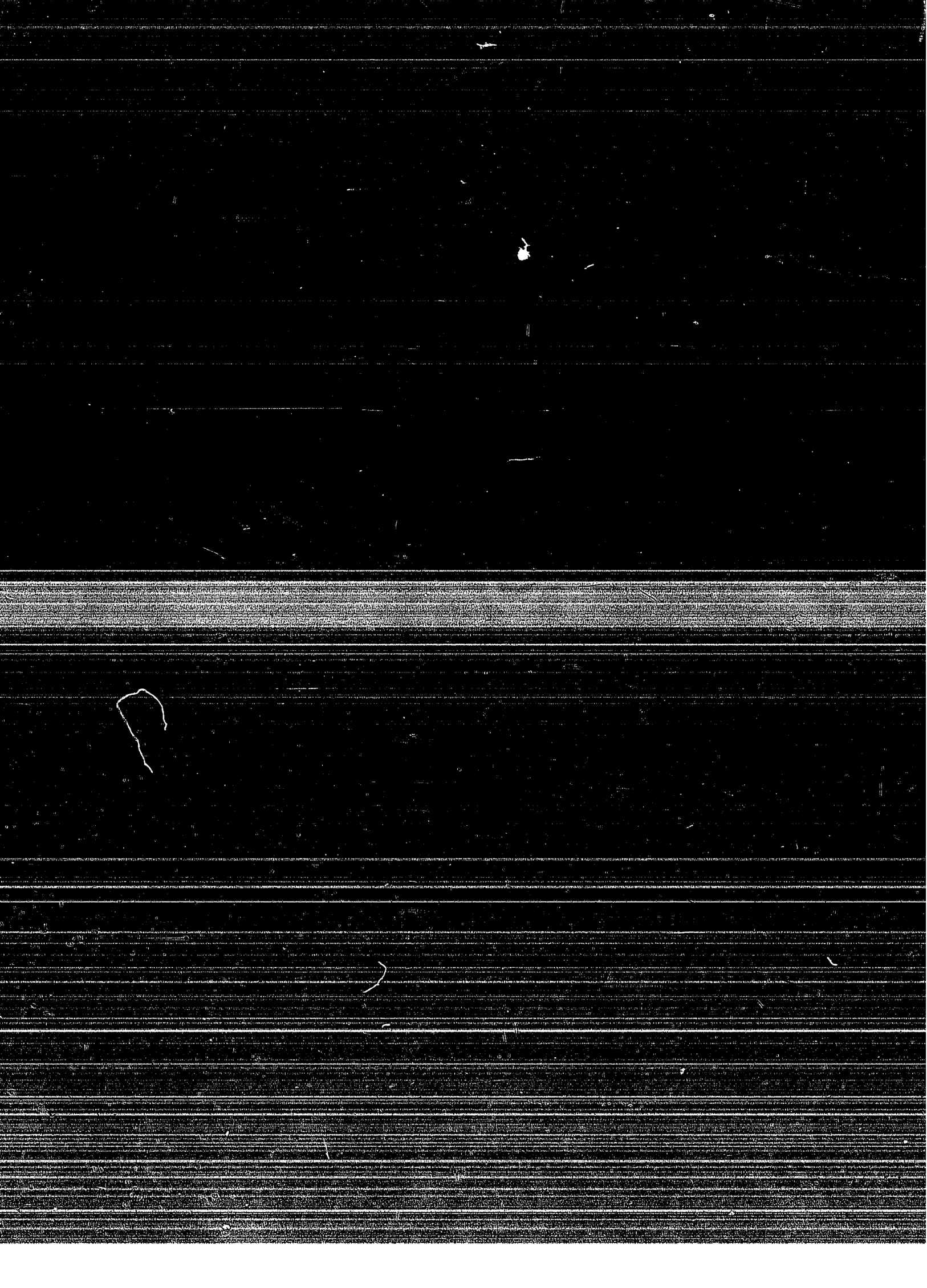

THE UNIVERSITY OF OKLAHOMA

GRADUATE COLLEGE

THE RELATIONSHIP BETWEEN LEADERSHIP STYLES AND GRADUATE ACADEMIC MAJORS

A DISSERTATION

SUBMITTED TO THE GRADUATE FACULTY

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THE RELATIONSHIP BETWEEN LEADERSHIP STYLES

AND GRADUATE ACADEMIC MAJORS

Approved by:

Dissertation Committee

In memory of my father

Ebrahim Sabermahani

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CHAPTER I

BACKGROUND OF THE PROBLEM

Leadership styles have been investigated empirically by theorists from various perspectives. Personality traits of leaders, autocratic and democractic styles, task and human relations oriented behaviors were the main topic for some authors. Styles in leadership that have included situational factors have been studied by situational researchers such as Hersey and Blanchard.

An enumeration and discussion of various leadership styles and an overview of the various ways in which leadership styles have been investigated by theorists follows:

McGregor's theory of management focused on two ways of looking at people. Theory X assumed that people dislike work, and therefore they should be controlled, directed and threatened with punishment so as to make them achieve for their organization. Basically, Theory X assumed that people are lazy and irresponsible. In contrast, Theory Y assumed that people consider their work as natural as play and that they are self-directed and creative at work if properly motivated. McGregor concluded that Theory Y assumptions were more defensible.[1]

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[1]Douglas McGregor, The Human Side of Enterprise (New York: McGraw-Hill Book Company, Inc., 1960), pp. 33-48.

Likert's management styles have indicated that there are four kinds of relationships in any organization. System 1 is task-oriented, with highly authoritarian management styles. System 2 is less task-oriented but still authoritarian. An informal organization usually develops, but it does not always resist formal organizational goals. System 3 is a consultative approach. Significant aspects of the control process are delegated downward with a feeling of responsibility at both higher and lower levels. System 4 is a relationship-oriented management style based on teamwork and mutual trust. Likert has concluded that System 4 is the most effective style in any kind of organization.[1]

Blake and Mouton have conceptualized in their managerial grid that leadership consists of two concerns, namely productivity and people. The two concerns (referred to as dimensions) have been used to identify five leadership styles, namely 9-1 (task), 9-9 (team), 1-9 (country club), 1-1 (improveship), and 5-5 (middle of the road). The team management style identified as 9-9 is considered to be the best style in an organization.[2]

Hemphill was one of the first researchers to be concerned with situational factors in leadership. He stated that various leadership studies make it increasingly clear that the situation is an important part of any leadership definition.[3]

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[1]Rensis Likert, The Human Organization (New York: McGraw-Hill Book Company, Inc., 1967), pp. 4-10.

[2]Robert R. Blake and James S. Mouton, The Managerial Grid (Houston, Texas: Gulf Publishing Company, 1964), pp. 232-233, 243.

[3]John K. Hemphill, Situational Factors in Leadership (Columbus, Ohio: Bureau of Educational Research, The Ohio State University, 1949), p. 5.

Getzels and his associates have labeled the most effective leadership style as "transactional." It calls for altering behavior to fit the particular situation.[1]

Fiedler's contingency theory emphasized that the effectiveness of a leader is a function of leadership style and a particular situation. Fiedler's approach was different in that he was not concerned with finding the best style of leadership as other theorists had recommended. He concluded that either task or relationship oriented leader behavior can be effective, depending on situational variables.[2]

Hersey and Blanchard's Situational Leadership Theory was developed as a result of extensive research. These two theorists have defined leadership as follows:

> Leadership is the process of influencing the activities of an individual or a group in efforts toward goal achievement in a given situation. In other words, leadership process is a function of the leader, the follower and other situational variables—L = F (l, f, s).[3]

This definition makes no mention of any particular type of organization. "In any situation where someone is trying to influence the behavior of another individual or group, leadership is occurring. Thus, everyone attempts leadership

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[1]Jacob W. Getzels, James M. Lipham, and Ronald F. Campbell, Educational Administration as a Social Process (New York: Harper and Row Publishers, 1968), pp. 148-149.

[2]Fred E. Fiedler, A Theory of Leadership Effectiveness (New York: McGraw-Hill Book Company, 1967), pp. 13-14.

[3]Paul Hersey and Kenneth H. Blanchard, Management of Organizational Behavior: Utilizing Human Resources (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1982), p. 83.

at one time or another, whether a leader's activities are centered around a business, an educational institution, a hospital, a political organization . . ."[1]

Leader Effectiveness and Adaptability Description (LEAD) instruments have been developed by Hersey and Blanchard to measure the effectiveness of a leader in relation to the maturity level of the follower(s) in a particular situation. The LEAD-Self is designed to measure three aspects of leader behavior: (1) Leader Style, (2) Style Range or flexibility, and (3) style adaptability.

The LEAD-Self contains twelve leadership situations in which respondents are asked to select four alternative actions — a high task/low relationship behavior, a high task/high relationship behavior, a high relationship/low task behavior, and a low relationship/low task behavior — the style that respondents felt would most closely describe their own behavior in that type of situation.[2] Because of differences in goals, training, experiences, and methodologies between various groups of people (for example, social science and applied science majors), differences may exist in their leadership styles, style ranges, and style adaptabilities.

Need for the Study

Hersey and Blanchard's Situational Leadership Theory is increasingly supported and popular among scholars such as Philip E. Gates[3] (1976), John D.

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[1] Ibid., p. 83

[2] Ibid., pp. 99-100.

[3] Philip E. Gates, Kenneth H. Blanchard and Paul Hersey. "Diagnosing Educational Leadership Problems: A Situational Approach", Educational Leadership (February, 1976), pp. 348-354.

Beck[1] (1978), Walter E. Neutemeyer[2] (1979), James E. Walter, Sarah Dejarnette Caldwell, and John Marshall[3] (1980) and Joan Chadourne[4] (1980). To justify whether or not that support is valid, more empirical evidence is needed.

Information is needed that will give clues about the relationship between background and administrator performance. If social science majors are people-oriented and applied science majors are product-oriented, this may suggest the need for applied science majors who aspire to administrative positions to become also involved in human relations training programs designed to help them perform more adequately in administrative positions.

The results of the study might also assist those who are responsible for developing programs for the preparation of educational administrators. For example, this information could be built into selection and training programs for educational administrators. Baumgartel has observed that analyses of leadership styles and situations indicate that effective leadership is not beyond measurement, but rather can be identified and built into selection and training programs.[5]

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[1]John D.W. Beck. "Leadership in Education: A Field Test of Hersey and Blanchard's Situational Leadership Theory," an unpublished dissertation, School of Education, University of Massachusetts, May, 1978.

[2]Walter E. Neutemeyer, Paul Hersey, and Kenneth H. Blanchard. "Situational Leadership, Perception, and the Impact of Power," Group and Organizational Studies, (December 1979), pp. 418-428.

[3]James E. Walter, Sarah Dejarnette Caldwell, and John Marshall. "Evidence for Validity of Situational Leadership Theory," Educational Leadership (May 1980), pp. 618-621.

[4]Joan Chadourne. "Training Groups: A Basic Life Cycle Model," Personnel and Guidance Journal, (September 1980), pp. 55-58.

[5]H. Baumgartel. "Leadership Styles as a Variable in Research Administration," Administrative Science Quarterly, (1957, 2), pp. 344-360.

There is a need for more validated information about the relationship of training and background and aptitude for leadership. It is desirable for organizations to have leaders who will approach their role so that the organizations will be as effective as possible. There is also a need to know how they will respond to training and the type of training they need.

Statement of the Problem

The principal problem of this study was to investigate whether or not there is a relationship between leadership styles and academic majors of graduate students.

