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The relationship of presidential leadership style and the financial health of private, non-proprietary institutions of higher learning

Seay, Sandra Eldridge, Ed.D.

East Tennessee State University, 1989

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**THE RELATIONSHIP OF PRESIDENTIAL LEADERSHIP STYLE
AND THE FINANCIAL HEALTH OF
PRIVATE, NON-PROPRIETARY INSTITUTIONS OF HIGHER LEARNING**

**A Dissertation
Presented to
the Faculty of the Department of
Educational Leadership and Policy Analysis
East Tennessee State University**

**In Partial Fulfillment
of the Requirements for the Degree
Doctor of Education**

by

Sandra Eldridge Seay

December, 1989

APPROVAL

This is to certify that the Graduate Committee of

SANDRA ELDRIDGE SEAY

met on the

3rd day of November, 1989.

The committee read and examined her dissertation, supervised her defense of it in an oral examination, and decided to recommend that her study be submitted to the Graduate Council and the Associate Vice-President for Research and Graduate Studies in partial fulfillment of the requirements for the degree Doctor of Education.

Lloyd H. Edwards
Chairman, Graduate Committee

Richard E. [unclear]

James A. Perry

Charles W. [unclear]

L. [unclear] Bowers

James H. [unclear]
Associate Vice-President for
Research and Dean of the
Graduate School

Signed on behalf of
the Graduate Council

ABSTRACT

THE RELATIONSHIP OF PRESIDENTIAL LEADERSHIP STYLE AND THE FINANCIAL HEALTH OF PRIVATE, NON-PROPRIETARY INSTITUTIONS OF HIGHER LEARNING

by

Sandra Eldridge Seay

An attempt was made in this study to determine if there was a relationship between the ability of academic institutions to pay their current debts and the leadership style exhibited by presidents presiding over those institutions.

The study involved a stratified random sample of 263 private, non-proprietary institutions of higher education drawn from a directory of institutions accredited by the Southern Association of Colleges and Schools in 1989. Testing of seven of the eight null hypotheses was based upon survey material completed by 77 presidents and upon the financial records of 53 institutions. The remaining hypothesis was tested using the financial records of 199 institutions. Financial health, or the ability of an institution to pay its current debt, was measured by a mathematical formula termed a modified ratio of expendable funds to plant debt. Presidential leadership style was determined through scales associated with Fred E. Fiedler's contingency model of leadership effectiveness. A combination of causal-comparative and correlational methods was used to answer questions concerning the association between financial health scores and three different types of leadership styles. Additionally, questions regarding the situational aspects of leadership effectiveness and the relationship of a reputational measure of leader effectiveness to the objectively defined measure of leadership effectiveness used in this study were posed. The Jaspens M coefficient of multiserial association, directional t tests for independent data, a point-biserial correlation, and one-way analysis of variance techniques were used to analyze the data by means of the SPSS-X and SPSS-PC+ statistical packages.

Of the eight null hypotheses tested, only one was found to be significant at the alpha .05 level. The conclusion drawn from the rejected hypothesis was that the financial health scores of institutions granting associate degrees only were significantly different from the financial health scores of institutions whose highest levels of degrees offered were either the bachelor's degree or the master's degree.

The majority of the presidents participating in the study were found to have task-oriented leadership styles. An additional finding was that the healthiest institutions, by the terms of this study, were institutions whose highest level of degree awarded was the bachelor's degree. This was in contrast to the finding in 1976 by Lupton and associates that the least healthy institutions were those granting bachelor of art and bachelor of science degrees only.

EAST TENNESSEE STATE UNIVERSITY
INSTITUTIONAL REVIEW BOARD

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Style and the Financial Health of Private,
Non-Proprietary Institutions of Higher
Learning

PRINCIPAL INVESTIGATOR: Sandra Seay

The Institutional Review Board has reviewed the above
project on (date) 7-11-89 with respect
to the rights and safety of human subjects, including
matters of informed consent and protection of subject
confidentiality, and finds the project acceptable to
the Board.

Anthony J. DeLucia
CHAIRMAN

DEDICATION

To my family: nuclear and extended, present time and earthbound, previous time and transcendent.

Your love was the wellspring that sprouted my desire for knowledge, nurtured my determination to exceed, and kept vibrant my search for possibilities.

I am honored to be a part of you.

ACKNOWLEDGMENTS

This dissertation represents the culmination of a major undertaking for me as I had little knowledge of the financial operation of academic institutions and even less awareness of the many invisible forces contributing to institutional solvency in the United States. The fact that this research has been completed is a credit, not so much to the researcher, as it is to the many persons whose names follow. Foremost, it is a testament to the patience and wisdom of my committee chair, Dr. Floyd H. Edwards, for whose support, I will be eternally grateful.

I am also thankful that Dr. Richard A. Manahan allowed me to serve as his intern, and I am appreciative of the fact that he found my academic goals to be credible. For forcing me to think clearly, I wish to thank the other members of my dissertation committee, Dr. Charles W. Burkett, Dr. J. Howard Bowers, and Dr. James S. Perry. Additionally, I wish to thank Dr. Nancy L. Garland who represented Dr. Manahan at various times during the course of this study.

For assistance ranging from permission to use illustrations to explanations of financial terms and statistical procedures, I extend a heartfelt thank you to: Professor Fred E. Fiedler, University of Washington; Mr. Frederick Turk and Mr. Daniel Robinson, Peat Marwick Main & Co.; Dr. W. Hal Knight, Dr. Russell West, Mr. David

Collins, Mr. Dwight Taylor, Mrs. Betty Tester, Dr. Susan Twaddle, Ms. Julia Adams, Mr. Brian Robinson, and Mrs. Sonja Cantrell, East Tennessee State University; Dr. Nathan Dickmeyer, Teachers College of Columbia University; Mr. Norman Brandt, Mr. John Dusatko, and Dr. Richard P. Cook, the United States Department of Education; Mr. Tobin P. Conley, the National Association of College and University Business Officers (NACUBO); Mr. Stan Galick and Mr. Charles Anderson, the American Council on Education.

Finally, to Mr. John E. Dillow, Vice-President for Financial Matters at King College, thank you for allowing me access to your personal library at King and for the time you spent explaining accounting principles and terms to me. To Mr. Dillow's staff at King, thank you for sharing your office space with me and for your kind acts of hospitality. To the presidents who took time away from their busy schedules to participate in the study, in all sincerity, I thank you.

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CHAPTER ONE

Introduction

More than 85 institutions of higher learning in the United States closed due to financial difficulties between 1967 and 1971 (Snyder, 1987). In rapid succession, a plethora of studies, designed to look into the financial circumstances and management practices of academic institutions, arose (Heisler & Hougland, 1984; Patrick & Caruthers, 1980). While the dramatic number of institutional closings has halted considerably in the 1980s, interest in obtaining and maintaining financial solvency for academic institutions has remained a concern of academic leaders and others interested in the future of higher education.

A number of works on institutional failings have focused on the *modi operandi* of the persons selected to lead colleges and universities (Berte & Morse, 1985; Fisher, 1984; Pray, 1979). Imbued throughout much of the literature is the conviction that the fortunes of academic institutions are a direct consequence of the actions taken by their titular heads. Presidents of colleges and universities, like their peers in business and the non-academic world, are held accountable for the operation of their enterprises. Almost twenty years ago, Fred Fiedler noted, "we evaluate the performance of an orchestra conductor not by his ability

as a musicologist or the happiness of his musicians but by how well his orchestra plays" (Fiedler, 1971, p. 131).

Fiedler's sentiments are especially apropos to higher education where a president is not only evaluated according to the fortunes of an institution, but is also considered the essential element in determining how well that academic institution functions. The idea that a single individual can shape and direct the fortunes of an academic enterprise is embodied in the great man theory of presidential leadership and has been given credence by pronouncements such as the following from the American Council on Education, reported by Fisher, Tack, and Wheeler (1988):

Every college must have a president, but as Stoke (1959) and Kauffman (1984) note, who the president is certainly makes a difference . . . Moreover . . . History shows that a college or university might be elevated to a higher level of significance, continue on its traditional course, or begin on a slippery path toward failure as a direct result of the person selected by the board to lead its institution (American Council on Education (ACE), np). (p. 2)

Leadership style is defined as the approach usually taken by a president in directing the affairs of an institution. Fred Fiedler (1967; 1969) has hypothesized that leadership styles are either task-oriented, relationship-oriented, or oriented more toward other

considerations (socio-independent). Fiedler's ideas about leader styles and effectiveness are given in his contingency model of leadership effectiveness.

In this investigation, the contingency theory was used to examine the leadership effectiveness of 53 college and university presidents whose institutions were accredited by the Southern Association of Colleges and Schools. Effectiveness was equated with management practices that resulted in an institution being able to meet its current financial obligations. Effectiveness was measured by applying financial data submitted by each institution to the National Center for Education Statistics on the Higher Education General Interest Survey (HEGIS) to a formula called the modified ratio of expendable fund balances to plant debt. Using the formula, ratios were calculated for each institution involved in the study. Once ratios had been calculated, those institutions whose ratios fell at or above the 75th percentile were labeled financially healthy. In particular, an attempt was made to determine which of the three leadership styles described by Fiedler was more often associated with academic institutions that were in good financial condition as measured by the terms of this study.

Because it focused upon present-day operations and used an objective measure of presidential leadership effectiveness, this study marked a departure from the usual methods employed to assess presidential effectiveness.

Historically, the effectiveness of academic leaders has been determined in post hoc analyses often involving retrospective recountings by presidents and their admirers of surmounting great odds or of having the singular ability to anticipate the future needs of an institution. This study was also different from the reputational method of determining leader effectiveness as used by Fisher, Tack, and Wheeler (1988) in a recent study of academic presidents in the United States. In the Fisher study presidents were asked to submit the names of peers whom they considered to be effective leaders. The end result was a listing of 100 presidents and their associated institutions. To some extent, the present study represented an addendum to the Fisher study in that it attempted to determine if presidents who had reputations among their peers as being effective leaders would be considered effective as well by the terms of the objective measure used in this investigation.

The Problem

The Statement of the Problem

The problem of this study was that the relationship between the financial health of selected private, non-proprietary institutions as measured by the modified ratio of expendable fund balances to plant debt and the

leadership style of task-oriented, relationship-oriented, and socio-independent presidents was unknown.

Related Problems

The approach taken by a president in managing the affairs of an institution is inextricably bound to leadership considerations. As such this study was also a field test of a number of hypotheses drawn from the contingency model, a theory of leadership developed by Fred E. Fiedler. According to Fiedler, leaders exhibit either a relationship-oriented, a task-oriented, or a socio-independent style. Task-oriented leaders are described as deriving satisfaction from getting things done; relationship-oriented leaders are motivated foremost by obtaining good relations with others in a group; and socio-independent leaders are "somewhat detached . . . but more open to their environment" (Fiedler and Chemers, 1984, p. 25). Further, Fiedler has written that there are situational determinants which greatly contribute to a leader's effectiveness and that leaders are not equally effective in all situations. For these reasons, Fiedler's theory has been labeled a situational theory of leader effectiveness.

The contingency model has been tested in a number of work and laboratory settings. The literature search, however, yielded few tests of the contingency theory which involved leaders of academic institutions. Another concern

of this study, then, was to determine if major hypotheses of the contingency theory were supported by data obtained from a field test of the theory which involved leaders of academic institutions.

Additionally, this study considered the technique of reputational rankings as a method of assessing leader effectiveness. It was noted that measures of academic presidential effectiveness have historically consisted of subjective rather than objective measures. A variant on previous writings of presidential leadership was the reputational ranking technique used by Fisher and his colleagues (1988). Aside from the added prestige gained from being placed on the list, the question as to what specific tasks the presidents were effective in carrying out remained unanswered by the Fisher, Tack, and Wheeler study. This study went beyond the aforementioned study in that it attempted to determine specifically how effectively presidents performed in the area of managing the fiscal resources of their institutions. While doing this, it set out in a second sub-problem to determine if there was any association between a president's reputed ability as measured by the terms of the Fisher, Tack, and Wheeler study and that same president's ability as measured by the terms of this study.

The Purposes of the Study

The primary purpose of this study was to determine if the financial health of institutions was associated with a particular leadership style. A second purpose of this study was to test a number of hypotheses drawn from Fred Fiedler's contingency model of leadership. A third purpose of this study was to determine if there was an association between a reputationally derived list of institutions considered to be led by effective leaders and the list of institutions considered to be led by effective leaders according to the findings of this study.

The Significance of the Study

Reports issued by futurists and others indicated that the resourceful management of academic institutions would continue to loom in importance as the 21st century approached. Institutional survival would depend upon leaders using sound and creative approaches in meeting the challenges brought on by shifts in enrollment patterns and the press of a changing technological environment.

This study was needed because data gained from it could only add to the current understanding of the far reaching effects of presidential leadership on the general functioning of colleges and universities and the particular effect of presidential leadership style on the financial condition of academic institutions.

Research Questions

For the questions which follow, leadership style was determined by a score obtained from the Least Preferred Coworker Scale (LPC), an instrument designed by Fred Fiedler and used to type leaders as having either a relationship-oriented, a task-oriented, or a socio-independent leadership style. Financial health scores were derived mathematically by applying financial data to a formula, termed the modified ratio of expendable fund balances to plant debt.

Within the context of the contingency model of leadership effectiveness, and using the above described objective definitions of leadership style and financial health, this study attempted to answer the following research questions:

1. Will there be a significant association between financial health scores and the leadership styles of relationship-oriented, task-oriented, and socio-independent presidents?

2. Will the financial health scores of institutions headed by relationship-oriented, task-oriented, and socio-independent presidents be significantly different?

3. Will the financial health scores of institutions granting associate, bachelor's, master's, and doctoral degrees be significantly different?

4. Will the financial health of institutions headed by task-oriented presidents be significantly higher than the

financial health scores of institutions headed by relationship-oriented presidents in situations that are favorable to task-oriented presidents?

5. Will the financial health of institutions headed by task-oriented presidents be significantly higher than the financial health scores of institutions headed by socio-independent presidents in situations that are favorable to task-oriented leaders?

6. Will the financial health scores of institutions headed by relationship-oriented presidents be significantly higher than the financial health scores of institutions headed by task-oriented presidents in situations that are favorable to relationship-oriented leaders?

7. Will the financial health scores of institutions headed by relationship-oriented presidents be significantly higher than the financial health scores of institutions headed by socio-independent presidents in situations that are favorable to relationship-oriented leaders?

8. Will there be a strong positive association between institutions whose presidents emerge from this study as effective leaders and institutions whose presidents were considered effective by the terms of the Fisher, Tack, and Wheeler study?

These research questions will be stated as null hypotheses in Chapter 4 for the purpose of statistical testing.

