF PHILOSOPHY

DEPARTMENT OF EDUCATIONAL LEADERSHIP AND POLICY STUDIES

BY

DONNA RUDY

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VITA

The author, Donna Elizabeth Rudy, is the daughter of Elmer Carl Rudy and Bernice (Tobin) Rudy. She was born August 25, 1944, in Elgin, Illinois.

Her elementary and secondary education was obtained in the public schools of Freeport, Illinois.

In August, 1962, Ms. Rudy entered the University of Illinois, receiving the degree of Bachelor of Science in social studies education in June, 1966. In June, 1969, she entered Northern Illinois University, receiving the degree of Master of Science in counseling education in June, 1970.

From 1970 to 1975, Ms. Rudy was a counselor at Triton College, providing academic, career, and personal counseling to community college students. For three years, she was assigned to an interdisciplinary general education program called Kaleidoscope which integrated five academic disciplines into an experiential community related approach to learning. She designed a quantitative testing package which was the basis for the program receiving departmental status.

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From 1980 to 1984, Ms. Rudy was a therapist at Baum and Associates Counseling Center in Elgin, Illinois. She provided individual, marital, and group counseling as well as hypnosis for smoking cessation in a private agency.

From 1984 to 1987, Ms. Rudy returned to Elgin Community College as the director of Alternatives, a program designed to provide career counseling, training, and job placement to high risk students such as victims of domestic violence, Hispanic homemakers, displaced homemakers, recipients of Public Aid, and single parents. Student enrollment increased from 100 to 550 students per year during three years.

From 1987 to 1990, Ms. Rudy was enrolled at Loyola University in the higher education doctoral program.
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CHAPTER I
INTRODUCTION

Since the mid 1970s, community colleges nationally as well as in Illinois have experienced a period of financial stringency. The primary sources for community college financial support are local property taxes, state funding, and student tuition. After Proposition 13 was passed in California in 1978, property tax limits were enacted in twenty states including Illinois (Cohen & Brawer, 1982). State funding has also been limited in Illinois. "The defeat of state income and corporate tax proposals in the last two years has meant extremely tight budgets for Illinois' public colleges, with most programs receiving minimal increases, if any at all" (Cage, 1989, p. A14).

With local and state funding limited, many community colleges have curtailed their spending through such actions as hiring freezes, early retirement, restricted faculty travel, increased hiring of part-time faculty, and expanded use of telecourses. In addition, there have been cuts in personnel, equipment, courses, and student support services. Moreover, there has been an interest in redefining and/or setting priorities within the mission of
the community college to accommodate the limited level of funding (Breneman & Nelson, 1981; Cross, 1989; Townsend, 1984).

The need for additional funds seems obvious. One way of gaining these funds is through grants, which can assist community colleges in fulfilling their current mission (Hellweg, 1980). Individual states, the federal government, private foundations, corporations, and philanthropic entities all provide grant funding for the improvement of teaching, the purchase of equipment, short-term vocational training, or the extension of access to nontraditional student populations.

However, the level of grant-writing activity varies among community colleges. While the Illinois Community Board (ICCB), the state agency responsible for coordinating community colleges, has not maintained a record of the number of grant proposals submitted to the state or the amount of state funding received categorized by specific community colleges, Rob Widmerg, the Director of Fiscal Affairs at ICCB, believes that the level of grant-writing among Illinois community colleges varies significantly (personal communication, May 30, 1989). This belief was corroborated by the results of a preliminary survey conducted for this study which found that grant funding in these colleges ranged from zero to four million dollars in FY 1989.
All community colleges in Illinois have a rationale for actively seeking grants given their tight financial condition. Community colleges with the most severe financial problems, in particular, would be expected to be most active. However, it is apparent from the results of a preliminary survey conducted for this study that the colleges which are the most active in seeking grants are not as financially stressed as those which are not as active.

Why some Illinois community colleges are far more active (as well as successful) in seeking grants than are others is not known. Various factors such as the type of institutional culture, presidential attitude toward grant-writing, college size and location, and the existence of rewards and supportive services for grant-writers have been suggested as affecting institutional levels of grant-writing activity. Perhaps a combination of these factors in an Illinois community college stimulates a high level of grant-writing among administrators.

Purpose

Since the amount of grant funding varies greatly among Illinois community colleges, the purpose of the study was to isolate those factors which lead to a high level of grant-writing among college administrators. More specifically, this study was designed to ascertain the
possible impact of certain institutional cultures, presidential attitudes, college size and location, and rewards and supportive services upon levels of administrative grant-writing at community colleges in Illinois.

Objectives

The major objectives of this study were as follows:

1) To classify Illinois community colleges into low, medium and high categories of grant-writing based on data collected about the level of grant-writing activity, personnel organization, and college policies at these colleges;

2) To survey selected administrators as to their perceptions regarding cultures which exist at Illinois community colleges, and to determine the correlation between cultural types as defined by Quinn (1980) and the three levels of grant-writing activity;

3) To understand the relationship between the combination of culture, presidential attitude about grant-writing, rewards, supportive services, and college size and location with the level of grant-writing at Illinois community colleges.

Conceptual Framework

An institution's culture plays an important role in
what activities are supported at a college. Culture is "the set of values and assumptions that underlie the statement, 'This is how we do things around here'" (Quinn, 1988, p. 66). Culture exists when "a large number of people share beliefs about how the organization works and what their role is within it" (Barrett & Cammann, 1984, p. 236). Institutional culture consists of shared values, beliefs and norms which help administrators, faculty, and students "understand what is appropriate and important" (Kuh & Whitt, 1988, p. 26). Most people are not aware of the existence of an institutional culture "until it comes in conflict with or is placed in contrast to another culture" (Sales & Mirvis, 1984, p. 116). Culture limits possibilities when it "channels that which people perceive as possible" (Tichy & Ulrich, 1984, p. 244).

Culture, according to the above definitions, has an impact on all constituents and their activities. Therefore a college's culture would affect the level of administrative grant-writing. Group cultures as well as institutional culture may presage the motivation of administrators to write grants. Therefore, administrators may be expected to become involved or not to be involved in grant-writing based on their group and/or institutional culture.

Institutional cultures have been categorized in various ways (Ouchi, 1980; Miner, 1979; Miles and Snow,
One such typology is the Competing Values Approach (CVA) which was developed from a number of empirical studies and concept papers done at the Rockefeller College's Institute for Government and Policy Studies at the State University of New York at Albany in the early 1980s (Quinn & McGrath, 1985; Quinn & Rohrbaugh, 1981; Hall & Quinn, 1983; Kimberly & Quinn, 1984).

According to the CVA, there are four general cultures. The human relations culture (clan) stresses concern, commitment, and morale. The open systems culture (adhocracy/entrepreneurship) stresses growth, external support, and resource acquisition. The rational goal culture (market) stresses accomplishment, productivity, and profit. The internal process culture (hierarchy) stresses stability, control, and continuity.

Figure 1 presents an illustration of these four cultures. The intersection of two axes create four quadrants; the vertical axis ranges from decentralization to centralization and the horizontal axis ranges from internal to external focus. Each quadrant represents one culture.

The figure illustrates the relationship among the cultural models. Each culture has an opposite with which it competes. For example, the human relations culture
Toward
Decentralization

HUMAN RELATIONS CULTURE
(Clan)

Toward Human Resources

Concern
Commitment
Morale

Discussion
Participation
Openness

Long Time Lines
Internal Focus

Measurement
Documentation
Information Management

Stability
Control
Continuity

Toward Consolidation & Equilibrium

INTERNAL PROCESS CULTURE
(Hierarchy)

OPEN SYSTEMS CULTURE
(Entrepreneurial)

Toward Expansion

Insight
Innovation
Adaptation

External Support
Resource Acquisition
Growth

Short Time Lines
External Focus

Accomplishment
Productivity
Profit

Goal Clarification
Direction
Decisiveness

Toward Maximization of Output

RATIONAL GOAL CULTURE
(Market)

Toward Centralization

Figure 1. Competing Values Framework: Culture.


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negatively correlates with the rational goal culture, and the open systems culture opposes the internal process culture. Similarities exist between each culture and its two adjoining cultures. For example, the human relations culture is similar to the open systems culture in flexibility. It is similar to the internal process culture in its internal focus.

Differing means and ends are associated with each culture. For example, the means of the rational goal culture are planning and goal setting; its ends are productivity and efficiency. The two criteria in each quadrant represent the cultural ends and means.

Leadership characteristics can also be represented by the two criteria in each culture (Quinn & McGrath, 1985). In the open systems culture, the innovator and broker roles predominate. In the human relations culture, the mentor and facilitator roles preside. In the internal process culture, the monitor and coordinator roles are valued. In the rational goal culture, the producer and director roles have eminence.

Organizations tend to develop through predictable life cycles (Quinn & Andersen, 1984). The first stage is entrepreneurial which reflects the open system culture. The second stage is collectivity which reflects a combination of the open system and human relations cultures. The third and most difficult stage is
formalization which is a combination of the internal process and rational goal cultures. The fourth stage is the elaboration of structure which is a balance among all four cultures.

Maintaining a balanced culture requires administrators to accept the contradictory cultures within their institution. If they see one culture only, there is a danger that they will overemphasize one set of values and skills (Quinn & Cameron, 1988). For example, the open systems culture can become an anarchy without some stability and internal focus. The rational goal culture can become a sweat shop without some attention to human resource development.

In a study administered by the National Center of Higher Education Management in 1983 (Krakower, 1987), trustees, administrators, and faculty were surveyed at 334 four year colleges about the extent to which their institutions were associated with Quinn's four cultural types. The findings indicated that the culture of most of the responding institutions (96.5%) consisted of a combination of cultural types. The results supported the competitive nature of cultures in Quinn's CVA theory since clan scores were strongly negatively correlated with market scores and hierarchical scores were strongly negatively correlated with adhocracy scores.

Which cultural types or combinations of cultural
types are conducive to grant-writing in Illinois community colleges are not known. Use of Quinn's CVA theory can allow administrators to compare their institutional and group cultures and their college presidents' leadership styles to characteristics of the four cultural models. In this way, a general cultural profile can be obtained of Illinois community college culture and presidential leadership style. If administrators at the institutions with a high level of grant-writing activity identify a different type(s) of institutional culture than administrators at institutions with a low level of grant-writing activity, then it would be demonstrated that certain cultural types support grant-writing while others do not.

Along with supportive cultural underpinnings, an effective grant-writing effort seems to require the institution's president to display a positive attitude toward grant-writing. The most essential factor for successful administrative grant-writing may be "communication from the president that grants seeking is of highest priority" (Hellweg, 1980). In a 1975 study (Young, 1978), the researcher selected nine colleges to represent high, middle, and low funding categories for site visits based on the results of an earlier survey of Florida community colleges. Interviews indicated that colleges placed in the high funding category have the
following characteristics:

1) Top priority given by the president to the grant funding effort which, in turn, develops positive attitudes toward grant-writing by administrators.

2) A high level of agreement between the president and the resource development officer.

Supportive services appear to be associated with a high level of college grant-writing. The existence of an adequately staffed and funded resource development program is important in assisting administrators be effective in their grant-writing efforts. Further results from the study of Florida community colleges (Young, 1978) indicated that colleges placed in the high funding category have the following characteristics:

1) A government relations/resource development program which communicates closely with government personnel about grant proposals and establishes institutional funding priorities.

2) A full-time development officer who understands the process of grant funding; the placement of the position in the organizational hierarchy; adequate support staff; adequate budget for travel, communications, and publications.

A rewards system appears to motivate grant-writing if the administrator receives recognition, a sense of achievement, responsibility for a project, advancement in
the college, and the enjoyment of the work itself (Bauer, 1989). Recognition rewards may include: grants person of the month, dinner with board members, plaques, stipends, newspaper releases, conference presentations, and increase in status in the organization.

College size and location seem to be directly related to the financial status of community colleges. However, an earlier survey conducted for this study determined that college financial status does not differentiate among colleges with a high and low level of grant-writing. However, Clark (1971) maintains that college size is related to culture. Large colleges generally have strong group cultures since they have difficulty forming an institutional culture which includes the whole operation. Perhaps size affects the level of grant-writing indirectly by setting the stage for the development of strong administrative cultures which, in turn, reinforce the value of writing grants.

General Hypothesis

Colleges with a high level of grant-writing would be different than colleges with a low level of grant-writing in terms of institutional cultures, presidential attitudes, college size and location, supportive services, and reward systems.
Sample and Data Gathering Procedures

This study was conducted in two stages. First, an initial study was conducted to ascertain the level of administrative grant-writing activity in each Illinois community college. A two-page researcher-designed survey was mailed to the development specialist or the person most involved in grant-writing. Data from this survey were used to group colleges into one of three levels of grant-writing activity: high, medium or low.

Once this information had been gathered, a six-page researcher-designed survey which focused on the impact of institutional culture, presidential attitude toward grant-writing, reward systems, and support services upon college level of grant-writing activity was mailed to all Illinois community college administrators in positions in which grant-writing was feasible.

Definition of Terms

The following definitions were used in the study.

Culture - The informal system of beliefs, values, and norms which are shared by people who work at an institution, as measured by the researcher-designed survey based on Quinn's Competing Values Approach.

Grants - Written proposals, which are open to competitive bidding, to obtain funding for a specified purpose. They are submitted to government agencies and private
foundations.

Organization of the Study

In this chapter a general introduction to factors affecting levels of grant-writing activity in higher education institutions has been presented. The purpose of the study - to ascertain the factors affecting grant-writing activity in Illinois community colleges - has been stated, and the general hypothesis, objectives, definition of terms, methodology, and limitations of the study have been included. Chapter II reviews research studies relating to community college presidential leadership, culture, grant-writing, and college size and location. Chapter III explains the procedures used to conduct the study. Chapter IV presents the results by hypothesis. Chapter V draws conclusions based on the results and the literature.
CHAPTER II
REVIEW OF THE LITERATURE

Summary of Rationale

Since institutional culture influences the behavior of all constituents, community college administrators are influenced by their college institutional culture to be or not to be involved in grant-writing. If administrators believe that grant-writing is not encouraged at their institution, they will not write grants. If administrators believe that writing grants is appropriate and important at their institution, they will be predisposed to write grants.

In this study, there are three different types of culture which all are related to administrative motivations to write grants. Institutional culture is the general culture of a specific community college and group culture is a subculture made up only of administrators. Organizational culture is the general culture of the community college sector in higher education.

There appears to be a close relationship between organizational culture and presidential leadership. It is not clear if culture influences the president to encourage grant-writing and/or if the president, by encouraging
grant-writing, influences culture.

Also there appears to be a relationship between institutional culture and college size. Perhaps the differences in culture between large and small community colleges are associated with differences in grant-writing activity.

Relationship to the Problem

In a period of limited finances, most Illinois community colleges need additional funding. Some of this need can be met through grant funds. However, there is a great variation in the level of grant-writing activity and grant funding among community colleges. Various factors such as the type of institutional culture, presidential attitude toward grant-writing, college size and location, and the existence of rewards and supportive services for grant-writers have been suggested as affecting institutional levels of grant-writing activity. A combination of these factors may provide a partial explanation of why administrators at some Illinois community colleges are actively involved in grant-writing while administrators at other colleges are not.

Summary of Relevant Literature

The nature of grant-writing is very different in community colleges than in four-year colleges and
universities because community colleges do not value faculty research. Although four-year institutions differ in their commitment to faculty research, most administrators and faculty at four-year institutions value faculty research to some extent and thus grant-writing to support the research. In contrast, most administrators and faculty at community colleges do not value faculty research.

Administrators at community colleges have different motivations to write grants than do administrators at four-year colleges. Community college administrators seek grant funding which supports their institutional goal of providing programs and services to meet the educational needs of residents of the local community. They are not pursuing funding to support faculty research. However, administrators at four-year institutions seek grant funding to support the particular mission of their institution. For example, administrators at research universities try to establish a climate conducive for research by providing faculty with released time, physical facilities, and graduate assistants (Blair, 1983). Administrators at comprehensive state colleges encourage research but provide little or no released time from teaching for faculty to conduct research. Administrators at liberal arts colleges encourage faculty research which is more "horizontal" than "vertical" reflecting "a broader
spectrum of less advanced courses" (Clark, 1985).

Grant-writing is an important source of funding at community colleges. Funding from grants in community colleges in Illinois ranged from zero to four million dollars in FY 1989 according to the preliminary study conducted for this study.

Grant-writing is part of the general field of resource development which, at some community colleges, includes a college foundation, corporate solicitation, alumni associations, and commercial activities undertaken to support educational programs and services (National Institute of Education, 1984). However, grant-writing differs from the other areas of resource development in that most grant funds received by community colleges are from nonlocally based government sources (Ottley, 1978). Grants funds given by private foundations to community colleges make up only 1% of all foundation gifts to education (Ryan, 1988).

The nonlocal orientation of grant-writing makes writing grants different than other means of raising funds for community colleges. A 1987 study (Glandon) reveals a negative correlation between college foundation activity and grant-writing activity. With 284 community college foundations grouped into high success, low success, and inactive categories, the one characteristic of the low success foundations was their emphasis on government grant
proposals. The active foundations were involved with locally oriented activities such as personal solicitation, an annual fund campaign, special events, and programs with business and industry. This finding supports informal communication from some members of the Illinois Resource Development Commission that college foundations are not related to grant-writing at their institutions (personal communication, 1989).