The four sub-problems of this study were as follows:

1. Are there differences between social science graduate students and applied science graduate students in style flexibility?
2. Are there differences between social science graduate students and applied science graduates in style adaptablity?
3. Is there a relationship between style flexibility and style adaptability of social science graduate students?
4. Is there a relationship between style flexibility and style adaptability of applied science graduate students?

Hypotheses to be Tested

The following hypotheses were developed for the purpose of investigating the problem:

HO_1 There is no statistically significant difference between leadership styles of social science graduate students and applied science graduate students on LEAD-Self scales.

HO_2 There is no statistically significant difference between leadership styles of applied science graduate students and social science graduate students on LEAD-Self scales based on gender.

HO_3 There is no statistically significant difference in mean scores between the style range of social science graduate students and applied science graduate students on LEAD-Self scales.

HO_4 There is no statistically significant difference in mean scores between the style adaptability of social science graduate students and applied science graduate students on LEAD-Self scales.

HO_5 There is no statistically significant correlation between the style range scores and style adaptability scores of social science graduate students on LEAD-Self scales.

HO_6 There is no statistically significant correlation between the style range scores and style adaptability scores of applied science graduate students on LEAD-Self scales.

Limitations

The study was limited to graduate students in the areas of social sciences and applied sciences who were enrolled in the University of Oklahoma during the spring semester 1982. The independent variables controlled in the study were limited to graduate students' major and sex, other variables such as the ordinal position in the family and race were not considered.

Definition of Terms

1. Leadership Styles: This terms consists of task behavior and relationships behavior and will vary according to the situation. Four styles are underscored; namely, S1 (telling), S2 (selling), S3 (participating), and S4 (delegating).[1]
2. Style Flexibility: Indicates how much a leader can vary his/her style.
3. Style Adaptability: Is the extent to which leader uses styles appropriate to the situations.
4. LEAD-Self Instrument: Is a questionnaire consisting of 12 situations, with four alternative choices designed to measure how leaders perceive themselves in relation to their followers. This instrument is scored by determining a leader's style, style flexibility and style adaptability.[2]

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[1] Hersey and Blanchard, op cit., pp. 152-155.

[2] Ibid., pp. 99-100, 243-244.

5. Demographic Information Sheet: Is a questionnaire designed by the investigator for the purpose of defining the respondents (social science and applied science graduate students) according to Guildford and Fruchter's sampling requirements.
6. Social Science Graduate Student: A respondent in this study who is following an advanced degree in the areas of social science at the University of Oklahoma, in the fields of Economics, Educational Foundation, Educational Administration, Human Relations, Political Science, Public Administration, and Secondary Education.
7. Applied Science Graduate Student: A respondent in this study who is following an advanced degree in the areas of applied science at the University of Oklahoma, in the fields of Architecture, Chemical Engineering, Computer Science, Electrical Engineering, Geological Engineering, Aerospace and Mechanical Engineering, and Petroleum Engineering.

Theoretical Framework

The framework for this study is based upon Hersey and Blanchard's Situational Leadership Theory. Situational Leadership Theory has been developed by Hersey and Blanchard as a result of extensive investigation. This theory is based on the amount of task behavior (direction), the amount of relationship behavior (socio-emotional support) that leaders must use in a given situation, and the maturity level of follower(s).[1]

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[1] Ibid., pp. 149-170.

The four leadership styles are defined by Hersey and Blanchard as follows:

Style 1. High task/low relationship leader behavior is referred to as "telling." This style is characterized by one-way communication in which the leader defines the roles of followers and tells them what, how, when, and where to do various tasks.

Style 2. High task/high relationship behavior is referred to as "selling." With this style, most of the direction is still provided by the leader. He or she also attempts, through two-way communication as socio-emotional supports, to get the follower(s) psychologically to buy into decisions that have to be made.

Style 3. High relationship/low task behavior is called "participating." With this style the leader and follower(s) now share in decision-making through two-way communication and much facilitating behavior from the leader since the follower(s) have the ability and knowledge to do the task.

Style 4. Low relationship/low task behavior is labeled "delegating." The style involves letting follower(s) "run their own show" through delegation and general supervision since the follower(s) are high in both task and psychological maturity.[1]

Maturity is defined in Situational Leadership Theory as the capacity to set high but attainable goals (achievement-motivation), willingness and ability to take responsibility, and education and/or experience of an individual or a group. These variables of maturity should be considered only in relation to a specific task to be performed.[2] Situational Leadership Theory is illustrated in Figure 1.

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[1] Ibid., pp. 152-154

[2] Ibid., p. 151, 157-158.

Social scientists are probably more oriented toward dealing with people. Farquhar and his associates have observed that psychologists emphasize individual behaviors, sociologists emphasize group phenomena, and anthropologists emphasize culture and race.[1] Applied scientists, such as engineers, are probably more oriented toward solving problems by means of specific and precise processes. Hersey and Blanchard have found that engineers who have become supervisors of other engineers were very concerned about task performance. These leaders often project in interviews that "no one can do things as well as I can."[2] Because social scientists deal primarily with people and applied scientists deal primarily with technical task it might be possible to assume that their primary orientations reflect the type of task they deal with. Empirical research on relationships between leadership styles and graduate academic majors is seemingly unavailable.

Organization of the Study

The study will be organized and presented in five chapters. Chapter I will be a description of the study, which will include background of the problem,statement of the problem, significance of the study, theoretical framework, limitations, definition of terms and organization of the study. Chapter II will be a review of related literature. Chapter III deals with methodology, including population and sample, procedures for collecting data, instrumentation, hypotheses to be tested, and research design. Chapter IV will include analysis and interpretation of data. Chapter V will include summary, conclusion and suggestions for further research.

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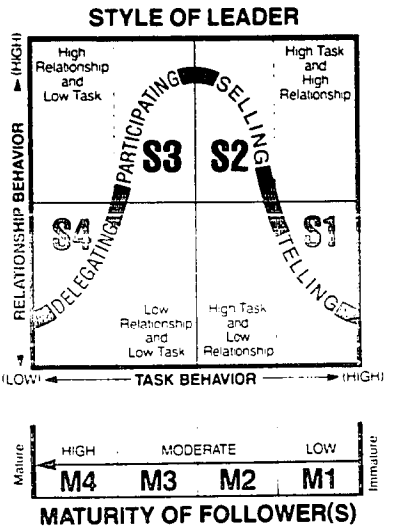
[1]Jack Culbertson, Ralin H. Farquhar, B. Eyre, M. Fogharty, and Mark A.Ehiles, Social Science Content for Preparing Educational Leaders (Columbus, Ohio: Bell and Howell Company, 1973), p. 415.

2Hersey and Blanchard, op. ct., p. 252.

FIGURE 1

SITUATIONAL LEADESHIP THEORY



(From Hersey and Blanchard, Management of Organization Behavior, Fourth Edition, p. 248.)

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[1] Ibid., p. 248.

CHAPTER II

REVIEW OF RELATED LITERATURE

The following review of related literature focuses on definition of leadership, scientific management, the human relations movement, the trait approach, the behavioral approach, and the situational approach to leadership.

Definition of Leadership

Leadership is an aspect of human behavior about which there has been less agreement than almost any other. As Katz and Kahn have stated, among social scientists who emphasize the concept of leadership, there is no close agreement on conceptual definition or even on the theoretical significance of leadership processes.[1]

Stogdill has stated that leadership is the process of influencing the activities of an organized group toward goal setting and goal achievement.[2] Applewhite[3] wrote that leadership is the ability to imitate goals within the

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[1] D. Katz and R. Kahn, The Social Psychology of Organizations (New York: John Wiley and Sons, 1966), pp. 300-301.

[2] Ralph Stogdill, "Leadership, Membership, and Organization", Psychological Bulletin, (1950-47), p. 4.

[3] P.B. Applewhite, Organizational Behavior (Englewood Cliffs: Prentice-Hall, 1965), p. 111.

organizational structure. Bass,[1] Terry,[2] Koontz and O'Donnell,[3] Kelly,[4] Hollander,[5] Shaw,[6] and Katz and Kahn,[7] among other investigators, believed that influence is central to the leadership process. Ivancevich and his associates have stated that leadership is the relationship between two or more people in which one attempts to influence the other toward the accomplishment of some goal or goals.[8]

Although there is disagreement among leadership authorities some researchers have tried to find a common concept with which most investigators would agree. Hersey and Blanchard have stated that a review of other writers indicates that most management writers agree that leadership is the process of influencing the activities of an individual or a group in efforts toward goal achievement in a given situation.[9]

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[1]B.M. Bass, Leadership, Psychology and Organizational Behavior (New York: Harper, 1960), p. 89.

[2]G.R. Terry, Principles of Management (Homewood, Illinois: R.D. Irwin, 1960), p. 493.

[3]H. Koontz and C. O'Donnell, Principles of Management (New York: McGraw-Hill, 1968), p. 435.

[4]J. Kelly, Organizational Behavior (Homewood: Richard Irwin, Inc. and The Dorsey Press, 1969), p. 141.

[5]E.P. Hollander, Leadership Dynamics (New York: The Free Press, 1978), pp. 1-5.

[6]M.E. Shaw, Groups Dynamics (New York: McGraw-Hill Book Company, 1976), p. 447.

[7]Katz and Kahn, op. cit., p. 309.

[8]J.M. Ivancevich, Andrew Szilayi, and Marc Wallace, Organizational Behavior Performance (Santa Monica, CA: Goodyear Publishing Co., 1977), p. 273.

[9]Hersey and Blanchard, op. cit., p. 83.

Scientific Management

Taylor (1856-1915), the father of scientific management, observed the way in which work was performed in the shop and work areas and noticed the haphazard, inconsistent system of the methods used. In 1911, his emphasis on precise, analytical approach became known as "scientific management".[1] Some of the principles of scientific management that were defined by Taylor are as follows: A large daily task, standard conditions, high pay for success, loss in case of failure, and expertise in large organizations.[2] Because Taylor was so concerned about the productivity of people in various organizations, he stated in 1916 that the average government employee did not do more than one-third to one-half of a proper day's work.[3]

Taylor and his followers have been called the "human engineers," and the traditional or classical organizational authors have often been called "administrative managers." However, Taylor's human engineers were concerned about the fastest method for performing a given task, and the administrative managers were concerned about the broad problems of departmental division of work and coordination. Their contributions complemented one another.[4] Fayol,

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[1]Howard M. Carlisle, Situational Management: A Contingency Approach to Leadership (New York: AMACO, A Division of American Management Associations, 1973), p. 4.

[2]Frederick Winslow Taylor, Scientific Management (New York: Harper, 1947), pp. 63-64.

[3]Frederick Winslow Taylor, Bulletin of the Taylor Society (December, 1916), pp. 7-13.

[4]Hoy and Miskel, op cit., pp. 4-5.

like Taylor, took a scientific approach to administration. In his list of "acknowledged truths regarded as proven on which to rely," he has introduced the principles of administration. According to Fayol, these were truths that all administrators in all organizations should know, because they represented the best way to organize, plan, command, coordinate, and control the activities of subordinates.[1] Gulick completed Fayol's suggestions by developing his seven administrative principles, "POSDCORB," an acronym for: Planning, Organizing, Staffing, Directing, Coordinating, Reporting, and Budgeting.[2]

Drucker has stated that Taylor helped the unskilled worker by improving productivity enough to raise the pay of unskilled labor nearly to that of skilled.[3] According to Morphet and his associates, Taylor has also had a substantial positive effect on educational organizations. They stated that there have been attempts in school systems to establish teacher ratings and merit pay for persons who were relatively well educated. Teachers generally associated this practice with "Taylorism" and deeply resented it.[4] According to Hersey and Blanchard, the function of the leader under scientific management or classical theory was obviously to set up and improve performance criteria to meet organizational goals. The main focus of a leader was on the needs of organization and not on the needs of the individual.[5]

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[1]Henri Fayol, General and Industrial Management (London: Sir Isaac Pitman and Sons, LTD., 1949), p. 42.