Limitations

The following limitations were relevant to this study:

1. Consideration of presidential effectiveness was limited solely to the financial management of institutional resources as measured by the modified ratio of expendable fund balances to plant debt.
2. Application of the ratio formula was limited to institutions for which capital debt was not accounted for by an outside agency or regulatory body; specifically, this study only involved private, non-proprietary institutions.
3. The population of applicable institutions was limited to those institutions accredited by the Southern Association of Colleges and Schools.
4. The testing of hypotheses relating to leader effectiveness was limited to institutions whose presidents had been in office at least three years, a time span considered sufficient to allow a president to become responsible for the management decisions affecting the financial operation of an institution.

Assumptions

The following assumptions were considered relevant to this study:

1. It was assumed that the financial health of an institution would not be affected by the institution's chronological age or geographic location.

2. It was assumed that the presidents involved in the study have sufficient authority to make decisions affecting the financial health of their institutions.

3. It was assumed that the scales used in the study were completed by the presidents themselves.

4. It was assumed that all completed scales contained verifiable data.

Definitions of Terms

Financial health

Financial health is a ratio score that measures an institution's ability to meet its monetary obligations (Peat Marwick, Rothschild, Unterberg, Towbin, & John Minter Associates, Inc., 1987, p. 13). Ratio scores for this study were calculated by using data found on a computer tape purchased from the National Center for Education Statistics and applying the data to a modification of a formula developed by the accounting firm of Peat Marwick & Main Co. (See the modified ratio of expendable fund balances to plant debt below).

Good financial health, as measured by the formula developed by Peat Marwick (p. 14), is indicated by a ratio of 1:1 or greater indicating that the institution has sufficient liquid assets to satisfy all related liabilities.

Poor financial health is indicated by a ratio of less than 1:1 indicating that the institution lacks sufficient liquid assets to satisfy its debts as of the reporting date (Peat Marwick, p. 14).

By the terms of this study, good financial health was indicated by a ratio score that placed at or above the 75th percentile in the distribution of all ratio scores calculated. Average financial health was objectively defined as ratio scores which fell at or above the 50th percentile and at or below the 74th percentile. Poor financial health was indicated by scores falling at or below the 49th percentile.

Financial Management

The concept of financial management, as defined by Nathan Dickmeyer (1982), includes:

the making of decisions and policies that govern collecting of revenues, setting of fees, allocating revenues, investing resources, and controlling cash flow. Viewed separately, each of these decision areas requires either optimization or the application of institutional values and priorities. Tuition can be set at a level that maximizes revenues; revenues can be allocated according to the value systems of the allocators (with the usual bargaining and trading inevitable

in allocations of scarce resources) . . . Some decisions are riskier but offer higher potential returns . . . The role of financial management is to report risk and resource trends and to assist in developing institutional strategies that will fulfill goals. (p. 57)

Fisher, Tack, and Wheeler Study

The Fisher, Tack, and Wheeler Study was a two year study conducted for the purpose of examining the personality characteristics and professional backgrounds of 412 presidents identified as being effective by their peers (Fisher, Tack, & Wheeler, 1988). The names of the 100 institutions considered to be headed by effective presidents by the terms of the Fisher, Tack, & Wheeler Study appear in Appendix A.

The 100 leaders were identified by the reputational method of determining effectiveness. This method is a variant of the reputational method used by investigators to identify prominent leaders or actors in community power structures. Tait, Bokemeir, and Bohlen (1980) report that the reputational method involves two steps: First, knowledgeable citizens are asked to provide a list of power actors in a community. Second, the names of the power

actors are then ranked according to their reputations for degree of social and political control within the community.

Higher Education General Information Survey (HEGIS)

The Higher Education General Information Survey (HEGIS) is an annual survey sent to all academic institutions in the United States by the Center for Education Statistics. The survey has been in existence since 1966 and is used by Department of Education statisticians to collect information regarding institutional income and expenditures (Lupton, Augenblick, & Heyison, 1976). All financial data used in this study were taken from the 1986 HEGIS survey.

Leadership style

Leadership style is the approach usually taken by a president in directing the affairs of an institution. For this investigation, leadership style was defined by a score obtained from the Least Preferred Coworker Scale (LPC).

Relationship-oriented leadership style. A relationship-oriented leadership style is indicated by a score of 73 and above on the LPC, indicating that a leader gets major satisfaction from good personal relations with others (Fiedler & Chemers, 1984, p. 22; Fiedler & Garcia, 1987, p. 76).

Socio-independent leadership style. A socio-independent leadership style is indicated by a score between

64 and 72 on the LPC, indicating that the leader is less concerned with the opinions of superiors or subordinates in a work setting (Fiedler & Chemers, 1984, p. 25). The cutoff points for the socio-independent style according to Fiedler and Garcia (1987) is 64 and 72 (p. 76).

Task-oriented leadership style. A task-oriented leadership style is indicated by a score of 64 or below on the LPC, indicating that the leader's primary goal is the accomplishment of the task (Fiedler & Chemers, 1984, p. 24). According to Fiedler and Garcia (1987) a task-oriented leadership style is indicated by a score of 63 or lower (p. 76). The more widely used cutoff points given Fiedler and Chemers were followed in this study.

Modified Ratio of Expendable Fund Balances to Plant Debt

The modified ratio of expendable fund balances to plant debt is a variant of a ratio formula devised by the accounting firm of Peat Marwick to measure the financial health of academic institutions. In the Peat Marwick formula, the numerator consists of current funds, quasi-endowment funds, unexpended plant funds, funds for renewal and replacement, and funds for retirement of plant indebtedness. The denominator consists of notes payable, bonds payable, mortgages payable, and interfund borrowings. Because it was not possible to separate endowment from quasi-endowment funds in the financial data submitted by the

institutions to the National Center for Education Statistics on the annual Higher Education General Information Survey (HEGIS), an adjustment was made to the Peat Marwick formula by removing all endowment (quasi as well as regular) figures from the numerator. The resulting formula was then termed the modified ratio of expendable fund balances to plant debt.

Ratio of Expendable Fund Balances to Plant Debt

The ratio of expendable fund balances to plant debt is a formula developed by the accounting firm of Peat Marwick & Main Co. as an aid in determining the ability of academic institutions to meet their current obligations. The formula, known also as Ratio No. 1, uses figures taken from an institution's balance sheet to calculate a ratio based upon the relationship of expendable fund balances to plant debt. According to its authors, "Ratio No. 1 reflects the concept that one of the most basic determinants of financial strength is the availability of sufficient cash, or assets that will convert to cash in the normal course of business, to meet all obligations as they come due. The ratio incorporates several conditions that are significant to its usefulness" (Peat Marwick, 1987, p. 13).

Procedures

The following procedures were followed in conducting this study:

1. A review of related literature was conducted.
2. Instruments to measure leadership style and financial health were selected. The Least Preferred Coworker (LPC) Scale was selected to measure leadership style. The ratio of expendable fund balances to plant debt, a formula developed by the accounting firm of Peat Marwick and used nationally by institutions as one of several tools to monitor financial events, was selected for use in the determination of financial health. To be properly used, this formula requires that quasi-endowments be separated from regular endowments. Because it was not possible to separate quasi- from regular endowments on the data base being used, the Peat Marwick formula was modified for use in this study.
3. Permission to use the LPC and associated scales was obtained from Fred E. Fiedler.
4. A listing of all private, non-proprietary institutions appearing in the 1989 Southern Association of Colleges and Schools' Proceedings manual was made.
5. Using methodology given by Schaeffer, Mendenhall, and Ott (1986) to insure a 95% confidence level, and four tables of random numbers, a stratified random sample of 263 institutions was drawn from the list described in Step four.

6. A computer tape containing financial data for academic institutions in the United States for the year 1986 was purchased from the Center for Education Statistics. The 1986 tape was the most current tape available for purchase from the National Center for Education Statistics.

7. The SPSS-X statistical program was used to calculate financial health scores for 199 of the 263 institutions in the sample. Due to missing blocks of data on the computer tapes, scores were not calculated for the remaining 64 institutions. The distribution of the 199 calculated financial health scores was used to determine the cutoff points for the percentile rankings of the 53 institutions whose scores were used in the testing of hypotheses related to the contingency model.

8. Packets containing a Least Preferred Coworker Scale, a Leader-Member Relations Scale, a Task-Structure Scale, a Leader Position Power Scale, and a Leader/Institutional Fact Sheet were mailed to the presidents of the 263 institutions selected in step five.

9. Three weeks later, follow-up letters were sent to presidents who had not returned their scales.

10. Percentiles, means, and standard deviations were used to describe the data. The point-biserial correlation coefficient, one-way analysis of variance, and directional t tests for independent data were used to analyze the data by means of the SPSS-X and SPSS-PC+ programs.

Organization of the Study

The study was organized into five chapters. Chapter one contained the introduction, the statement of the problem, the purpose, the significance, limitations, assumptions, hypotheses, definition of terms, procedures, and organization of the study.

Chapter two was a review of the literature related to the study.

Chapter three described the research design and hypotheses tested in the study.

Chapter four presented the analysis of the data.

Chapter five included the summary, findings, conclusions, and recommendations for the study.

CHAPTER TWO

Review of Related Literature

Presidential Leadership Styles

Immegart (1988) equated style with "The pattern of behaviors, displayed by a leader in a leadership situation," (p. 262). In this investigation, leadership style was defined as the approach taken by presidents in directing the affairs of institutions. Further, presidential leadership style was considered inseparable from management style and was described as being the president's usual manner of implementing or influencing broad decisions that affect the operation of an institution. This use of the term borrowed heavily from Peterson and Mets (1987) who defined management as being the "structure and process for implementing or executing broad decisions and leadership as being processes through which individuals seek to influence decisions" (p. 4).

Recent investigations into presidential leadership style used more than 25 descriptors to describe the personalities and the methods used by presidents to enact policy and perform other acts of administration. While the labels used to describe their administrative styles were many, it was noted that presidents tended either towards a democratic or autocratic approach when making decisions (Bensimon, 1987).

In a work published in 1980, Astin and Scherrei developed a four pronged typology of presidential styles based upon the person or persons with whom the president communicates frequently, the preferred mode of communication, and how the president is perceived by faculty and administrators. Type one, the bureaucrat, tended to limit communication to key administration officials and was often considered a remote and not especially efficient leader. The intellectual style was characteristic of presidents heading selective institutions in the eastern United States who tended to communicate with faculty as well as top administrators. The third type, the egalitarian, frequently interacted with students, faculty, staff, donors, and visitors. The fourth style, or the counselor approach, typified presidents who preferred communication through informal meetings. Of the four types, the egalitarian leadership style was closest to a democratic leadership style in that the president involved others to some degree in decision-making.

Benezet, Katz, and Magnusson (1981) used the labels take-charge, standardbearer, organization, moderator, explorer, and founding to describe six different types of leadership styles. The adjectives energetic and experienced were used to describe the take-charge president who tended to have moderate views on educational issues. The standardbearer president was often found at relatively

stable and financially solid institutions. The authors noted that this president's primary concern was with tightening standards. The label, organization president, was applied to those presidents who were preoccupied with operating an institution without causing friction. The moderator president relied upon delegation and consultation as administrative tools and was often seen as being an uncertain leader. Finally, the explorer president was credited with bringing concrete change to an institution and the founding president seemed committed to special missions.

Madeline Green (1986) explored the relationship between two leadership styles and the efficient operation of an institution. The collegiality style was applied to presidents who conducted academic business in a spirit of consensus and compromise, but who often failed to take decisive stands on issues. The heroic president was described as being capable of stabilizing an institution in the short run but causing the development of alienation and confusion at an institution in the long run. Green concluded that neither governance approach was ideal for institutions facing change and those in crisis.

In a 1985 work, Guskin and Bassis concluded that leadership styles in universities reflected the president's primary approach to people and decision-making. The authors described three presidential styles. The first, the heroic style, typified a president who tended to alienate faculty

and to avoid integrating mechanisms. The mediator was the most common style exhibited by presidents. A president having such a style was described as using negotiation and compromise to solve crises. The negotiator president was said to establish weak integrating mechanisms and not to focus on future needs. The quality of life for faculty under a mediator administration was said to be poor since crises and disruptions were ever present. The style favored by Guskin and Bassis was the team leader approach. In this governance pattern, the president actively involves faculty and others in the decision-making process. Forums are used to solve problems and the quality of life for faculty is high.

Kerr and Gade (1986) used the labels old main, mission impossible, and evangelical to describe three presidential leadership styles. The descriptor, old main, categorized an academic leader who was very involved in the hiring of faculty. The mission impossible president focused on helping students directly through activities such as teaching English to newly immigrated students or by writing employment recommendations for students. The evangelical president felt that the sole mission of an academic president was to create a good moral environment for young people.

Pray (1979), from either working with or talking to more than 1,000 presidents, concluded that presidents can be

distinguished by their appearance, style, behavior, and interests. Pray used the labels do it yourself and it will get done right, the fastest gun on the campus, the philosopher king, the everything in its place, the let's take a vote, the timid soul, the bull in the china shop, and the reasonable adventurer to describe eight academic leadership styles. Of these types, Pray found the reasonable adventurer president to be more effective than the other seven. Reasonable adventurers have been described as having six characteristics: intellectuality, close friendships, independence in value judgments, tolerance of ambiguity, a breadth of interests, and a sense of humor. As presidents, reasonable adventurers listen attentively, use their staffs to collect data, are time and priority conscious, are goal oriented, have high standards, and ultimately make their own decisions.

Peck (1985) described the characteristics of presidents who had entrepreneurial leadership style. Peck studied 19 successful small colleges in 1981 and concluded that the entrepreneurial leadership at those colleges share six characteristics. First, each was mission-oriented; that is, all public utterances about the institution referred to the purpose of the institution. Second, at each institution, the presidents made certain that faculty and staff were clear in understanding the mission of the institution. Third, there was continuous monitoring of changes in the

external environment, changes in people's attitudes, and changes in social values. Fourth, the presidents were constantly doing new things. Fifth, the presidents exercised good judgment. Sixth, the presidents had good intelligence gathering systems, and seventh, the presidents were not afraid to take risks.

Other writers used labels to describe the various governance patterns that were associated with different presidential leadership styles. Astin and Scherrei (1980) noted that a hierarchial administrative pattern was often associated with a bureaucrat president. In such administrations, lower level administrators were found to have little involvement in decision-making, and honest displays of frankness were discouraged. The hierarchial pattern was associated with new administrations at large institutions. Egalitarian presidents were frequently found to have a humanistic administrative style and to be employed at small institutions. Under a humanistic administration, communication occurs at all administrative levels and administrators with strong interpersonal skills are often the favored staff members. Presidents heading entrepreneurial administrations were found to reward risk-taking and frankness and often presided over poorer institutions found in the midwest. Intellectual presidential styles were associated with insecure administrations, characterized by nepotism and dissatisfied

administrators. Intellectual presidents were often leaders of institutions located in the South. The authors further found that task-oriented administrations, characterized by an emphasis on initiative, cooperation, and competency, were often associated with satisfied administrators. In addition, Astin and Scherrei reported that task-oriented administrations were not associated with any particular presidential style.