Grant-writing appears to be positively correlated with a favorable attitude of the college president toward grant-writing. In a study consisting of interviews of 25 development officers (McNamara, 1988), a consensus existed about three characteristics necessary for an effective two-year college fund-raising program: presidential support, involvement of board members, and a strong development officer. In a 1975 study (Young, 1978), the researcher selected nine community colleges to represent high, middle, and low funding categories for site visits based on the results of an earlier survey of Florida community colleges. In colleges placed in the high funding category, the president gave top priority to the grant funding effort. In forming a structure at community colleges to insure success with grant-writing, Hellweg (1980) stresses the importance of the president communicating that writing grants has "the highest priority". Moreover, this point needs to be communicated
A good working relationship between the president and the development officer seems critical to a successful grant-writing effort. The Young study (1978) stressed the importance of a high level of agreement between the president and the resource development officer. The development officer should assist the president by being an "accomplished generalist" (Coll, 1983) by advising about ramifications of presidential decisions upon funding sources and arranging meetings for the president with legislators.

Community college administrators may also work closely with the president to insure a successful grant-writing effort. As a team, administrators involved in grant-writing efforts may play the following roles effectively: lobbyist, conceptualist, writer, budget analyst, and negotiator (Webb & Jackson, 1978).

Adequately staffed and funded supportive services tend to be associated with a high level of grant-writing. Results from a study of Florida community colleges (Young, 1978) indicated that colleges which receive a high level of grant funding have adequate staff and budget. In a study consisting of interviews of 13 directors of successful resource development programs at California community colleges, the importance of adequate budget and staff was consistently stressed (Jenner, 1987). The
implication of these studies is that adequately staffed and funded supportive services are apt to be used by administrators involved in writing grants.

Rewards tend to reinforce grant-writing behavior in institutions of higher education. There are several kinds of rewards for writing grants: achievement, recognition, the work itself, responsibility for a project, and advancement (Bauer, 1989). In terms of internal recognition, several incentives have been suggested such as the designation of a grant-writer of the year, plaques, stipends, and dinner with board members. As for external recognition, press releases, conference presentations, and inclusion in college publications may be motivating factors. Some perquisites such as special parking area, increased budget, acquisition of special equipment, or new title may also constitute institutional rewards.

In summary, the literature about grant-writing indicates that a relationship exists between grant-writing activity in community colleges and a favorable attitude of the college president toward grant-writing, a good working relationship between the president and the development officer and/or administrators, adequately staffed and funded supportive services, and rewards for grant-writers.

Very little has been written about the relationship between institutional culture and grant-writing. In the Young (1978) study, one conclusion was that a risktaking
climate was important for grant-writing to flourish. This statement appears to reinforce the connection between the values of the open systems culture and a high level of grant-writing.

The remaining sections will explore the literature about community college culture and presidential leadership, starting with an historical overview of community college organizational culture.

An Historical Overview of Community College Culture

Different types of organizational culture have characterized different periods in community college history. Consequently, presidential leadership styles have followed the changes in culture. As Wenrich (1980, p. 37) stated:

As the community college movement has evolved, it is possible that the nature of the presidency has changed.

Deegan and Tillery (1985) believe that community colleges have passed through four generations: high school extension, 1900-1930; junior college, 1930-1950; community college, 1950-1970; comprehensive community college, 1970-present. Each generation has called for a new presidential role and has emphasized different cultural values.

From 1900 to 1930, the public junior college was an adjunct of the local secondary school and was perceived as providing the 13th and 14th years of a high school
education. It was usually administered by the high school principal who reported to a local school board.

Because of these early roots, community college organizational culture is considered to be more bureaucratic than other institutions of higher education. The bureaucratic model of governance is based on the idea of a formal hierarchy with communication being channeled through chains of command (Weber, 1947). In a bureaucracy, the president has the authority to coordinate the activity of the general operation efficiently. The expertise of the president is not questioned, and the power of the president is evident. Titles and authority are respected. Policies and procedures are specified in detail. The bureaucratic culture places value on efficiency, following procedures, and not questioning authority. Being part of a bureaucracy means not taking risks and covering mistakes. The goal is to please the administrator next on the reporting chain. The style of presidents in a bureaucracy is cautious, conservative, and respectful of policy and procedures. Presidents are well organized and able to coordinate and monitor subordinates. They are slow to develop new programs or new markets.

From 1930 to 1950, the majority of public junior colleges broke away from their high school roots and sought an identity for junior colleges as part of higher education. In Illinois, legislation was passed to
establish their own boards and report to their own state agencies. The faculty sought more power and status to emulate their four-year counterparts.

Since junior colleges perceived themselves as part of higher education, junior colleges sought to emulate the traditional values of the four-year institutions of higher education. The collegium model of governance is based on the concept that "the community of scholars" should be in charge and decisions should be based on faculty consensus (Millett, 1962). As professionals in professional organizations, faculty should play the major role while administrators play minor roles (Etzioni, 1964). The culture reinforces being a team player: doing what is best for the college, encouraging faculty and students, and feeling emotionally committed to the mission of the college. The role of the president is to share power with the faculty in a form of participatory government. As a team builder, the president needs human relations skills. As a facilitator and mentor, the president should be cooperative and supportive.

The junior college was transformed into the community college during the 1950s and 1960s during a period of rapid growth in college enrollments and student financial aid programs from the federal government. After World War II, a large number of veterans took advantage of the G.I. Bill to attend colleges in general and community
colleges in particular. More students enrolled as a result of the passage of the the Higher Education Act of 1965 followed by the Higher Education Amendments of 1972 which extended federal financial aid to needy college students. Even more students attended as a result of adult education, community service, and remedial education becoming part of the mission of the community college.

During this time of high student enrollment and expansion of services, the community college developed an entrepreneurial organizational culture. Finding new resources in order to build and/or expand facilities and developing new markets were important. Creative ideas and individualism were reinforced. Presidents were innovators and risk takers, ready and anxious to move quickly.

McClenney (1978, p. 26) stated:

The president functioned as an educational entrepreneur, and creativity, glamour, and excitement prevailed in most quarters. Mistakes ... were obscured by growth in student enrollment and the development of campuses.

The financial condition of community colleges changed drastically between the early 1970s and mid 1980s. Presidents were forced to deal with tight budgets, collective bargaining, and state legislatures.

A combined bureaucratic-political organizational culture developed. With a number of interest groups competing for limited resources, conflict was inevitable. The political governance system presumes that policy is
formed through conflict management (Baldridge, 1971). It is important to analyze what groups have a stake in the issue at hand, what they want to achieve, and what compromises will be acceptable to them in order to achieve one's own purposes (Block, 1988). Because of tight budgets, presidents also had to manage resources efficiently by setting up systems of accountability, cost effectiveness, and management by objectives. McClenney (1978, p. 33), in trying to encourage presidents to adopt the managerial perspective, concluded:

The president may even reach a point when he or she will not mind being called a manager - one who plans, organizes, directs, coordinates, and controls in order to insure the qualitative growth of an exciting institution.

The dominant community college culture and presidential leadership styles during the period from 1986 to 1990 are not clear. However, the role of bureaucratic manager is currently eschewed by most community college presidents. A manager focuses upon getting things done while a leader is concerned with goals and philosophy. Bennis (1989, p. 18) describes the difference in this way:

Leaders are people who do the right thing; managers are people who do things right.

Currently it is much more respectable to be considered a leader than a manager.

A customer service culture which originated in the corporate sector (Desatnick, 1987; Peters and Waterman, 1982) may characterize community colleges currently. If
so, a combination of prior cultural values would be revived and integrated into a new entrepreneurial-political-collegial cultural direction. The entrepreneurial culture would return strongly to attract more students through expanded and improved services. The political emphasis upon mediating with external interest groups would unite with the collegial emphasis upon motivating internal constituents into a cohesive unit.

The presidential role which best fits the decentralized and flat organizational hierarchy in the corporate sector appears to be a combination of inspiring entrepreneurs of smaller units, building of teams of internal constituents, and directing achievement of goals within the context of a well articulated mission. With this approach, the challenge for the president is to know the correct role to emphasize at the right times. Wenrich states (1980, p. 39):

Presidential success may hinge on the ability to recognize which role must be played at what time, and then to assess one's ability to play the particular role - or to get a substitute.

Wenrich believes that community college presidents play five roles: advocate, manager, planner, negotiator, and legitimatior. Therefore the president must have a refined sense of timing in order to know when to play each role. Wenrich implies that presidential turnover may be the result of playing the wrong role.

Several theorists believe that a combination of
presidential roles is ideal. Reyes and Twombly (1987) believe that presidents of more developed institutions have the capacity to use three leadership roles and presidents of least developed institutions can only play one role.

George Vaughan (1986) presents a metaphor of a presidential seesaw with internal and external constituents at the ends and the president in the middle, maintaining a delicate balance. The seesaw should be in constant motion with the president taking small steps to correct imbalance as it occurs. Vaughan states (p. 5):

Balancing the presidential seesaw is the primary role of the college president, for without balance, the college can never reach its full potential nor can the president ever be an effective leader.

Cameron and Whetton (1983) agree that presidents stress two cultural directions: one for the external and one for the internal environment. They claim that the most adaptive leaders can adopt values from each cultural orientation simultaneously. However, Richard Alfred (1984) portrays presidential leadership as "a catalyst that adapts the internal organization to changing environmental conditions" (p. 10). The goal is to make the internal factors congruent with external factors. In his view, external factors have more weight and require more of the president's attention.
Comparison of Institutional Cultures

Although community college organizational culture changes as it passes through developmental stages, each community college has its own distinct institutional culture. The institutional culture of each community college may be strong or weak, may or may not be divided into subgroup cultures, and may consist of one or many types of cultures.

However, there must be a way of comparing institutional cultures without studying each institutional culture at every college in depth. One way is to classify institutions according to certain attributes. Detecting differences in culture among institutions is necessary in this study in order to compare the culture of community colleges with medium and high levels of grant-writing to the culture of colleges with a low level of grant-writing in this study.

There have been several attempts at classifying institutional cultures to facilitate comparisons. On the basis of technology, Perrow (1967) classified organizations into the following categories: craft, routine, nonroutine, and engineering. Miner (1979) identified four domains on which to base comparisons: hierarchic, professional, task, and group. Miles and Snow (1978) viewed the nature of institutions in the following ways: analyzer, implementer, defender, and prospector.
The relationship of cultures to the development of new programs to appeal to potential students can be used to compare cultures (Hall & Quinn, 1983). Quinn's Competing Values Approach (CVA) consists of the following four cultural models: open systems, human relations, internal process, and rational goal. The open systems culture which emphasizes institutional growth and resource acquisition can be characterized as being the first on the scene with an inspired staff to present an innovative program. The rational goal culture which stresses accomplishment and productivity can be described as entering the scene later with a cost efficient program. The human relations culture which values tradition and morale enters new markets slowly. The internal process culture which values preserving its market niche with more efficiency rarely enters new markets at all.

Markets, bureaucracies, and clans can be compared on the basis of behavior which is considered to be acceptable at work (Ouchi, 1980). In markets, employees are expected to compete with each other to increase their salaries. Employees follow the formal rules of the hierarchy in bureaucracies to gain acceptance from their supervisors. Employees are socialized through tradition in clans to understand what behavior is acceptable.

The psychological orientation of the members of an institution can be used as a basis of comparison among
cultures (Cameron, 1985). The Myers-Briggs Type Indicator, which is based on Jung's philosophy, identified four psychological types: thinking, feeling, intuiting, and sensing. If most members of an institution are characterized as one psychological type, then the institutional culture is based on that psychological type. Cameron characterizes feeling as "participation, spontaneity, flexibility, and interaction" (p. 15). Thinking calls for "order, stability, linearity, and rationality" (p. 15). Intuiting encompasses "broad perspective, creativity, imagination, and ideology" (p. 16). Sensing requires "action, systems, short-term perspectives, and pragmatism" (p. 16). Thinking is negatively correlated with feeling, and intuiting is negatively correlated with sensing.

Individual development theory has been applied to the organizational level with the concept of organizational life cycles (Quinn & Cameron, 1981), and institutional cultures can be compared based on developmental stages. Cultural changes follow a predictable order according to Quinn's Competing Values Approach (CVA). The first is the entrepreneurial stage which stresses the values of the open system. The second is the collectivity stage which emphasizes the human relations values. The third is formalization which combines the values of the internal process and rational
goal cultures. The fourth is elaboration of structure which features the open systems values for renewed growth.

Several studies have been based upon organizational development. Downs (1962) focused on the founding stages of government bureaus. Lippitt and Schmidt (1967) believed that corporations progressed through birth, youth, and maturity. Scott (1971) traced corporations from informal groups to formalized bureaucracies to diversified conglomerates. Greiner (1972) pictured organizations having to solve problems before moving on to the next stage. Lyden (1975) emphasized that the nature of problems determines values. Katz and Kahn (1978) described three stages: primitive, stable, and elaboration of structure.

A study compared institutional cultures of 334 institutions of higher education using Quinn's four CVA cultural models. In 1983, the National Center for Higher Education Management System (NCHEMS) distributed a survey instrument to trustees, administrators, and faculty (Krakower, 1987). The Institutional Performance Survey measured culture and institutional performance (enrollment, revenues, characteristics, strategy, decision processes, external changes). The hypothesis was that institutions with strong cultures were more likely to perform better than institutions with weak cultures. The data did not support the hypothesis.

The results of the cultural part of the study
supported the CVA theory. Clan scores were strongly negatively correlated with market scores and hierarchical scores were strongly negatively correlated with adhocracy scores. The culture of most institutions consisted of a combination of several cultural types. Only 12 institutions (3.5% of the sample) had single predominant cultures, and they were all clan cultures. Cultural strength was defined as internal agreement among group members. Organizations may have strong cultures even if they are comprised of more than one type of culture. Approximately 25% of the responding institutions had cultures which were distinctly stronger than those of the remaining colleges.

Even though there was no general relationship between culture and effectiveness, cultural type was related to particular areas of institutional performance measures. For example, the clan culture was effective in developing morale which was measured by student educational satisfaction and personal development, faculty and administrator employment satisfaction, and organizational health. The adhocracy was effective in academic development for students and faculty, student career development, and community interaction. The market was effective in the ability to acquire new resources. However, the hierarchy was not effective in any area.

There are some limitations to the study (Krakower &
One is the low response rate (48%) which makes the validity of the results questionable. Secondly, there was a low level of agreement among members of the same institution on the non-cultural items, which makes generalization of these results unwise. However, there was a high level of agreement on the cultural items which supports generalization.

The relationship among institutional performance, culture, and student outcomes was examined using the data from the NCHEMS study (Ewell, 1985). High levels of student dissatisfaction were strongly associated with the hierarchy as well as with non-public control, low levels of trust in institutional functioning, and with infrequent student-faculty contact. Student satisfaction and noncognitive development were related to the clan culture.

The Institutional Performance Survey (IPS) used in the NCHEMS study was administered to 263 faculty and chairpeople of the English and business departments at ten SUNY community colleges in 1985 (Gigliotti, 1987). The hierarchy culture was the dominant culture followed by the clan culture. The hierarchy was associated with student academic, career, and personal development, faculty and administrator employment satisfaction, community interaction, and organizational health. Faculty and department chairpeople in two types of departments as well as in their separate departments had the same perceptions.
of organizational culture, but differed in their perceptions of organizational effectiveness.

This study demonstrates the level of agreement about culture among faculty groups in a community college. The dominant cultural type was different for faculty at New York community colleges than for faculty, administrators, and trustees in the four-year college population of the NCHEMS study. This study dispels the notion that perhaps the instrument is biased against the hierarchical culture.

A community college version of the IPS used in the NCHEMS study was developed and field tested at Montgomery College, MD (Zammuto, 1985). The instrument was refined but not changed based on comments from a panel of administrators, faculty, and staff in three community colleges.

Most of the refinements improved the instrument generally as opposed to narrowing its focus to community colleges. Some of the wording was changed. A "don't know" category was added and all information for each item was displayed together in the Executive Report.

One study used qualitative measures to compare the strength of cultures at three Catholic colleges sponsored by women's religious communities and to examine the cultural impact upon presidential selection (Kolman, 1987). Site visits of at least eight days were conducted
at each college, and data were obtained through interviews, observation, and document analysis.

The results indicated that the strength of the culture provided clarity to the search process. College A, with the strongest culture, required a president from the religious order. It is has a stable mission and a long history; it is small and traditional. College B, with the weakest culture, had experienced changes in mission, program, and clientele. There was no unified image of the institution or the qualities needed in its leader. College C, with a moderately strong culture, had a practical focus and was looking for a president with fund raising expertise.

The impact of culture on the presidency might be questioned by Roueche (1981, p. 52) who stated:

The molding and shaping of a new community college culture is clearly and visibly the domain of the community college president.

**Operationalization of the CVA**

The CVA theory is based on a study (Quinn & Rohrbaugh, 1981) which identified criteria for organizational effectiveness from the perspective of theorists. The goal was "to make the implicit and abstract notions of multiple theorists explicit and precise" (p. 365). The results demonstrated that theorists did share a common conceptual framework.
Theorists were asked to evaluate the conceptual similarity between every possible pairing of 17 of Campbell's list of 30 indices of organizational effectiveness. Among the paired comparisons of criteria which the theorists rated, the following three dimensions accounted for the most variance: internal/external focus, flexible/stable structure, and means/ends continuum. They constitute the major criteria by which organizations are classified by the CVA.

Three of the four CVA cultures had been developed previously by organizational theorists. The internal process culture was described as a "bureaucracy" by Weber (1947). The rational goal culture was entitled "the market" by Williamson (1975). The human relations culture was called "Theory Z" by Ouchi (1980) and "the collegium" by Millett (1962). Eventually the open systems culture was developed by Quinn and Cameron (1983).