[2]Luther Drucker and L.V. Ruuich, Papers on the Science of Administration (New York: Institute of Public Administration, Columbia University, 1937), pp. 15-27, 119.

[3]Peter Drucker, The Age of Discontinuity (New York: Harper and Row, 1968), p. 272.

[4]Morphet, et. al., op. cit., p. 151.

[5]Hersey and Blanchard, op cit., p. 85.

Human Relations Movement

The "human relations movement" was developed as a reaction against traditional or classical administrative models.[1] According to Hersey and Blanchard, the main focus of human relation theorists, contrary to scientific movement theorists, was on individual needs, not on the needs of the organizations.[2] Follett, who was among the first to recognize the importance of the human side of administration, stated that the fundamental problems in all organizations were in developing and maintaining dynamic and harmonious relationships.[3] Mayo stated that the organization was to be developed around the workers and had to take into consideration human feelings and attitudes.[4]

According to Kenzevich, an experiment at the Western Electric Company's Hawthorne plant in Chicago almost unintentionally provided significant information on the impact of human relations on the productivity in an organization.[5] Roethisberger and Dickson pointed out that the aim of the first three experiments of the above study was to investigate the relation of quality and quantity of illumination to efficiency in industry.[6] The puzzled researchers concluded neither wage incentive alone nor change in physical conditions

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[1] Hoy and Miskel, op cit., p. 7.

[2] Hersey and Blanchard, op cit, p. 85.

[3] Metcalf and Urwich, op cit.

[4] Elton Mayo, "The Social Problems of an Industrial Civilization (Boston: Harvard Business School, 1945), p. 23.

[5] Stephen J. Kenzevich, Administration of Public Education (New York: Harper and Row, 1975), pp. 76-77.

[6] F.J. Roethisberger and William J. Dickson, Management and the Workers (Cambridge: Harvard University Press, 1939), pp. 14-17.

increased output.[1] Olmsted has stated that it became evident that people in continuous contact tend to form informal social organizations; a group code is developed and differentiation of roles occurs within the informal group.[2] Hoy and Miskel stated that the Hawthorne studies are basic to the literature describing informal groups, and the study of informal groups is basic to an analysis of schools.[3]

Both scientific management and human relations movements have been criticized; the scientific management for mechanizing employees, and human relations for oversimplifying all problems. The third and contemporary phase, the behavioral approach, balances these two extremes with recognition of both formal and informal organizations by applying the modern behavioral and social sciences.[4] In relation to leadership, Hersey and Blanchard have stated that:

> the scientific management movement emphasized a concern for task (output), while the human relations movement stressed a concern for relationship (people). . .a leader must be concerned for both tasks and human relationships.[5]

Trait Approach

Introduction

Early approaches to leadership attempted to identify a set of universal characteristics such as physical energy, friendliness, intelligence. . . which allow leaders to be effective in all situations.[6] Many researchers, among them

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[1] Knezewich, op cit., p. 28.

[2] M.S. Olmsted, The Small Group (New York: Random House, 1959), pp. 30-31.

[3] Hoy and Miskel, op cit., p. 7.

[4] Ibid., pp. 27-28.

[5] Hersey and Blanchard, op cit., pp. 84-85.

[6] Cherter A. Schriesheim, James M.Tolliver and Orlando C. Behling, "Leadership: Some Organizational and Managerial Implications," in Paul Hersey and John Stinson, (eds.) Perspectives in Leadership Effectiveness (Ohio: The Center for Leadership Studies, Ohio University, 1980), pp. 4-5.

Gouldner,[1] Selznick,[2] Hamachek,[3] Gross and Herriott,[4] Hellriegel and Slocum,[5] and Ivancevich,[6] have been critical of this approach. Stogdill, after analyzing 124 research studies on leadership in 1948, has stated that the tide of opinion about the importance of traits began to change in the late 1940's, and leadership researchers began to move away from the "trait approach."[7]

Personality Trait

Most of the early studies of leadership focused on the personality traits of leaders. According to this approach, there are a finite number of distinguishable traits that successful leaders possess and those traits distinguish effective from ineffective leaders. Emory Bogardus proposed that there were five universal traits: Imagination, foresight, flexibility, versatility, and

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[1] A.W. Gouldner, Studies in Leadership (New York: Harper and Row, 1950), p. 32.

[2] P. Selznick, Leadership in Administration (Illinois: Row, Peterson and Co., 1957), p. 22.

[3] D. Hamachek, "Leadership Styles, Decision Making and the Principal," The National Elementary Principal, (April, 1966), p. 27.

[4] N. Gross and R. Herriot, Staff Leadership in Public Schools: A Sociological Enquiry (New York: John Wiley and Sons, Inc., 1965), p. 10.

[5] D. Enquiry and J.S. Locum, Organizational Behavior: Contingency View (New York: West Publishing Co., 1976), pp. 296-298.

[6] J.M. Ivancevich, A. Szilagyi, and M. Wallace, op. cit., pp. 276-277.

[7] R.M. Stogdill, "Personal Factors Associated with Leadership: A Study of Literature," The Journal of Psychology, (1948, 25), pp. 35-72.

inhibition. Bertrand Russell added to the list self-confidence, quick decision-making, and skill.[1]

Ordway Tead listed the traits as follows: a sense of purpose and direction, enthusiasm, friendliness and affection, integrity, intelligence, and faith.[2] Ghiselli hypothesized five traits—intelligence, supervisory ability, initiative, self-assurance, and individuality, which he found to be significantly correlated with management performance and organizational level.[3] Liphan investigated the relationship between personality variables and performance in 84 school principals. He found that those principals who were rated more effective by superintendents of schools and members of central office staff scored significantly higher in activity drive, achievement drive, social ability, and feelings of security than did principals who were rated less effective.[4] Hollander and Julian wrote that there are some personal characteristics associated with leader effectiveness, and these operate in a relatively general fashion.[5]

Studies failed, however, to find any consistent pattern of traits which would characterize leader effectiveness. One reason advanced for this was that

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[1]Alvin Gouldner, ed., Studies on Leadership (New York: Harper and Bros, 1950), pp. 4-5.

[2]Ordway, Tead, The Art of Leadership New York: McGraw-Hill, 1935), pp. 20, 82-83.

[3]E. Ghiselli, "Managerial Talent," American Psychologist, Vol. 18, 10 (October, 1963), pp. 631-641.

[4]James M. Lipham, "Personal Variables of Effective Administrators," Administrator's Notebook, IX (September, 1960), pp. 1-4.

[5]E. Hollander and J. W. Julian, "Contemporary Trends in the Analysis of Leadership Process, Psychological Bulletin, 1969, pp. 387-397.

personality traits were poorly conceived and unreliably measured.[1] Gibb[2] and Myers[3] found that the literature on correlates of leadership provides little support for hypothesis that one or more traits are common to all kinds of leaders. However, this does not imply that among individuals who serve as formal leaders of some type of organizations, traits may not be uncovered that are associated with variations in their leadership.

Lane and his associate stated that:

> Fifty years of study has failed to find one personality trait or set of qualities that can be used to discriminate leaders from non-leaders.[4]

Therefore, the attitude that leaders are born and leadership training would be helpful only to those with inherent leadership traits has been abandoned. Then leadership researchers have focused on observed behavior, and as Hersey and Blanchards stated, it is believed that most people can increase their effectiveness in leadership roles through education, training, and development.[5]

Hopper and Bills have investigated the relationship of intelligence of school administrators to success as administrators. They found that the school administrators were considerably above average in intelligence but that there

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[1]Charles Bird, Social Psychology, (New York: Appleton-Century Co., 1940), pp. 370-379.

[2]C. A. Gibb, "Leadership," in G. Lindzey (ed.), Handbook of Social Psychology, (Cambridge, Mass.: Addison-Westly Publishing Co., 1954), p. 889.

[3]R. Myere, "The Development and Implications of a Conception for Leadership Education," (Unpublished doctoral dissertation, University of Florida, 1954).

[4]W.R. Lane, R.G. Corwin, and W.G. Monohan, Foundations of Educational Administration: A Behavior Analysis (London: Macmillan, 1967), p. 306.

[5]Hersey and Blanchard, op. cit., pp. 83-84.

was little correlation between intelligence and success.[1] Morphet and his colleagues stated that:

> Actually, most of the personality traits or characteristics that have been found to be associated with leadership should be classified as skills or competencies rather than personality traits. Therefore, it should be possible within limits to attain these skills and competencies through an appropriate program of learning experience. This emphasized the importance of preparation programs for school administrators.[2]

Sociological Factors

When it became apparent that the traits approach to the study of leadership had limited value, the "time makes the man" approach captured the imagination of some people about 1940. Hitler and Mussolini were certainly leaders. Yet each lacked many of the qualities that rationally should be associated with leadership. Perhaps they were products of their times. This approach produced much speculation but little research. Perhaps its principal contribution was to give emphasis to the need for studying the leader in relation to his social environment.[3] Hoy and Miskel have stated that the jump from "leaders are born, not made" to "leaders are made by the situation, not born," however was short-lived. Many studies since 1950 clearly indicate that both personality and situational factors are important determiners of leader effectiveness.[4]

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[1]Robert L. Hopper and Robert E. Bills, "What's a Good Administrator Made Of?", The School Executive, (1955, 74), pp. 93-95.

[2]Morphet, et. al., op cit., p. 132.

[3]Edgar L. Morphet, Robert L. Johns, and Theodore L. Reller, Educational Organization and Administration: Concepts, Practices, and Issues (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1974), p. 133.

[4]Hoy and Miskel, op cit., p. 178.

Most of the earlier researchers focused on group phenomena. Benne and his associate introduced a description of the different roles played in well-functioning groups. They classified group roles into two categories: group task roles and group building and maintenance roles. Group task roles assumed that the task of the group was to select, define, and solve common problems. The group building and maintenance roles were concerned with the emotional life of the group. The membership roles proposed by Benne and his colleague pointed to many complex functions performed in groups and dealt with by leader and members. The members of a highly effective group handled these roles with sensitivity and skill, and they found that the emotional life of the group contributed to the performance of the group's tasks rather than interfering with them.[1]

Hemphill found fifteen group dimensions. He concluded that two dimensions, viscidity (the feeling of cohesion in the group) and hedonic tone (the degree of satisfaction of group members) to correlate more highly with leadership adequacy than did the other dimensions.[2] Moser studied the content of conflict in generalized expectations held for the school principal's role. He stated that the principal emphasized "nomothetic" behaviors (stressing goal achievement, institutional regulations, and centralized authority) in his relations with the superintendent, and "idiographic" behaviors (stressing individual needs and wants, minimum rules, decentralized authority) in his interaction with

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[1] K. Benne and P. Sheats, "Functional Roles of group Members," Journal of Social Issues (Spring, 1948), pp. 42-44.

[2] John Hemphill, op. ct. pp. 12-46.

teachers. He concluded that the principal is in a delicate position as a member of two organizational families.[1]

Katz and his colleagues, in a study of high and low production groups, found that working with people in groups was a complicated undertaking and that there were many differences among groups which were of crucial importance to the leader.[2]

However, attempts to determine a universal set of leadership effectiveness characteristics by trait approach writers have failed and the trait approach per se could not introduce an appropriate leadership style(s) for effectiveness of leaders; it was a useful tool for directing researchers toward further studies from different aspects in the field of leadership. For example, behavioral scientists shifted their investigation from personality trait of leaders toward observed behaviors of leaders.