Hodgkinson (1970) conducted over 900 conferences on 19 campuses to gain information on presidents and the governance patterns used on their campuses. This researcher gathered data on the methods used by presidents to collect information; the people with whom the presidents consulted; the channels of decision-making; the people upon whom the presidents depended; the matters presidents considered to be public, and those considered confidential. Three types of presidential governance patterns emerged from the data. The benevolent autocracy was characterized by delegation and consultation; clearly drawn boundaries of responsibility, and communication through established channels. In addition, those who worked in the system felt that they were in a productive work environment. An autocratic-hierarchical system was characteristic of an administration in which the president was the sole arbiter of decision-making. The autocratic-by-default president's administration was

characterized by passive deans and the president being the sole decision-maker.

In sum, the adjectives used to describe presidential leadership styles were as varied as the people who became presidents were different. As was pointed out by Immegart (1988):

Style conceptualizations have taken a number of forms from nominal idealized categories (such as heroes, princes . . . to typological categorizations such as highly participative, mildly participative . . . to either dichotomous or continuous style categorizations of initiating structure and consideration . . . nomothetic and idiographic . . . or that of democratic and autocratic leadership. (p. 262)

Presidential Leadership Roles

"The college president," wrote Herbert Simon (1967), "is an executive; that is, a man who has committed himself to making an institution thrive--maintaining high goals for it, securing and conserving the material and human resources it needs to reach those goals, and seeing that the resources are directed efficiently toward their realization" (p. 69). In the same work, Simon enumerated and discussed the five most important functions associated with an academic presidency. These were to: raise money, balance the

budget, participate in setting institutional goals, work with faculty to create an environment that encourages learning, and recruit and maintain high quality faculty.

Prior to the 1960s, the performance of the duties delineated by Simon, as well as the defining of an institutional mission, usually involved the president in concert with trustees or members of a governing body. The rise of campus advocacy groups, the increased coverage by the media of events on academic campuses, the push in general for shared decision-making, and the drop in revenues caused a number of writers to look anew at what roles academic presidents were to play as they set out to lead the nation's colleges and universities (Benezet, 1982; Burke, 1977; Justiz, Schwab, & Kameen, 1986; Kauffman, 1982, Sharp, 1984; Tunnicliffe & Ingram, 1969).

Harold Howe's (1977) comments were representative of many writers who felt that in addition to being a referee among divisions within a college and a consultant to disgruntled students or trustees, that presidents foremost must be vision bearers of their institutions. According to Howe, "the leader's task is to hold before all persons connected with the institution some vision of what its mission is and how the institution can perform it more effectively. Because institutions exist in moral, political, social, and economic circumstances that are

constantly changing, the burden of addressing an institution's purposes and performance never ends" (p. 21).

In addition to being the visionary, Howe noted that the role of manager would increasingly become important for academic leaders:

In the last ten years, the theory and practice of managing higher education institutions have changed significantly. These developments constitute important contributions to the capacity of institutions to meet their fiscal problems and to operate efficiently. Systems for financial control and for planning, offices of institutional research, and the application to educational institutions of techniques developed in the realms of business and government have all become powerful new tools in college and university administration. But they are only tools. The ultimate purposes to which they are to be turned will continue to be defined by human judgment, and the president's principal job is to lead the process of arriving at that judgment. (p. 22)

Research conducted by Cote (1985) indicated that presidents were in agreement as to the relative importance of the various roles they play while serving as chief executive officers of their institutions. Cote found that presidents ranked the role of financial manager 5th out of

18 roles; while in the same survey, the role of academic planner was considered only 12th in overall importance.

The significance attached to financial management by presidents reflected the growing awareness by presidents, faculty, and others that institutional vitality increasingly would be linked to the sound use of human and monetary resources (Brahney, 1981; Wexler, 1981). McCorkle, Jr. and Archibald (1985) emphasized the role presidents play in setting out strategies that lead to successful management of financial resources:

It is the chief executive who ensures that objectives and strategies are set. He must establish processes to see that resources are used to achieve objectives efficiently and effectively. He is responsible for seeing that performance is assessed routinely, and he selects persons for critical positions and provides that opportunity for their growth in those positions. (p. 192)

The literature search yielded few studies that addressed the specific strategies used by effective presidents to manage fiscal resources (Brahney, 1981; Jones, 1987; McCorkle & Archibald, 1985). Among the few was Lewis Mayhew's (1979) discussion of the concerns facing presidents in the coming decade and what Mayhew considered to be strategies that effective presidents will use in meeting these concerns. Mayhew wrote that effective presidents

would:

Devote considerable time to the details of management so that they know the precise financial situation of the institution, the exact enrollment situation, the way in which various offices function or do not function, and the relative strengths and weaknesses of the faculty. They appear to conceptualize how institutions behave and seek to make decisions consonant with their concepts. (p. 81)

The long held image of the academic president as scholar exemplar and venerable sage was replaced in the early 1970s by that of a fatigued corporate executive coping with student and faculty dissent, lawsuits, and calls for accountability (Ashworth, 1982; Kauffman, 1977; Moore, 1982; Neumann, 1987; Staff, 1984). Increasingly, the language used to describe academic presidents took on the nuances of the business community. References to academic presidents as being captains of their ships and chief executive officers became commonplace (Friedrich, 1986; Staff, 1986).

Some writers insisted that educational institutions required presidents who were business managers as well as academic leaders; others disagreed (McLaughlin, 1986; Walker, 1977). Yet it had become apparent to all of academe by the mid-1970s that to be effective, college and

university presidents would have to be capable of addressing the financial issues affecting all of higher education.

Effective Presidential Leadership Styles

Opinions were varied as to the characteristics and behaviors that describe effective presidents of academic institutions. In the past, effectiveness was often associated with the amassing of sprawling campuses occurring along with growing institutional reputations for a commitment to scholarship. Father Theodore Hesburg of Notre Dame and Robert Hutchins of the University of Chicago have stood as examples of leaders who have been placed in this category. Others have felt that presidents like John Silber of Boston University, who has been quick to assert and use the power of his office, make the most effective presidents. Leon Botstein (1985) expressed this point of view when he wrote, "[H]istory indicates that without a strong presidency, significant progress and intellectual ferment in a college or university are highly unlikely" (p. 107). Still there were others who have agreed with Guskin and Bassis (1985) that effective presidents are team leaders; that is they are presidents who actively involved faculty and others in the decision-making process.

Other writers such as Berte and Morse (1985) emphasized the need of successful presidents to have a future orientation. Using the label proactional to describe such

presidents, the authors wrote that these presidents would have to clarify the need for change, implement designs for change, mobilize resources, and unite staff members in a common purpose. Berte and Morse suggested that to be successful, proactional presidents would have to re-analyze their institutions' missions, develop academic programs in conjunction with other institutions, create partnerships with business concerns, and provide opportunities for students to become involved in institutional governance matters.

Fisher (1984) wrote about successful presidents in terms of the forms of power they use to get things done. Within the context of Dahl's idea that power is the ability of A to get B to do something that B would otherwise not do, Fisher described and discussed five forms of power. The first, coercive power, involved threats and punishments. Fisher cautioned that this form of power should rarely be used. Instead, he suggested that reward power, in the form of recognition or special favors, be given to those who support the goals of the organization regardless of the president's personal feelings towards those receiving the rewards. Further, Fisher stated that legitimate power should be used by a president since it was rarely contested. Expert power was said to reflect the perceptions others have of the president's authority, while charismatic power varied directly with the amount of trust and confidence

others had in the president. Fisher wrote that the most effective president would use charismatic power in conjunction with expert, legitimate, and a carefully measured portion of reward power.

Gilley (1985), concluded that successful presidents would be those who applied a parallel perspective to the presidency. A parallel perspective is a practice whereby a president relies upon a leadership approach found to be successful in a prior presidency to resolve a current difficulty. This perspective can often determine whether or not a president will be successful in moving an institution forward. Gilley cited the case of Arthur Levine who was successful in using the parallel perspective at Bradford College to restructure its undergraduate education programs. Prior to assuming the presidency, Levine had researched the restructuring of undergraduate education programs extensively while employed with the Carnegie Commission and had also developed a model for the restructuring of such programs. These experiences allowed Levine to begin his term of office with a well developed and ready-to-be-implemented plan for strengthening the undergraduate program at Bradford College.

Guskin (1981) looked at effective presidents in terms of presidents who were best suited for faculty development, and noted that to be effective teachers, faculty required

environments in which they felt secure in terms of employment, that they were a necessary part of the institution, and proud to be associated with the institution. Guskin wrote that faculty feel a part of the institution when they participate in a shared governance system and feel pride in an institution when they believe that the institution supports quality academic standards. Guskin suggested that only team leader administrations were conducive to improving the quality of life for faculty. Under a team leader administration, a sense of mutual respect among faculty and senior administrators exists. The top administrators are accessible and there is support for a shared governance system.

In a personal perspective, Father Hesburg (1971) listed and discussed the virtues and characteristics essential for academic presidents. Foremost, he felt that the president must excel in moral leadership and actively enlist the support of various segments of the community. A president must be involved in issues and a president must be respectful of true learning, individual human concerns, and academic freedom. Most importantly, a president must make institutional goals clear. Father Hesburg cautioned that good leadership requires courage and wisdom and the ability to make faculty feel that the president cares about them. Father Hesburg concluded by stating that moral leadership on

a campus is the responsibility of the president as well as students and faculty.

Hill (1976) examined the relationship between self-esteem and effective governance patterns. According to this researcher, leaders who do not have positive internal feelings about themselves cannot effectively participate in democratic management systems. Further, effective leaders show supportive behavior toward the people who report to them, use participative decision-making, and are flexible enough to consider contingent approaches to problem solving. Hill noted, however, that an effective participative governance system can only occur under a leader who has a high self-esteem. Leaders with high self-esteem do not feel threatened nor insecure in honest exchanges of ideas. Hill stressed that to be effective, the leader must be confident and have high expectations of others.

Still others have looked at effective presidents in terms of politics. Kauffman (1984), in anticipating presidencies of the 1990s, envisioned that presidents would have to address concerns emanating from the external as well as the internal environment. Kauffman felt that unstable economies, changing population demographics, and the loss in general by higher education of its credibility would affect the fortunes of institutions. Internally, presidents would have to cope with complex governance systems and low faculty morale. The leadership style required to address these

tensions and lead institutions on viable courses of operation is one in which the leader is politically effective, is visible both to internal and external publics, and is imbued with a respect for the value of education.

Other writings on effective presidential leadership include remembrances of the strategies used by particular presidents to overcome great odds. The actions of Harold T. Shapiro of the University of Michigan were reported by Lipschutz (1985) as an example of how a president faced a financial crisis. As related by Lipschutz, a recession in the auto industry in 1981 caused the state of Michigan to cut its funding support of the University of Michigan by \$12 million. President Shapiro initiated a process of evaluation and pruning which allowed the university to maintain its mission of research, graduate training, and excellence in teaching through a process called offensive budgeting and through a governance system that allowed considerable input from academic units. The process occurred in three stages. In stage one, current academic programs were evaluated and pruned, new programs which fit into the university's mission were funded, and academic units decided the fate of the current programs. In stage two, the president increased state support through the development of non-traditional avenues. In stage three, a major campaign to increase private support was launched.

McCall (1985) focused on the leaders of four predominantly Black institutions to isolate the strategies used by the presidents of Fisk University, Tuskegee Institute, Morehouse College, and Hampton Institute to bring their institutions out of financial difficulty. Management strategies, common to all the presidents, included trimming administrative positions, courting corporate support via internship programs and grants, the building up of alumni support, and the inclusion of business and faculty loan programs into the current curriculums. Faculty loan programs involved the lending of experienced professionals by corporations to colleges to serve as instructors as well as mentors to students. One of the more innovative strategies reported on was the cluster program initiated by Dr. William Harvey of Hampton Institute. In this program, corporate representatives, college administrators, and students worked in joint projects to determine the needs of the school.

Mayhew (1971) suggested that presidents might take a political approach to academic management by purposely building a base of support among various campus constituencies and strengthening rapport with board members.

Richardson (1980) wrote that the search was on-going for an approach to decision-making that is effective under all circumstances. One approach, advocated by followers of Frederick Taylor, holds that the leader should be the sole

decision maker. Richardson labeled such a perspective as hard-nosed pragmatism. The other idea, advocated by McGregor and Likert, held that the most effective decision-making occurs through group action. This was described as the participative involvers approach. Richardson stated that neither approach was appropriate at all times. In fact, he described situations which underscore the point that effective presidential leadership is situational. The author noted that the growing trend was toward participative governance patterns, but he cautioned that this approach is difficult for a president to learn to use and is often misinterpreted by subordinates. From personal experience, Richardson related that when he, in his role as an academic president, used participative governance, the faculty and deans invariably described him as being authoritarian. The author suggested that successful presidents should engage in the participative involvers approach by consulting with others before making decisions, by effectively delegating, and by not meddling in the operation of committees.

George Vaughan (1986a) likened the effective management of a community college as functioning much like that of a fulcrum. The president was seen as the balancing point positioned squarely in the middle of external and internal constituents. Internal constituents consist of students, faculty, administrators, and support staff. External constituents consist of politicians, business leaders,

trustees, alumni, and special interest groups. Vaughan wrote that crisis management was not sufficient for the effective governance of a college since it fails to address the seemingly insignificant events which often lead to major disruptions in the operation of a college. Vaughan felt that the greatest danger to a college occurs when the seesaw ceases to move as signaled by the onset of complacency. Complacency can be disarming because it seems to indicate that problems are nonexistent. Successful presidents, however, rid their administrations of complacency by setting up dynamic tensions between the two ends of the seesaw and by insuring that no constituency becomes too powerful.

In another work, Vaughan (1986b) discussed the personal qualities and skills associated with successful community college presidents. Vaughan felt that successful presidents must have personal qualities of judgment, integrity, courage, and concern for others; while the necessary technical skills included the ability to select capable people, resolve conflict, and produce results. Ranked lowest among the presidential skills were publishing in scholarly publications and teaching. The author cautioned that to remain successful, presidents must work with faculty and politicians. Presidents must become computer literate, cognizant of financial affairs, and involved with other institutions.

A recent study completed by Fisher, Tack, and Wheeler (1988) focused on the attributes and behaviors which set effective presidents apart from others. The authors described effective presidents as being "strong leaders who believe less in close collegial relationships, work long hours, are less concerned about being liked, and rely more on respect than popularity as a leadership principle" (p. 77).