A practical application of the CVA was demonstrated in a study by Rohrbaugh (1981). The purpose of the study was to examine the cost effectiveness of thirty offices with expensive computerized job matching systems in the Employment Service. Survey results were averaged by offices instead of by individuals. Graphing the effectiveness of each office on the eight means and ends criteria made it possible to see differences in dominant criteria and in the balance between criteria among the
Quinn and Cameron (1983) also used the CVA in a qualitative study of a community mental health agency which moved through three life cycle stages. In the entrepreneurial stage (open system) which consisted of the first five years, there was an emphasis on innovation. In the collectivity stage (human relations), there were high levels of cohesion among workers and an ideological commitment. Negative press about the Department of Mental Hygiene and then about the program brought about the formalization stage (internal process and rational goal) which emphasized efficiency and accountability. Many of the staff left or remained with less motivation when formalization occurred. The study ended before the community mental health agency reached entered the fourth stage, elaboration of structure.

It is difficult to make a smooth transition to formalization since the change is generally "costly both in financial and human terms" (Quinn & Andersen, 1984, p. 16). There is a dramatic shift from the values of the open systems and human relations cultures to the opposite values of the internal process and rational goal cultures. Consequently, there is a danger of diminished performance and bitter conflict since most people are not aware that a natural process of maturation is occurring.

The concept of incongruency is important in
understanding how cultures change (Quinn & McGrath, 1985). For example, when the open systems model becomes more powerful, its opposite, the internal process model, begins to emerge. Growth means an increase in the number of people and a reduction in informal communication. This brings increasing tension and the need for formalization. At some point, a major shift to the internal process culture occurs. During transitions, strategies which worked in the past only make the situation worse (Quinn & Kimberly, 1984).

Cultural Studies of Specific Community Colleges

Although comparing institutional cultures detects differences among institutional cultures, the study of a specific community college provides a deep understanding of one culture. A review of studies of specific community colleges is important to confirm the results of studies which compare cultures of many institutions.

A study was conducted at St. Petersburg Junior College which surveyed faculty, staff, and administrators about institutional culture (Pesuth, 1976). The results were classified into four categories developed by Rensis Likert: exploitative authoritarian, benevolent authoritarian, consultative, and participative. All of the groups believed the participative model was ideal. The faculty saw the leadership as benevolent authoritarian,
and the administration saw it as consultative.

In a similar study of a community college, a sample of 731 Miami-Dade Community College faculty, administrators, and support staff received The Institutional Climate Survey, which is based upon the Likert categories described above. The faculty scored lower than the other groups in terms of their perception of the college culture. On the basis of the results, Roueche (1987) claimed that the leadership at Miami-Dade is in the "high" consultative category with every chance of moving into the participative category. However, with a 35% return rate, the results are questionable.

Structured interviews also were part of the Roueche study. Many of the comments of the administrators reflected the values of the participative culture. Some samples of the administrators' statements follow. "The management of a college involves the enhancement of the individual - first the student, and then the faculty member" (p. 131). "The opportunity and challenge to meet adult needs and expectations call for dynamic responses which are not impeded by the bureaucracy" (p. 121). "The philosophy is to get good people, give them good instruction, give them lots of room to move, lots of places to be creative, don't ride them, don't press them, trust them, and keep the project moving" (p. 127).

A limitation of the studies at St. Petersburg Junior
College and Miami-Dade Community College is that the surveys did not include any externally oriented cultural options such as the entrepreneurial or political models. The surveys were limited to internally oriented options such as participative and authoritarian.

However, both studies confirmed that faculty and administrators at both community colleges view the bureaucratic culture as less positive than the human relations culture. All groups viewed the participative category as ideal.

A study of Broome Community College in New York involved interviews, surveys, and observations (Fish, 1988). Generally students had positive attitudes toward the college and repeated the college reputation for having excellent student/teacher relationships. The students had a local orientation and did not value leaving the area to attend college. Also the students believed their college experience increased their self-confidence and raised their aspirations. There is no evidence of the students being "cooled out." The faculty as a whole identified with the college and with the concept of service to students and the community.

Presidential leadership

Presidential leadership and institutional culture appear to be intertwined. In fact, some cultural studies
appear to be an analysis of presidential policies such as the study of "Family State College" by William Tierney (1988). Moreover, presidents played major roles in forming or changing the sagas of Reed College, Antioch College, and Swarthmore College (Clark, 1971). Therefore, a review of studies of presidential leadership provides a better understanding of community college culture.

The study conducted by George Vaughan (1986) consisted of 1) interviewing 96 community college presidents, trustees, spouses, faculty, administrators, and national leaders, 2) administering the Career and Lifestyles Survey to 838 presidents (70.5% response), and 3) administering the Leadership Survey (84% response) to 75 leaders which received five or more votes from community college presidents in their state. Spouses of the presidents were also surveyed.

The following four leadership roles were identified from the interviews: communicator of the community college mission, educational leader, motivator of internal constituents, and external articulator. However, the survey results indicated that most presidents were not successful in articulating the community college mission. Moreover, they indicated that they spent little time with academic concerns; most of the academic leadership was supplied by the instructional vice president.

According to Vaughan, the presidential leadership
role is based on a combination of the bureaucratic and collegial cultures. Some presidents do not understand how to remain a strong leader while at the same time involving faculty in making decisions. Shared governance is supposed to be participatory in nature but with ultimate decisionmaking authority belonging to the president.

A study conducted by Pedro Reyes and Susan Twombly (1987) consisted of administering surveys to 44 participants: the president, instructional dean, a chairperson, and a faculty member from 11 community colleges. The survey's purpose was to measure the dominant type of academic governance among bureaucratic, collegial, and political. The results indicated that the bureaucratic was dominant followed by the political type. Over half of the presidents and almost all the faculty perceived the academic governance as bureaucratic. However, the chairpersons thought the governance pattern was either political or collegial.

These results are somewhat limited because the respondents had a forced choice between three alternatives. No combinations were possible; Vaughan's concept of shared governance could not be indicated on the survey because both bureaucratic and collegial options could not be checked. Externally oriented alternatives such as entrepreneurial and rational goal options were not included.
The Fisher/Tak Effective Leadership Inventory (Fisher, Tak, & Wheeler, 1988) was administered to 412 selected effective college presidents and a random sample of representative presidents. The sample consisted of presidents of two and four-year public and private institutions.

Effective presidents did not fit the picture of the traditional collegial image. They were different in the following ways: less collegial, more concerned with respect than affiliation, more willing to take risks, more committed to ideals than to an individual institution, and less spontaneous. They also worked longer hours and preferred organizational flexibility.

For a study conducted from 1982 to 1984, members of the Commission on Strengthening Presidential Leadership appointed by the Association of Governing Boards of Universities and Colleges interviewed 848 presidents, former presidents, spouses, trustees, administrators, faculty, foundation officials, state and federal officials, and members of search agencies (Commission on Strengthening Presidential Leadership, 1984). From the community college sector, 82 presidents, 14 spouses, and 9 others participated.

On the basis of the interviews, advice was given to governing boards on how best to treat the president. In searching for a president, the board should know what kind
of leadership the institution needs and look broadly for the person who can offer it. All important issues concerning the position should be discussed before any public announcements are made. Honest positive feedback is critical for the president's mental health. Informal annual reviews should be conducted privately. Since the average term in office is seven years, the board should think in terms of the president spending more time in the position.

The final study compares the actions of community college presidents to those of chief executive officers in business settings. Hammons and Ivery (1987) used "structured observation" of five presidents for a period of one week each. A detailed record was kept of everything they did. The results were compared to the results of a comparable study by Mintzberg (1968) of chief executive officers of a consulting firm, a consumer goods manufacturing firm, a technology manufacturing firm, and a school system.

There were many differences in terms of how both groups spent their time. The CEOs received more reports and fewer memos from subordinates, and they spent more time reading. The CEOs spent three times as much time at their desks and one half the time on the phone. They had nine times as many meetings with more than four other people but fewer meetings with less than four people. They
spent more time handling requests and making decisions.

One flaw in the study is that CEOs may have changed their habits since 1968. With so few colleges and businesses being observed, the question of representativeness of the findings should also be considered.

The Effect of College Size Upon Culture and Presidential Leadership

A relationship appears to exist among college size, culture, and presidential leadership. The relationship between culture and presidential leadership seems to exist (Tierney, 1988; Clark, 1971; Vaughan, 1986; Reyes and Twombly, 1987). There tends to be a relationship between culture and college size as well as between presidential leadership and college size. However, there is nothing in the literature which connects college size with grant-writing activity.

College size affects the type of culture in an institution. Smaller institutions are much more likely to be perceived as having a clan culture than larger institutions (Zammuto, 1985). Larger community colleges are prone to have internal process cultures. In these colleges, group cultures are as strong as institutional cultures since large colleges have difficulty in developing an institutional culture that covers all of
their diverse activities (Clark, 1971).

According to Quinn's developmental stages, size plays a role. As institutions become larger, they begin to move toward the formalization stage as part of the maturation process. It becomes necessary to set up formal communication networks when large numbers of people are involved instead of continuing to depend on the informal communication of the entrepreneurial and collectivity stages.

College size impacts the nature of presidential leadership in institutions. Presidents identified as leaders in Vaughan's study are generally presidents of larger institutions. The typical size of the college headed by a leader is 4501, while the size of the college for all presidents is 2030 (Vaughan, 1980, p. 197). This phenomenon may be explained by the fact that presidents of large institutions generally have "moved up" from presidencies of small institutions and have more experience as a college president. Also large colleges have more resources and thus more visibility.

Presidents of large colleges appear to value grant-writing more than presidents of small colleges. In a study designed to investigate whether presidents and board chairpeople agree about the relative importance of selected presidential roles (Cote, 1985), the role of government liaison/resource stimulator received higher
priority from both presidents and board chairpeople as the size of the institution increased.

Summary of Research and Relationship to the Problem

Summary of Research

There is no research on the effect of culture on community college administrators' involvement in grant-writing. Moreover, there is no research on the relationship among institutional culture, presidential leadership, and grant-writing in community colleges. However, there is abundant literature about organizational culture and presidential leadership and the close relationship between institutional culture and presidential leadership.

The literature about organizational culture reveals the importance of developmental stages of community colleges as a whole. It appears that the formalization stage has been completed at most community colleges and the elaboration of structure stage has begun. The studies of St. Petersburg Community College and Miami-Dade Community College demonstrate the move away from internal process values emphasized in the formalization stage.

The literature about presidential leadership in community colleges revolves around roles and goals. It appears that the president is expected to be able to play
a number of leadership roles and to know when to use them. In addition, the president is expected to have a vision for the institution and to present the vision effectively to internal and external constituents.

There is a close relationship between culture and presidential leadership. The culture appears to limit the kinds of leadership roles a president can play. On the other hand, the president has the power to change the culture at important junctures in the institution's development with an innovative vision.

Relationship to the Problem

There are no studies which support the connection between financial need of community colleges and level of grant-writing. The literature appears to support the relationship between grant-writing activity and a favorable attitude of the president toward grant-writing, useful supportive services, and rewards for grant-writers (McNamara, 1988; Hellweg, 1980; Young, 1978; Coll, 1983; Webb & Jackson, 1978; Jenner, 1987; Bauer, 1989). However, there is minimal literature about the relationship between grant-writing activity and culture.

The literature seems to support the approach of comparing several colleges in terms of their cultural attributes and the methodology of using survey research to make cultural comparisons (Perrow, 1967; Miner, 1979;
Miles & Snow, 1979; Hall & Quinn, 1983; Ouchi, 1980; Cameron, 1985; Quinn & Cameron, 1981). The use of Quinn's CVA in survey instruments is supported by the review of studies which used the CVA to compare cultures (Rohrbaugh, 1981; Krakower, 1987; Gigliotti, 1987). Quinn's CVA theory was supported by the results of the NCHEMS study which showed the expected negative correlations between competing values and which revealed that most institutional cultures consisted of a number of cultural types.
CHAPTER III
METHODOLOGY
Procedures

This study was conducted in two stages. In Stage One, a survey was conducted to ascertain the nature and level of administrative grant-writing activity in each Illinois community college. A researcher-designed, seven item questionnaire entitled "Grant-writing Activity in Illinois Community Colleges" was distributed in November, 1989, to the development specialist or the person most involved in grant-writing at each of the Illinois community colleges (See Appendix A). Data from this survey were used to categorize colleges into high, medium, and low levels of grant-writing.

Once the colleges had been grouped according to their grant-writing level, the second stage of the study took place. In Stage Two, a researcher-designed survey which focused on the relationship among institutional culture, presidential attitude toward grant-writing, supportive services, reward systems, college size and location, and levels of grant-writing activity was mailed to appropriate administrators at all of the Illinois community colleges. The endorsement of the Illinois
Council of Community College Administrators was obtained for the study in November, 1989. The survey and post card reminders were sent in November, 1989. A second mailing of the survey to nonrespondents occurred in December, 1989, and a third mailing in January, 1990.

**Pilot Study**

Before this study began, a pilot study was conducted to test the hypothesis that there were differences in the perceptions of presidential attitude toward grant-writing, institutional culture, rewards and supportive services for writing grants among Elgin Community College (ECC) faculty and administrators who write grants and those who do not.

In November, 1988, surveys designed to discover the differences in perceptions of grant-writing between grant-writers and non-grant-writers were mailed to 52 administrators and faculty at ECC, including grant-writing and non-grant-writing faculty, and non-grant-writing and grant-writing administrators. The entire population (100%) of grant-writing faculty and grant-writing administrators participated; their names were supplied by the ECC Coordinator of Funded Programs. The sample of non-grant-writing faculty was chosen from the faculty names listed in the catalog using the Table of Random Numbers. There were not enough non-grant-writing administrators to
constitute a group for statistical purposes. With only one mailing of the survey, the response rate was 73%.

A discriminant analysis of the results indicated that each of the three groups was different statistically and group membership could be predicted accurately ninety-three times out of a hundred. The significance level obtained by the discriminant function was $p < .00001$, indicating that it is extremely unlikely that the group differences would occur by chance alone. These results are particularly noteworthy because of the relatively small number of group members.

The discriminant analysis provided support for the conceptualization of the survey designed to discover differences among ECC faculty and administrators who write grants and those who do not. Of the sixteen items selected by statistical processes to discriminate between the three groups, questions about all of the hypothesized four factors, i.e., presidential attitude toward grant-writing, institutional culture, rewards and supportive services for writing grants were included. Institutional culture was very effective in discriminating among groups.

Because of the results of the pilot study, plans were made to conduct a statewide study. However, a major modification was made. Instead of addressing the differences between faculty and administrators at one institution, the focus of the major study was directed to
differences among institutions in terms of their administrative grant-writing behavior. The reason for not including faculty is that very few community college faculty members were involved in writing grants on a statewide basis. Therefore the results were not expected to be as dramatic as in the pilot study because differences among members of one group should not be as great as differences among members of two groups.

Stage One

The description of Stage One consists of a review of the population, methodology, and results.

Population Used in Stage One

The subjects for the first survey in the study were development specialists from every one of the community colleges in Illinois. The purposive sampling procedure was a census of development experts. However, at fourteen institutions, there was no one designated as a development specialist. The personnel officer at those colleges suggested administrators with general knowledge of grant-writing in the institution to take part in the project. At 32 colleges, there were job titles relating to grant-writing such as "resource development" or "external services."

The two centralized systems of community colleges
differ in their approach to writing grants. Grant-writing is centralized through the Illinois Eastern system so that Frontier, Lincoln Trail, Olney Central, and Wabash Valley College do not write grant proposals independently. On the other hand, the Chicago City Colleges system has staff at each college to handle the grant-writing effort. Therefore, one survey was sent to the assistant of the chancellor at Illinois Eastern and eight separate surveys were sent to resource directors at each city college.

Methodology Used in Stage One

Questionnaires were sent to development personnel at 47 community colleges with a return rate of 34 or 72%. The remaining 13 were contacted by phone in order to obtain a 100% response rate. No demographic data about the respondents were collected since the purpose of the survey was to gather data needed to conduct the second study.

Results from Stage One

The first survey provided general information about administrative grant-writing in Illinois community colleges. Typically most community colleges employ one full-time person (15 institutions or 48.4%) and no part-time people (23 institutions or 74.2%) to write grants. Most development personnel either have direct access to the president (9 institutions or 29%) or report to someone
who does (8 institutions or 25.8%). Ten colleges reported a history of promoting grant managers to hard money administrative positions. Four colleges reported the use of incentives to write grants, e.g., a department receiving 20% of the indirect cost rate for its use in the following year, faculty receiving released time to assist in writing grants.

The assumption that most grants in Illinois community colleges have been written by administrators instead of faculty was shown to be true. More administrators (134) were involved in writing grants than faculty (71). Assuming approximately 4500 full-time faculty in Illinois community colleges (Illinois Community College Board, 1989, p. 18), only 1.6% of the full-time faculty were involved in writing grants in 1989. Of the 382 administrators in positions in which grant-writing is feasible, 233 (61%) were involved in writing grants in 1989. However, one should note that because of differing definitions of administrators, the percentage of administrators and faculty who write grants may not be accurate.

The data from the survey used in Stage One were used to categorize institutions into three groups based on the amount of funding received through grants. Since the design of the study in Stage Two required a breakdown of the colleges by their grant-writing level, it was
important to group them empirically.