Behavioral Approach

Dissatisfaction with the trait approach has shifted the leadership investigators focus from the characteristics of the individual leader to an examination of what leaders actually do and how they do it. A number of writers such as Owens,[3] Halpin,[4] and Lipham,[5] who conceptualized the study of

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[1]Daniel Katz, Nathan Maccoby, and Nancy Morse, Productivity, Supervision, and Morale in an Office Situation, (Ann Arbor, Michigan: University of Michigan, 1950), pp. 9-22.

[2]R.G. Owens, Organizational Behavior in Schools (Englewood Cliffs: Prentice-Hall, 1970), pp. 120-126.

[3]Andrew W. Halpin, The Leadership Behavior of School Superintendents (Chicago: University of Chicago, 1959).

[4]J.M. Lipham, "Personal Variables of Effective Administrators," Administrator's Notebook, (September, 1960), p. 133.

[4]Robert Moser, "The Leadership Patterns of School Superintendents and School Principals," Administrator's Notebook, (September, 1957), pp. 1-4.

leadership from the behavioral approach, stated that behavioral studies focus on observed behavior of leaders. Behavioral scientists have been concerned with two styles of leadership: task behavior and relationship behavior.

Walter and his associates stated that research and practice have demonstrated that organizational leadership has two major dimensions—the performance of the organization (task) and the socioemotional needs of persons (relationship) in the organization.[1] Hersey and his associates have defined task and relationships as follows:

> Task behavior refers to the leader's directions: telling people what, when, where, and how to perform. The leaders set their goals and define their roles. Relationship behavior refers to two-way communication, including listening and support by the leader.[2]

The recognition of task and relationship as two critical dimensions of a leader's behavior has been an important part of leadership research over the last several decades.[3] These two dimensions have been labeled various things such as"autocratic and democratic," "employee-oriented and production-oriented," "initiating structure and consideration," "task behavior and relationship behavior." As Hersey and Blanchard[4] stated, these two leadership concerns seem to be a reflection of two of the earliest schools of thought in organizational theory—scientific management and human relations.

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[1]Walter, et. al., op. cit., p. 618.

[2]Paul Hersey, Kenneth H. Blanchard, and Walter E. Nalemeyer, "Situational Leadership, Perception and the Impact of Power", Group and Organization Studies (December, 1979), pp. 418-428.

[3]Paul Hersey and John Stinson, Perspectives in Leader Effectiveness, (eds.), (Center for Leadership Studies, Ohio University, 1980), p. 98.

[4]Hersey and Blanchard, op cit., p. 84.

These two dimensions, task behavior and relationship behavior, or a combination of both, have been investigated by various researchers in different studies. The following are representatives.

Michigan and Harvard Studies

The University of Michigan Research Center has studied leadership behavior. According to Katz and his associates, two concepts were identified: "employee orientation" and "production orientation."[1] Employee orientation refers to the supervisor who stresses the "human relations" aspect of his job. Production orientation emphasizes the mission or job to be done and the technical aspects of the job.[2]

Harvard University, under the direction of Robert F. Bales, has conducted some studies of small groups under laboratory conditions. Bales has concluded that there were two separate leadership roles in small task groups attempting to solve problems—the task leader and the social leader.[3] The task leader kept the group engaged in the work, whereas the social leader maintained unity in the group and kept group members aware of their importance as unique individuals whose special needs and values were respected.[4]

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[1]Daniel Katz, N. Maccoly, and Nancy Morce, Productivity, Supervision and Moral in an Office Situation (Detroit: Darel, 1950). See also Hersey and Blanchard, Management of Organizational Behavior, p. 87.

[2]Likert, op cit., pp. 14-24.

[3]Robert F. Bales, "Relation to Leadership", Educational Administration Quarterly, 3 (1967), p. 149.

[4]Hoy and Miskel, op cit, p. 189.

Ohio State Studies

The Ohio State University Bureau of Business Research also conducted its studies on leader behavior. Two basic leader behaviors, initiating structure and consideration were introduced.[1] The principal investigators in the Ohio State Leadership Studies were the following: Alvin E. Coons; Edwin A. Fleishman, Andrew W. Halpin; John K. Hemphill; Carroll L. Shartle; Ralph M. Stogdill; and B. James Winer. The primary result of their contributions was the development of the set of instruments identified as the Ohio State Leadership scales, the Leader Behavior Description Questionnaire (LBDQ).[2]

Four leadership styles were developed by combinations of initiating structure (task behavior) and consideration (relationship behavior) as follows: (1) high structure and low consideration, (2) high structure and high consideration, (3) high consideration and low structure, and (4) low structure and low consideration.[3] Halpin, by using the LBDQ, conducted a study in an educational organization. He has stated that school administrators generally are most effective when they score high on both dimensions of leader behavior, consideration (relationship behavior) and initiating structure (task).[4] Brown has claimed that although strength in both dimensions is highly desirable, principals

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[1] Andrew W. Haplin, Theory and Research in Administration (New York: Macmillan, 1960), pp. 86-90.

[2] R.M. Stogdill and A.E. Coons, Leader Behavior: Its Description and Measurement (Columbus: The Ohio State University, Bureau of Business Research, monograph No. 88, 1957).

[3] Hersey and Blanchard, op cit., p. 89.

[4] Halpin, Theory and Research in Administration, op cit., pp. 97-98.

committed to developing effective organizational dynamics may make up for weakness in one dimension with unusual strength in the other.[1]

The conceptualization of leadership styles by Blake and Mouton has been labeled as the Managerial Grid. They postulate two basic dimensions of leadership—concern for production and concern for people.[2] Their Managerial Grid introduced the following five leadership styles: (1) Improveship (1-1), (2) Country Club (1-9), (3) Team (9-9), (4) Task (9-1), and (5) Middle of the Road (5-5).[3] Hoy and Miskel have pointed out that the Managerial Grid is consistent with the theoretical and research perspectives of Ohio State, Michigan, and Harvard studies. Blake and Mouton introduced the fifth leadership style (5-5), in contrast to the Ohio State studies. Although the Managerial Grid has not been used extensively in studying, analyzing, or training leaders of school organizations, Hoy and Miskel claimed that it does seem to offer useful conceptual perspectives that, combined with the Ohio State framework, might provide a heuristic device for studying and analyzing school leadership patterns.[4]

Schriesheim and his associates concluded that while behavioral scientists have attempted to determine a universal general leadership style or the universally best combination of leadership behaviors, the research clearly indicates that no single leadership style is universally effective. This is true

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[1]Alan F. Brown, "Reactions to Leadership", Educational Administration Quarterly, 3 (1963), pp. 62-73.

[2]Blake and Mouton, The Managerial Grid, op cit., p. 10.

[3]Robert R. Blake, James S. Mouton, J.S. Barnes, and L.E. Greiner, "Breakthought in Organizational Development," Harvard Business Review (November - December, 1964), pp. 133-155.

[4]Hoy and Miskel, op cit., p. 202.

because the relationships among supervisory behavior, organizational performance, and employee satisfaction changed from situation to situation.[1]

Situational Approach

Recognition of Situation as Part of Leadership Studies

Prior to World War II, the "law of the situation" was Follett's term to express the idea that when workers identify with organizational goals, they tend to perceive what the situation requires and take that action whether or not the leader exerts influences toward that action.[2] In 1931 Bogardus stated that development of leadership depends on studying social situations and on acquiring skill in controlling them.[3] In 1935 Pigors wrote that an adequate theory of leadership should give consideration to four variables that are essential to organized group life: (1) the leader, (2) the follower, (3) the common goal, and (4) the situation, which is the immediate conditions that surround the goal.[4] Chester Barnard was also concerned about the importance of situation in the studies of leadership. He has stated that leadership is a function of three variables: the leader, the follower, and the conditions. Each condition calls for a specific type of leader behavior.[5]

Gibb's investigation proved that leadership is always related to the situation. The study also has indicated that there was no one type of leadership

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[1]Schriesheim, et. al., op. cit., pp. 4-6.

[2]Metcalf and Urwick, (eds.), Dynamic Administration: The Collected Papers of Mary Parker Follett, op. cit., pp. 58-59.

[3]Emory S. Bogardus. "Leadership and Social Situations," Sociology of Social Research, XVI (1931-32), pp. 164-170.

[4]Paul Rigors, Leadership or Domination (New York: Houghton Mifflin, 1935), pp. 16-21, 323-25.

[5]Chester I. Barnard, Organization and Management (Cambridge, Mass.: Harvard University Press, 1948), pp. 39-44, 84-92.

that would be generally effective in various situations.[1] Jennings has stated that the research indicated that leadership is a function of interpersonal relations and appears to reside in the interpersonal contributions of an individual in a specific situation.[2] Pfiffer and Sherwood have claimed that since 1945 much of the emphasis on leadership studies has been placed on probing the situational aspects that surround the exercise of leadership.[3]

According to Stogdill, leadership is a process of influencing the activities of an organized group toward goal achievement. An organization is formal or informal, a group of two or more people with a common task, with differentiation of duties, and with a leader or leaders. The actions of the leader, who is not a free agent, are delimited by the organization's goals and structure and the large environment within which the organization operates.[4] Argyris has stated that it may not be possible to study leadership in an organization without studying the nature of the organization and its pattern of variables. Accordingly, a theory of organization should include both formal and informal behavior and focus on the situational process by which effectiveness or non-effectiveness is created rather than the results.[5] Tannenbaum and Weschler

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[1]Cecil A. Gibb. "The Principles and Traits of Leadership," Journal of Abnormal and Social Psychology VLIL (1947), pp. 267-284.

[2]Helen H. Jennings, Leadership and Isolation (New York: Longmans Green, 1950), pp. 18-26, 165-85.

[3]J.M. Pfiffer and F.P. Sherwood, Administrative Organization (Englewood Cliffs, N.J.: Prentice-Hall, 1960), p. 356.

[4]Ralph M. Stogdill. "Leadership, Membership, and Organization," op. cit., pp. 1-14.

[5]Chris Argysis. "Organizational Leadership," in Luige Petrullo and Bernard Bass, (eds.), Leadership and Interpersonal Behavior (New York: Holt, 1961), pp. 326-351.

have concluded that the sense of leadership is interpersonal influence within the situational framework. They have explained the dimensions of the situation as the physical aspects; members of the group, including the leader; the organization; the broader culture, including social norms; and the personal, group, and formal organizational goals.[1]

Shartle, another member of the study group formed at Ohio State University, has stated that a particular situation may be an aid to a leader while another situation may be a hindrance.[2] Argyris has concluded that in the leadership process, the leader will diagnose the situation, balance the effects of actions on various factors, and then choose the best way to lead.[3] Seeman has stated that the differential context of leadership ultimately evolved into the situational approach which took a firm hold in the field by the 1950's.[4] This point of view has been supported by a number of investigators such as: Gibb,[5] Gross and Herriott[6], and Gouldner.[7]

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[1]Robert Tannebaum, Irving I. Weschler, and Fred Massarik, Leadership and Organization (New York: McGraw-Hill, 1961), pp. 24-29, 271.

[2]Carroll L. Shartle, Executive Performance and Leadership, (Englewood Cliffs, N.J.: Prentice-Hall, 1956), pp. 106-116, 120.