Birnbaum (1987) described the two implied theoretical orientations presidents have toward leadership. For some, leadership is a process of influencing; for others, leadership is a process of emphasizing goals. Influencing can be achieved either through directive or facilitative means. Over 77.8% of the presidents Birnbaum studied used the directive approach when working with subordinates; fewer than 25% of the presidents used facilitative approaches when working with staff members.

In sum, the literature contained many descriptions of presidential behaviors that were considered compatible with the well-being of an academic institution. This study added to those studies in that it specifically examined the effect of presidential actions on the management of fiscal resources.

Institutional Financial Health

As has been noted previously, an alarming number of academic institutions closed in the early 1970s. Though there had been a few writers who had warned of a coming crisis in higher education, their cries had been drowned out by the sounds of construction and protestors on many campuses. One explanation for the failure of academe to acknowledge the coming financial crisis was given by Millett (1976) who pointed out that, until the late 1960s, pleas by presidents for money and warnings of financial need were tactics often used to obtain funding for wanted projects and not actual distress calls; but as developments advanced in the 1970s, it became apparent that many institutions were in economic jeopardy. Millett noted, "The one circumstance colleges and universities dread acknowledging is that they confront financial exigency or imminent bankruptcy" (p. 27).

In looking at what caused the crisis, Landry and Mebane (1982) wrote:

The problem . . . dates to the 1950's and 1960's. In those years, the challenge was to increase campus capacity fast enough to accommodate the baby-boom students on their way to college . . . A powerful combination of public and private support fueled this unparalleled expansion program . . . Since that boom period, major new elements

entered the picture . . . high inflation rates [which] have hit higher education harder than many segments of the national market . . . The profound effect of price increases for electricity, gas, and fuel oil . . . A number of [government] regulations in recent years [that] have greatly added to the renovation demands on colleges and universities . . . the failure to keep pace with technological change . . . [and the lack of] increased access to financing, including debt financing. (p. 36)

Some researchers focused their efforts on isolating the characteristics peculiar to failing institutions. Mel Scarlett (1982) determined that institutions exhibiting the following five characteristics "are not necessarily doomed to extinction in the '89's, though those continuing 'business as usual' will likely fail" (p. 63). The characteristics were enrollment of less than 1,000 students, enrollment declines in more than one recent year, low selectivity in enrollment, cutbacks in more than one recent year (in building maintenance, library acquisitions, equipment, supplies, faculty travel, etc.) to meet fixed operating costs such as salaries and utilities, and operation at a deficit in one or more recent years.

During these times, the phrase financial health became a part of the academic vocabulary. Though referred to by

some writers as economic health, increasingly financial health came to denote the ability of an academic institution to meet its financial obligations. Dickmeyer and Hughes (1980) described a financially sound college as one which would "have enough financial resources to meet its immediate commitments such as salaries, other operating expenses, and debt service. It will also have a capital base (i.e., endowment and reserves) sufficient to provide a financial cushion as well as offer a stabilizing influence on the flow of revenues" (p. 2).

Concerted efforts began to isolate the interplay of factors which largely determine financial health. The need was apparent and was effectively stated by Mortola (1980):

a national body representing colleges and universities needs to develop uniform financial and statistical reporting standard These new reporting standards should encompass indicators of financial performance that provide for analysis to focus attention on danger signals. Ultimately, the indicators would serve an essential function--to help institutions preserve their strength and independence. (p. 177)

Ratio Analysis

A ratio is a mathematical tool used to monitor the operation of a business enterprise; it allows the relationship between two sets of financial data to be expressed cogently in a simple figure. According to Spiro (1982), the four main types of financial ratios are liquidity ratios, profitability ratios, activity ratios, and leverage ratios (p. 54). Of the four, the liquidity ratios, defined as "indicators of an entity's ability to discharge its current obligations in terms of stress" (p. 54) were of great interest to those involved in determining academic solvency.

Analysts and others were aware that the tools used to gauge the strength and well-being of profit-making enterprises could not be directly applied to academic enterprises. Several conferences sponsored by the American Council on Education and attended by Department of Education personnel and finance officers from a number of academic institutions were held to explore the many issues involved in the determination of academic financial health (American Council on Education, 1977; Coldren, 1978; Stich, 1979). It was from these efforts that many of the principles currently used in the financial assessment of colleges and universities were determined.

Lupton, Augenblick, and Heyison (1976) published one of the first articles to address the issue of academic

financial health. Their article was the end result of a research effort conducted by the authors on the behalf of the New Jersey Commission on Financing Post-Secondary Education to "develop a systemwide analysis to measure the impact of policy choices on institutional financial condition" (p. 22). As they began their research, Lupton and associates discovered that there were no national norms then existing which could be used to describe the health of academic institutions. Their first task was to develop such norms. This was accomplished through a process that involved discriminant analysis, ratings by a panel of experts, and data from the 1972, 1973, and 1974 HEGIS surveys. The focus of the work conducted by Lupton and the others was to develop a number of ratios that could be used to set healthy institutions apart from institutions in financial stress. The idea was that through vigilant monitoring of the financial operation of an institution, presidents and others could anticipate problems in certain areas and work to correct those problems before the necessity to close became apparent. A general outline of the procedures used by Lupton, Augenblick, and Heyison is given in the following quote:

Our intent was to examine a large number of ratios considered by experts as indicative of the financial condition of institutions, and to reduce this collection to the few that best and

most reliably account for the differences between healthy and unhealthy institutions We selected a random sample of 50 institutions . . . from the USOE's 1974 HEGIS survey. The sample underrepresented private and graduate-level institutions, and five additional institutions were added to insure its representativeness Based upon this HEGIS financial data, we developed . . . 46 financial ratios . . . This information was transmitted to the panel of eight experts to be used when they rated each institution's financial health Once two groups (healthy and unhealthy) were distinguished, discriminant analysis was utilized to determine the underlying causes of the difference between the groups . . . The program selected . . . 10 ratios The analysis emphasizes operating ratios and . . . by using an objective analytical technique in searching for the factors that are good indicators of financial condition and by employing a consensus model that relied on unidentified institutions, we believe a significant step has been taken in gaining a better understanding of the relative fiscal condition of academic institutions. (p. 36)

Following the publication of the Lupton, Augenblick, and Heyison article, a number of ratios were developed by other researchers. While different in many respects, the ratios were similar in that all of them concerned the relationship between institutional resources and institutional debt. As Frances and Stenner (1979) had noted, "It is the relationship between expenditures and revenues which is at the very core of a sound definition of financial health" (p. 8). By 1980 Victor Wenk reported that "since 1973 more than 40 major studies generating over 300 financial indicators have been conducted" (p. 174).

A number of researchers pointed out that financial condition could not be adequately determined by focusing upon one ratio. Rather, prediction of financial status could be enhanced through the use of several ratios, the routine monitoring of trends affecting student demographics, governmental appropriations, and changes in the external environment.

Dickmeyer and Hughes (1980) developed a workbook that college administrators could use to assess the financial health of their institutions. The objective of the workbook was "to help those using it to evaluate the college's financial condition relative to its financial risks" (p. ix). In addition, Dickmeyer and Hughes felt the workbook would "enable users to calculate a number of statistics that are necessary for assessing institutional risks and

resources. The computed statistics are indicators that form the basis for assembling the institution's financial strategies" (p. ix). Among the statistics developed by the authors were ratios to measure financial resources such as the relationship between unrestricted current fund assets to unrestricted current fund liabilities and ratios to measure nonfinancial resources such as student characteristics and the quality of the academic program. The workbook also included a discussion of trends that impact significantly upon institutional health.

Interest in ratio analysis for academic institutions spread from presidents and business officers to regional accrediting agencies, officials at the Department of Education, and state regulatory agencies. Wenk (1980) noted that "financial indicators . . . could give greater visibility to problem areas in higher education and allow for more informed judgments about national priorities" (p. 174).

In their work Schmidlein and Lapovsky (1980) explained the importance of financial health indicators for the state of Maryland:

As higher education moves into a decade where statewide enrollment declines are projected, the question of how to allocate existing scarce resources efficiently to provide education of high quality must be addressed. The state must look at

both strategic and operational financial indicators to make difficult decisions about resource allocations, deciding which indicators are relevant to particular decisions and what decisions one makes, given the indicators.

(p. 173)

In a short time, financial indicators became a part of the regional accrediting process for the Southern Association of Colleges and Schools (SACS). Haywood (1980) recounted the events which led to the establishment by SACS of the Subcommittee on Financial Stability and the use by this committee of financial data to assess the financial condition of member institutions. Haywood recalled that prior to the establishment of the Subcommittee on Financial Stability, materials used in the accrediting process often did not screen well for deteriorating financial condition present in institutions undergoing the accreditation review.

By the early 1980s the use of ratios and accompanying information about trends in demographics and environmental developments had become accepted parts of the methodology used by business analysts and others interested in higher education management to ward off financial exigency. A number of different ratios and strategies were developed by business officers and others for specific institutions. Regardless of the specific techniques used, many followed

the strategies described by Dickmeyer and Hughes (1979):

The theory and framework of the evaluation process needs to be understood before actual evaluation begins. The theory and framework are composed of three separate analytic steps or tiers. The first involves examination of a limited number of easily calculated statistics . . . the second tier provides a systematic method for expanding the analysis to the causes of financial concern. The second level begins a diagnostic process that suggests the specific causes of financial concern. The third tier describes possible management improvement techniques that may prove helpful in correcting deficiencies identified in the prior analysis. (p. 181)

Research and conferences devoted to financial management and to the development of ratios that could be used to assess financial health for institutions peaked during the late 1970s. Lack of money to carry out adequate research has been stated as being one of the factors causing researchers to address issues other than financial measurement. The issue, however, remained a concern for business officers and for accountants whose expertise was, as always, needed in evaluating academic institutions.

The partners of Peat Marwick, a well established accounting firm, continued in their efforts to develop

appropriate ratios because "our auditors need tools . . . that . . . are essential to assist auditors in determining whether an institution is facing imminent insolvency or bankruptcy so that readers of the financial statements can be so warned" (p. 1). Of the several ratios developed by Peat Marwick, the most relevant to this study was its ratio of expendable fund balances to plant debt, since it was developed as a tool to help answer the question, "Can the institution pay its debts?"

The ratio of expendable fund balances to plant debt was described as indicating "the relative liquidity of the institution. It is a fundamental indicator of financial strength" (Peat Marwick, p. 13). The formula is best used when analyzing the resources of independent institutions and is not appropriate for use in analyses of the finances of many public institutions for reasons similar to those given in the following by David Collins, Assistant Vice President for Finance at East Tennessee State University:

The only debt recorded on our records is the debt for self-supporting operations, i.e. auxiliaries such as dormitories. Funds for the construction or renovation of academic buildings are funded by the State through the appropriations process. If bonds are issued to generate funds for the appropriations, they are reflected on the State's accounting records, not the University. This is

true for North Carolina and Tennessee, the two states with which I am familiar. I believe the other states follow similar practices, but I am not positive. Since the debt is issued and recorded by the state, not the University, the Ratio of Expendable fund balances to plant debt does not have much meaning for our institution. In fact, it could be said that it overstated the financial health of the institution since all debt is not recorded. For example, if the expendable balances are 1 million and our recorded plant debt in auxiliaries is 3 million the ratio would be 1/3 or 33.33%. If we assume that the State has an additional 2 million of debt that applies to the institution, the ratio would be 1/5 or 20%. As you can see, the first ratio would give a creditor much more comfort than the second. The problem with looking at it this way, is the institution is not responsible for repaying the debt, the State is; therefore, the second ratio is meaningless. Also, you must remember, that State institutions are different animals from private institutions. We are dependent on the State for the majority of our revenue and subject to State rules and regulations. In many states, any unexpended funds are lapsed to the State at year end, and therefore

they do not have any unexpended fund balances. This is not true for Tennessee, but is true in the majority of states with which I am familiar.

(David Collins, personal correspondence, July 13, 1989)

The ratio of expendable plant funds to plant balances has been used by Peat Marwick in analyzing the financial condition of a number of private institutions. The figures used to calculate the ratio is obtained from an institution's balance sheet. For inter-institution comparisons, comparable information can be obtained from a data bank maintained by the National Center for Education Statistics. The data is collected by means of the Higher Education General Information Survey (HEGIS), a questionnaire that collects financial figures from academic institutions throughout the United States on an annual basis. While there were some concerns expressed that HEGIS data may contain inaccurately reported data (Conger, 1979; Patrick & Collier, 1978), Dickmeyer, who is recognized as an authority on financial ratios, concluded that "the HEGIS data bank is now the best and most comprehensive source for current research aimed at the universe of postsecondary institutions" (1980, p. 2).

The Contingency Model of Leadership Effectiveness

A theory which looked both at leadership style and effectiveness was Fred Fiedler's contingency model of leadership effectiveness. The contingency model has been written about extensively in a number of works. For that reason only the major concepts and terms associated with the model were discussed in the study. Fiedler's model recognized three types of leadership styles and posited that none of the three styles was most effective in all situations. Rather, leadership effectiveness was dependent upon five elements--the leader's style, the group type, leader-member relations, the task structure, and the leader's position power.

Fiedler defined a leadership style as being "the underlying need structure of the individual which motivates his behavior in various situations" (Fiedler, 1969, p. 36). In a later work, Fiedler and Chemers (1984) stated that a leadership style could be recognized by the leader's typical way of interacting with members of the group (p. 5). Leaders exhibited either a task-oriented, a relationship-oriented, or a socio-independent style. Fiedler and Chemers (1984) described relationship-oriented leaders as being more concerned with personal relations, more sensitive to the feelings of others, and better at heading off conflict. Of relationship-oriented leaders, Fiedler and Chemers wrote that "they use their good relations with the group to get

the job done" (p. 39). Task-oriented leaders were said to be "eager and impatient to get on with the work. They quickly organize the job and have a no-nonsense attitude about getting the work done" (p. 39). Leaders exhibiting a socio-independent style "tend to be less concerned with the attitudes and opinions of others and less involved with either their superiors or their subordinates or the way in which their personality impinges on others . . . Research also suggests that these persons are less involved with both the task and others in their work setting" (Fiedler & Garcia, 1987, pp. 76-77).

Fiedler's (1967) ideas were applicable only to interacting groups which by definition are those in which the performance of a primary task requires "the close coordination of several team members" (p. 18). Within interacting groups, the leader is "the individual in the group given the task of directing and coordinating task-relevant group activities or who, in the absence of a designated leader, carries the primary responsibility for performing these functions in the group" (p. 8).