Tri-partition of Colleges by Grant-writing Activity

The colleges were listed according to the self-reported amount of funding received through grant sources. The top third was placed in the high group, the middle third in the middle group, and the low third in the low group. Those colleges which reported receiving one million dollars or more were classified as having a high level of grant-writing; those with less than a million but more than one hundred thousand dollars were classified as having a middle level of grant-writing; those with one hundred thousand dollars or less were classified as having a low level of grant-writing.

The original plan was to base the tri-partition on a combination of the amount of funding received from grant sources and two other items on the first survey. Because of differing definitions of the term "administrator" by respondents, the items asking for the number of administrators involved in writing grants and the number of grants written partly or solely by administrators could not be used to categorize colleges.

Stage Two

The description of Stage Two consists of a review of
the population and sample, instrument and reliability, purpose, hypotheses, and research questions.

**population and Sample Used in Stage Two**

The population consisted of selected community college administrators in Illinois. The sample subjects were chosen from the list of administrators at each community college (1989 HEP Higher Education Directory) on the basis that their job titles indicated that they were in a position to be involved in grant-writing.

Of the 382 surveys mailed, 281 were returned for an overall response rate of 76%. This response rate is based on 370 instead of 382 surveys because twelve could not be filled out because nine people were no longer employed as administrators, two were too new to their institutions to have written grants, and one is deceased.

Some development specialists reported that administrators were sending their questionnaires to them to complete because of their expertise in grant-writing. Since the surveys asked for the opinions of the administrators, the results would have been distorted if development personnel completed them. Fortunately, they either indicated their name and position on the completed survey or did not complete them at all. This problem was addressed in the cover letter of the third mailing by advising the respondents not to forward the survey to
their development specialists.

Two outliers were excluded from the sample because their scores were very atypical and would have affected the statistical results disproportionately if included. Their discriminant scores were \(-10.2150\) and \(-0.6191\), and \(-21.0121\) and \(1.6794\). They in no way were representative of the population. As extreme outliers, the inclusion of their scores in the analysis would have distorted the results obtained for the statistics calculated using the line of regression.

**Instrument Used in Stage Two**

The survey entitled "Administrative Involvement and Noninvolvement with Writing Grants in Illinois Community Colleges," was designed by the researcher to collect data about administrators' perceptions of culture, presidential attitude toward grant-writing, college size and location, supportive services and reward systems in order to discover if a relationship exists between these variables and college level of grant-writing activity (See Appendix B). There were 16 items: five questions with four subsets, two questions with one subset, and one question with eight subsets.

The reliability of the researcher designed second instrument as a whole was high (Cronbach Alpha = .8293). Some independent variables in the survey consisted of
groups of survey items. The reliability of each group indicated how effective the survey was in measuring the variable. The group of cultural items (#7-11) had a Cronbach Alpha of .9042; the group of support services items (#1a) had .8163; the group of rewards for writing grants items (#2) had .8127.

Specific Hypotheses of the Second Stage

The specific hypotheses generated for this study were derived from the general hypothesis that colleges with a medium and high level of grant-writing would be different than colleges with a low level of grant-writing in terms of institutional cultures, presidential attitudes toward grant-writing, college size and location, and rewards and supportive services for grant-writers. Therefore, the following six specific directional hypotheses were tested:

H1: Administrators at community colleges with medium and high levels of grant-writing are more likely to believe that the college president has a favorable attitude toward writing grants than are administrators at community colleges with a low level of grant-writing.

Community college presidents, regardless of leadership style, seem to have influence upon administrators by virtue of their position. Administrators do not have tenure and they report to the president. When
the president states that grant-writing is important, administrators generally write grants (Hellweg, 1980; Young, 1978).

**H2:** Administrators from large colleges are more likely to be involved in writing grants than are administrators from small colleges.

Administrators at small colleges have a broader range of responsibilities and may not have the time to become involved in grant-writing. Moreover, since presidents of small colleges have a tendency not to value grant-writing as much as their colleagues in large colleges (Cote, 1985), administrators at small colleges may not be as motivated to write grants.

**H3:** Administrators from Chicago suburban colleges and colleges in cities other than Chicago are more likely to be involved in writing grants than administrators from colleges in other locations.

Perhaps administrators in rural and urban settings are preoccupied with serious problems which are not issues in the Chicago suburban colleges and colleges in cities other than Chicago such as crime in the urban settings and transportation in the rural settings. These specific kinds of concerns cannot be alleviated through grant-writing.

**H4:** The institutional and/or administrative cultures at community colleges with medium and high levels
of grant-writing differ from the cultures of community colleges with a low level of grant-writing.

Culture has an impact on all constituents and their activities. It is likely that administrators would be influenced by cultural values. If the cultural values of the institution or of the group of administrators support the importance of writing grants, administrators are more inclined to become involved. If the cultural values do not support grant-writing activity, administrators are less apt to become involved. Therefore, a college's culture is likely to affect the level of administrative grant-writing indirectly.

Community colleges in Illinois may have different types of culture. Perhaps the colleges with a high level of grant-writing emphasize different kinds of values than the colleges with a low level of grant-writing.

H5 Administrators at community colleges with medium and high levels of grant-writing would make greater use of supportive services than would administrators at community colleges with a low level of grant-writing.

Supportive services exist to help faculty and administrators write grants. Administrators who write grants have a need for supportive services; administrators who do not write grants do not have a need for the supportive services. Assuming that the services are competently staffed and adequately funded, administrators
who write grants are likely to use services set up to assist them in their grant-writing efforts.

H6: Administrators at community colleges with medium or high levels of grant-writing are more likely to believe that there are rewards for writing grants than are administrators at community colleges with a low level of grant-writing.

Most individuals are motivated by the expectation that their work will be rewarded in some way. There are many kinds of rewards such as recognition, a sense of achievement, responsibility for a project, advancement in the college, and the enjoyment of the work itself (Bauer, 1989). If administrators believe that they will be rewarded in a way which is important to them, they will be more apt to become involved in grant-writing.

Statistical Analysis

Multiple discriminant analysis was used to determine if statistically significant differences in the independent variables of presidential reinforcement, culture, college size and location, supportive services and rewards for grant-writers existed between administrators at community colleges with high, medium, and low levels of grant-writing. If differences among the three college groups exist, the discriminant function would be able to predict to which group individual
administrators belong based on their scores on the survey.

Summary

A two stage study was conducted in order to ascertain factors affecting the level of grant-writing activity in Illinois community colleges. A pilot study yielded significant differences among grant-writing administrators, grant-writing faculty, and non-grant-writing faculty at Elgin Community College in terms of their perceptions of presidential reinforcement, culture, college size and location, supportive services, and reward systems. The first stage of the study collected data from development specialists needed to categorize all of the community colleges in Illinois into high, medium, and low levels of grant-writing activity. The second stage yielded significant differences in perceptions of administrators at colleges with high and medium levels of grant-writing and at colleges with a low level of grant-writing in terms of presidential attitude, culture, college size and location, and supportive services.
CHAPTER IV
RESULTS

This chapter presents the results from the analysis of the data collected through a survey sent to administrators in a position to write grants in Illinois community colleges. The study attempts to ascertain what factors are related to a high level of grant-writing among administrators. Presidential attitude toward grant-writing, culture, college size and location, and rewards and supportive services for grant-writers are expected to account for the differences between colleges with medium and high levels of grant-writing and colleges with a low level of grant-writing.

The results are organized by descriptive data, multiple discriminant analysis data, ancillary hypotheses data, and supplementary data.

Descriptive Data

The salient feature of the respondents is that the majority (82.9%) has been involved in writing grants, and only a minority (16.7%) has not been involved in grant-writing. There is a lower percentage of administrators in colleges with a low level of grant-writing (72%) involved
in grant-writing than the percentage of administrators in
colleges with a medium level (88%) and high level (84%) of
grant-writing activity.

Over half of the respondents, 152 (54%), have been
in their current positions for less than five years.
However, 146 (53%) have been in the same institution
eleven to twenty years. These facts imply a policy of
promotions from within. Approximately one third of the
respondents in their current positions for less than five
years have eleven to twenty years experience in the
institution. Table 1 illustrates the relationship between
time in current position and time in the institution.

The order of "years in current position" proceeds
predictably from the largest, the one to five year
category, to the middle and then to the smallest, the
eleven to twenty year category. However, the order of the
groups within the category of "years in the institution"
is surprising. It proceeds from the largest, the eleven to
twenty year category, to the lowest, the one to five year
category, and then to the middle. This change in order may
be due to the fact that there is a large percentage of
faculty and staff over forty years old who were hired
during the 1960's, the expansion years for community
colleges. When members of this senior group retired,
positions were opened. Therefore, there are more
administrators with one to five years than five to ten
years experience.

Table 1. --Years of Experience of Illinois Community College Administrators

<table>
<thead>
<tr>
<th>Years in Institution</th>
<th>N</th>
<th>1-5 yrs (%)</th>
<th>6-10 yrs (%)</th>
<th>11-20 yrs (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>275</td>
<td>27 (75)</td>
<td>20 (54)</td>
<td>53 (146)</td>
</tr>
</tbody>
</table>

Years in Position

<table>
<thead>
<tr>
<th>Years in Position</th>
<th>1-5 years</th>
<th>6-10 years</th>
<th>11-20 years</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>152 (75)</td>
<td>68 (0)</td>
<td>55 (0)</td>
</tr>
<tr>
<td></td>
<td>49.3</td>
<td>41.1</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>17.1</td>
<td>17.1</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>33.6 (51)</td>
<td>58.9 (40)</td>
<td>100 (55)</td>
</tr>
</tbody>
</table>

Over 90% of the respondents have either completed masters or doctorate degrees. More have master's degrees (152 or 54.1%) than have doctorate degrees (107 or 38.1%).

The grouping of the respondents according to their college's grant-writing level resulted in a skewed distribution. There were fewer administrators from colleges with a low level of grant-writing activity than from administrators of colleges in the other two categories. Although their return rate was comparable to the middle group, there weren't as many members in the low college grant-writing level group. However, there was a normal distribution of the number of colleges in the low, middle, and high groups. Eleven colleges were placed
in the high level group, twenty-four in the middle level group, and ten in the low level group. The respondents from the low level group were from small colleges with few administrators.

Number of respondents

<table>
<thead>
<tr>
<th></th>
<th>Low</th>
<th>Middle</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Return rate =</td>
<td>69%</td>
<td>70%</td>
<td>93%</td>
</tr>
</tbody>
</table>

Figure 2. Distribution of respondents among colleges

The location and size of colleges appear to be related to the grouping of the colleges. Apparently, medium to large colleges in the Chicago suburbs or in cities other than Chicago seem to be most successful in obtaining grant funding. Small and medium sized colleges in the city of Chicago have the least success.
Table 2. --Size of Enrollment and Location of Illinois Community Colleges

<table>
<thead>
<tr>
<th>Location</th>
<th>N</th>
<th>Under 4K (%)</th>
<th>4-8K (%)</th>
<th>8-12K (%)</th>
<th>12-20K (%)</th>
<th>Above 20K (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rural</td>
<td>65</td>
<td>69.2</td>
<td>30.8</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>City (not Chicago)</td>
<td>85</td>
<td>36.5</td>
<td>40</td>
<td>14.1</td>
<td>9.4</td>
<td>0</td>
</tr>
<tr>
<td>Suburb</td>
<td>85</td>
<td>8.2</td>
<td>4.7</td>
<td>21.2</td>
<td>48.2</td>
<td>17.7</td>
</tr>
<tr>
<td>Chicago</td>
<td>41</td>
<td>41.5</td>
<td>58.5</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>276</td>
<td>36.2</td>
<td>10.1</td>
<td>10.9</td>
<td>17.8</td>
<td>5.4</td>
</tr>
</tbody>
</table>

Table 3. --Size and Location of Illinois Community Colleges with a High Level of Grant-Writing

<table>
<thead>
<tr>
<th>Location</th>
<th>N</th>
<th>Under 4K (%)</th>
<th>4-8K (%)</th>
<th>8-12K (%)</th>
<th>12-20K (%)</th>
<th>Above 20K (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rural</td>
<td>15</td>
<td>40</td>
<td>60</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>City (not Chicago)</td>
<td>41</td>
<td>2.4</td>
<td>82.9</td>
<td>14.7</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Suburb</td>
<td>44</td>
<td>0</td>
<td>0</td>
<td>22.7</td>
<td>43.2</td>
<td>34.1</td>
</tr>
<tr>
<td>Chicago</td>
<td>6</td>
<td>0</td>
<td>100</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>106</td>
<td>6.6</td>
<td>46.2</td>
<td>15.1</td>
<td>17.9</td>
<td>14.2</td>
</tr>
</tbody>
</table>
Table 4. --Size and Location of Illinois Community Colleges with a Medium Level of Grant-Writing

<table>
<thead>
<tr>
<th>Location</th>
<th>N</th>
<th>Under 4K (%)</th>
<th>4-8K (%)</th>
<th>8-12K (%)</th>
<th>12-20K (%)</th>
<th>Above 20K (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rural</td>
<td>42</td>
<td>83.3</td>
<td>16.7</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>City (not Chicago)</td>
<td>44</td>
<td>68.2</td>
<td>0</td>
<td>13.6</td>
<td>18.2</td>
<td>0</td>
</tr>
<tr>
<td>Suburb</td>
<td>30</td>
<td>0</td>
<td>0</td>
<td>26.7</td>
<td>73.3</td>
<td>0</td>
</tr>
<tr>
<td>Chicago</td>
<td>8</td>
<td>50</td>
<td>50</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>124</td>
<td>55.6</td>
<td>8.9</td>
<td>11.3</td>
<td>24.2</td>
<td>0</td>
</tr>
</tbody>
</table>

Table 5. --Size and Location of Illinois Community Colleges with a Low Level of Grant-Writing

<table>
<thead>
<tr>
<th>Location</th>
<th>N</th>
<th>Under 4K (%)</th>
<th>4-8K (%)</th>
<th>8-12K (%)</th>
<th>12-20K (%)</th>
<th>Above 20K (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rural</td>
<td>8</td>
<td>50</td>
<td>50</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>City (not Chicago)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Suburb</td>
<td>11</td>
<td>63.6</td>
<td>36.4</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Chicago</td>
<td>27</td>
<td>48.1</td>
<td>51.9</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>46</td>
<td>52.2</td>
<td>47.8</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
Multiple Discriminant Analysis

The major hypothesis is that a combination of certain types and patterns of culture and particular managerial policies is associated with a high level of grant-writing among administrators at Illinois community colleges. As long as the intervening variables of college size and location are added to the independent variable list, the data support the hypothesis.

Multiple discriminant analysis was used to determine if statistically significant differences in presidential attitude toward grant-writing, culture, college size and location, and rewards and supportive services for grant-writers exist among administrators at community colleges with high, medium, and low levels of grant-writing.

The results were significant at \( p < 0.0001 \). However, when the sample size is large, the level of significance may not be a good measure of the function's ability to discriminate according to Hair (1979).

However, there are additional reasons to believe that the results are meaningful. First, the Eigenvalue is over one (1.837). Secondly, the group centroids (means) differ: .9141 for the high level group, .29207 for the medium level, and -2.97362 for the low level of grant writing institutions.

The discriminant function has a high predictive capability with 80.66% of the individuals correctly
classified. Table 6 shows how well the discriminant analysis worked as a predictive tool.

The mistakes in classification fit the normal pattern. As expected, most of the mistakes in classification occurred between the middle and high level groups with 20 people (18%) placed in the middle group who should have been placed in the high group by virtue of their scores and 14 people (15.1%) placed in the high group who should have been in the middle group. As expected, the fewest mistakes in placement occurred when one person (2.6%) was placed in the low group who should have been in the high group, and two people (2.2%) were placed in the high group who should have been in the low group.

Table 6. --Prediction of Group Membership in Colleges by Using the Discriminant Function

<table>
<thead>
<tr>
<th>Predicted Group Membership</th>
<th>N</th>
<th>Low (%)</th>
<th>Medium (%)</th>
<th>High (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Actual Group</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td>39</td>
<td>92.3 (36)</td>
<td>5.1 (2)</td>
<td>2.6 (1)</td>
</tr>
<tr>
<td>Medium</td>
<td>111</td>
<td>7.2 (8)</td>
<td>74.8 (83)</td>
<td>18 (20)</td>
</tr>
<tr>
<td>High</td>
<td>93</td>
<td>2.1 (2)</td>
<td>15.1 (14)</td>
<td>82.8 (77)</td>
</tr>
<tr>
<td>Total</td>
<td>243</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Another validation of the significance of the results is that the discriminant function has explained 72.43% of the variance among the three groups. The remaining unaccounted for variance (27.57%) may be due to limits in the study or unknown factors.

The assumptions for using discriminant analysis are multivariate normality of the distributions and equal dispersion and covariance structures for the three groups. The within group variance of the middle group is larger than that of the other two. However, according to Hair (1979, p. 87), "discriminant analysis is not very sensitive to violations of these assumptions."

Multivariate analyses are more realistic than bivariate analyses because individual variables do not exist in a vacuum. The variables chosen to account for the variance among the three groups provide an overall representation of the composition of factors which lead to grant-writing.

The approach used in discriminant analysis corrects for collinearity. These results differed from the results of the cross tabulations of individual variables with grant-writing level since the variables chosen by the discriminant function were selected for their ability to add to the overall discriminating power of the function. Individual variables which vary in the same way as other individual variables and do not add to the function's
The conceptualization of the study was supported since all of the independent variables were included in the function: institutional culture, group culture, presidential leadership, presidential attitude toward grants, reward systems, and support services. Items from each of the four cultural models were included. Table 7 lists all of the variables included in the function.