[3]Chris Argyris, Personality and Organization (New York: Harper and Row, 1957), pp. 127-207.

[4]M. Seeman, Social Status and Leadership: The Base of the School Executive (Columbus: Columbus Bureau of Educational Research and Service, Ohio State University, 1960), pp. 2-5.

[5]C. Gibb, "Leadership," in Glinzey and Anderson, (eds.), The Handbook of Social Psychology, (Reading, Mass.: Addison-Wesley Publishing Co., 1969), pp. 913-914.

[6]Gross and Herriot, op cit., p. 9.

[7]Gouldner, op cit.

According to Bass, the likelihood of the leader's success is dependent upon the demands of limitations placed on the leader by the situation and the personal characteristics of the leader and the followers.[1] Sharif has concluded that leadership qualities are expressed as interactional between the leader, followers, and the problems of the situation at hand.[2] Similarly, McGregor has stated that leadership is a relationship between (1) the characteristics of the leader, (2) the personal characteristics of the followers, (3) the characteristics of the organization, and (4) the social, political, and economic environment.[3]

Effectiveness Versus Single Ideal Leadership Style

Over the past few decades, practitioners and writers in the field of leadership and management have been involved in a research for the "best" style of leadership which would be successful in most situations.[4] For some time, it was believed that task and relationship behaviors could be depicted on a single dimension, a continuum, moving from authoritarian (task) leader behavior at one end to very democratic (relationship) behavior at the other.[5] The leadership studies initiated in 1945 by the Bureau of Business Research at Ohio State University questioned this assumption.[6]

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[1]Bass, op cit., pp. 445-465.

[2]Muzafer Sharif, In Common Predicament, (Boston: Houghton Mifflin Company, 1966), pp. 72-93.

[3]McGregor, op cit., pp. 18-21.

[4]Philip E. Gates, Kenneth H. Blanchard, and Paul Hersey. "Diagnosing Educational Leadership Problems: A Situational Approach", Educatinal Leadership (February 1976), p. 347.

[5]Robert Tannebaum and Schmidt H. Warren. "How to Choose a Leadership Pattern," Harvard Business Review (March-April 1957), pp. 95-101.

[6]Stogdill and Coons, op. cit.

Halpin, by using the LBDQ in a study of school superintendents, found that desirable leadership behavior is characterized by high scores on both initiating structure and consideration; undesirable leadership behavior is marked by low scores on both dimensions.[1] Likert, by using the Michigan studies as a starting place, also has conducted research in this area. He has concluded that the employee centered or democractic leader style is the best.[2] Blake and his associates have stated that team management (9-9) is the best leadership style.[3]

Although some authors have tried to find the "best" style of leadership, based on the definition of leadership as a function of the leader, the follower, and other situatonal variables, the desire to have a single ideal type of leader behavior seems unrealistic.[4] Hoy and Miskel have concluded that the concept of good or bad leadership must be restricted to a particular situation.[5] According to Hersey and Blanchard the evidence from research in the past decade clearly indicates that there is no single all-purpose leadership style.[6] This idea has

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[1]Halpin, The Leadership Behavior of School Superintendents, op cit., p. 79.

[2]Rensis Likert, New Pattern of Management (New York: McGraw-Hill Book Company, 1961), pp. 7-9.

[3]Black, et. al., "Breakthrough in Organizational Development," op cit., pp. 135-150.

[4]Hersey and Blanchard, op cit., p. 63.

[5]Hoy and Miskel, op cit., p. 208.

[6]Hersey and Blanchard. "So You Want to Know Your Leadership Style?", Training and Development Journal, (June 1981), p. 37.

been supported by various investigators—for example, Korman[1] and Fiedler[2]. Similarly, Carlisle has claimed that there are no principles that can be applied across the board; there are principles that must be related according to the particular problem or situation at hand. He stated that:

> Just as a doctor, even in this day of miracle drugs, has no universal remedy but must first find out what is wrong with the patient, so the manager must select the tools and concepts that are appropriate to his particular situation.[3]

After various investigators proved that it is not realistic to research for one single ideal leadership style which can be effective in different situations, leadership researchers changed their concerns toward the effectiveness of a leader in a particular situation. Tannenbaum and Schmidt stated that effective leaders are able to adapt their style of leader behavior to the needs of followers and the situaton.[4] Hersey and Blanchard have claimed that it is not a matter of having the best style but, having the most effective style for a particular situation.[5]

Although a number of investigators have tried to introduce a situational model based on the effectiveness of a leader in a particular situation, some of these studies were useful only for improving another situational theory. For

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[1]A.K. Korman, "Consideration: Initiating Structure and Organizational Criteria—A Review," Personal Psychology: A Journal of Applied Research 19 (1966), pp. 349-360.

[2]Fred Fiedler, The Theory of Leadership Effectiveness, 1967.

[3]Carlisle, op cit., p. 6.

[4]Tannebuam and Schmidt, op cit., pp. 162-171.

[5]Hersey and Blanchard, Management of Organizational Behavior, op cit., p. 94.

example, House and Mitchell developed the "Path—Goal Theory of Leadership", which was a situational model. They themselves have concluded that the Path—Goal Theory was offered more as a tool for directing research and stimulating insight than as a proven guide for managerial action.[1] Fiedler's contingency model and Hersey and Blanchard's Situational Leadership theory both have received substantial support in the leadership reports.

Contingency Model

The Contingency Model of Leadership effectiveness was developed by Fred E. Fiedler. According to this theory, the effectiveness of a particular style of leadership for group performance will be contingent on the favorability of the situation in which the leader finds himself.[2] Fiedler has stated that a situation is favorable according to the degree to which it enables the leader to exert influence over his/her group. The most unfavorable situation for a leader is when he/she is disliked, has little position power, and is faced with an unstructured task. He has claimed that either a task or a relationship-oriented leader style can be effective depending on the situation.[3]

Two instruments called Assumed Similarity Oppositons (A.S.O.) and the Least Performed Coworker (L.P.C.) were developed by Fiedler to measure a discriminating leader attitude which was associated with high group performance

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[1]Robert J. House and Terence R. Mitchell, "The Path—Good Theory of Leadership" in Hersey and Stinson, (eds.), Perspectives in Leader Effectiveness, pp. 81-92.

[2]Fred E. Fiedler, "A Contingency Model of Leadership Effectivenss," in L. Berkowitz, ed., Advances in Experimental Social Psychology (New York: Academic Press, 1964), pp. 150-191.

[3]Fiedler, A Theory of Leadership Effectiveness, op cit., pp. 13-14.

when the situation was either favorable or unfavorable.[1] Although these instruments have been used in various organizations, including educational setting, Fiedler himself has concluded that a better method is required for measuring the favorableness of leadership situations.[2]

Fiedler, after performing 50 studies over a period of 16 years, has summarized the results in his book, A Theory of Leadership Effectiveness. In his studies, he became confident that leadership performance depends as much on the situation as on the leader.[3]

As Hersey and Blanchard have stated, although Fiedler's model is useful to a leader, he seems to be reverting to a single continuum of leader behavior, suggesting that there are only two basic leader behavior styles, task-oriented and relationship-oriented. Most evidence has indicated that leader behavior must be plotted on two separate axes rather than one single-continuum.[4] A number of researchers who conducted studies in a variety of settings to validate Fiedler's model have identified a number of serious shortcomings. For example, Grean, Orris, Alvares[5], and McMahon[6] concluded that the style range (flexibility)

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[1]Ibid., p. 13.

[2]Ibid., p. 262.

[3]Ibid., p. 260.

[4]Hersey and Blanchard, Management of Organizational Behavior, op. cit., p. 95.

[5]G. Grean., J. Orrisand and H.A. Lvares. "Contingency Model of Leadership Effectiveness: Some Experimental Result," Journal of Applied Psychology (June 1921), pp. 196-201.

[6]J. McMahon. "The Contingency Theory: Logic and Method Revisited," Personal Psychology, (December 1972), pp. 697-710.

of the leader was not considered by the model, and Fielder introduced only two leadership styles.

Korman, after an extensive review of the Ohio studies, stated that what is needed in future studies is not just recognition of this factor of "situational determination," but rather a systematic conceptualization of situational variances as they might relate to leadership behavior. He has suggested the possibility of a curvilinear relationship rather than a simple linear relationship between "initiating structure (task behavior) and "consideration" (relationship behavior) and other variables.[1]

Gates and his colleagues stated:

> Successful leaders are those who can adapt their behavior to meet the demands of their own unique environment. This conclusion that leadership "all depends on the situation" is not very helpful to the practicing educational leader who may be personally interested in how he or she can find some practical value in theory. Unless one can help this leader determine when it is appropriate to behave in what way, all theory and research have done is set the practitioner up for frustration. As a result, one of the major concerns of the work of hersey and Blanchard has been the development of a conceptual framework which can help practicing managers make effective day-to-day decisions on how various situations should be handled.[2]

Tri-Dimensional Leaders Effectiveness Model

Hersey and Blanchard developed one of their major leadership models, namely the Tri-Dimensional Leader Effectivenss Model, at the Center for Leadership Studies, Ohio University. They used the terms of "task behavior" and "relationship behavior"[3] to describe concepts similar to "consideration" and

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[1] Korman, op cit., pp. 349-361.

[2] Gates, et. al., op cit., p. 348.

[3] Hersey and Blanchard, op cit., p. 96.

"initiating structure" of Ohio State studies.[1] Hersey and Blanchard were also influenced by Reddin's work.[2] Reddin, for the first time, added on effectiveness dimension to the task behavior and relationship behavior in some attitudinal models such as the Managerial Grid. He has stated that a variety of styles may be effective or ineffective depending on the situation.[3]

Hersey and Blanchard, by adapting to add an effectiveness dimension to the task behavior and relationship behavior dimensions of the earlier Ohio State Leadership Model, have developed their Tri-Dimensional Leader Effectiveness Model to integrate the concepts of leader style with situational demands of a specific environment. They have stated that when the style of a leader is appropriate to a given situation, it is termed effective; when the style is inappropriate to a given situatoin, it is termed ineffective.[4] They have concluded that effectivenss depends upon the leader, the follower(s), and other situational variables that make up the environment — E = F (l, f s).[5]

Situational Leadership Theory

Hersey and Blanchard, after extensive studies and careful consideration of other studies, developed their Situational Leadership Theory (referred to in their earlier work as the Life Cycle Theory of Leadership).

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[1] Stogdill and Coons, "Leader Behavior: Its Description and Measurement, op cit., pp. 42-43.

[2] Hersey and Blanchard, op cit., p. 96.

[3] William J. Reddin, "The 3-D Management Styles of Theory," Training and Development Journal (April, 1967), pp. 8-17.

[4] Hersey and Blanchard, Management of Organizational Management, op cit., p. 94.

[5] Ibid.

Situational Leadership Theory, an outgrowth of Hersey and Blanchard's Tri-Dimensional Leader Effectivenss Model, is based on a curvilinear relationship between task and relationship behavior (as Korman suggested in 1966) and maturity. They explained their Situational Leadership Theory as follows:

> This theory is based on a curvilinear relationship between task behavior and relationship behavior and the maturity. This theory attempts to provide leaders with some understanding of the relationship between an effective style of leadership and the level of maturity of the follower. Thus, while all the situational variables (leader, follower(s), superior(s), associates, organization, job demands, and time) are important, the emphasis in Situational Leadership Theory will be on the behavior of a leader in relation to followers.[1]

According to the Situational Leadership Theory, the range of appropriate leadership styles for different maturity levels was as follows:

> Situational Leadership Theory contends that in working with people who are low in maturity (ml) in terms of accomplishing a specific task, a high task/low relationship style (S1) has the highest probability of success; in dealing with people who are of low moderate maturity (m2), a high task/high relationship style (S2) appears to be most appropriate; in work with people who are of moderate to high maturity (m3) a high relationship/low task style (S3) has the highest probability of success; and low relationship/low task style (S4) has the highest probability of success with people of high task-relevant maturity (m4)[2]

According to Hersey and Blanchard, while telling (S1), selling (S2), participating (S3), and delegating (S4) referred to the effective styles of leader in a particular situation, the quandrant numbers Q_1, Q_2, Q_3, or Q_4, referred to ineffective styles.[3]

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[1] Ibid., pp. 150.