The contingency model is an example of a situational theory of leadership since it states that a leader's effectiveness in a work situation is contingent upon the interaction of the leader's style with the degree to which the leader is personally accepted and liked (leader-member relations), the degree to which the task is defined (task

structure), and the power inherent in the position of the leader apart from his personal attraction or ability to command respect and loyalty (leader position power) (Fiedler, 1969, pp. 232-233). Leader-member relations are either good, moderately poor, or poor. Tasks have either high or low structures, and position power is either strong or weak.

In any situation, leaders affect a group's performance. Situational favorableness is a measure of the "degree to which the situation itself provides the leader with potential power and influence over the group's behavior" (Fiedler, 1971, p. 129). A favorable situation is one in which the leader has control over the group, task, and the outcome (Fiedler & Chemers, 1984, p. 5). Any situation can be described as one either of high, moderate, or low control.

High control situations are characterized by the leader having a great deal of influence over the group; this situation is amenable to the task-oriented leader. Outcomes are somewhat uncertain in a moderate control situation. In such situations, the relationship oriented leader is most effective. In low control situations, the leader has little justification for feeling that the group will accomplish its task. In such a situation, the task-oriented leader is more effective than the relationship-oriented leader. Fiedler

does not state the situations that are favorable for socio-independent leaders.

The major hypotheses of the contingency model are illustrated in the accompanying diagrams. In the graphs, a leader is seen as operating in one of eight situations called octants. Each octant is distinguished from the other seven by its unique admixture of degree and kind of leader-member relations, task structure, and leader-position power. Figure one illustrates the octants associated with the contingency model. Fiedler and Garcia (1987) have written that octants I, II, III, and VIII are favorable for task-oriented leaders and that octants IV, V, and VI are favorable for relationship-oriented leaders (p. 86). From correspondence with Fiedler, it was determined that octant VII is favorable to the task-oriented leader (Fred Fiedler, personal communication, September, 1988). Figure two illustrates the situations favorable to relationship-oriented and task-oriented leaders.

As was noted previously, Fiedler has made few comments regarding socio-independent leaders. Since Fiedler has stated that socio-independent leaders are neither oriented towards tasks nor relationships, the position taken in this study was that socio-independent leaders would not perform as effectively as task-oriented leaders in low and high control situations and would not perform as effectively as

Octants Associated with the Contingency Model of Leadership Effectiveness								
	Octant One	Octant Two	Octant Three	Octant Four	Octant Five	Octant Six	Octant Seven	Octant Eight
	I	II	III	IV	V	VI	VII	VIII
Leader-Member Relations	Good	Good	Good	Good	Moderately Poor	Moderately Poor	Moderately Poor	Moderately Poor
Task Structure	Structured	Structured	Un-Structured	Un-Structured	Structured	Structured	Un-Structured	Un-Structured
Leader Position Power	Strong	Weak	Strong	Weak	Strong	Weak	Strong	Weak

Figure 1. Octants associated with the contingency model and their relationship to the quality of leader-member relations, amount of task structure, and degree of leader position power. Note. From A Theory of Leadership (p. 146) by F. E. Fiedler, 1967, New York: McGraw-Hill. Copyright 1967 by Fred E. Fiedler. Adapted by permission.

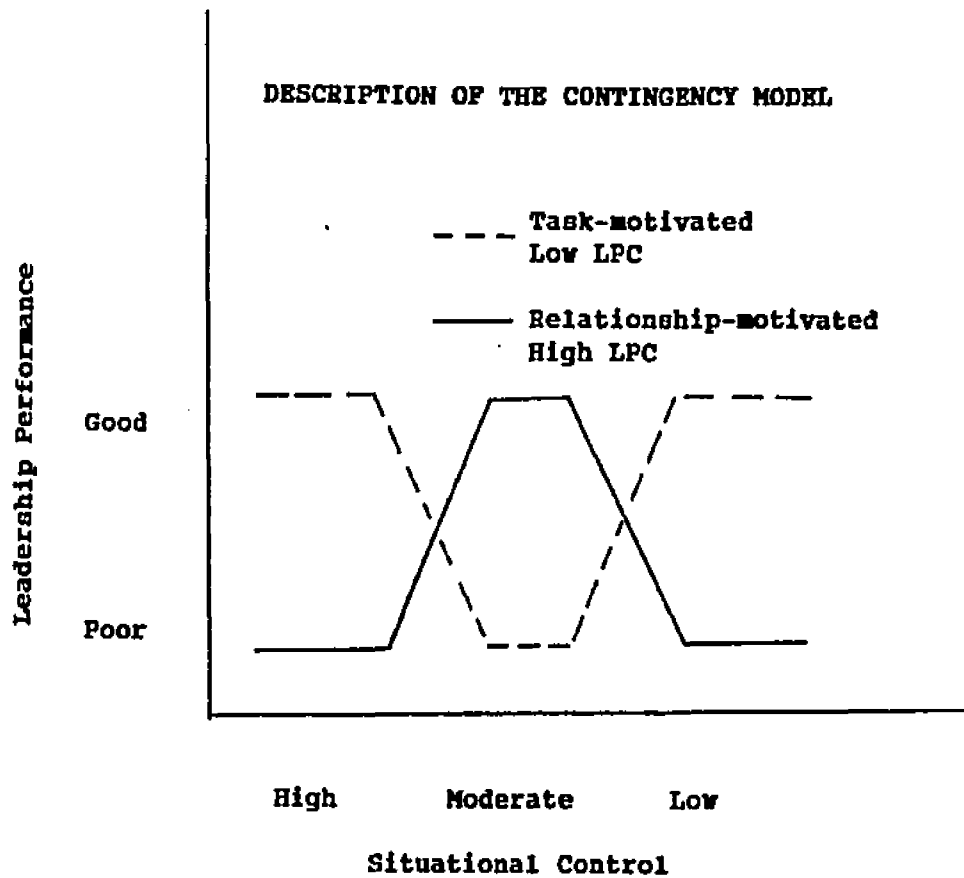


Figure 2. Graphical representation of situations favorable to relationship-oriented and task-oriented leaders. Note. From New Approaches to Effective Leadership: Cognitive Resources and Organizational Performance (p. 83) by F. E. Fiedler and J. E. Garcia, 1987, New York: Wiley. Copyright by Fred E. Fiedler and J. E. Garcia. Adapted by permission.

relationship-oriented leaders in moderate control situations.

The contingency model has had a number of supporters and detractors for over two decades. Some researchers have charged that field tests of the model demonstrate that it lacks reliability and validity (Evans & Dermer, 1974; Graen, Orris, & Alvares, 1971a; Theodory, 1981; Vecchio, 1980). Yet even some critics have hesitated to dismiss the contingency model (Kennedy, Jr., Houston, Korsgaard, Gallo, 1987; Stewart & Latham, 1986). McMahon (1972), for instance, wrote that:

[w]hile it appears that significant predictive power is lacking, the dismissal of the contingency model based upon strictly methodological criticisms is not warranted. (p. 697)

The Least Preferred Coworker (LPC) scale, designed by Fred Fiedler to test hypotheses derived from the contingency model, was selected for use in this investigation because it has been shown to effectively distinguish between two leadership styles--one toward tasks and the other toward people.

Summary

It was commonly accepted that "a president's ability to provide effective leadership is the key element in an institution's success or failure" (Fisher et al., p. 65).

In this study, effective leadership was defined as being able to manage fiscal resources such that the institution would be in good financial health. The major concern of this investigation was to determine whether a relationship-oriented, a task-oriented, or a socio-independent president would perform best in managing the fiscal resources of an academic enterprise. The issue raised was important because the literature search had revealed that the survival of academic institutions would continue to be tenuous as the effects of inflation, shrinking traditional student populations, and other forces continue to act against financial security.

Financially healthy institutions were described as having the capacity to meet their financial obligations. Presidents, because they have control over major decisions affecting the use of fiscal resources, are responsible for the financial condition of their institutions.

The literature contained a number of studies that detailed the attributes and behaviors of effective presidents. Few studies addressed the president's responsibility in managing the fiscal resources of an institution. Yet, it was shown that presidents, faculty, and commentators on education matters recognized how important the president's role of fiscal manager was to the functioning of an institution.

This study proposed to go beyond description of effective behavior to the actual determination of a behavior (leadership style) that yielded the best management of fiscal resources. The contingency model of leadership effectiveness and scales designed to test hypotheses deduced from the model were selected to determine leadership styles and to measure leader effectiveness. A modified ratio of expendable funds to plant debt was selected as an instrument to measure institutional health.

CHAPTER THREE

Methods and Procedures

Research Design

"Research design refers to the procedures used by the researcher to explore relationships between variables, to form subjects into groups, administer the measures, apply treatment conditions, and analyze the data" (Borg & Gall, 1983, p. 351). Major research designs include the causal-comparative method, the correlational method, and the experimental method.

This study was conducted using a combination of the causal-comparative and correlational methods. In the causal-comparative method, samples are compared on the basis of a critical variable (Borg & Gall). The critical variable for this study was financial health scores and the samples consisted of institutions whose presidents exhibited different leadership styles. In the correlational method, a determination is made of the degree of relationship between variables. This study proposed to examine the relationship between financial health scores and leadership styles.

Sample Selection

The target population for this study was presidents of selected private, non-proprietary colleges and universities accredited by the Southern Association of Colleges and

Schools (SACS). A stratified random sample of those institutions was drawn using highest degree offered as a criterion for stratification. To insure a 95% confidence level, 263 institutions were selected using methodology described later in this study. Data regarding the financial condition and the leadership orientations of the presidents heading those institutions formed the basis of this study.

Financial health is a complicated concept which is known to be affected by many factors. Among these factors are geographic region and institutional control. To control as much as possible for these factors, this study focused upon private institutions within a common region. It was decided that for an initial study such as this one, more could be gained from studying a sub-group of the total population than from looking at the entire spectrum of institutions throughout the United States. The procedure used to begin the study was to stratify the population according to the criterion of highest degree offered. The resulting subgroups were then assured of representation "in the sample in proportion to their numbers in the population itself" (Borg and Gall, 1987, p. 248).

To initiate the sampling, a listing was made of all the accredited, non-proprietary, and private institutions listed in the 1989 Proceedings manual of SACS. The total came to 323. Of that number, 48 were level one institutions which were described in the SACS directory as being those

institutions whose highest level of degree offered was the associate degree. A total of 141 institutions were classed as level two indicating that the highest degree offered was the bachelor's degree. Level three institutions, or those for whom the master's was the highest degree offered, totaled 75 in the population. There were three institutions in level four. This level included institutions which offer both master's and education specialist degrees as the highest degree awarded. In level five there were 47 institutions. Level five consists of institutions which award three or fewer doctor's degrees annually. Level six institutions are those which offer at least four or more doctoral degrees annually. Such institutions totaled nine institutions in this study. A decision was made to collapse the three level four institutions into level three because the educational specialists degree more closely resembled the master's level work rather than the doctoral level of work in level five. Similarly, the nine institutions in level six were collapsed into level five since both levels offered doctoral degrees as the highest degree. The resulting level was then called level four. The reason for collapsing the original levels four and six was prompted by cautions given by Fink and Kosecoff (1985) who stated, when writing about stratified random sampling, that "for each strata or subgroup, you must have at least twenty persons in order to make statistical comparisons meaningful" (p. 56).

With the total population from which the sample was to be taken still at 323, the substrata following the collapsing then consisted of 48 institutions in level one; 141 institutions in level two; 78 institutions in level three; and 56 institutions in level four.

Fink and Kosecoff (1985) defined a confidence level as being the level at which a sample is representative of the population from which it has been drawn. It was decided to draw a stratified random sample for this study which would have a 95% confidence level. The formula, $N = (z/e)^2(P)(1-P)$, given below by Fink and Kosecoff (1985, p. 62) was used to estimate the size needed for each of the substratum in the population. As used in this study, N equaled the size of each substratum; z represented the standard score corresponding to a given confidence level. Additionally, the confidence level was set at 95% which was equivalent to a z score of 1.96. The e equaled the proportion of the sampling error which Fink and Kosecoff said traditionally was up to plus or minus .10 (p.62); the P was equal to the estimated proportion or incidence of cases. Beginning with level one and continuing through to level four, substitutions were made into the above formula to derive the total sample size required for the study. The calculations indicated that a sample size of 263 institutions was needed to assure a 95% confidence level. However, the formula given by Fink and Kosecoff yielded sampling estimates

that were larger than the actual number of institutions in two of the levels. This development necessitated the use of another methodology to determine the appropriate number of institutions to be sampled from the four academic levels. The method used was the proportional allocation method described by Schaeffer, Mendenhall, and Ott (1986). This is a procedure whereby substratum sizes are determined by multiplying the total sample size by the proportion of members in a particular substratum. Using this technique, 39 level one institutions were selected, 115 level two institutions, 63 level three institutions, and 46 level four institutions were selected from the total list of institutions.

As a check on the sub-sample sizes and the total sample size derived by these methods, other sources were consulted. As a general estimate of an appropriate total sample size needed for stratified random sampling, Borg and Gall (1983) have written:

The size of the sample is usually determined by the minimum number of cases we decide is acceptable in the smallest subgroup. If we decide that the smallest must contain 30 cases, then we select a total sample large enough so that the correct proportion of our smallest subgroup will equal 30. For example, if 8 percent of our sample must be slow girls and this subsample must be 30

cases, then our total sample would be 375 (i.e., 30 divided by .08). (p. 249)

By this strategy, the estimated sample size was determined to be 261. A similar sample size was derived by using a formula developed by other writers (Guilford & Fruchter, 1978). Table 1 shows the number of institutions sampled in each substratum.

Table 1

Response Rate by Institutional Level

Level	Number in Population	Number Sampled	Number Returned	Response Rate
One	48	39	10	30%
Two	141	115	34	28%
Three	78	63	22	34%
Four	56	46	11	24%
Totals:	323	263	85	32%

In their work, Schaeffer, Mendenhall, and Ott (1986) cautioned that "different random sampling schemes should be used within each stratum so that the observations chosen in one stratum do not depend upon those chosen in another" (p. 82). With these comments in mind, four different tables

of random numbers were used to actually select the institutions from each stratum and the strategies used for selecting the institutions varied from stratum to stratum. To illustrate, the beginning point for the table of random numbers when selecting level one institutions was in the middle of the page and sampling proceeded down the page with selections made at every other row, using the last three digits in each column. Sampling for level four institutions differed from the preceding in that, the beginning point was at the top of the table of random numbers and sampling proceeded across the page with stops at every column using the first three digits in each column.

Instruments

The Least Preferred Coworker Scale, Leader-Member Relations Scale, Task Structure Scale, and Position Power Scales were used to classify leadership styles and determine situational control. The modified ratio of expendable fund balances to plant debt was used to determine institutional financial health. Data used to calculate a ratio for each of the institutions in the study were obtained from computer tapes purchased from the Center for Education Statistics. Information from a Leader/Institutional Fact Sheet was used to make a minimal assessment of a number of internal and external factors known to affect institutional health.