Table 7. -- The Order in which Variables were Entered in the Discriminant Function

<table>
<thead>
<tr>
<th>Variables</th>
<th>Number of Survey Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. President's attitude toward grants</td>
<td>6</td>
</tr>
<tr>
<td>2. Size of enrollment</td>
<td>0</td>
</tr>
<tr>
<td>3. Location</td>
<td>0</td>
</tr>
<tr>
<td>4. Efficiency</td>
<td>7C</td>
</tr>
<tr>
<td>5. Budget construction</td>
<td>1A4</td>
</tr>
<tr>
<td>6. Conceptualization</td>
<td>1A3</td>
</tr>
<tr>
<td>7. Career development</td>
<td>2F</td>
</tr>
<tr>
<td>8. President's conversations</td>
<td>6A3</td>
</tr>
<tr>
<td>9. President's correspondence</td>
<td>6A2</td>
</tr>
<tr>
<td>10. Achievement</td>
<td>9D</td>
</tr>
<tr>
<td>11. Personal commitment</td>
<td>7A</td>
</tr>
<tr>
<td>12. Service to students</td>
<td>2G</td>
</tr>
<tr>
<td>13. Group achievement</td>
<td>11D</td>
</tr>
<tr>
<td>14. Team builder</td>
<td>8A</td>
</tr>
<tr>
<td>15. Prime mover</td>
<td>8B</td>
</tr>
<tr>
<td>16. New resources</td>
<td>9B</td>
</tr>
<tr>
<td>17. Measurable goals</td>
<td>7D</td>
</tr>
<tr>
<td>18. Grant-writing behavior</td>
<td>1</td>
</tr>
<tr>
<td>19. Funding for your area</td>
<td>2A</td>
</tr>
<tr>
<td>20. Writing assistance</td>
<td>1A5</td>
</tr>
<tr>
<td>21. Human resources</td>
<td>9A</td>
</tr>
<tr>
<td>22. Strength of group culture</td>
<td>14</td>
</tr>
<tr>
<td>23. Group permanence</td>
<td>11C</td>
</tr>
<tr>
<td>24. Highest educational degree</td>
<td>18</td>
</tr>
<tr>
<td>25. Dynamic group</td>
<td>10B</td>
</tr>
<tr>
<td>26. Extent of agreement</td>
<td>15</td>
</tr>
</tbody>
</table>
The following is a list of variables in the discriminant function with their respective percentages of variances accounted for and significance levels:

- presidential attitude 37% .0001
- size of enrollment 11% .0001
- location of the college 10% .0001
- culture 9% .0001 - .0153
- supportive services 4% .0001 - .0019
- rewards 1.43% .0011

Ancillary Hypotheses

The remaining results will be presented by ancillary hypotheses.

First Ancillary Hypothesis

The first hypothesis is that administrators at community colleges with middle and high levels of grant-writing are more likely to believe that the college president has a favorable attitude toward writing grants than are administrators at community colleges with a low level of grant-writing. The data support the hypothesis.

In general, most administrators (74%) indicated that they knew their president had a positive attitude toward writing grants. The majority of administrators in colleges with middle and high level of grant-writing (88%) believed their president had a positive attitude as opposed to 13%
of administrators in colleges with a low level of granting. Table 8 presents a cross tabulation of the level of grant-writing by presidential attitude.

It is interesting that the degree of association among the groups varies depending on the statistics used. With bivariate analysis, knowing the president's attitude toward grants reduces the error in predicting the college level of grant-writing group by 55.5%. With discriminant analysis, presidential attitude accounts for 36.7% of the variance among the three groups. However, discriminant analysis is considered to be more realistic because it is a multivariate procedure.

Table 8. --Presidential Reinforcement By Level of College Grant-writing.

<table>
<thead>
<tr>
<th>Groups of Community Colleges</th>
<th>N</th>
<th>High (%)</th>
<th>Middle (%)</th>
<th>Low (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive</td>
<td>206</td>
<td>44.7</td>
<td>52.4</td>
<td>2.9</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(92)</td>
<td>(108)</td>
<td>(6)</td>
</tr>
<tr>
<td>Negative or Don't Know</td>
<td>69</td>
<td>18.8</td>
<td>23.2</td>
<td>58</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(13)</td>
<td>(16)</td>
<td>(40)</td>
</tr>
<tr>
<td>Total</td>
<td>275</td>
<td>38.2</td>
<td>45.1</td>
<td>16.7</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(105)</td>
<td>(124)</td>
<td>(46)</td>
</tr>
</tbody>
</table>

Mann-Whitney 2 tailed p < .00001  
Somers' D = .55537
Second Ancillary Hypothesis

The second hypothesis is that administrators from large colleges are more likely to be involved in writing grants than administrators from small colleges. The data support the hypothesis. Large college size is positively correlated with grant-writing level as shown in Table 9.

Table 9. --Size of College Enrollment By Level of College Grant-writing

<table>
<thead>
<tr>
<th>Enrollment</th>
<th>N</th>
<th>High (%)</th>
<th>Medium (%)</th>
<th>Low (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 4,000</td>
<td>100</td>
<td>7 (7)</td>
<td>69 (69)</td>
<td>24 (24)</td>
</tr>
<tr>
<td>4K to 7,999</td>
<td>82</td>
<td>59.8 (49)</td>
<td>13.4 (11)</td>
<td>26.8 (22)</td>
</tr>
<tr>
<td>8K to 11,999</td>
<td>30</td>
<td>53.3 (16)</td>
<td>46.7 (14)</td>
<td>0 (0)</td>
</tr>
<tr>
<td>12K to 20K</td>
<td>49</td>
<td>38.8 (19)</td>
<td>61.2 (30)</td>
<td>0 (0)</td>
</tr>
<tr>
<td>20K +</td>
<td>15</td>
<td>100 (15)</td>
<td>0 (0)</td>
<td>0 (0)</td>
</tr>
<tr>
<td>Total</td>
<td>276</td>
<td>38.4 (106)</td>
<td>44.9 (124)</td>
<td>16.7 (46)</td>
</tr>
</tbody>
</table>

Kruskal-Wallis p < .00001
Somers' D = .33537

According to bivariate statistics, knowing the size of enrollment of an institution proportionally reduces the error in predicting the institution's level of grant-
writing by 33.5%. According to multivariate statistics, the size of an institution accounts for 11% of the variance among the three college grant-writing groups. Collinearity between presidential attitude and size of enrollment is controlled in the discriminant analysis.

Third Ancillary Hypothesis

The third hypothesis is that administrators from Chicago suburban colleges and colleges in cities other than Chicago are more likely to be involved in writing grants than administrators from colleges in other locations. The data as shown in Table 10 support the

Table 10. --College Location By Level of College Grant-writing.

<table>
<thead>
<tr>
<th>Location</th>
<th>N</th>
<th>High (%)</th>
<th>Medium (%)</th>
<th>Low (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rural</td>
<td>65</td>
<td>23.1 (15)</td>
<td>64.6 (42)</td>
<td>12.3 (8)</td>
</tr>
<tr>
<td>City (Not Chicago)</td>
<td>85</td>
<td>48.2 (41)</td>
<td>51.8 (44)</td>
<td>0 (0)</td>
</tr>
<tr>
<td>Suburb</td>
<td>85</td>
<td>51.8 (44)</td>
<td>35.3 (30)</td>
<td>12.9 (11)</td>
</tr>
<tr>
<td>Chicago</td>
<td>41</td>
<td>14.6 (6)</td>
<td>19.5 (8)</td>
<td>65.9 (27)</td>
</tr>
<tr>
<td>Total</td>
<td>276</td>
<td>38.4 (106)</td>
<td>44.9 (124)</td>
<td>16.7 (46)</td>
</tr>
</tbody>
</table>

Kruskal-Wallis p < .00001
hypothesis. The colleges with medium and high levels of grant-writing are located in cities other than Chicago and in the Chicago suburbs. College location accounted for 10% of the variance among the three college level of grant-writing groups according to discriminant analysis.

Fourth Ancillary Hypothesis

The fourth hypothesis is that the institutional and administrative cultures at community colleges with medium and high levels of grant-writing differ from the cultures of community colleges with a low level of grant-writing. The data support the hypothesis.

All of the correlations between the cultural items and levels of college grant-writing were low. However, the variance among the three grant-writing groups explained by culture in the discriminant analysis was 9%, comparable to the variances explained by college location and size.

Even though the cultural differences between the three grant-writing groups were small, they were significant. Moreover, the reliability for the cultural items was high (Cronbach Alpha = .9042). It appears that the survey instrument was reliable enough to uncover the small differences.

The colleges with middle and high levels of grant-writing appear to have an open systems institutional culture which is externally oriented. The colleges from
the low group seem to have an internal orientation. The
difference in cultural orientation among colleges with
medium and high levels of grant-writing and those with a
low level of grant-writing suggests that grant-writing
activity may flourish more in an external as opposed to an
internal type of culture.

The open systems institutional culture was
represented by two items in the survey: new resources and
institutional growth. Since the open systems culture is
externally oriented, a higher percentage of respondents
from middle and high grant-writing groups would be
expected to have high scores than the low grant-writing
group. For new resources, Table 11 shows that a higher
percentage of administrators from colleges in the high
(82%) and middle levels (75.6%) of grant-writing had high
scores than administrators from colleges with a low level
of grant-writing (55.56%). The pattern was repeated for
institutional growth; a higher percentage of
administrators from colleges with high (82%) and middle
(77%) levels of grant-writing had high scores on the
growth item than administrators from colleges with a low
level (70%) of grant-writing.

As expected, the low scores on the two open systems
cultural items show that administrators from colleges with
a low level of grant-writing rated their institutional
culture low more often than administrators from colleges
with medium and high levels of grant-writing. For the new resources item, 22.22% of the administrators from colleges with a low level of grant-writing indicated low scores, while 7.55% of the high and 8.94% of the middle level grant-writing groups indicated low scores. For the institutional growth item, 19.57% of the administrators from colleges with a low level of grant-writing indicated low scores, while 4.72% of the high and 9.09% of the medium level grant-writing groups indicated low scores.

Table 11. --New Resources By Level of College Grant-writing

<table>
<thead>
<tr>
<th>New Resources</th>
<th>N</th>
<th>High (%)</th>
<th>Medium (%)</th>
<th>Low (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3</td>
<td>12.2</td>
<td>42.4</td>
<td>45.4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(25)</td>
<td>(87)</td>
<td>(93)</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>25</td>
<td>27.5</td>
<td>47.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(11)</td>
<td>(19)</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>34.5</td>
<td>27.6</td>
<td>37.9</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(10)</td>
<td>(11)</td>
</tr>
<tr>
<td>Total</td>
<td>274</td>
<td>16.4</td>
<td>38.7</td>
<td>44.9</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(45)</td>
<td>(123)</td>
</tr>
</tbody>
</table>

Kruskal-Wallis p < .0081
Somers' D = .21542

Knowing the scores of the item on new resources should improve the prediction of the correct college level of grant-writing by 21.5%. Knowing the scores of the item on growth should improve the prediction of the correct
college level of grant-writing by 14.1%.

Table 12. --Institutional Growth By Level of College Grant-writing

<table>
<thead>
<tr>
<th>Level of College Grant-writing</th>
<th>N</th>
<th>High (%)</th>
<th>Medium (%)</th>
<th>Low (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Institutional Growth</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>212</td>
<td>41</td>
<td>43.9</td>
<td>15.1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(87)</td>
<td>(93)</td>
<td>(32)</td>
</tr>
<tr>
<td>2</td>
<td>36</td>
<td>38.9</td>
<td>47.2</td>
<td>13.9</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(14)</td>
<td>(17)</td>
<td>(5)</td>
</tr>
<tr>
<td>1</td>
<td>25</td>
<td>20</td>
<td>44</td>
<td>36</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(5)</td>
<td>(11)</td>
<td>(9)</td>
</tr>
<tr>
<td>Total</td>
<td>273</td>
<td>38.8</td>
<td>44.3</td>
<td>16.9</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(106)</td>
<td>(121)</td>
<td>(46)</td>
</tr>
</tbody>
</table>

Kruskal-Wallis p > .0265  
Somers' D = .14119

Moving from the external to the internal cultures, the alignment of score percentages changed drastically. In the internal process culture with the institutional stability item, the percentage of high scores for administrators from colleges with a high level of grant-writing (48.11%) was much lower than that of administrators from colleges with a medium (65.04%) and low (64.44%) level of grant-writing. Moreover, Table 13 illustrates that administrators from colleges with a high grant-writing level had a higher percentage of low scores (29.25%) than administrators from colleges with low (22.22%) and middle (16.26%) levels.
Table 13. --Institutional Stability By Level of College Grant-writing.

<table>
<thead>
<tr>
<th>College Levels of Grant-writing</th>
<th>N</th>
<th>High (%</th>
<th>Medium (%)</th>
<th>Low (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Institutional Stability</strong></td>
<td></td>
<td><strong>(51)</strong></td>
<td><strong>(80)</strong></td>
<td><strong>(29)</strong></td>
</tr>
<tr>
<td>3</td>
<td>160</td>
<td>31.9</td>
<td>50</td>
<td>18.1</td>
</tr>
<tr>
<td>(24)</td>
<td>(23)</td>
<td>(6)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>53</td>
<td>45.3</td>
<td>43.4</td>
<td>11.3</td>
</tr>
<tr>
<td>1</td>
<td>61</td>
<td>50.8</td>
<td>32.8</td>
<td>16.4</td>
</tr>
<tr>
<td>Total</td>
<td>274</td>
<td>38.7</td>
<td>44.9</td>
<td>16.4</td>
</tr>
</tbody>
</table>

Kruskal-Wallis p < .0455
Somers' D = -0.14073

In regard to institutional cultures, Quinn's theory of opposites seems to apply. In the high level group, the highest scoring culture was open systems. According to Quinn, the culture which competes with open systems is internal process. In the high level group, the lowest scoring culture was internal process. The low group illustrated the same principle with human relations competing with rational goal as its highest and lowest scoring cultures.

In regard to group culture, all of the three groups appear to predominate in the rational goal culture which is externally oriented. However, the pattern of more internally oriented cultures in the low group contrasting
with more externally oriented cultures in the middle and high groups was repeated in the realm of group cultures.

In the open systems model, one would expect the high group to have a higher percentage of high scores on the items measuring group culture than the middle and low groups. Table 14 demonstrates the results for the item entitled growth orientation.

Table 14. --Administrative Group's Growth Orientation By Level of College Grant-writing

<table>
<thead>
<tr>
<th>College Levels of Grant-writing</th>
<th>N</th>
<th>High (%)</th>
<th>Medium (%)</th>
<th>Low (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Growth Orientation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>213</td>
<td>40.8</td>
<td>44.6</td>
<td>14.6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(87)</td>
<td>(95)</td>
<td>(31)</td>
</tr>
<tr>
<td>2</td>
<td>29</td>
<td>37.9</td>
<td>51.7</td>
<td>10.4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(11)</td>
<td>(15)</td>
<td>(3)</td>
</tr>
<tr>
<td>1</td>
<td>31</td>
<td>25.8</td>
<td>41.9</td>
<td>32.3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(8)</td>
<td>(13)</td>
<td>(10)</td>
</tr>
<tr>
<td>Total</td>
<td>273</td>
<td>38.8</td>
<td>44.3</td>
<td>16.9</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(106)</td>
<td>(123)</td>
<td>(44)</td>
</tr>
</tbody>
</table>

Kruskal-Wallis p < .0691
Somers' D = .12866

The percentage of administrators from colleges with a high level of grant-writing (82.08%) with high scores was higher than that of administrators from colleges with medium (77.24%) and low levels (70.45%) of grant-writing. The percentage of administrators from colleges with a low
level of grant-writing (22.73%) with low scores was higher than that of administrators from college with medium (10.57%) and high levels (7.55%) of grant-writing.

Knowing the score on the growth item for the administrative group should reduce error in predicting the correct college grant-writing level by 12.9%.

In the rational goal culture, one would expect the high group to have a higher percentage of high scores than the middle and low groups. Table 15 demonstrates the results for the item achievement orientation.

Table 15. --Administrative Group's Achievement By Levels of College Grant-writing

<table>
<thead>
<tr>
<th>College Levels of Grant-writing</th>
<th>N</th>
<th>High (%)</th>
<th>Medium (%)</th>
<th>Low (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Achievement</td>
<td></td>
<td>3</td>
<td>216</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>39.8</td>
<td>(86)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>45.4</td>
<td>(98)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>14.8</td>
<td>(32)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>2</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>50</td>
<td>(15)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>36.7</td>
<td>(11)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>13.3</td>
<td>(4)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1</td>
<td>27</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>18.5</td>
<td>(5)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>51.9</td>
<td>(14)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>29.6</td>
<td>(8)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total</td>
<td>273</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>38.8</td>
<td>(106)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>45.1</td>
<td>(123)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>16.1</td>
<td>(44)</td>
<td></td>
</tr>
</tbody>
</table>

Kruskal-Wallis p < .0223  
Somers' D = .09488

The percentage of administrators from colleges with a high
level of grant-writing with high scores was higher than that of administrators from colleges in the other two groups, but the differences were too negligible to report.

In the rational goal culture, one would expect the low group to have a higher percentage of low scores than the other two groups. As expected, 18.18% of the low group had low scores while 11.38% of the middle and 4.72% of the high group had low scores.

Knowing the scores on the group achievement item should reduce the error in predicting the correct college grant-writing level by 9.5%.

With presidential styles of leadership, the results are mixed. As expected, for the prime mover item, one would expect the high grant-writing group to have the highest percentage of high scores (78.3%) followed by the middle (69.9%) and low (64.4%) grant-writing groups. Knowing the results of the item about the prime mover presidential style would reduce the error of predicting the correct college grant-writing level by 14% as shown in Table 16.