[2] Ibid., pp. 152-154.

[3] Ibid., p. 154-155.

Hersey and Blanchard have concluded that Situational Leadership not only suggests the high probability leadership style for various maturity levels, but it also identifies the probability of success of the other style configurations if a leader is unable to use the desired style. The probability of success of each style for the four maturity levels, depending on how far the style is from the high probability style along the perspective curve in the style of leader portion of the model, for each of maturity level recommended sequencey styles are as follows:

M1 S1 high, S2 2nd, Q3 3rd, Q4 low probability
M2 S2 high, S1 2nd, S3 2nd, Q4 low probability
M3 S3 high, S2 2nd, S4 2nd, Q1 low probability
M4 S4 high, S3 2nd, Q2 3rd, Q1 low probability[1]

For example, in dealing with people who are low in maturity, (M1), Hersey and Blanchard suggested that a high task/low relationship style(s) has the highest probability of success, and a low relationship/low task style is the most ineffective style (Q_4) that leaders may use.

Application of Situational Leadership

Hersey and Blanchard's Situational Leadership has been used in various organizations and in different countries around the world. Situational Leadership has been a major training component for such Fortune 500 Companies as Bank of America, Caterpillar, IBM, Mobil Oil, Union 76, and Xerox. It has been widely accepted in all of the military services and numerous fast growing entrepreneurial companies. Representatives from the Center for Leadership are doing situational training in the four corners of the world.[2] Gumpett and

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[1] Ibid., p. 155.

[2] Ibid., p. 171.

Hambleton's studies at Xerox Corporation have proved that not only is the Situational Leadership valid, but it also works in practice. Situational Leadership now is a cornerstone of the Information System Group (ISG) of Xerox, and is taught to middle-level as well as new first level supervisors. Gumpett and Hambleton have concluded that there is strong evidence suggesting that when Situational Leadership was used, and applied correctly, subordinate job performance was judged higher and the gains in job performance were practically and statistically significant.[1]

In an educational setting, Situational Leadership has been used in studying the teacher-student relationship, administrator-governing board relationship, and administrator-faculty relationship. For example, Angelini, Caracushansky, and Hersey in Brazil conducted a study applying Situational Leadership to teaching.[2] Blanchard has applied the Situational Leadership in administrator-governing board relationships.[3] A number of doctoral students also have attempted to study various aspects of Situational Leadership in their dissertations. For example, Peters,[4], and Beck[5] have devoted their studies to some aspects of Situational Leadership in relation to educational settings.

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[1]Raymond A. Gumpett and Ronald K. Hambleton. "Situational Leadership: How Xerox Manager Fine-Tune Managerial Styles to Employee Maturity and Task Needs," Management Review (December 1977), pp. 8-12.

[2]Arrigo L. Angelini, Sofia Caracushamsky, and Paul Hersey. "Situational Leadership Theory Applied to Teaching: A Research on Learning Effectiveness," an unpublished paper, Sao Paulo, Brazil.

[3]Kenneth H. Blanchard. "College Boards of Trustees: A Need for Directive Leadership," Academy of Management Journal, (December 1967).

[4]Lee Gordon Peters. "Some Aspects of Leader Style, Adaptability and Effectiveness among Western Massachusetts Principals," an unpublished dissertation, School of Education, University of Massachusetts, September, 1974.

[5]Mary J. Smith. "Effectiveness in Urban Elementary School as a Function of the Interaction Between Leadership Behavior of Principals and Maturity of Followers, an unpublished dissertation, School of Education, University of Massachusetts, Amherst, Mass., December, 1974.

Chadhoure also used Hersey and Blanchard's leadership model in training groups for five years. He stated that trainees reported that cognitive learning founded on the experience has been transferable to many situations.[1]

Gates and his colleagues have stated that:

> We have endeavored to present Situational Leadership Theory as a means by which educational leaders at every level can increase their probability of success in working with and through others to accomplish goals.[2]

Summary

The review of related literature focused on trait approach, behavioral approach, and situational approach to leadership.

The classical traitists attempted to identify a set of universal traits such as physical energy, friendliness, intelligence, imagination, flexibility, self-confidence, quick decision-making, and so on, which allow leaders to be effective in all situations. According to this approach, there is a finite number of distinguishable traits that successful leaders possess and those traits distinguish between effective and ineffective leaders. Fifty years of study failed to find any consistent patterns of traits which would characterize the leader. Therefore, the attitude that leaders are born and leadership training would be helpful only to those with inherent leadership has been abandoned, and most leadership researchers have focused on observer behavior.

Dissatisfaction with the trait approach shifted the leadership investigator's focus from the characteristics of the individual leader to an examination of what leaders actually do and how they do it. Behavioral

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[1] Chadhourne, op. cit., p. 57.

[2] Gates, et. al., op. cit., p. 354.

scientists have been concerned with two styles of leadership: "task behavior" and "relationship behavior." These two dimensions have been investigated by various researchers. Investigators at the University of Michigan identified these two concepts as "employee orientation" and "production orientation." Harvard University researchers found there were two separate leadership roles, "task leader" and "social leader." Ohio State researchers labeled these two dimensions "initiating structure" and "consideration." The main differences between the Ohio State studies and previous studies was that the Ohio State investigators developed four leadership styles by combinations of initiating structure and consideration. The LBDQ instruments were also developed to measure these four styles. Blake and Mouton postulated two basic dimensions of leadership, "concern for production" and "concern for people." They combined these two concepts and introduced five leadership styles in their "Managerial Grid."

While behavioral scientists have attempted to determine a universal general leadership style or the universally best combination of leadership behaviors, researchers clearly indicated that no single leadership style is universally effective because the relationships among supervisory behavior, organizational performance, and employee satisfaction change from situation to situation.

Various leadership studies questioned the assumption that task and relationship were either/or leadership styles, and they proved that there was no one type of leadership that would be generally effective in various situations. Although a number of investigators have tried to introduce a situational model based on the effectiveness of a leader in a particular situation, Fiedler's

Contingency Model and Hersey and Blanchard's Situational Leadership Theory have received substantial support. Fiedler developed a Least Preferred Co-worker (LPC) to measure leadership styles and various instruments to measure aspects of situational favorableness. Although these instruments have been used in various organizations, Fiedler himself has concluded that a better method is required for measuring the favorableness of leadership situations. Hersey and Blanchard, by adding an effectiveness dimension to the leadership styles of the Ohio State studies, have developed their Tri-Dimensional Leadership Effectiveness Model to integrate the concepts of leader style with situational demands of a specific environment. After extensive studies, they have developed their Situational Leadership Theory (referred to in their earlier work as Life Cycle Theory of Leadership). Leader Effectiveness and Adaptability Description (LEAD) instruments have been developed by Hersey and Blanchard to measure the effectiveness of a leader in relation to the maturity level of the follower(s) in a particular situation. Hersey and Blanchard's situational leadership has been used in various organizations and in different countries around the world.

CHAPTER III

METHODOLOGY

Population and Sample

The populations from which the sample for this study were drawn consisted of graduate students who were majoring in the areas of applied sciences and in the areas of social sciences, at the University of Oklahoma, Norman, during the spring semester of 1982. There was a total of 539 graduate students enrolled in applied science areas and a total of 1044 graduate students enrolled in social science areas. Samples used consisted of 52 applied science graduate students from the areas of engineering and computer science and 52 social science graduate students from various areas of the social sciences. The investigator issued 104 packages, 96 of which were completed and returned.

The 96 respondents consisted of 48 graduate students whose majors were in applied science and 48 graduate students whose majors were in social science. Thus, the study had a 92.30% return.

The first sample that was taken from graduate students majoring in applied sciences was classified as "the applied science sample" (see Figure 2). The second sample, which consisted of graduate students majoring in the social sciences, was classified as "the social science sample" (see Figure 3).

The actual samples consisted of 48 applied science graduate students (15 females; 33 males) and 48 social science graduate students (22 females; 26

males). There were 96 graduate students (37 females; 59 males) who participated in the study.

The steps of incidental sampling as identified by Guilford and Fruchter were adhered to in obtaining the samples in this study. So that generalizations beyond the samples could be made safely[1] (see Appendix F), each respondent was defined by means of a demographic questionnaire developed by the investigator.

Procedures for Collecting Data

After the Advisory Committee gave formal approval for conducting this study, the data were collected during the period beginning March 29, 1982, and ending May 7, 1982. A pilot study was conducted in a graduate class in Mechanical Engineering on March 24, 1982, for the purpose of checking out such particulars as the willingness of graduate students to be respondents in the study, instruments, time required to complete instruments and the fatigue effect. On March 2, 1982, the Institutional Review Board, Norman Campus, approved the study to be in accordance with guidelines on human subject involvement in research (see Appendix A).

Two procedures were used by the investigator in obtaining respondents for the study: First a letter which included a brief explanation of the sampling of the study was submitted by the investigator to different professors in the areas of applied science requesting 20 minutes of their class time, so that their graduate students could be given an opportunity to participate. In addition,

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[1] J. P. Guildford and B. Fruchter. Fundamental Statistics in Psychology and Education (New York: McGraw-Hill, 1973), p. 159.

Figure 2

Population: OU Applied Science Graduate Students

A sample was taken from graduate students in these areas.

Architecture (ARCH)
Chemical Engineering (CHE)
Civil Engineering (CE)
Computer Science (CS)
Electrical Engineering (EE)
Geological Engineering (GE)
Aerospace and Mechanical Engineering (AME)
Petroleum Engineering (PE)

Figure 3

Population: OU Social Science Graduate Students

A sample was taken from graduate students in these areas.

Economics (ECON)
Historical, Philosophical and Social Foundations (EDFN)
General Administration (EDAD)
Human Relations (HR)
Political Science (PSC)
Public Administration (PUAD)
Secondary Education (EDSE)

during the meeting with professors the investigator described in more detail the purpose of the study. Similarly, selected professors in the areas of social sciences were asked to make their graduate classes available. The second procedure involved asking students to participate who met the criteria for participation but were not enrolled in a regular graduate class, for example dissertation students, were asked to participate on an individual basis. It is to be noted that the first procedure provided 95% of the respondents and the second procedure provided 5% of the respondents in the study (see Figure 5).

Once a graduate class had been identified for participation, the investigator adhered to the following steps during the administration of instruments:

(1) a brief overview of the study was presented to the potential respondents,

(2) the graduate students were asked to participate; this gave each graduate student an opportunity to refuse participation,

(3) each graduate student who accepted was given the packet of instruments,

(4) each packet contained: (a) a letter which included some information about the study, the purpose of gathering the data, and the way of handling the data, (b) the Demographic Information Sheet, and (c) the LEAD-self instrument. With a few exceptions, respondents completed the questionnaires in 15 minutes.