The Least Preferred Coworker (LPC) Scale

The Least Preferred Coworker Scale is a self-report measure which asks a leader to describe a coworker in terms of descriptors on an 18-item bipolar scale. Scores on the Least Preferred Coworker Scale ranging from 73 and up indicate a relationship-oriented leadership style. Mid-range Least Preferred Coworker scores from 65 to 72 indicate a socio-independent leadership style, and low Least Preferred Coworker scores, from 1 to 64, indicate a task-oriented leadership style (Fiedler & Chemers, 1984, p. 20).

Validity. The LPC's measurement capability and stability over time have been questioned (Evans & Dermer, 1974; Fox, 1976; Graen, Orris, & Alvares, 1971a; Graen, Orris, & Alvares, 1971b; Kanuck, 1976; Theodory, 1981; Vecchio, 1980). Yet critics and supporters alike agree that the Least Preferred Coworker Scale does distinguish between two types of leaders. Rice (1978), who supports the Least Preferred Coworker Scale, wrote "data does [sic] suggest that low LPC persons tend to place greater value on successful task performance, and high LPC persons place greater value on success in the realm of interpersonal relations" (p. 1215). Kennedy, Jr., Houston, Korsgaard, & Gallo (1987), critics of the model, offered this statement:

Often overlooked by the critics is the fact that the basic distinction made on the basis of the LPC scores has remained constant over the years. That

is, low LPC leaders are concerned primarily with the group task while high LPC leaders are primarily concerned with interpersonal relations. (p. 808)

Finally, Stewart and Latham (1986), who have criticized the model on a number of points, wrote that:

[t]he common interpretation of the LPC score is that a high score represents a primary concern for interpersonal success and a low score represents primarily emphasis on task success . . . Nothing in the present analysis would suggest that this interpretation is invalid. (p. 91)

Reliability. Researchers have reported test-retest reliability coefficients for the Least Preferred Coworker Scale ranging from .46 to .92 (Fiedler & Garcia, 1987, p. 75). Fiedler feels that such coefficients are in the range given for well accepted personality tests such as the California Personality Inventory whose reliability coefficient is reported at .65 males for males and at .68 for females. In defense of the Least Preferred Coworker Scale, Fiedler and Garcia (1987) wrote:

Although it seems customary in texts and articles to refer to the LPC score as controversial by citing criticisms which go back more than 15 years, it is difficult to see what is so controversial about the score at this time. There are very few social-

psychological measures with higher internal consistency and test-retest reliability, and few for which there are more validity data available. (p. 79)

In defense of the LPC's reliability, researchers Fox (1976) and Kennedy and Gallo (1975) pointed out that the LPC has significant stability provided the individual completing the scale during a retest uses the same referent person for both the original and follow up test.

The Leader-Member Relations (LMR) Scale

The Leader-Member Relations (LMR) scale "allows the leader to estimate relations in the group" (Fiedler & Chemers, 1984, p. 60). Scores below 20 indicate poor relations, scores from 20-30 indicate moderate relations, and scores of 30 and above indicate good leader-member relations (Fiedler & Chemers, 1984, p. 65).

Task Structure Scale

The Task Structure Scale measures "the degree to which procedures, goals, and evaluation of a task can be defined" (Fiedler & Chemers, p. 96). A score of 14 or above indicates that the job is high in structure. A score between 7 and 13 is medium in structure and scores of 6 and below are indicative of low structure (Fiedler & Chemers, p. 81).

Position Power Scale

The Position Power Scale measures the amount of authority the leader enjoys within the group. "A score of 7-10 indicates high position power; a score of 4-6 shows moderate position power and a score of 3 or below denotes low position power" (Fiedler & Chemers, p. 105).

Situational Control Score

The contingency model states that leadership effectiveness results from a leadership style acting within the context of three environmental elements, namely leader-member relations, task structure, and leader position power. Together these elements determine the favorableness of a situation for a leader. Task-oriented leaders are most effective in situations of high and low favorability. Relationship-oriented leaders are most effective in moderately favorable situations. It was assumed that socio-independent leaders would perform less well than task-oriented leaders in high and low control situations and less well than relationship-oriented leaders in moderate control situations. The situational control score is computed by totalling the scores from the leader-member relations, task structure, and position power scales. "Scores from 51-70 indicate situations of high control or favorableness for the leader. Moderate control is indicated by scores from 31-50

and low control scores is indicated by scores from 10-30" (Fiedler & Chemers, p. 128).

Leader/Institutional Fact Sheet

The Leader/Institutional Fact Sheet consists of 8 questions developed by the researcher to determine the presence of a number of factors said to affect institutional health. Concerning factors within an institution, Richard Cook, statistician at the Center for Education Statistics, pointed out in personal correspondence that financial health can be affected by relations with board members, and the track record of athletic programs. From the works of writers who have investigated the demise of academic institutions, it could be surmised as well that other factors such as the proximity of one academic institution to another, the institution's length of existence, and an institution's reputation for academic quality can contribute to financial health (Heisler & Hougland, 1984; Hughes & Ackley, 1978; Stewart & Harvey, 1975).

Data Collection and Treatment

The data analysis involved financial data contained on a computer tape purchased from the Center for Education Statistics and scales completed and returned to the researcher by the presidents participating in the study.

The computerized financial data were downloaded on East Tennessee State University's mainframe computer. Using the SPSS-X statistical program, financial health ratios based on the modified ratio of expendable fund balances to plant debt were calculated for 199 of the 263 institutions that comprised the sample. Ratios were not calculated for the remaining institutions whose records lacked one or more sets of figures needed to calculate the ratio.

The distribution of ratio scores was then grouped into percentiles. For the purpose of statistical testing, scores falling below the 50th percentile were considered to indicate poor financial health, scores from the 50th to the 74th percentile to indicate average financial health, and scores from the 75th percentile and up to indicate good financial health. This strategy was similar to the one used in the Lupton, Augenblick, and Heyison study. One difference between the two studies was that Lupton and associates used standard deviations to demarcate scores indicating poor to very good financial health scores. In this study, standard deviations were not used because the distribution of ratio scores for the 199 institutions was not normal. Instead, percentiles were used to describe the data since they are not affected by extreme scores and are routinely used to describe skewed distributions. In doing so the researcher followed procedures used by the Southern Association of Colleges and Schools (SACS) to assess the

financial operation of SACS institutions. A summary of the procedures used by SACS is given in the following quote:

quartiles were selected as the descriptive statistics because of their relative simplicity and clarity of presentation and the characteristic of being unaffected by extreme values. The first quartile (Q1) is the 25th percentile, i.e., that point in the distribution below which 25% of the values fall. The second quartile (Q2) is the 50th percentile (or median), i.e., that point in the distribution below which 50% of the values fall. The third quartile (Q3) is the 75th percentile, i.e., that point in the distribution below which 75% of the values fall. (Southern Association of Colleges and Schools, 1987, p. 2)

Letters containing all the scales associated with this study, as well as an informed consent form, were mailed to 263 presidents. Following a second mail out, all returned scales were hand scored by the researcher. A total of 85 presidents returned completed scales to the researcher. Of those, eight were not used in the data analysis segment of this study because they were received after the data analysis had begun. Of the remaining 77 scales, 24 were not used in the testing of the four hypotheses drawn from the contingency model for reasons discussed below.

Two conditions had to be met in order to test the hypotheses derived from the contingency model. First, it was necessary that the institutions involved be led by presidents who had been in office a minimum of 3 years. This was to insure that the leadership effectiveness test was being applied to presidents who had at least 36 months to assume control of the major decisions in force that affected the financial operation of each institution. Through examination of item one on the Leader/Institutional Fact Sheet, it was determined that 18 of the responding presidents had been in office less than 3 years. Consequently, their scales were not used in the tests of hypotheses four, five, six, and seven.

Second, situational control scores had to be calculated for each president. Due to an omission on the Leader-Member Relations Scales sent on the first mail out, situational control scores could not be determined for six of the presidents who responded to the study. The scores of these presidents were also not used in the testing of hypotheses four, five, six, and seven. It should be noted that situational control scores could be determined for the majority of the presidents who participated in the study either because the responding presidents were supplied the scoring criteria directly by the researcher or because the presidents, by notation on the scales, indicated the

direction of their response to the various items on the Leader-Member Relations Scale.

Prior to the receipt of the data, it had been planned to base the data analysis solely upon institutions whose internal and external environments had been relatively stable and unchanged for at least three years. This approach, however, was abandoned when examination of the returned Leader/Institutional Fact Sheets indicated that change of some type such as recent business closings or movement into the service area by new industries had occurred on each of the campuses led by the presidents responding to the study.

Statistical Procedures

Four statistical tools were used to test the hypotheses. The Jaspens M correlation technique was used to test hypothesis one. Directional t tests for independent data were used to test hypotheses three, four, and five. One-way analysis of variance was used to test hypotheses two and seven and hypothesis eight was tested using the point-biserial correlation.

To test hypothesis one, which concerned the association between financial health scores of institutions and the leadership styles of academic presidents, Jaspens M, known also as the coefficient of multiserial association, (Champion, 1981, p. 348) was calculated using data generated

through the SPSS-X statistical package. The Jaspens' M is appropriate for determining an association between an ordinally measured and an intervally measured variable. In testing hypothesis one, leadership style was considered an ordinal measure because the leadership scores could be ranked with the highest scores indicating a relationship-oriented leadership style and the lowest scores indicating a task-oriented leadership style. Financial health scores met the interval measure criteria as they were actually of the ratio level. The Jaspens' M is computed from the following formula:

$$M = \Sigma(Y_i)(o_b - o_i) \div (s_y)\Sigma[(o_b - o_i)^2/p] \text{ where}$$

M = the coefficient of multiserial association

\bar{Y}_i = the mean of the subgroup

o_b = the f ordinate

o_i = ordinate above the f ordinate

s_y = the standard error of all y scores

p = the proportion of each subgroup to the sample

According to Champion (p. 353) the statistical significance of the computed coefficient of multiserial association is determined by converting the M value to an equivalent Pearson r value by the following formula:

$$r = (M) \sqrt{\Sigma[(o_b - o_i)^2 \div p]}$$

The computed r value was then evaluated using an alpha of .05 and degrees of freedom equal to $N_f - 2$ where N_f represents the total population size.

To test hypothesis two, which concerned the differences among the financial health scores of institutions whose presidents had different leadership styles, the one-way analysis of variance command on the SPSS-X program was used.

Hypothesis three was concerned with the differences among the financial health scores of institutions differing by highest level of degree awarded. This hypothesis was tested by means of the one-way analysis of variance command on the SPSS-X program.

Hypotheses four, five, six, and seven were used to test concepts related to the contingency model of leadership effectiveness. These hypotheses were tested using the SPSS-PC+ program. The 77 returned scales were hand sorted into groups based upon the president's length of term in office, the situational control score, and the LPC score. Data analysis for hypothesis four involved the scores of task-oriented and relationship-oriented presidents operating in high control situations. As was indicated previously, there were no low control scores found among the scales.

To test hypothesis five, the scores of task-oriented and socio-independent presidents operating in high control situations were used.

Hypothesis six involved scores from relationship-oriented and task-oriented presidents operating in moderate control situations.

Hypothesis seven was tested using the scores of relationship-oriented and socio-independent presidents operating in moderate control situations.

Hypothesis eight concerned the association between two lists of effectively led academic institutions. It was tested using the point-biserial correlation technique. The point-biserial correlation technique is appropriate for use in the determination of a relationship between a dichotomous and a continuous variable. As was stated by Ferguson (1981), "This statistic can always be interpreted as a measure of the degree to which the continuous variable differentiates, or discriminates, between the two categories of the dichotomous variable" (p. 428).

The formula used to calculate the point-biserial correlation for hypothesis seven was found in Ferguson (1981, p. 428) and is given below:

$$r_{pb} = (\bar{X}_p - \bar{X}_q / s_x) (\sqrt{pq})$$

Ferguson writes that in this formula, " s_x is the standard deviation of scores on the continuous variable . . . p and q are the proportions of individuals in the two categories of the dichotomous variable . . . X_p and X_q are the mean scores on the continuous variable" (p. 428). To evaluate the strength of the calculated association, the following formula was used:

$$t = r_{pb} [(N - 2) / (1 - r_{pb}^2)]; \quad d.f. = N - 2$$

The point-biserial correlation technique was not included among the commands available on the SPSS-X package, but the crosstabs command on the SPSS-X program was used to calculate some of the formula parts needed to compute this association. Specifically, the crosstabs procedure was used to determine the mean figures for \bar{X}_p and \bar{X}_q , and the frequency command was used to obtain the standard deviation. The first step in calculating the point-biserial correlation was to make a listing of all the institutions emerging from this study as being in good financial health. Such institutions were defined as those whose ratio scores placed at or above the 75th percentile. There was a total of 97 institutions meeting this criterion and these institutions were placed on the Seay list of effective institutions. Another listing of institutions that had appeared on the Fisher, Tack, and Wheeler list of institutions led by effective presidents was made by consulting The Chronicle of Higher Education (The 100 most effective college leaders, 1986) and listing the names of any of those institutions which were both private and members of SACS. This information was then written into a computer program with 0 being assigned to institutions not on the Fisher list but on the Seay list and 1 being assigned to institutions both on the Fisher and Seay effective lists. In effect, an attempt was made to discriminate between membership and nonmembership on

the Fisher list by use of institutional financial health scores. Table two illustrates the procedure followed.

Table 2

Illustration of the Calculation of the Point-Biserial
Correlation

Institution	Financial Health Score	Fisher
1	5.40	0
10	.40	0
59	35.66	1

CHAPTER FOUR

Data Analysis and Results

This study was designed to determine if there was a relationship between presidential leadership style and the ability of an academic institution to pay its current debts. Secondly, the study tested concepts related to Fred Fiedler's contingency model of leadership effectiveness; and finally, it tested the strength of the relationship between an operationally defined measure of presidential effectiveness and a reputationally defined measure of presidential effectiveness.

Descriptions of the presidents responding to the study, of the distribution of ratio scores, and of the results of the testing of the seven hypotheses associated with this study follow.

The Respondents

Out of 263 presidents contacted to participate in this study, 85 responded by returning completed scales to the researcher. Of those 85, however, only 77 were received before the data analysis portion of this study began. The response rate, using 85 as the dividend, was 32%, a lower figure than that of 75% reported by Fisher and associates (p. 15) and 70.5% reported by Vaughan (1986b, p. xv) but in keeping with the 27% response rate reported by Patrick and

Caruthers (1980, p. 198) and the 40% response rate reported by Duea (1981, p. 501) in their respective studies of academic leaders.

Information regarding the leadership styles of the presidents responding to the survey are presented in Table 3. The tabular data indicate that 61% of the responding presidents had task-oriented leadership styles. Additionally, the majority of the scales were returned by presidents who headed level two institutions.