Moving to the internally oriented cultures, one would expect for the team builder item that the low grant-writing group would have the highest percentage of high scores (75.5%) followed by the middle (73.98%) and high (58.49%) grant-writing groups.
Table 16. --Prime Mover Presidential Style By College Level of Grant-writing

<table>
<thead>
<tr>
<th>College Levels of Grant-writing</th>
<th>N</th>
<th>High (%)</th>
<th>Medium (%)</th>
<th>Low (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prime Mover</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>198</td>
<td>41.9</td>
<td>43.4</td>
<td>14.7</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(83)</td>
<td>(86)</td>
<td>(29)</td>
</tr>
<tr>
<td>2</td>
<td>37</td>
<td>35.1</td>
<td>51.4</td>
<td>13.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(13)</td>
<td>(19)</td>
<td>(5)</td>
</tr>
<tr>
<td>1</td>
<td>39</td>
<td>25.6</td>
<td>46.2</td>
<td>28.2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(10)</td>
<td>(18)</td>
<td>(11)</td>
</tr>
<tr>
<td>Total</td>
<td>274</td>
<td>38.7</td>
<td>44.9</td>
<td>16.4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(106)</td>
<td>(123)</td>
<td>(45)</td>
</tr>
</tbody>
</table>

Kruskal-Wallis p < .0626  
Somers' D = .14026

Table 17. --Team Builder Presidential Style By Level of College Grant-writing

<table>
<thead>
<tr>
<th>Levels of College Grant-writing</th>
<th>N</th>
<th>High (%)</th>
<th>Medium (%)</th>
<th>Low (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Team Builder</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>187</td>
<td>33.2</td>
<td>48.6</td>
<td>18.2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(62)</td>
<td>(91)</td>
<td>(34)</td>
</tr>
<tr>
<td>2</td>
<td>40</td>
<td>57.5</td>
<td>37.5</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(23)</td>
<td>(15)</td>
<td>(2)</td>
</tr>
<tr>
<td>1</td>
<td>47</td>
<td>44.7</td>
<td>36.2</td>
<td>19.1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(21)</td>
<td>(17)</td>
<td>(9)</td>
</tr>
<tr>
<td>Total</td>
<td>274</td>
<td>38.7</td>
<td>44.9</td>
<td>16.4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(106)</td>
<td>(123)</td>
<td>(45)</td>
</tr>
</tbody>
</table>

Kruskal-Wallis p < .0082  
Somers' D = -0.14210
In short, the cultural differences among the three grant-writing groups are small but significant. There is a tendency for values of the external cultures to receive high ratings from administrators from the high and middle level groups and low ratings from administrators from the low grant-writing group. Moreover, there is a tendency for values of the internal cultures to receive low ratings from administrators from the high and middle level groups and high ratings from administrators from the low grant-writing group.

Another cultural difference which exists among the three levels of college grant-writing is that administrators from colleges with a low level of grant-writing perceive their group cultures to be weaker than administrators from the other two groups of colleges. In survey item #14, a higher percentage of the low level administrators ranked their cultures as weak (18.18%) than administrators from the middle (8.13%) and high (7.62%) level groups. A lower percentage of the low level group ranked their group culture as strong (22.73%) than administrators from the middle (31.71%) and high (41.90%) level groups. Table 18 demonstrates the relationship between the perception of strength of group culture and college grant-writing levels.

Knowing the scores on the item about the strength of group culture should reduce the error in predicting the
correct college grant-writing level group by 15.4%.

**Table 18. --Strength of Group Culture By Level of College Grant-writing**

<table>
<thead>
<tr>
<th>College Levels of Grant-writing</th>
<th>N</th>
<th>High</th>
<th>Medium</th>
<th>Low</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>272</td>
<td>38.6</td>
<td>45.2</td>
<td>16.2</td>
</tr>
<tr>
<td>Very strong</td>
<td>93</td>
<td>47.3</td>
<td>41.9</td>
<td>10.8</td>
</tr>
<tr>
<td>(44)</td>
<td>(39)</td>
<td>(10)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medium strength</td>
<td>153</td>
<td>34.6</td>
<td>48.4</td>
<td>17</td>
</tr>
<tr>
<td>(53)</td>
<td>(74)</td>
<td>(26)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weak</td>
<td>26</td>
<td>30.8</td>
<td>38.5</td>
<td>30.7</td>
</tr>
<tr>
<td>(8)</td>
<td>(10)</td>
<td>(8)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>272</td>
<td>38.6</td>
<td>45.2</td>
<td>16.2</td>
</tr>
<tr>
<td>(105)</td>
<td>(123)</td>
<td>(44)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Kruskal-Wallis p < .0348
Somers' D = .15394

**Fifth Ancillary Hypothesis**

It was hypothesized that administrators at community colleges with medium and high levels of grant-writing would make greater use of supportive services than would administrators at community colleges with a medium or low level of grant-writing. The data support the hypothesis in most cases.

Over half of all of the respondents made use of the following services: writing assistance (59.5%), budget construction (56.4%), and conceptualization (54.8%). However, 66.31% of the respondents did not use contacts.
Table 19. --Use of Supportive Services By Level of College Grant-writing

<table>
<thead>
<tr>
<th>College Levels of Grant-writing</th>
<th>N</th>
<th>High (%)</th>
<th>Medium (%)</th>
<th>Low (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conceptualization</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>153</td>
<td>46.4 (71)</td>
<td>42.5 (65)</td>
<td>11.1 (17)</td>
</tr>
<tr>
<td>No</td>
<td>121</td>
<td>27.3 (33)</td>
<td>48.7 (59)</td>
<td>24 (29)</td>
</tr>
<tr>
<td>Total</td>
<td>274</td>
<td>38 (104)</td>
<td>45.3 (124)</td>
<td>16.7 (46)</td>
</tr>
<tr>
<td>Mann-Whitney 2 tailed p &lt; .0002</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Somers' D</td>
<td></td>
<td>.23897</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Budget Construction            |   |          |            |        |
| Yes                            | 157| 47.2 (74)| 36.9 (58) | 15.9 (25) |
| No                             | 117| 25.7 (30)| 56.4 (66) | 17.9 (21) |
| Total                          | 274| 38 (104)| 45.3 (124)| 16.7 (46) |
| Mann-Whitney 2 tailed p < .0033|    |          |            |        |
| Somers' D                      |    | .19141   |            |        |

| Writing Assistance             |   |          |            |        |
| Yes                            | 167| 42.7 (71)| 46.7 (78) | 10.8 (18) |
| No                             | 107| 30.8 (33)| 43 (46)   | 26.2 (28) |
| Total                          | 274| 38 (104)| 45.3 (124)| 16.7 (46) |
| Mann-Whitney 2 tailed p < .0035|    |          |            |        |
| Somers' D                      |    | .19262   |            |        |
Table 20. --Use of Grant Contacts By Level of College Grant-writing.

<table>
<thead>
<tr>
<th>Grant Contacts</th>
<th>Levels of College Grant-writing</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
</tr>
<tr>
<td>Yes</td>
<td>94</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>180</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>274</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Mann-Whitney 2 tailed p < .0004  
Somers' D = .24102  

In comparing the use of supportive services among colleges with low, medium, and high levels of grant-writing, significant differences occurred among the grant-writing groups. For all but the budget item, the low grant-writing level group had the most low scores and the fewest high scores.

The supportive services items accounted for 4% of the variance between groups according to discriminant analysis.

Sixth Ancillary Hypothesis

The sixth hypothesis is that administrators at community colleges with medium and high levels of grant-writing are more likely to believe there are rewards for
writing grants than are administrators at colleges with a low level of grant-writing. The data fail to support this hypothesis.

Over half of all groups rated service to students (71%), funding for your area (68%), staff for your area (52.9%), and equipment for your area (50.6%) very highly as rewards for receiving a grant. The high group did not distinguish itself by having significantly higher scores. Only service to students had statistically significant results as shown in Table 21.

Table 21. --Service to Students By Level of College Grant-writing

<table>
<thead>
<tr>
<th>College Levels of Grant-writing</th>
<th>N</th>
<th>High</th>
<th>Medium</th>
<th>Low</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service to Students</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>198</td>
<td>33.8</td>
<td>46</td>
<td>20.2</td>
</tr>
<tr>
<td></td>
<td>(67)</td>
<td></td>
<td>(91)</td>
<td>(40)</td>
</tr>
<tr>
<td>4</td>
<td>52</td>
<td>51.9</td>
<td>42.3</td>
<td>5.8</td>
</tr>
<tr>
<td></td>
<td>(27)</td>
<td></td>
<td>(22)</td>
<td>(3)</td>
</tr>
<tr>
<td>3</td>
<td>12</td>
<td>33.3</td>
<td>58.3</td>
<td>8.4</td>
</tr>
<tr>
<td></td>
<td>(4)</td>
<td></td>
<td>(7)</td>
<td>(1)</td>
</tr>
<tr>
<td>2</td>
<td>4</td>
<td>75</td>
<td>25</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>(3)</td>
<td></td>
<td>(1)</td>
<td>(0)</td>
</tr>
<tr>
<td>1</td>
<td>5</td>
<td>40</td>
<td>40</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>(2)</td>
<td></td>
<td>(2)</td>
<td>(1)</td>
</tr>
<tr>
<td>Total</td>
<td>271</td>
<td>38</td>
<td>45.4</td>
<td>16.6</td>
</tr>
<tr>
<td></td>
<td>(103)</td>
<td></td>
<td>(123)</td>
<td>(45)</td>
</tr>
</tbody>
</table>

Kruskal-Wallis p < .0285
Somers' D = -.18891
Supplementary Results

The study uncovered data which are not directly tied to the hypotheses. However, these results are important to gain a better understanding of the variables. The rest of the chapter is devoted to data about culture, presidential leadership, relationship between college size and group culture, and the relationship between presidential attitude toward writing grants and use of supportive services, presidential leadership styles, and externally oriented cultures.

Culture

The study generated new data about community college culture in Illinois. An overall cultural profile was derived by plotting the average scores for survey items 7-11. As shown by Table 22, the general institutional culture consists of the open systems culture complemented by both the human relations and rational goal cultures. The internal process culture is distinctly weaker than the other three cultures.

This configuration supports Quinn's theory of competing values. In comparing the scores at the ends of each line, the greatest difference existed between the open systems and internal process scores. According to Quinn, the open systems cultural model is supposed to be the opposite of the internal process cultural model and is
Table 22. --Overall Institutional Cultural Profile of Illinois Community Colleges

<table>
<thead>
<tr>
<th>HUMAN RELATIONS</th>
<th>Decentralization</th>
<th>OPEN SYSTEMS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q9 5.13</td>
<td>Q7 5.56</td>
<td></td>
</tr>
<tr>
<td>Q7 5.47</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q9 4.69</td>
<td>Q7 4.85</td>
<td>Q7 5.45</td>
</tr>
<tr>
<td>Q9 4.96</td>
<td>Q9 5.34</td>
<td></td>
</tr>
</tbody>
</table>

INTERNAL PROCESS    Centralization    RATIONAL GOAL

1 = .5 inch
Table 23. -- Overall Administrative Group Cultural Profile of Illinois Community Colleges

HUMAN RELATIONS       Decentralization       OPEN SYSTEMS

INTERNAL PROCESS       Centralization       RATIONAL GOAL

1 = .5 inch
predicted to have the greatest difference in scores.

The administrative group culture consists of the rational goal culture complemented by the open systems culture with the internal process and the human relations culture trailing behind as shown by Table 23.

This pattern also supports Quinn's theory of competing values. As expected, the greatest difference between opposing scores occurred between the rational goal and human relations scores.

Both the institutional and group cultures in Illinois community colleges appear to be externally oriented. Most of the administrators in the colleges with medium or high levels of grant-writing viewed their institutional and group cultures as primarily externally oriented. Although most of the administrators in colleges with a low level of grant-writing valued internally oriented cultures, their numbers were not large enough to affect the general profile of all community colleges.

Presidential Leadership Styles

In considering the profile of presidential leadership styles in Illinois community colleges, it appears that most administrators view their president as an achiever (77.2%) with prime mover (70.8%) and team builder (66.9%) as acceptable roles. Only a minority of administrators saw their president as an expert (39.5%).
Table 24. --Overall Profile of Presidential Leadership Styles in Illinois Community Colleges

<table>
<thead>
<tr>
<th>HUMAN RELATIONS</th>
<th>Decentralization</th>
<th>OPEN SYSTEMS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q8 5.22</td>
<td>Q8 5.30</td>
<td></td>
</tr>
<tr>
<td>Internal</td>
<td>External</td>
<td></td>
</tr>
<tr>
<td>Q8 4.19</td>
<td>Q8 5.62</td>
<td></td>
</tr>
</tbody>
</table>

INTERNAL PROCESS  Centralization  RATIONAL

1 = .5 inch
According to Quinn's theory, the greatest difference in scores would be expected between achiever and team builder. However, the greatest difference occurred between prime mover and expert.

The administrators in the study may have viewed the president as the leader of their group culture and, in that role, as portraying the major group value of being an achiever. Perhaps the higher than expected score for team builder may have come from the administrators' understanding that the president needs to represent and lead a large population of internal constituents with other values.

According to Quinn, there should be a match between presidential leadership style and cultural type. The data appear to support his contention. It appears there is a correlation between presidential leadership style and institutional and group culture. In forming cross tabulations of presidential leadership style and cultural items, the results indicate the existence of a significant relationship between the two variables.

A proportional reduction in error resulted in predicting the presidential style of team builder by knowing the scores of the following items: personal commitment to the college (37.2%), importance of human resources (41.4%), extended family group (33%), and the importance of human relations (40.9%). Similar reductions
in error occurred in predicting the presidential styles of achiever and prime mover by knowing the scores of the matched cultural items.

However, the presidential style of expert would not be chosen by knowing the scores on any of the cultural items. It appears that the items which were classified as part of the internal process culture were matched most closely with the presidential styles of teambuilder and prime mover instead of expert.

This phenomenon becomes even clearer when looking at the association between presidential styles. One would expect a high correlation between the two externally oriented presidential styles and between the two internally oriented presidential styles. For the external styles, there is a 51.75% reduction in error in predicting the style of achiever by knowing the scores on the prime mover item. However, for the internal styles, there is only a 22.33% reduction in error in guessing the style of expert by knowing the score on the team builder item.

Although a relationship appears to exist between the president's leadership style and both institutional and group culture with the exception of the expert style, it is unclear in what direction the influence flows. Presidents may have a great impact on the administrative group culture since they work closely with administrators in a leadership capacity. On the other hand, most
presidents do not have the seniority at the institution that the administrative staff has. Presidents may alter their style to accommodate administrative expectations. Perhaps presidents are hired because their leadership styles reflect the cultural values of the institution.

**College Size and Group Culture**

There also are supplementary results relating to size of the community colleges in regard to group culture. Table 25 shows that there is a relationship between large

**Table 25. --College Size By Strength of Group Culture**

<table>
<thead>
<tr>
<th>Strength of Group Culture</th>
<th>N</th>
<th>Weak (%)</th>
<th>Medium (%)</th>
<th>Strong (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 4,000</td>
<td>100</td>
<td>13 (13)</td>
<td>65 (65)</td>
<td>22 (22)</td>
</tr>
<tr>
<td>4,000 - 7,999</td>
<td>80</td>
<td>10 (8)</td>
<td>52.5 (42)</td>
<td>37.5 (30)</td>
</tr>
<tr>
<td>8,000 - 11,999</td>
<td>12</td>
<td>3.3 (1)</td>
<td>56.7 (17)</td>
<td>40 (12)</td>
</tr>
<tr>
<td>12,000 - 20,000</td>
<td>22</td>
<td>8.4 (4)</td>
<td>45.8 (22)</td>
<td>45.8 (22)</td>
</tr>
<tr>
<td>Above 20,000</td>
<td>15</td>
<td>0 (0)</td>
<td>53.3 (8)</td>
<td>46.7 (7)</td>
</tr>
<tr>
<td>Total</td>
<td>273</td>
<td>9.5 (26)</td>
<td>56.4 (154)</td>
<td>34.1 (93)</td>
</tr>
</tbody>
</table>

Kruskal-Wallis p < .0026
Somers' D = .18
colleges and strong group cultures. In small colleges only 22 (22%) administrators believed their group culture was strong while in large colleges, 29 (46%) believed their group culture was strong. On the other hand, 13 (13%) administrators in small colleges believed their group culture was weak while 4 (6%) administrators in large colleges believed their group culture was weak.

The President's Attitude toward Grant-writing

The president's attitude toward grant-writing is related to a number of variables such as use of supportive services, presidential leadership styles, and culture.

Table 26 and 27 demonstrate a significant but low correlation between the use of specific supportive services for grant-writers and presidential attitude.