To assure the confidentiality of a respondent's data, the investigator adhered to the following procedures: (1) a respondent was identified by college,

Figure 4

Graduate Classes Participating in Study

Sample 1	Number	Sample 2	Number
CE	19	EDFN	1
CS	16	EDAD	14
EE	3	HA	6
AME	5	PSC	3
PE	2	PUAD	15
	—	EDSE	7
Total	45		46

Individuals Participating in Study

ARCH	1	ECON	2
GE	1		
CHE	1		—
Total Number in Sample	48	Total Number in Sample	48

major, and sex; (2) other information requested in the Demographic Information Sheet such as age and birth order became group data and was statistically analyzed as group data only; (3) no proper names were requested of respondents or used by the investigator; (4) the investigator answered any questions which respondents had prior to their consenting to be involved in the study; (5) the investigator answered any questions which respondents had during the time instruments were being administered; (6) a respondent had the option to withdraw his/her consent and discontinue participation any time before the completion of the instruments.

It is to be noted that a graduate student was a respondent in the sample only once. Thus, when a graduate student was enrolled in more than one class which was participating in the sample, that graduate student was a respondent only once.

Instruments Used in the Study

The Demographic Information Sheet was a 13-item questionnaire which was developed by the investigator for the purpose of defining and describing respondents who participated in the study according to the requirements of incidental sampling (see Appendix B).

The LEAD-Self instrument was a 12-item questionnaire used to collect data for this study for the purpose of measuring the leadership style, style range, and the style adaptability of respondents. This instrument was developed by Hersey and Blanchard in the Center for Leadership Studies. Questionnaires were obtained from the Learning Resources Corporation, 8517 Production Avenue, San Diego, California 92121 (see Appendix C).

Several investigators have done various kinds of research on the reliability and validity of the LEAD instrument and have found evidence supporting the use of LEAD as an empirically sound instrument. For example, Walter and his colleague, in their "Evidence for the Validity of Situational Leadership Theory," stated that to establish reliability, a group of elementary school principals was asked to respond to the LEAD. Two measures of internal consistency yielded reliability coefficients of .81 and .61. For determining the concurrent validity of the instrument, a group of elementary school principals was asked to respond to the education LEAD and four teachers from each of their schools to respond to the LBDQXII. Walter and his associates reported that:

> Principals perceived by teachers as "always" initiating structure tended to choose high task/low relationship actions on the LEAD, and they did not have high effectiveness scores. Moreover, the principals who preferred low task/high relationship behavior were perceived by teachers as "seldom" or "never" initiating structure.[1]

The researchers concluded that their findings indicated a marginal concurrent validity for the education version of the LEAD. They added that the LEAD had validity for assessing leadership style.

Green has performed extensive investigations on the reliability and validity of the LEAD instrument. He reported that the contingency coefficient was .71. A significant correlation of .67 was found between the adaptability (effectiveness) scores of managers and the independent ratings of corresponding supervisors. The coefficient and correlation were significant beyond the .01 level.[2]

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[1]James E. Walter, Sarah Dejarnette Caldwell, and John Marshal, "Evidence for the Validity of Situational Leadership Theory," Educational Leadership (May 1980), pp. 618-621.

[2]John F. Green, "Lead-Self Manual," Draft Report University of Bridgeport, Milford, Connecticut, December 1979 (Revised January 1980).

Hypotheses to be Tested

The general hypothesis of the study was that there exists a significant difference between the leadership styles of graduate students who were majoring in applied sciences and those who were majoring in social science areas.

To test this hypothesis, the following null hypotheses were developed to be tested at the .05 level of significance.

HO_1 There is no statistically significant difference between leadership styles of social science graduate students and applied science graduate students on LEAD-Self scales.

HO_2 There is no statistically significant difference between leadership styles of applied science graduate students and social science graduate students on LEAD-Self scales based on gender.

HO_3 There is no statistically significant difference in mean scores between the style range of social science graduate students and applied science graduate students on LEAD-Self scales.

HO_4 There is no statistically significant difference in mean scores between the style adaptability of social science graduate students and applied science graduate students on LEAD-Self scales.

HO_5 There is no statistically significant correlation between the style range scores and style adaptability scores of social science graduate students on LEAD-Self scales.

HO_6 There is no statistically significant correlation between the style range scores and style adaptability scores of applied science graduate students on LEAD-Self scales.

The Design for Analyzing Data

As Siegel stated, the choice of an appropriate statistical procedure is an extremely important part of the research design.[1] Since the intended outcome of this study was to determine whether or not there was a difference between the leadership styles of graduate students (classified into two broad categories, social science majors and applied science majors), it is to be noted that the most appropriate statistical test for analyzing the data related to the null hypotheses HO_1 and HO_2 was chi-square.[2] According to Downie and his associate, this statistical tool is used as a test of goodness of fit when the data are expressed in frequencies or in terms of percentages or proportions that can be reduced to frequencies. Many of the applications of chi-square were with discrete data.[3] A number of other researchers, among them Kerlinger,[4]

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[1]S. Siegel, Nonparametric Statistics for the Behavioral Sciences (New York: McGraw Hill, 1956), pp. 32-33.

[2]Edward W. Minium, Statistical Reasoning in Psychology and Education (New York: John Wiley and Sons, 1978), pp. 390-404.

[3]N. M. Downie, and R. W. Heath, Basic Statistical Methods (New York: Harper and Row Publishers, 1974), p. 188.

[4]Fred N. Kerlinger, Behavioral Research (New York: Holt, Rinehart and Winston, 1979), pp. 314-316.

Hays,[1] and Winer,[2] supported the application of chi-square in such circumstances.

The most appropriate statistical test for analyzing the data related to null hypotheses HO_3 and HO_4 was analysis of variance (ANOVA). Various writers such as Minium,[3] Larson,[4] Kurtz and Mayo,[5] and Kerlinger[6] stated that ANOVA was an appropriate statistical tool for testing null hypotheses designed to test the differences between two or more populations means by examining the amount of variation within each of the samples, relative to the amount of variation between the samples. According to Klugh, the term "independent variable" is used in research to designate any variable presumed to exert an effect, and the term "dependent variable" was used to designate the variable presumably affected.[7] Since this study is designed to investigate the effect of one variable upon another, the independent variables of the above null hypotheses were the academic majors and gender, and the "dependent variables" were the leadership style, style range, and style adaptability.

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[1]William L. Hays, Statistics (New York: Holt, Rinehart and Winston, 1981), pp. 305-317.

[2]B. J. Winer, Statistical Principles in Experimental Design (New York: McGraw-Hill Book Company, 1971), pp. 826-859.

[3]Edward W. Minium, Statistical Reasoning in Psychology and Education (New York: John Wiley and Sons, 1978), pp. 389-421.

[4]Harold J. Larson, Statistics: An Introduction (New York: John Wiley and Sons, Inc., 1975), pp. 273-287.

[5]Albert K. Kurtz and Samuel T. Mayo, Statistical Methods in Education and Psychology (New York: Springer-Verlag, 1979), pp. 408-431.

[6]Fred N. Kerlinger, Foundations and Behavioral Research (New York: Holt, Rinehart and Winston, Inc., 1973), pp. 214-240.

[7]Henry E. Klugh, Statistics: The Essential for Research (New York: John Wiley and Son, Inc., 1970), pp. 4, 81, 96.

To determine whether or not there was a relationship between style range (flexibility) and style adability (effectiveness) in social science groups, and applied science groups, the most appropriate statistical test for analyzing the data related to the null hypotheses HO_5 and HO_6 was the Pearson correlation coefficient. The application of Pearson r in such situations received substantial support by statisticians, among then Downie and Heath,[1] Harnett and Murphy,[2] and Gellman.[3]

Statistical Analysis System (SAS) available at the University of Oklahoma Computer Services was used for the statistical analyses of the data in this study.

According to the staff of the SAS Institute:

> SAS is a computer software system. Like any language, SAS has its own vocabulary and syntax. SAS was originally developed for statistical needs. It grew into an all-purpose data analysis system in response to the changing needs of its user community. To the basic SAS system, user can add tools for graphic, forecasting, data entry, and interface to other data bases to provide one total system. (SAS runs an IBM 360/370/30XX/43XX and compatible machine in batch and interactivity under OS, OS/VS, VM/CMS, DOS/VSE, and TSO.) The basic SAS system provides tools for: information storage and retrieval, data modification, report writing, statistical analysis, and file handling.[4]

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[1]Downie and Heath. OP CIT., pp. 82-88.

[2]Donald L. Harnett and James L. Murphy, Introductory Statistical Analysis (Reading, Massachusetts: Addison-Wesley Publishing Company, Inc., 1975), pp. 336-418.

[3]Estelle S. Gellman, Statistics for Teachers (New York: Harper and Row, Publishers, 1973), pp. 97-111.

[4]SAS User's Guide: Basics, (Cary, North Carolina: SAS Institute Inc., 1982).

CHAPTER IV

ANALYSIS OF DATA

Introduction

The analysis and interpretation of data in the study are listed in this chapter as follows: (1) demographic characteristics of the sample, and (2) statistical analysis, including chi-square, analysis of variance, and correlation coefficient. The data generated by the study were based on the administration of the Demographic Information Sheet and the Lead-Self Questionnaire to samples drawn from the populations of social science graduate students and applied science graduate students enrolled at the University of Oklahoma during the Spring Semester of 1982.

Demographic Characteristics of Samples

As indicated in Chapter III (See Figure 4), the two samples in the study were "incidental." Therefore, it is necessary to describe the salient characteristics (see Tables 1 and 2).

Number and Sex of Respondents

The total sample consisted of 96 respondents of which 48, or 50%, were social science graduate students and 48, or 50%, were applied science graduate students. On the characteristic of sex, 37 respondents, or 38.5%, were females and 59 respondents, or 61.5%, were males. From the social science graduate students, there were 22 females, or 22.9%, and 26 males, or 27.1% of that subsample. From the applied science graduate students, there were 15 females, or 15.6%, and 33 males or 34.4% of that subsample.

TABLE 1

DEMOGRAPHIC CHARACTERISTICS OF SAMPLES

Characteristics	SS Majors	AS Majors	Sum
1. Number in Samples	48	48	96
2. Sex			
a. Females	22	15	37
b. Males	26	33	59
3. Marital Status			
a. Married	36	18	54
b. Single	12	30	42
4. Age			
a. Below 25 years of age	6	13	19
b. 25 - 40	27	33	60
c. Above 40 years of age	15	2	17
5. Ordinal Position in Family			
a. First born	24	8	32
b. In the middle	12	28	40
c. Youngest	10	11	21
d. Adopted child	2	1	3
6. Race			
a. White	42	34	76
b. Black	2	3	5
c. Hispanic	1	5	6
d. Asian or Pacific Islander	2	6	8
e. American Indian or Alaska Native	1	0	1
7. Presently a superior or supervisor	31	5	36

TABLE 2

DEMOGRAPHIC CHARACTERISTICS OF SAMPLES

USING FREQUENCY PERCENTAGES

Characteristics	SS Majors (N=48)	AS Majors (N=48)	Cum% (N=96)
1. Majors Enrolled	50%	50%	100%
2. Sex			
a. Females	22.9%	15.6%	38.5%
b. Males	27.1%	34.4%	61.5%
3. Marital Status			
a. Married	37.5%	18.8%	56.3%
b. Single	12.5%	31.2%	43.7%
4. Age			
a. Below 25	6.3%	13.5%	19.8%
b. 25 - 40	28.1%	34.4%	62.5%
c. Over 40	16.6%	2.1%	18.7%
5. Ordinal Position in Family			
a. First born	25%	8.3%	33.3%
b. In the middle	12.5%	29.2%	41.7%
c. Youngest	10.4%	11.4%	21.8%
d. Adopted Child	2.1%	1.1%	3.2%
6. Race			
a. White	43.6%	35.4%	79%
b. Black	2.1%	3.1%	5.2%
c. Hispanic	1.1%	5.2%	6.3%
d. Asian or Pacific Islander	2.1%	6.3%	8.4%
e. American Indian or Alaska Native	1.1%	0.0%	1.1%
7. Presently a superior or supervisor	32.3%	5.2%	37.5%

Marital Status

The demographic characteristics indicated that 54 respondents, or 56.3% of the total sample, were married; the remaining 42, or 43.7% of the total sample stated they were single. From the social science graduate students, there were 36 married respondents, or 36.5% of the subsample. From applied science graduate students there were 18 married respondents, or 18.7% of that subsample.