Table 3

Response Rate by Institutional Level and Leadership Style

Level	Relation- ship- Oriented	Socio- independent- Oriented	Task- Oriented	Total
One	2	1	7	10
Two	6	7	21	34
Three	7	3	12	22
Four	2	2	7	11
Totals	17 (22%)	13 (17%)	47 (61%)	77

Situational control scores were computed for 71 of the responding presidents. Because of an error on the Leader-Member Relations Scale, situational control scores could not be computed for the six other presidents. Of those for whom situational control scores were computed, 74.6% were operating in situations of high control and 25.4% were operating in moderate control situations. None of the scores indicated that any of the presidents were operating in low control situations.

In terms of mail out rate, the majority of the presidents responding to the survey were heads of institutions located in Mississippi and Kentucky. In terms of count only, the majority of the presidents responding to the survey were leaders of institutions located in Texas and North Carolina. This information is presented in Table 4.

Financial Health Scores

Financial health scores were calculated for 199 institutions in the sample. The distribution of these 199 scores was found to be positively skewed with a mean of 17.74 and a standard deviation of 52.37. Within the distribution, scores ranged from a minimum of .54 to a maximum score of 480.31.

Table 4

Response Rate by State

State	Number Mailed	Number Returned	Response Rate
Alabama	13	3	23%
Florida	26	6	23%
Georgia	26	7	27%
Kentucky	23	8	35%
Louisiana	9	1	11%
Mississippi	9	4	44%
North Carolina	35	11	31%
South Carolina	16	5	31%
Tennessee	36	10	28%
Texas	43	14	33%
Virginia	27	8	30%
Totals	263	85	32%

The distribution of scores associated with the financial health scores of the 77 institutions whose presidents participated in the study was also positively skewed with a mean of 28.72 and a standard deviation of 78.025. The mean score for level one institutions was 139.35; for level two institutions, 17.03; for level three institutions, 11.00; and for level four institutions, 50.08.

Scores at or below the value of 5.71 placed at or below the 49th percentile and were considered to indicate poor financial health. Scores falling between 5.79 and 11.71 placed between the 50th and the 74th percentiles and were considered indicative of average financial health. Scores falling at or above 11.81 placed either at or above the 75th percentile. Such scores were said to indicate good financial health.

Table 5 presents the distribution of the percentile ranks of the financial health scores by state. The largest number of unhealthy institutions was found in the states of Florida and Texas. This was an interesting discovery since, due to migration to these areas within the last decade and the relocation of manufacturing industries to the sunbelt, it had been expected that in general fewer institutions in a poor financial condition would be found in these states.

Table 5

Percentile Rank of Financial Health Scores by State

State	Scores up to the 49th* Percentile (Poor Health)	Scores between the 50th and 74th* Percentile (Average Health)	Scores at or above the 75th* Percentile (Good Health)
Alabama	-	1	2
Florida	4	1	1
Georgia+++	1	3	-
Kentucky+	1	-	6
Louisiana	1	-	-
Mississippi++	-	-	2
North Carolina+++	-	1	7
South Carolina+	-	3	1
Tennessee++++	1	2	3
Texas+++++	3	-	3
Virginia ++	1	1	4
Totals	12	12	29

*cut off score = 5.71; **cut off scores = 5.79 and 11.71;
 ***cut off score = 11.81; +missing financial data for one
 institution; ++missing financial data for two institutions;
 +++missing financial data for three institutions
 ++++missing financial data for four institutions
 +++++missing financial data for eight institutions

The data in Table 6 indicate that institutions whose scores placed most frequently in the good financial health category were those institutions offering the bachelor's degree as the highest degree awarded. Institutions offering the master's degree as the highest degree offered had the largest number of their cases falling within the poor financial health category.

Table 6

Percentile Rank of Financial Health Scores by Institutional Level

Level	Scores up to the 49th Percentile	Scores between the 50th and 74th Percentile	Scores at or above the 75th Percentile
One (missing 6)	-	-	4
Two (missing 9)	4	5	16
Three (missing 5)	6	5	6
Four (missing 4)	2	2	3
Total	12	12	29

Hypotheses Testing

This study was designed to test the following null hypotheses:

- HO₁: A significant association will not exist between financial health scores of institutions and the leadership styles of academic presidents.
- HO₂: The financial health scores of institutions led by relationship-oriented, socio-independent, and task-oriented presidents will not be significantly different.
- HO₃: The financial health scores of level one, level two, level three, and level four institutions will not be significantly different.
- HO₄: The financial health scores of institutions headed by task-oriented presidents will not be significantly higher than the financial health scores of institutions headed by relationship-oriented presidents in low and high control situations.
- HO₅: The financial health scores of institutions headed by task-oriented presidents will not be significantly higher than the financial health scores of institutions headed by socio-independent presidents in low and high control situations.

- HO₆: The financial health scores of institutions headed by relationship-oriented presidents will not be significantly higher than the financial health scores of institutions headed by task-oriented presidents in moderate control situations.
- HO₇: The financial health scores of institutions headed by relationship-oriented presidents will not be significantly higher than the financial health scores of institutions headed by socio-independent presidents in moderate control situations.
- HO₈: A strong, positive association will not exist between effectively led institutions, as defined by the terms of this study, and effectively led institutions, as defined by the terms of the Fisher, Tack, and Wheeler study.

Null hypothesis one stated that a relationship will not exist between financial health scores of institutions and the leadership styles of academic presidents. The hypothesis was tested using the Jaspens' M coefficient of multiserial association. The calculated M value equaled $-.0032$ which indicated that an inverse relationship existed between financial health scores and leadership styles. Specifically, higher Least Preferred Coworker scores tended to be associated with lower financial health scores. Since

higher Least Preferred Coworker scores indicate a relationship-oriented leadership style, another interpretation of the calculated M value of $-.0032$ is that relationship-oriented leadership styles tended to be associated with institutions having lower financial health scores. To test its significance, the M value was converted into a Pearson r value. However, the computed r value was smaller than the critical value of $.2319$ associated with 74 degrees of freedom and an alpha level of $.05$. Therefore, null hypothesis one was not rejected. Table 7 shows the calculations used in the evaluation of null hypothesis one.

Table 7

Calculations for the Jaspens' M Coefficient of Multiserial Association

$$M = -.0032; \quad r_s = -.0026^*$$

d.f. = 74; $p^* < .05$

Null hypothesis two stated that the financial health scores of institutions led by relationship-oriented, socio-independent, and task-oriented presidents will not be significantly different. This hypothesis was tested using the one-way analysis of variance command on the SPSS-X statistical package. With the alpha level set at $.05$ and

degrees of freedom of 2 and 50, the critical value F equaled 3.18. This value was greater than the calculated value of .6820 and, consequently, null hypothesis two was not rejected. Table 8 contains the analysis of variance summary data used to make the decision regarding null hypothesis two.

Table 8

One-Way Analysis of Variance of Financial Health Scores by Leadership Style

Source	D.F.	Sum of Squares	Mean Squares	F Ratio
Between Groups	2	8406.54	4203.27	.68*
Within Groups	50	308163.17	6163.26	
Total	52	316569.70		

* $p < .05$.

Null hypothesis three stated that the financial health scores of level one, level two, level three, and level four institutions will not be significantly different. This hypothesis was tested using the one-way analysis of variance command on the SPSS-X statistical program. The calculated F value of 3.90 was greater than the critical value F which equaled 2.80. Therefore null hypothesis three was rejected.

Both the Neuman-Keuls and the Tukey-B procedures indicated that the financial health scores of level one institutions were significantly different from those of level two institutions and that the financial health scores of level one institutions were also significantly different from those of level three institutions. The post hoc procedures used indicated that the financial health scores of level four institutions were not significantly different from the scores of level one, two, or three institutions. Table 9 presents the analysis of variance summary data associated with the rejection of null hypothesis three.

Table 9

One-Way Analysis of Variance of Financial Health Scores by Institutional Level

Source	D.F.	Sum of Squares	Mean Square	F
Between Groups	3	61076.30	20358.76	3.90*
Within Groups	49	255493.40	5214.15	
Total	52	316569.70		

p* > .50.

Null hypothesis four stated that the financial health scores of institutions headed by task-oriented presidents will not be significantly higher than the financial health scores of institutions headed by relationship-oriented presidents in low and in high control situations. This hypothesis was tested using the SPSS-PC+ statistical package. A directional t test for independent data with an alpha level set at .05 was used to evaluate the difference between the two sets of scores. Because the computed t value of 1.41 was less than the critical value t of 1.729, null hypothesis four was not rejected. Table 10 contains the results of the data analysis.

Table 10

Directional t test for Independent Data - Hypothesis 4

	Number of Cases	t-value
Group 1 (task)	17	1.41*
Group 2 (relationship)	5	

d.f. = 19; $p^* < .05$, one-tailed.

Null hypothesis five stated that the financial health scores of institutions headed by task-oriented presidents will not be significantly higher than the financial health scores of institutions headed by socio-independent presidents in low and in high control situations. Null hypothesis five was tested by means of a directional t test for independent data and the SPSS-PC+ statistical package. The calculated t value of 1.71 was smaller than the critical value t of 1.746. Therefore, null hypothesis five was not rejected. Table 11 presents the data used to make this decision.

Table 11

Directional t test for Independent Data - Hypothesis 5

	Number of Cases	<u>t</u> value
Group 1 (task)	17	1.71*
Group 2 (socio-independent)	3	

d.f. = 16; p* < .05, one-tailed.

Null hypothesis six stated that the financial health scores of institutions headed by relationship-oriented presidents will not be significantly higher than the financial health scores of institutions headed by task-oriented presidents in moderate control situations. This hypothesis was tested using the SPSS-PC+ statistical package and a directional t test for independent data with the alpha level set at .05. The computed t value of .37 was less than the critical value of 2.015, therefore null hypothesis six was not rejected. The data used in making this decision is presented in Table 12.

Table 12

Directional t-test for Independent Data - Hypothesis 6

	Number of Cases	t-value
Group 1 (relationship)	4	.37*
Group 2 (task)	4	

d.f. = 6; $p^* < .05$, one-tailed.

Null hypothesis seven stated that the financial health scores of institutions headed by relationship-oriented presidents will not be significantly higher than the financial health scores of institutions headed by socio-independent presidents in moderate control situations. This hypothesis was tested using the SPSS-PC+ program and a directional t test for independent data with the alpha level set at .05. The computed t value of .69 was less than the critical value of 2.132. Therefore, null hypothesis seven was not rejected. Calculations associated with null hypothesis seven are presented in Table 13.

Table 13

Directional t test for Independent Data - Hypothesis 7

	Number of Cases	t value
Group 1 (relationship)	4	.69*
Group 2 (socio-independent)	2	

d.f. = 4; $p^* < .05$, one-tailed.

Null hypothesis eight stated that an association will not exist between effectively led institutions, as defined by the terms of this study, and effectively led institutions, defined by the terms of the Fisher, Tack, and Wheeler study. The point-biserial correlation was used to test this hypothesis. The calculated r_{pb} equaled $-.07$ and the t value associated with it was equal to $-.48$. Because the calculated t value was less than the critical t value of 1.684 , the decision was made not to reject null hypothesis eight. The calculations associated with the evaluation of null hypothesis eight are presented in Table 14.

Table 14

Calculations Associated with the Point-Biserial
Correlation Computation

$$r_{pb} = -.07; \quad t = -.48^*$$

$$d.f. = 47; \quad p^* < .05.$$

CHAPTER FIVE

Summary, Findings, Conclusions, and Recommendations

Summary

The primary purpose of this study was to determine if a relationship existed between the financial health of academic institutions and the leadership style of college and university presidents. Secondly, the study tested a number of hypotheses derived from the contingency model of leadership effectiveness. Lastly, the study attempted to determine if there was an association between two lists of institutions considered to be led by effective presidents.

The study involved a stratified random sample of 263 private institutions accredited by the Southern Association of Colleges and Schools (SACS). The study was designed to test eight null hypotheses. Seven of those hypotheses were tested using data based upon the scored responses from 77 presidents and financial data for 53 institutions whose presidents responded to the study. The remaining hypothesis involved the financial data of 199 institutions accredited by SACS. The data were analyzed by means of the Jaspens' M correlation technique, one-way analysis of variance, directional t tests for independent data, and a point-biserial correlation. Of the eight null hypotheses, only one, hypothesis 3, was rejected at the .05 level of significance. From that rejection, a determination was made

that financial health scores of institutions that awarded only associate degrees were significantly different both from the scores of institutions whose highest degree awarded was the bachelor's degree and institutions whose highest degree awarded was the master's degree.

Findings

The results of the data analysis led to the following findings:

1. The financial health scores of the institutions involved in this study were not associated with any particular presidential leadership style. This finding was based upon the failure to reject null hypothesis one.
2. There were no statistically significant differences in the financial health scores of institutions led by relationship-oriented, socio-independent, and task-oriented presidents. This finding was based upon the failure to reject null hypothesis two.
3. The ratio figures derived to determine the financial health of level one institutions were significantly different from the ratio figures derived for level two and level three institutions. This finding was based upon the rejection of null hypothesis three.

4. The major tenets of the contingency model of leadership effectiveness were not supported by the data used in this study. This finding was based upon the failure to reject null hypotheses four, five, six, and seven.

5. There was no significant relationship between institutions led by presidents with reputations for effective leadership and institutions led by presidents who were considered effective by the terms of this study. This finding was based upon the failure to reject null hypothesis eight.

6. Analysis of the scored Least-Preferred Coworker Scales revealed that 61% of the presidents had task-oriented leadership styles and that a socio-independent leadership style was least likely to be exhibited by the presidents who responded.

7. Tallies from the scored Leader-Member Relations Scales, Task Structure Scales, and Position Power Scales indicated that a very large percentage (74.6%) of the respondents were operating in high control situations; none of the presidents were operating in low control situations.

8. Through the use of frequency counts and cross tabulation procedures, it was determined that the institutions which offered the bachelor's degree as their highest degree were those most frequently found in the good financial health category.

9. Frequency counts and cross tabulation procedures also revealed that almost one fourth of the institutions, for which financial health scores were computed, were deemed to be in poor financial health; another fourth were interpreted as having average financial health; and about one-half were found to be in good health.

Conclusions

The following conclusions were based upon the data analysis and findings presented previously:

1. The financial condition of academic institutions cannot be predicted through knowledge of the presiding president's leadership style.

2. Ratio values used to indicate the financial condition of level one institutions are not representative of the ratio values used to indicate the financial condition of level two and level three institutions.

3. Relationship-oriented, socio-independent, and task-oriented presidents are equally effective in moderate and high control situations.

4. High financial health scores, derived by the methods of this study, cannot be used to indicate effectively led institutions by the terms of the Fisher, Tack, and Wheeler Study.