Table 26. --Information about Grants By Presidential Attitude toward Grants

<table>
<thead>
<tr>
<th>Information</th>
<th>N</th>
<th>Negative (%)</th>
<th>Positive (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Negative</td>
<td>89</td>
<td>37.1 (33)</td>
<td>62.9 (89)</td>
</tr>
<tr>
<td>Positive</td>
<td>188</td>
<td>19.7 (37)</td>
<td>80.3 (151)</td>
</tr>
<tr>
<td>Total</td>
<td>277</td>
<td>25.3 (70)</td>
<td>74.7 (207)</td>
</tr>
</tbody>
</table>

Chi-Square 8.78227, p < .0030
Phi = .187
Table 27. --Use of Supportive Services By Presidential Attitude toward Grant-writing

<table>
<thead>
<tr>
<th>Presidential Attitude toward Grants</th>
<th>N</th>
<th>Negative (%)</th>
<th>Positive (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>(%)</td>
<td>(%)</td>
</tr>
<tr>
<td>Conceptualization</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Negative</td>
<td>124</td>
<td>35.5</td>
<td>64.5</td>
</tr>
<tr>
<td>Positive</td>
<td>153</td>
<td>17</td>
<td>83</td>
</tr>
<tr>
<td>Total</td>
<td>277</td>
<td>25.3</td>
<td>74.7</td>
</tr>
</tbody>
</table>

Chi-Square 11.44008, $p < .0007$

Phi = .212

Writing

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Negative (%)</th>
<th>Positive (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>(%)</td>
<td>(%)</td>
</tr>
<tr>
<td>Negative</td>
<td>110</td>
<td>38.2</td>
<td>61.8</td>
</tr>
<tr>
<td>Positive</td>
<td>167</td>
<td>16.8</td>
<td>83.2</td>
</tr>
<tr>
<td>Total</td>
<td>207</td>
<td>25.3</td>
<td>74.7</td>
</tr>
</tbody>
</table>

Chi-Square 14.99133, $p < .0001$

Phi = .241

Table 28 shows the positive relationship between presidential attitude toward grants and externally oriented presidential leadership styles: 78.2% of administrators who believed that their presidents had positive attitudes toward grant-writing also viewed them as achievers. Knowing the president's attitude reduces the
error in predicting prime mover by 23.8% and achiever by 28.7%.

Table 28. --President's Attitude Toward Grant-writing By Prime Mover and Achiever

<table>
<thead>
<tr>
<th>Presidential Attitude toward Grants</th>
<th>Prime Mover</th>
<th>Achiever</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>Negative (%)</td>
<td>Positive (%)</td>
</tr>
<tr>
<td>Total</td>
<td>274 (68)</td>
<td>274 (68)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Prime Mover</th>
<th>N</th>
<th>Negative (%)</th>
<th>Positive (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>39</td>
<td>51.3 (20)</td>
<td>48.7 (19)</td>
</tr>
<tr>
<td>2</td>
<td>37</td>
<td>29.7 (11)</td>
<td>70.3 (26)</td>
</tr>
<tr>
<td>3</td>
<td>198</td>
<td>18.7 (37)</td>
<td>81.3 (161)</td>
</tr>
</tbody>
</table>

Mann-Whitney 2 Tailed p < .00001
Somers' D = .238

<table>
<thead>
<tr>
<th>Achiever</th>
<th>N</th>
<th>Negative (%)</th>
<th>Positive (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>22</td>
<td>63.6 (14)</td>
<td>36.4 (8)</td>
</tr>
<tr>
<td>2</td>
<td>36</td>
<td>38.9 (14)</td>
<td>61.1 (22)</td>
</tr>
<tr>
<td>3</td>
<td>216</td>
<td>18.5 (40)</td>
<td>81.5 (176)</td>
</tr>
</tbody>
</table>

Total 274 (68) 274 (68)
Mann-Whitney 2 Tailed p < .00001
Somers' D = .287
In terms of culture, there is a positive relationship between presidential attitude and external cultural values. In the open systems and rational goal cultures, the two externally oriented CVA models, there appears to be a relationship between a favorable presidential attitude toward grant-writing and cultural values. For example, in the open systems culture, 84.5% of administrators who viewed their presidents as having positive attitudes toward grant-writing saw new resources as important to their culture, and 82.4% of administrators who believed their presidents were favorable toward grant-writing viewed institutional growth as an important value as shown by Table 29. In the rational goal culture, 83.9% of administrators with favorable presidents saw achievement as a critical value and 68% saw measurable goals as important as shown in Table 30. In the group culture, 85.4% of the administrators with favorable presidents saw achievement as important and 82.5% viewed growth as critical as shown in Table 31.
Table 29. --President's Attitude Toward Grant-writing By New Resources and Institutional Growth

<table>
<thead>
<tr>
<th>Presidential Attitude toward Grants</th>
<th>N</th>
<th>Negative (%)</th>
<th>Positive (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>New Resources</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>29</td>
<td>62.1 (18)</td>
<td>37.9 (11)</td>
</tr>
<tr>
<td>2</td>
<td>40</td>
<td>47.5 (19)</td>
<td>52.5 (21)</td>
</tr>
<tr>
<td>3</td>
<td>205</td>
<td>15.1 (31)</td>
<td>84.9 (174)</td>
</tr>
<tr>
<td>Total</td>
<td>274</td>
<td>24.8 (68)</td>
<td>75.2 (206)</td>
</tr>
</tbody>
</table>

Mann-Whitney Two Tailed $p < .0033$
Somers' $D = .383$

| **Institutional Growth**           |     |               |              |
| 1                                  | 25  | 52 (13)       | 48 (12)      |
| 2                                  | 36  | 33.3 (12)     | 66.7 (24)    |
| 3                                  | 212 | 20.8 (44)     | 79.2 (168)   |
| Total                              | 273 | 25.3 (69)     | 74.7 (204)   |

Mann-Whitney Two Tailed $p < .0006$
Somers' $D = .1995$
Table 30. --President's Attitude Toward Grant-writing By
Achievement and Measurable Goals

<table>
<thead>
<tr>
<th>Presidential Attitude toward Grants</th>
<th>Negative (%)</th>
<th>Positive (%)</th>
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<td>209</td>
<td>17.7 (37)</td>
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<tr>
<td>Total</td>
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<td>24.9 (68)</td>
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Mann Whitney Two Tailed p <.00001
Somers' D = .305

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Mann Whitney Two Tailed p <.00001
Somers' D = .214
CHAPTER V
CONCLUSIONS

Overview

Federal and state subsidization of Illinois public community colleges has decreased. The cost of providing education has increased with lower or stable enrollment, the expense of purchasing and maintaining equipment for technical courses, and high salaries for a tenured and mature faculty. The resulting budget squeeze creates a dramatic need for additional funding.

The funding can be raised through grants development, revenue diversification, corporate donations, alumni associations, college foundations, and activities undertaken specifically to support educational programs and services such as contract education, catering food, bookstore, leasing facilities, and concessions (National Institute of Education, 1984). For Illinois community colleges, the most common approach has been grant-writing.

However, not all colleges are involved in grant-writing. Even more surprising, the results of a preliminary survey conducted for this study indicate that colleges with the least financial need are most involved in writing grants.
Statement of the Problem

In a period of limited finances, most Illinois community colleges need additional funding. Some of this need can be met through grant funds. However, there is a great variation in the level of grant-writing activity and grant funding among community colleges. The purpose of the study was to isolate those factors which lead to a high level of grant-writing among college administrators. More specifically, this study was designed to ascertain the possible impact of certain institutional cultures, presidential attitudes, college size and location, and rewards and supportive services upon levels of administrative grant-writing at community colleges in Illinois.

Sample and Data Gathering Procedure

This study was conducted in two stages. First, an initial study was conducted to ascertain the level of administrative grant-writing activity in each Illinois community college. A two-page researcher-designed survey was mailed to the development specialist or the person most involved in grant-writing. Data from this survey were used to group colleges into one of three levels of grant-writing activity: high, medium or low.

Once this information had been gathered, a six-page researcher-designed survey which focused on the impact of
institutional culture, presidential attitude toward grant-writing, reward systems, and support services upon college level of grant-writing activity was mailed to all Illinois community college administrators in positions in which grant-writing was feasible.

Data Analysis

Multiple discriminant analysis was used to determine if statistically significant differences in presidential reinforcement, culture, college size and location, supportive services and rewards for grant-writers existed between administrators at community colleges with high, medium, and low levels of grant-writing. First, a procedure involving the determination of a weighted composite discriminant score for each individual made it possible to determine group means by averaging the discriminant scores for all the individuals within each of the three grant-writing groups. Discriminant analysis involved deriving the linear combination of the survey items that discriminated best between the three college grant-writing level groups. The function was a good discriminator between the three groups with presidential reinforcement of grant-writing as the strongest factor followed by college size and location and culture.
Conclusions

Most community college presidents in Illinois approve of grant-writing, and most community college administrators are involved in writing grants. The combination of a favorable presidential attitude toward grant-writing and use of supportive services appears to be related to a high level of grant-writing.

In general, Illinois community colleges appear to have externally oriented cultures with the overall institutional culture primarily exhibiting open systems values and the overall group culture predominantly showing rational goal values. It appears that most community colleges in Illinois have completed the formalization developmental stage and are moving toward the elaboration of structure stage.

Most Illinois community college administrators view their presidents as combining the roles of achiever, prime mover, and team builder. Most community college presidents are not considered managers of a bureaucracy by their administrators. Administrators at colleges with a low level of grant-writing perceive their presidents as team builders more often than administrators at colleges with medium and high levels of grant-writing.

There is a difference in culture and size among colleges involved in grant-writing and those not involved. Colleges with a high level of grant-writing subscribe more
to the values of externally oriented cultures, are generally large, and have strong group cultures while colleges with a low level of grant-writing subscribe more to values of internally oriented cultures, are small, and do not have strong group cultures. Strong group culture appears to be related to large college size.

It is surprising that the large Chicago suburban community colleges which appear to need grant funding the least because of their financial resources are the most involved in grant-writing activities. The original premise of the study was that the variation in grant-writing activity among colleges was surprising when all colleges experience budgetary constraints. However, it is even more surprising that the most active colleges in writing grants have the least overall financial need.

It is also surprising that administrators who write grants do not appear to be motivated by rewards or incentives. However, if they perceive their president values grant-writing, they are motivated to become involved.

Discussion

As expected, the results of the study indicate that presidential attitude toward grant-writing is the single most important determinant of administrative grant-writing activity. This conclusion reflects common sense. Since
administrators are in a line relationship to the
president, it is no surprise that they want to meet
his/her goals. Since they do not have tenure, their job
security depends upon their performance. Therefore, if the
president communicates clearly and often that grant-
writing is important, administrators will likely be
motivated to write grants. This finding supports those of
other studies which conclude that presidential
reinforcement of grant-writing is critical to the success
of grant-writing programs in community colleges (McNamara,
1988; Young, 1978).

The results of this study do not apply to four-year
colleges and universities because administrators at those
institutions write grants to support institutional
missions which usually call for some degree of faculty
research. In contrast, administrators at community
colleges write grants to meet the educational needs of
residents and groups in their district.

One surprising finding was that administrators
involved in grant-writing were not motivated by special
rewards or incentives. Perhaps administrators who report
to presidents who encourage grant-writing see writing
grants as part of their job and, as such, do not need
further motivation.

Both presidential attitude toward grant-writing and
the use of supportive services appear to be related to the
level of college grant-writing. This finding supports the studies which indicate that a combination of presidential reinforcement and adequate funding of supportive services is related to success in grant-writing (Young, 1978; Hellweg, 1980), as well as the studies which indicate that a combination of presidential reinforcement and adequate funding of supportive services is related to success in grant-writing (Young, 1978; Hellweg, 1980).

The nature of grant-writing requires a focus external to the institution to understand what grants are available, what terms are acceptable, and what kinds of programs are attractive to community residents. Grant-writing behavior fits well with institutional cultures which are externally oriented. According to Quinn's Competing Values Approach (CVA), there are two internally oriented cultures and two externally oriented cultures. Administrators from institutions with open systems and rational goal cultures, the two externally oriented cultures, were more involved in grant-writing than administrators from institutions with internally oriented cultures. The open systems culture stresses growth, innovation, and resource acquisition which grant funds can make possible. The rational goal culture stresses accomplishment, a clear direction, and productivity which grant funds can underwrite.

Presidents with positive attitudes toward grant-
writing are concerned with external constituents such as potential students, local business and industry, community agencies, and state and local public officials. According to Quinn's CVA, there are two presidential roles which are internally oriented and two which are externally oriented. Presidents with positive attitudes toward grant-writing were perceived by their administrators to play the achiever and prime mover roles which focus upon the external environment.

These cultural results can be placed in the context of developmental stages. It appears that community colleges in Illinois have moved out of the formalization stage, the third developmental stage, characterized by internal process values and the expert president. They seem to be entering the fourth stage, which Quinn characterizes as the elaboration of structure stage. This stage emphasizes the open systems values as well as the complementary values of the rational goal and human relations cultures. The findings of the study indicate this configuration of cultural values which match Quinn's description of the fourth stage.

Quinn claimed that limiting an institution to one culture can interfere with its development. For example, an entrepreneurial culture in the first developmental stage can become an anarchy if not allowed to move into the second developmental stage of collectivity. In fact,
all the community colleges were described by their administrators as having a combination of cultural values. These findings support Quinn's contention that there should be a balance of cultures (1988) and the NCHEMS study's conclusion that most (96.5%) of the institutional cultures consisted of a combination of cultural models.

Presidental leadership style reflects the combination of cultural values in the fourth developmental stage. The combination of the three roles of achiever, prime mover, and team builder with the achiever role being dominant is the best description of presidential leadership style in Illinois community colleges. These results are supported by other findings. Juggling or combining roles is considered to be ideal by Wnerich (1980), Reyes and Twombly, (1986-87), Vaughn, (1986), and Quinn (1988). However, the Commission on Strengthening Presidential Leadership contradicts these results by stating that "an all-purpose talent" (1984, p. 18) does not exist and that some strengths cannot coexist in the same person.

Quinn's competing values concept was supported by the opposing cultural models demonstrating the greatest difference in scores. In Quinn's model, the open systems competes with the internal process culture, and the rational goal competes with the human relations culture. As expected, in terms of institutional culture, the
greatest difference in scores occurred between the open systems and the internal process cultures. As expected, in terms of the group culture, the greatest difference in scores occurred between the rational goal and the human relations cultures.

The competing nature of Quinn's theory makes future cultural developments predictable. As the open systems values in the institutional culture become more prominent, eventually, perhaps in the next twenty years, the internal process values will regain strength. If this happens, grant-writing among administrators probably will decrease in popularity.

Cultural strength seems to be important in determining the impact of culture. In this study, most administrators believed their institutional cultures and their group cultures were strong. However, in the NCHEMS study, only about 25% of the cultures were considered to be strong. The difference in perception of strength may be explained by the way cultural strength was computed by both survey instruments, or it may mean that a higher percentage of Illinois community college cultures are strong than of the cultures of four-year institutions across the nation which participated in the NCHEMS study.

The strength of the group culture and the size of the community college are related to the college level of grant-writing. Administrators from large suburban colleges
are more involved in writing grants than administrators from small colleges. Large community colleges appear to have stronger group cultures than small community colleges. Group cultures are more externally oriented than institutional cultures, and externally oriented cultures are related to grant-writing. These findings support Clark's (1971) assertion that large colleges have a tendency to have strong group cultures.

In short, the community college president's attitude toward grant-writing determines the level of grant-writing at the institution. Culture is related to grant-writing in that institutional and group cultures and presidential leadership roles tend to be externally oriented in institutions involved in grant-writing. Community college culture has entered the fourth stage of development which stresses external values which are conducive to grant-writing.

Limitations of the Study

This study has several limitations. First of all, data collection was limited to grant-writing for one year in Illinois community colleges. Because states have such different ways of coordinating and funding community colleges which may have an impact upon grant-writing activity, the results of the study cannot be generalized.
to a national population. Secondly, the use of survey research which Kuh & Whitt (1980) characterize as "wrongheaded" (p. 15) does not provide the in-depth analysis of individual community college cultures which is possible with ethnographic research. However, survey research made comparisons among institutions possible.

Implications for Practice

Community college presidents in Illinois who have wondered about the efficacy of advocating grant-writing should have confidence in proceeding. This study shows that the president's leadership is the most important component in motivating administrators to write grants.

Since presidential support of grant-writing activity is so important, governmental agencies wanting to encourage community colleges to submit proposals should approach community college presidents. If the president is interested, proposals from administrators will follow.

Because the study has shown that presidents of large colleges with strong group cultures are in an excellent position to implement a grant-writing program, they may want to reinforce grant-writing by staffing and funding supportive services for grant-writing adequately.

Professors in higher education programs with a concentration in community colleges may consider teaching the skills and attitudes associated with the four
presidential leadership styles as part of their curricula. It appears that community college administrators believe that a potential president needs to be able to play each role. The curriculum for public administration graduate programs at fifteen public and private colleges and universities in the state of New York is based on the four CVA leadership styles (Quinn, 1988).

Recommendations for further research

This study can be expanded by interviewing community college presidents in Illinois. Since the presidents were not invited to respond to the questionnaires, their perspectives are not known. As a way of confirming the results of the study, they could be asked to describe their attitude toward administrative grant-writing, the nature of their working relationship with their administrators and the resource development office, their leadership style, and their perception of the institutional and group culture.

In-depth cultural studies of an Illinois community college with a high level of grant-writing and of another Illinois community college of a similar size with a low level of grant-writing may be undertaken. In this way, the results of this study can be confirmed or challenged.

A replication of this study in another state would demonstrate if the combination of factors associated with
grant-writing in Illinois community colleges is also related to grant-writing in community colleges in another area.
APPENDICES
Dear _____,

Grant-writing at community colleges is widespread, but not much research has been done about it. I want to conduct a study about what factors motivate Illinois community college administrators to write grants. Before doing so, I need first to know the level of grant-writing activity at individual community colleges in Illinois. This information is not available currently.

Your position title indicates you are involved in grant-writing at your institution. Therefore, I am asking you to fill out the enclosed one page questionnaire. Your response is important because data about your institution are needed to make the study complete.

The results of this project will provide an overview of grant-writing activity in Illinois community colleges as well as a compilation of institutional grant-writing activity in terms of the number of people involved in grant-writing, grant development personnel on staff, organizational structure, and policies. A summary of the results will be forwarded to you if you so indicate on the questionnaire. The data will be aggregated; individual institutional data will not be reported.

Please call me at (708) 697-8124 if you have questions.

Thank you for your assistance.

Sincerely,

Donna Rudy
Project Director
APPENDIX B  STAGE ONE QUESTIONNAIRE

Please complete the survey by responding in the spaces below each question.

1. Indicate the total number of people who contributed a section or wrote a complete competitive (nonentitlement) grant proposal in FY 89 at your college:


2. Indicate how many of those people belong in each of the following categories:

   a) ADMINISTRATORS ___
   b) FACULTY
   c) OTHER (PLEASE INDICATE WHAT GROUP) _________

3. Estimate the total amount of funding secured for your college through competitive grant sources in FY 88:


4. Estimate the total number of grant proposals written partly or solely by administrators for FY 89.


4.a. When you review how many grants have been written by administrators in the last five years, how typical is the number of grants written for FY 89?

   [ ] HIGHER THAN USUAL
   [ ] ABOUT THE SAME
   [ ] LOWER THAN USUAL
   [ ] DO NOT KNOW

5. How many full-time and/or part-time staff are employed at your college to provide grant-writing assistance?

   a) FULL-TIME ______
   b) PART-TIME ______
Please indicate where the grant development area fits into the order of the hierarchy at your college. Provide titles in the blank spaces below for the people in the reporting chain from the grant developer (s) to the president.

PRESIDENT


GRANT DEVELOPER (s)

Does your college offer any incentives to write grant proposals?

[ ] YES
[ ] NO

If yes, please explain.

To your knowledge, have any people who began as grant personnel moved into an administrative position at your college?

[ ] YES
[ ] NO

If yes, please explain.

Your contribution to this study is greatly appreciated.

As you know, the results of this survey will be used in a study about what factors motivate Illinois community college administrators to write grants. Would you like a summary of that study?

[ ] YES
[ ] NO

THANK YOU!
Dear ____,

Administrators of community colleges in Illinois have been faced with budget constraints throughout the 1980's. Grant funding has provided relief as well as the needed resources to develop new programs and services. If you are interested in attaining more grant money for your institution, it is important to understand what factors stimulate grant-writing activity.

The Illinois Council of Community College Administrators has endorsed this study about administrative grant-writing. The study proposes to discover how important institutional cultural values, presidential reinforcement, and reward systems are to Illinois community college administrators in becoming or not becoming involved in grant-writing.

Only administrators of community colleges in Illinois with opportunities to be involved in grant-writing are being asked to respond to the enclosed questionnaire. Your position title indicates that you may be involved in activities which are frequently funded through grants. Therefore, your responses are critical to the success of the study.

You may be assured of complete confidentiality. While the questionnaire has an identification number for mailing purposes, your name will never be placed on the questionnaire.

If you would like a summary of the results, write your name on the back of the return envelope. The results of the study will also be shared with interested organizations.

Please call me at (708) 697-8124 if you have questions. Thank you for your assistance.

Sincerely,

Donna Rudy
Project Director
APPENDIX D  STAGE TWO QUESTIONNAIRE

Please check one choice for each item unless otherwise directed.

GRANT-WRITING BEHAVIOR

1. Which of the following best reflects your behavior in regard to writing grants in the last five years?

[ ] HAVE WRITTEN ONE OR MORE GRANT PROPOSALS
[ ] BEEN PART OF A GROUP WRITING A PROPOSAL
[ ] HAVE CONSIDERED WRITING A GRANT PROPOSAL
[ ] NEVER CONSIDERED WRITING A GRANT PROPOSAL

1.a. In which of the following ways do personnel at your institution help you to write grants? (Check all that apply).

[ ] SOURCE OF INFORMATION ABOUT GRANTS
[ ] INTRODUCTION TO GRANT CONTACTS
[ ] HELP WITH CONCEPTUALIZATION
[ ] HELP WITH BUDGET CONSTRUCTION
[ ] HELP IN WRITING THE GRANT
[ ] NONE OF THE ABOVE

REWARDS FOR WRITING GRANTS

2. The following is a list of possible rewards for having a grant proposal funded. Circle the appropriate number indicating the degree to which the following rewards would matter to you if you were to receive funding from a grant.

<table>
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<tr>
<th>Reward</th>
<th>NOT AT ALL</th>
<th>VERY MUCH</th>
</tr>
</thead>
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</tr>
<tr>
<td>Staff for your area</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>Equipment for your area</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>Recognition within the college</td>
<td>1 2 3 4 5</td>
<td></td>
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<tr>
<td>Recognition outside the college</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>Your career development</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>Service to students</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
</tbody>
</table>
3. Would a direct salary bonus motivate you to write a grant proposal?

[ ] VERY MUCH
[ ] QUITE A BIT
[ ] SOMEWHAT
[ ] NOT MUCH
[ ] NOT AT ALL

4. Would receiving a grant positively affect your annual evaluation?

[ ] VERY MUCH
[ ] QUITE A BIT
[ ] SOMEWHAT
[ ] NOT AT ALL
[ ] DON'T KNOW

5. Should long term grant managers be considered for promotion into college administrative positions funded through the college budget?

[ ] ALWAYS
[ ] OFTEN
[ ] SOMETIMES
[ ] NEVER
[ ] DON'T KNOW

THE LEADERSHIP OF THE PRESIDENT

6. What is the attitude of your institution's president toward grant-writing?

[ ] POSITIVE
[ ] NEUTRAL
[ ] NEGATIVE
[ ] DON'T KNOW

6.a. How do you know about the president's attitude?

(Check all that apply.)

[ ] SPEECHES
[ ] CORRESPONDENCE
[ ] CONVERSATIONS
[ ] POLICIES
[ ] OTHER Please explain ____________________
DESCRIPTION OF THE CULTURE

These questions relate to the institutional culture that is most like the culture of your community college. Culture is the values and beliefs implied in the statement, "This is how we do things around here". Each item contains four descriptions. Please indicate how similar the description is to your institutional culture by placing an X on the line below. Each line represents a continuum between not similar and very similar.

For example:
In the next question, if institution A seems very similar to yours, your answer would look like this.

NOT SIMILAR ___________________________ X VERY SIMILAR

7. Please indicate how similar the institutional characteristics of the following institutions are to those of your institution by placing X's on the lines below.

At Institution A, personal commitment to the college is high.

NOT SIMILAR ___________________________ VERY SIMILAR

Institution B emphasizes institutional growth.

NOT SIMILAR ___________________________ VERY SIMILAR

Institution C is efficient and smooth-running.

NOT SIMILAR ___________________________ VERY SIMILAR

Institution D focuses upon accomplishing measurable goals.

NOT SIMILAR ___________________________ VERY SIMILAR

8. Please indicate how similar the presidents of the following institutions are to your president by placing X's on the lines below.

The president of institution A is a team builder.

NOT SIMILAR ___________________________ VERY SIMILAR

The president of institution B is the prime mover.

NOT SIMILAR ___________________________ VERY SIMILAR
The president of institution C is the expert.
NOT SIMILAR ____________________________ VERY SIMILAR

The president of institution D is an achiever.
NOT SIMILAR ____________________________ VERY SIMILAR

9. Please indicate how similar the institutional emphases of the following institutions are to your institution by placing X's on the lines below.

Institution A emphasizes human resources.
NOT SIMILAR ____________________________ VERY SIMILAR

Institution B emphasizes acquiring new resources.
NOT SIMILAR ____________________________ VERY SIMILAR

Institution C emphasizes stability.
NOT SIMILAR ____________________________ VERY SIMILAR

Institution D emphasizes achievement.
NOT SIMILAR ____________________________ VERY SIMILAR

DESCRIPTION OF THE GROUP CULTURE

10. Please indicate how similar the culture of the group of administrators at the following institutions is to your group culture by placing X's on the lines below. The group consists of vice presidents, assistants to the president, and deans of divisions.

Group A is like an extended family.
NOT SIMILAR ____________________________ VERY SIMILAR

Group B is dynamic.
NOT SIMILAR ____________________________ VERY SIMILAR

Group C is formal.
NOT SIMILAR ____________________________ VERY SIMILAR

Group D is task oriented.
NOT SIMILAR ____________________________ VERY SIMILAR
11. Please indicate how similar the emphases of the administrative groups at the following institutions are to those of your group by placing X's on the lines below.

Group A emphasizes the importance of human relations.
NOT SIMILAR ___________________________ VERY SIMILAR

Group B emphasizes growth.
NOT SIMILAR ___________________________ VERY SIMILAR

Group C emphasizes permanence.
NOT SIMILAR ___________________________ VERY SIMILAR

Group D emphasizes achievement.
NOT SIMILAR ___________________________ VERY SIMILAR

12. Some people find that they are closely aligned with the values of the institution as a whole. Others feel more a part of a group within the college. Which reflects your own values most closely?

[ ] THE INSTITUTIONAL CULTURE
[ ] THE GROUP CULTURE
[ ] BOTH THE SAME
[ ] NEITHER

13. How strong is the institutional culture?

[ ] VERY STRONG
[ ] MEDIUM STRENGTH
[ ] WEAK

14. How strong is the group culture?

[ ] VERY STRONG
[ ] MEDIUM STRENGTH
[ ] WEAK

15. Do you believe that most administrators at your institution would agree with your perception of the overall culture?

[ ] ALMOST ALL AGREE
[ ] THE MAJORITY AGREES
[ ] ABOUT HALF AGREE
[ ] A MINORITY AGREES
[ ] HARDLY ANY AGREE
INFORMATION ABOUT YOU

16. How long have you worked in your current position at this college?
   ____ YEARS

17. How long have you worked at this college?
   ____ YEARS

18. What is the highest educational degree you have completed?
   [ ] DOCTORATE
   [ ] MASTERS
   [ ] BACHELORS
   [ ] OTHER

Is there anything else you would like to state about what motivates you to write or to not write grants? If so, please use this space for that purpose.

Also, any comments you wish to make that will add to an understanding of administrative motivations to write grants will be appreciated, either here or in a separate letter.

Your contribution to this study is greatly appreciated. If you would like a summary of the results, please print your name and address on the back of the return envelope (NOT on the questionnaire).

THANK YOU.
APPENDIX E  PILOT STUDY QUESTIONNAIRE

Please check one choice for each item unless directed otherwise.

1. Which of the following best reflects your behavior in regard to writing grants in the last five years?

[ ] HAVE WRITTEN ONE OR MORE GRANT PROPOSALS
[ ] HAVE WRITTEN A PART OF A GRANT PROPOSAL
[ ] BEEN PART OF A GROUP
[ ] HAVE CONSIDERED WRITING A GRANT PROPOSAL
[ ] NEVER CONSIDERED WRITING A GRANT PROPOSAL

SKIP TO #2

1.a. In what ways do you use grant-writing assistance? (Check all that apply).

[ ] SOURCE OF INFORMATION ABOUT GRANTS
[ ] INTRODUCTION TO GRANT CONTACTS
[ ] HELP WITH CONCEPTUALIZATION
[ ] HELP WITH BUDGET CONSTRUCTION
[ ] HELP IN WRITING THE GRANT
[ ] NONE OF THE ABOVE

2. The following is a list of typical rewards for having a grant proposal accepted. Circle the appropriate number indicating the degree to which the following rewards would matter to you if you were to receive a grant.

<table>
<thead>
<tr>
<th>Reward</th>
<th>None</th>
<th>Minimum</th>
<th>Moderate</th>
<th>High</th>
<th>Very High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Funding for your area</td>
<td></td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Staff for your area</td>
<td></td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Equipment for your area</td>
<td></td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Status within the college</td>
<td></td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Status outside the college</td>
<td></td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Your career development</td>
<td></td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Service to students</td>
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<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
3. Would a direct salary bonus motivate you to write a grant proposal?

[ ] VERY MUCH
[ ] QUITE A BIT
[ ] SOMEWHAT
[ ] NOT MUCH
[ ] NOT AT ALL

4. Which of the following best defines your professional role?

[ ] FACULTY MEMBER
[ ] ADMINISTRATOR
[ ] GRANT MANAGER

5. Do you agree or disagree that receiving a grant would positively affect your annual evaluation?

[ ] STRONGLY AGREE
[ ] AGREE
[ ] NEUTRAL
[ ] DISAGREE
[ ] STRONGLY DISAGREE

6. Do you agree or disagree that long term grant managers should be in line for promotion into college administrative positions funded through the college budget?

[ ] STRONGLY AGREE
[ ] AGREE
[ ] NEUTRAL
[ ] DISAGREE
[ ] STRONGLY DISAGREE

7. What is the attitude of your institution's president toward grant-writing?

[ ] POSITIVE
[ ] NEUTRAL
[ ] NEGATIVE
[ ] DON'T KNOW - SKIP TO #8
7.a. How do you know about the president's attitude?
(Check all that apply.)

[ ] SPEECHES
[ ] CORRESPONDENCE
[ ] CONVERSATIONS
[ ] POLICIES

8. Although more than one of the following categories may describe the nature of your institution, please check the one description which best represents your college at the current time.

[ ] It is a personal place; it is like an extended family. People seem to share a lot of themselves. Tradition and high morale are important. Commitment to the college runs high.

[ ] It is a dynamic and entrepreneurial place. People are willing to take risks. There is an emphasis on being first as well as growing and acquiring new resources.

[ ] It is a formal place. Bureaucratic procedures generally govern what people do. Maintaining an efficient and smooth-running institution is important here.

[ ] It is a productive place. Major concerns are getting the job done and accomplishing measurable goals. Competitive actions foster achievement.

9. What group at the college do you feel most allied with:

[ ] ADMINISTRATION
[ ] FACULTY
[ ] DEPARTMENT/DIVISION
[ ] CAMPUS/BUILDING
[ ] OTHER

10. Although more than one of the following categories may describe the nature of the group which you chose in question 9, please check the one description which best represents your group.

[ ] It is a personal group.
[ ] It is an entrepreneurial group.
[ ] It is a formal group.
[ ] It is a productive group.
11. The purpose of this section is to learn about your perception of the leadership styles at your college.

1. Choose people at your college who represent the roles listed sideways on the left. To keep track of them, you may want to write their initials behind each category. Do not use yourself in any category other than "myself".

2. Rate each person on the scale of one (1) to seven (7) on the continua below. Write the numbers in the boxes to the left of the descriptors.

3. Cross out the initials after you finish the grid.

<table>
<thead>
<tr>
<th>INITIALS</th>
<th>Most powerful administrator</th>
<th>Most influential faculty member</th>
<th>Least influential faculty member</th>
<th>Least powerful administrator</th>
<th>Myself</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
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<td></td>
</tr>
</tbody>
</table>

- means oriented .......... ends oriented
- consensual ............... individual
- facilitator ............... producer
- multiple purposes ........ single purpose
- cooperative .............. competitive
- future emphasis .......... present emphasis
- risktaking .............. conservative
- subjective ............... objective
12. How long have you worked in your current position at this college?
   ____ YEARS

13. How long have you worked at this college?
   ____ YEARS

14. What is the highest educational degree you have attained?
   [ ] DOCTORATE
   [ ] MASTERS
   [ ] BACHELORS
   [ ] OTHER

15. Sex
   [ ] MALE
   [ ] FEMALE

THANK YOU!

Would you like a summary of the results of the survey to be mailed to you?

Comments about the survey instrument:
## APPENDIX F1 PILOT STUDY RESULTS

<table>
<thead>
<tr>
<th>Actual Group</th>
<th>Predicted Group Membership</th>
<th>N</th>
<th>Low (%)</th>
<th>Middle (%)</th>
<th>High (%)</th>
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</thead>
<tbody>
<tr>
<td>Low</td>
<td></td>
<td>10</td>
<td>90 (9)</td>
<td>0 (0)</td>
<td>10 (1)</td>
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<tr>
<td>Middle</td>
<td></td>
<td>10</td>
<td>0 (0)</td>
<td>10 (100)</td>
<td>0 (0)</td>
</tr>
<tr>
<td>High</td>
<td></td>
<td>10</td>
<td>10 (1)</td>
<td>0 (0)</td>
<td>90 (9)</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>30</td>
<td>33.3 (10)</td>
<td>33.3 (10)</td>
<td>33.3 (10)</td>
</tr>
</tbody>
</table>

93.33% correctly classified
APPENDIX F2  PILOT STUDY RESULTS

ORDER IN WHICH VARIABLES WERE ENTERED IN THE DISCRIMINANT FUNCTION IN THE PILOT STUDY

Variables

1. President's Conversations
2. Years in Current Position
3. Grant Possibilities
4. Equipment for Your Area
5. Institutional Culture
6. Conceptualization
7. Administrative Positions for Grant Managers
8. Job Security for Grant Managers
9. Writing Grants
10. Bonus
11. President's Policies
12. Highest Educational Degree
13. Years at the College
14. Status Outside the College
15. Your Career Development
REFERENCES


The dissertation submitted by Donna Rudy has been read and
approved by the following committee:

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Associate Dean of the School of Education, Loyola

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Lecturer, Center for Organizational Development,
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The final copies have been examined by the director of the
dissertation and the signature which appears below
verifies the fact that any necessary changes have been
incorporated and that the dissertation is now given final
approval by the Committee with reference to content and
form.

The dissertation is therefore accepted in partial
fulfillment of the requirements for the degree of Doctor
of Philosophy.

Date

Director's Signature