5. When attending to financial matters, academic presidents are more interested in completing tasks than they are in attending to the needs of their subordinates.

6. The financial condition of institutions offering the bachelor's degree as the highest level of degree awarded, has improved since the publication of a 1976 work by Lupton, Augenblick, and Heyison. In that article, Lupton and colleagues found that such institutions were the least healthy of all the academic institutions surveyed in their study.

Recommendations

As a result of this study, it is recommended that:

1. A national study to investigate academic financial health should be undertaken. It is suggested that a revised Higher Education General Information Survey (HEGIS) form and the ratio of expendable fund balances to plant debt, developed by the accounting firm of Peat Marwick, be used to collect and analyze the data. It is recommended that the HEGIS form be revised to allow separate entries for quasi- and regular endowments. This revision would allow the direct application of the ratio of expendable fund balances to plant debt to the financial data collected by means of the HEGIS form. The proposed study would be the first such undertaking since the Lupton, Augenblick, and Heyison study conducted more than 12 years ago. Nationally, there is a

need to know how well all academic institutions are functioning.

2. Academic presidents should routinely monitor the financial condition of their institutions by using the ratio analysis techniques used in this study or similar techniques. Academic solvency can only be assured through the judicious monitoring of financial operation.

3. Separate measures of financial condition should be developed for academic institutions according to their degree granting status. This study has shown that degree awarding status significantly affects measures used to indicate financial health.

4. Reputational measures of academic leadership effectiveness should not be presumed to indicate a president's potential skill in performing duties associated with the financial management of an institution.

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APPENDICES

APPENDIX A

**LISTING OF 100 INSTITUTIONS LED BY EFFECTIVE PRESIDENTS
ACCORDING TO THE TERMS OF THE FISHER, TACK, & WHEELER STUDY**

LISTING OF 100 INSTITUTIONS LED BY EFFECTIVE PRESIDENTS

4-RESEARCH COLLEGES AND UNIVERSITIES

RESEARCH I

Harvard U.
 Michigan State U.
 U. of North Carolina
 U. Of Texas at Austin
 Yale U.
 U. of Chicago
 U. of Illinois
 U. of Missouri
 John Hopkins U.
 U. of Michigan
 Boston U.

DOCTORAL-GRANTING I

Rensselaer Polytechnic I.
 West Virginia U.
 U. of North Dakota
 Rice U.
 U. of Notre Dame
 U. of South Carolina
 Boston College
 State U. of New York at Albany
 U. of Alabama

RESEARCH II

Rutgers U.
 Catholic U. Of America
 Carnegie Mellon U.
 George Washington U.
 Georgetown U.
 U. of Virginia
 Indiana U.
 Brown U.

DOCTORAL-GRANTING II

Baylor U.

COMPREHENSIVE I

Troy State U.
Salem State College
Trinity U. (Tex.)
James Madison U.
Cali. State U. (Northridge)
Moorhead State U.
Concordia College (Minn.)
Madonna College
U. of North Carolina at Charlotte
U. of Richmond
California State U. at Long Beach
Furman U.
George Mason U.
College of St. Thomas
DePauw U.
U. of Tennessee at Martin
Seattle U.
U. of Montevallo
Ithaca College

COMPREHENSIVE II

Bloomfield College
Mars Hill College
Wheaton College (Ill.)
Hood College
Xavier U. of Louisiana
Gettysburg College
Aquinas College

LIBERAL ARTS I

Pomona College
Birmingham Southern College
Reed College
Hollins College
Wesleyan U.
Williams College
Smith College
Goucher College
Grinnell College
Carleton College
Wheaton College (Mass.)
Gordon College
Drew U.
Sarah Lawrence College
Kenyon College
Wellesley College
Mills College
Hope College
Lawrence U.
Central U. of Iowa
Westmont College

LIBERAL ARTS II

Morehouse College
Hiram College
Mary Baldwin College
Fisk U.
Alverno College
Southwestern U.

2-YEAR COLLEGES AND INSTITUTES

Cuyahoga Community College District
Maricopa County Community College District
Lakewood Community College
St. Louis Community College District
Central Piedmont Community College
Westchester Community College
Los Angeles Community College District
Dallas County Community College
College of DuPage
Miami-Dade Community College
Alamo Community College District
Clarke College (Miss.)
Sinclair Community College
Tarrant County Junior College
State Center Community College District (Cal.)
Gulf Coast Community College District
Chowan College
Bay Path Junior College

APPENDIX B
CORRESPONDENCE

Educational Leadership and
Policy Analysis
East Tennessee State University
Box 19,000A
Johnson City, TN 37614-0002

July 25, 1989

Dear Dr. :

I am a student in East Tennessee State University's Department of Educational Leadership and Policy Analysis. For my dissertation research, I am exploring the relationship between academic leadership styles and financial management.

My study has two purposes. The first is to determine the leadership style of 263 college and university presidents through scales developed by Fred E. Fiedler. The second is to determine if leadership styles tend to be associated with a particular ratio figure. Specifically, data from the Center for Education Statistics will be used to calculate a financial ratio for each institution being contacted. This ratio, termed a modified ratio of expendable fund balances to plant debt, yields a measure of an institution's ability to pay its current debts.

I hope you will participate in this study by completing the scales which accompany this letter and returning them within two weeks. Completing the scales will require no more than 15 minutes of your time as you are not being asked to score any of the items; simply place either a check mark or a circle around the response of your choice and be reminded that this study is focusing upon leadership as it relates to staff within the financial sphere of your institution.

All scales will be scored by me and only I will have access to the key code which identifies each institution. The attached Informed Consent Form is a standard attachment to all research projects at East Tennessee State University. However, as this study is not experimental in nature and is funded solely by the researcher, some cautions given in the Informed Consent Form are not especially germane to this study.

For the results of this study, please write your name and address on the enclosed card. Then return the card separately from your survey answers in order to insure the anonymity of your response.

Sincerely,

Sandra Seay

Enclosures

Educational Leadership and
Policy Analysis - Box 19,000A
East Tennessee State University
Johnson City, Tennessee 37614-0002

August 15, 1989

Dear Dr. :

Three weeks ago, I wrote to you and requested that you participate in a study I am conducting. The study has two purposes. The first is to determine the leadership style of 263 college and university presidents through scales developed by Fred E. Fiedler. The second is to determine if leadership styles tend to be associated with a particular ratio figure. Specifically, data from the Center for Education Statistics will be used to calculate a financial ratio for each institution being contacted. This ratio, termed a modified ratio of expendable fund balances to plant debt, yields a measure of an institution's ability to pay its current debts.

I am aware that time is a scarce and valuable commodity for leaders of academic institutions. For this reason, the scales I have selected to measure leadership style are brief and will require no more than 15 minutes of your time to complete. Further, I am not asking you to score any of the scales. Simply place either a check mark before or a circle around the response of your choice and be reminded that all questions on the scales are to be answered in terms of the management of financial matters on your campus.

As I indicated in my first letter to you, all information will be confidentially maintained. However, should you want the results of this study, please write your name and address on the enclosed card. Then return the card separately from your survey answers in order to insure the anonymity of your response.

Sincerely,

Sandra Seay

Attachments

APPENDIX C
SCALES ASSOCIATED WITH THE
CONTINGENCY MODEL OF LEADERSHIP EFFECTIVENESS

PLEASE NOTE:

Copyrighted materials in this document have not been filmed at the request of the author. They are available for consultation, however, in the author's university library.

These consist of pages:

134, Least Preferred Coworker Scale Instructions

135, Least Preferred Coworker Scale

U·M·I

LEADER-MEMBER RELATIONS SCALE

NOTE: Please answer the following in terms of the management of financial matters on your campus. Circle the number which best represents your response to each item.

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree
1. The people I supervise have trouble getting along with each other.	1	2	3	4	5
2. My subordinates are reliable and trustworthy.	5	4	3	2	1
3. There seems to be a friendly atmosphere among the people I supervise.	5	4	3	2	1
4. My subordinates always cooperate with me in getting the job done.	5	4	3	2	1
5. There is friction between my subordinates and myself.	1	2	3	4	5
6. My subordinates give me a good deal of help and support in getting the job done.	5	4	3	2	1
7. The people I supervise work well together in getting the job done.	5	4	3	2	1
8. I have good relations with the people I supervise.	5	4	3	2	1

TASK STRUCTURE RATING SCALE

NOTE: Please answer the following in terms of the management of financial matters on your campus. Circle the number which best represents your response to each item.

	Usually	Sometimes	Seldom
<u>IS THE GOAL CLEARLY STATED OR KNOWN?</u>			
1. Is there a blueprint, picture, or model which shows how the finished product should look or is there a detailed description of the finished product or service?	2	1	0
2. Is there a person available who can advise and give at least a general description of the finished product or service or how the job should be done?	2	1	0
<u>IS THERE ONLY ONE WAY TO ACCOMPLISH THE TASK?</u>			
3. Is there a step-by-step procedure or a standard operating procedure which indicates in detail the process which is to be followed?	1*	2	0
4. Are there some ways which are clearly recognized as being better than others for performing this task?	2	1	0
<u>IS THERE ONLY ONE CORRECT ANSWER OR SOLUTION?</u>			
5. Is it obvious when the task is finished and the correct solution has been found (e.g., the machine runs well, a against the problem of "will this policy work out")?	2	1	0
6. Is there a book, manual, or job description which indicates the best solution or the best outcome for the task (e.g., a book indicating the revolutions per minute an engine should turn; a field manual giving the accuracy of target shooting)?	2	1	0
<u>IS IT EASY TO CHECK WHETHER THE JOB WAS DONE RIGHT?</u>			
7. Is there a generally agreed understanding about the standards the particular product or service has to meet to be considered acceptable?	2	1	0
8. Is the evaluation of this task generally made on some quantitative basis, that is, by giving a certain number of points, grades, or by rating as excellent, good, fair, etc.?	2	1	0
9. Can the leader and the group find out how well the task has been accomplished in enough time to improve future performance?	2	1	0

*Scaling as it appears on the form sent by Professor Fiedler to the researcher.

POSITION POWER RATING SCALE

Circle the number which best represents your answer.

1. Can the leader directly or by recommendation administer rewards and punishments to his subordinates?

<u>2</u>	<u>1</u>	<u>0</u>
Can act directly or can recommend with high effec- tiveness	Can recommend but with mixed results	NO

2. Can the leader directly or by recommendation affect the promotion, demotion, hiring or firing of his subordinates?

<u>2</u>	<u>1</u>	<u>0</u>
Can act directly or can recommend with high effec- tiveness	Can recommend but with mixed results	NO

3. Does the leader have the knowledge necessary to assign tasks to subordinates and instruct them in task completion?

<u>2</u>	<u>1</u>	<u>0</u>
YES	Sometimes or in some aspects	NO

4. Is it the leader's job to evaluate the performance of his subordinates?

<u>2</u>	<u>1</u>	<u>0</u>
YES	Sometimes or in some aspects	NO

5. Has the leader been given some official title of authority by the organization (e.g., foreman, department head, platoon leader)?

<u>2</u>	<u>0</u>
YES	NO

SITUATIONAL CONTROL SCALE

Enter the total scores for the Leader-Member Relations dimension, the Task Structure Scale, and the Position Power Scale in the spaces below. Add the three scores together and look up the total on the conversion chart to determine overall situational control.

1. Leader-Member Relations Total..... _____
 2. Task Structure Total..... _____
 3. Position Power Total..... _____
- GRAND TOTAL..... _____

TOTAL SCORE	51-70	31-50	10-30
AMOUNT OF SITUATIONAL CONTROL	High Control	Moderate Control	Low Control

APPENDIX D
LEADER/INSTITUTIONAL FACT SHEET

LEADER/INSTITUTIONAL FACT SHEET

INSTRUCTIONS: For the questions that follow, please check the appropriate response.

1. How long have you been the chief executive officer (president, provost, chancellor) or your institution?
 Less than 3 years 3 years or more
2. How would you describe relations with your governing board?
 Amicable Less than amicable Adversarial
3. Whose objective does your institution's budget primarily reflect?
 Yours The governing board's
4. Have any of the following events occurred at your institution within the last five years?
 Your institution was put on some form of suspension
 Your institution was denied accreditation
 Your institution sustained a major embarrassment
5. Have any of the following occurred at your institution during the last five years?
 Had a change in mission
 Had a winning athletic program
 Had a losing athletic program
 Established a new school, college, or some other venture
6. Has one or more institution(s) of higher learning within 50 miles of your institution closed within the last five years?
 No Yes
7. Has one or more new industries moved into your area within the last five years?
 No Yes
8. Has one or more major business concerns in your locale closed or moved out of the area within the last five years?
 No Yes

THANK YOU FOR PARTICIPATING IN THIS STUDY.

VITA

SANDRA ELDRIDGE SEAY

- Personal Data:** Date of Birth: November 12, 1946
Place of Birth: Richmond, Virginia
Marital Status: Married
- Education:** Public Schools, Richmond, Virginia
University of Massachusetts at Boston,
Boston, Massachusetts; anthropology-
sociology, B.A., 1971
University of Chicago, Chicago, Illinois;
social sciences, M.A., 1976.
East Tennessee State University, Johnson
City, Tennessee; counseling, M.A.,
1982
East Tennessee State University, Johnson
City, Tennessee; educational leadership
and policy analysis, Ed.D., 1989
- Professional Experience** Science Feature Writer, the National
Consortium for Black Professional
Development; Louisville, Kentucky, 1977-
1978
Instructor of social and experimental
psychology, Milligan College; Milligan,
Tennessee, 1982
Coordinator, Premedical Reinforcement and
and Enrichment Program, East Tennessee
State University; Johnson City, Tennessee,
1983-1986.
Coordinator, PROJECT EXCEL, Virginia
Highlands Community College; Abingdon,
Virginia, 1986-1988
- Publications** Seay, S. E. (1981). Surviving.
Mockingbird, pp. 35-39. Johnson City,
Tennessee: East Tennessee State
University
- Honors and Awards** Voted outstanding student in the
Anthropology-Sociology Department,
University of Massachusetts at
Boston, 1971.
Third place winner, Hackney Literary
Awards, 1977.
Second place winner. Virginia Highlands
Creative Writing Contest, 1980.

Second place winner, Mockingbird Creative Writing Contest, 1981.
Appeared on the National Dean's List, 1982-1983.
Outstanding Young Woman of America, 1983

Certificates and Licenses Certified guidance counselor, State of Tennessee
Certified professional counselor, State of Tennessee

Professional Memberships PHI KAPPA PHI
PHI DELTA KAPPA
KAPPA DELTA PI

Community Activities Board Member, B. Carroll Reece Museum, Johnson City, Tennessee; 1985 to the present
Board Member, William King (Art) Foundation, Abingdon, Virginia, 1987-1989.