Age of Respondents

On the characteristic of age, 19 respondents, or 19.8% of the total sample, were below 25 years of age; 60 respondents, or 62.5% of the total sample claimed ages that ranged from 25 to 40 years; and 17 respondents or 18.7% were above 40 years of age. The respondents from applied science areas were younger than those from social science areas. Of applied science graduate students, 13, or 13.5% of that subsample, were below 25 years of age, while 6 social science graduate students, or 6.3% of that subsample, were in the same age range. Of applied science graduate students, 33, or 34% of that subsample, were from 25 to 40 years of age; on the other hand, 27 social science graduate students, or 28.1% of that subsample, were between 25 to 40 years of age. There were 15 social science graduate students, or 16.6% of that subsample, whose ages were above 40 years; only 2 applied science graduate students, or 2.1% of that subsample, claimed ages in the same range.

Ordinal Position in the Family

The classification according to ordinal position in the family was as follows: (a) 32 respondents, or 33.3% of the total sample, were first born; (b) 40

respondents, or 41.7% of the total sample, were born in the middle; (c) 21 respondents, or 21.8% of the total sample, were the youngest born; (d) 3 respondents, or 3.2% of the total sample, stated that they were adopted and were the only child in the family; (e) 24 social science graduate students, or 25% of that subsample, were first born; (f) 12 social science graduate students, or 12.5% of that subsample, were born in the middle; (g) 10 social science graduate students, or 10.4% of that subsample, were the youngest born; (h) 2 social science graduate students, or 2.1% of that subsample, were adopted children; (i) 8 applied science graduate students, or 8.3% of that subsample, were first born; (j) 28 applied science graduate students, or 29.2% of that subsample, were born in the middle; (k) 11 applied science graduate students, or 11.4% of that subsample, were the youngest born; (l) 1 applied science graduate student, or 1.1% of that subsample, was an adopted child.

Race

The classifications according to race were as follows: (a) 76 respondents, or 79% of the total sample, were White; (b) 5 respondents, or 5.2% of the total sample, were Black; (c) 6 respondents, or 6.3% of the total sample, were Hispanic; (d) 8 respondents, or 8.4% of the total sample, listed themselves as Asian or Pacific Islander; (e) 1 respondent, or 1.1% of the total sample, was American Indian; (f) 42 social science graduate students, or 43.6% of that subsample, were White; (g) 2 social science graduate students, or 2.1% of that subsample, were Black; (h) 1 social science graduate student, or 1.1% of that subsample, was Hispanic; (k) 2 social science graduate students, or 2.1% of that subsample, were Asian or Pacific Islander (l) 1 social science graduate student, or 1.1% of that sample, was American Indian; (m) 34 applied science graduate

students, or 35.4% of that subsample, listed themselves as White; (n) 3 applied science graduate students, or 3.1% of that subsample, were Black; (o) 5 applied science graduate students, or 5.2% of that subsample, identified themselves as Hispanic; (p) 6 applied science graduate students, or 6.3% of that subsample, were Asian or Pacific Islander; (q) There were not any American Indian or Alaska Native respondents among applied science graduate students.

Employment

Sixty-three respondents, or 65.6% of the total sample, were employed in various organizations. Forty-two social science graduate students, or 87.5% of that subsample, were employed and 6 social science graduate students, or 12.5% of that subsample were not employed. From applied science graduate students, 21 respondents, or 43.7% of that subsample, were employed and 27 respondents, or 56.3% of that subsample, were not employed.

Supervisory Employment

Past: 74 respondents, or 77% of the total sample, had worked as superiors or supervisors in various organizations. Forty social science graduate students, or 83.3% of that subsample, had supervisory experiences, and 8 respondents, or 16.7% of that subsample, did not have any supervisory experiences. From applied science graduate students, 21 respondents, or 43.7% of that subsample, had worked as superiors or supervisors, and 27 respondents, or 56.3% of that subsample, did not have any supervisory experience.

Present: On the question of whether a respondent was employed as a superior or supervisor during the spring semester of 1982, 36 respondents, or 37.5% of the total sample, listed themselves as being employed in supervisory

positions. From social science graduate students, 31 respondents, or 64.6% of that subsample, were superiors or supervisors. From applied science graduate students, 5 respondents, or 10.4% of that subsample, were superiors or supervisors.

Future: On the question of whether or not a respondent desired to have a supervisory position, 60 respondents, or 62.5% of the total sample, who were not working as superiors or supervisors answered as follows: From 17, or 35.4% of social science graduate students, 12 respondents, or 25% of that subsample, desired to have supervisory positions, 4 respondents, or 8.4% of that subsample were undecided, and 1 respondent, or 2% of that subsample, did not desire to have a supervisory position. From 43, or 89.6% of applied science graduate students, 22 respondents, or 45.8% of that subsample, desired to have supervisory positions, 17 respondents or 35.4% of that subsample were undecided, and finally, 4 respondents, or 8.4% did not desire to have supervisory positions.

Statistical Analyses

The phrasing of null hypotheses and the nature of data required three inferential statistical techniques for their testing. Those null hypotheses whose data were in terms of frequencies, percentages, or proportions were tested by chi-square. Those null hypotheses which used the phrase "significant differences in mean scores between two groups" were tested by single classification of analysis of variance, while those null hypotheses which posited a relationship or an association between two variables were tested by Pearson correlation coefficient.

One-hundred-four LEAD-Self instruments and Demographic questionnaires were distributed to graduate students. Ninety-six, (92.3%) of the

questionnaires were responded to and returned to the investigator to serve as a database for this study. All hypotheses were tested at the .05 level of significance.

Testing HO_1

This null hypothesis was stated as follows:

HO_1: There is no statistically significant difference between leadership styles of social science graduate students and applied science graduate students on LEAD-Self scales.

The chi-square test was used to test HO_1. The value of the chi-square was 26.44 which, for 3 degree of freedom was significant at the .05 level. The results of the computations using chi-square test are shown in Tables 3 and 4.

Thirteen respondents' (13.54% of the total sample) leadership styles were telling (S1), 58 respondents, or 60.42% of the total sample, listed their leadership styles as selling (S2), 22 respondents' (22.92% of the total sample) leadership styles were participating (S3), and 3 respondents' (3.13% of the total sample) leadership styles were delegating (S4). Eleven applied science respondents' (22.9% of that subsample) leadership styles were selling, 35 applied science respondents' (72.92% of that subsample) leadership styles were telling, 2 applied science respondents, or 4.17% of that subsample, identified their leadership styles as participating, and there were no respondents among applied science graduate students with delegating style. From social science graduate students, 2 respondents' (4.17% of that subsample) leadership styles were telling, 23 social science respondents' (47.92% of that subsample) leadership styles were selling, 20 social science respondents' (41.67% of that subsample) leadership styles were participating, and there were 3 social science respondents, or 6.25% of that subsample, with delegating style.

TABLE 3

MAJOR BY LEADERSHIP

OBSERVED FREQUENCY

	Telling	Selling	Participating	Delegating	Total
Applied Science	11	35	2	0	48
Social Science	2	23	20	3	48
Total	13	58	22	3	96

TABLE 4

MAJOR BY LEADERSHIP

EXPECTED FREQUENCY

	Telling	Selling	Participating	Delegating	Total
Applied Science	6.5	29	11	1.5	48
Social Science	6.5	29	11	1.5	48
Total	13	57	23	3	96

DF = 3

Obtained $X^2 = 26.44$*

Table $X^2 = 7.815$

$26.44 > 7.815$

*Significance at .05 Level

According to the results from testing HO_1, it was interpreted that there was a statistically significant difference between leadership styles of applied science graduate students and social science graduate students. Therefore, HO_1 was rejected.

Testing HO_2

This null hypothesis was stated as follows:

HO_2: There is no statistically significant difference between leadership styles of social science graduate students and applied science graduate students on LEAD-Self scales based on gender.

HO_2 was divided into three parts as follows:

a. There is no statistically significant difference between leadership styles of male and female social science and applied science graduate students as a whole on LEAD-Self scales.

b. There is no statistically significant difference between leadership styles of male and female applied science graduate students on LEAD-Self scales.

c. There is no statistically significant difference between leadership styles of male and female social science graduate students on LEAD-Self scales.

The chi-square test was used to test all parts of HO_2. The obtained chi-squares were respectively: 0.09, 1.04, and 0.24 at .05 level. The results of the computations using the chi-square test for the first part of HO_2 are shown in Tables 5 and 6.

Thirteen respondents' (13.54% of the total sample) leadership styles were telling (S1), 58 respondents, or 60.42%, listed their leadership styles as selling (S2), 22 respondents' (22.92%) leadership styles were participating (S3),

TABLE 5

SEX BY LEADERSHIP

(AS AND SS)

OBSERVED FREQUENCY

	Telling	Selling	Participating	Delegating	Total
Female	5	22	9	1	37
Male	8	36	13	2	59
Total	13	58	22	3	96

TABLE 6

SEX BY LEADERSHIP

(AS AND SS)

EXPECTED FREQUENCY

	Telling	Selling	Participating	Delegating	Total
Female	5	22.4	8.5	1.2	37.1
Social Science	8	35.6	13.5	1.8	58.9
Total	13	57	23	3	96

$DF = {}_2{}^3$

Obtained $X^2 = 0.09$

Table $X^2 = 7.815$

$0.069 < 7.815$

and 3 respondents' (3.13% of the total sample) leadership styles were delegating (S4). Five female respondents' (5.21 of the sample) leadership styles were telling, 22 female respondents' (22.92% of the sample) leadership styles were selling, 9 female respondents' (9.38% of the sample) leadership styles were participating, and 1 female respondents' (1.20% of the sample) leadership style was delegating. From the males, 8 respondents, or 8.33% of the sample, listed their leadership styles as telling, 36 male respondents' (37.50% of the sample) leadership styles were selling, 13 male respondents' (13.54% of the sample) leadership styles were participating and 2 male respondents, or 2.08 of the sample, listed their leadership styles as delegating.

The results of the computations using the chi-square test for the second part of HO_2 are shown in Tables 7 and 8.

Four female applied science respondents, or 8.33% of that subsample, listed their leadership styles as telling, 11 female respondents' (22.29% of that subsample) leadership styles were selling, and there were not any female respondents with leadership styles of participating. Seven male respondents' (14.58% of that subsample) leadership styles were telling, 24 male respondents' (50% of that subsample) leadership styles were selling, 2 male respondents' (4.17% of that subsample) leadership styles were articipating, and there were not any female or male respondents among applied science graduate students with delegating styles.

The results of the computations using the chi-square test for the third part of HO_2 are shown in Tables 9 and 10.

One female social science respondent (2.08%) of that subsample listed her leadership style as telling, 11 female respondents' (22.92%) leadership styles were selling, 9 female respondents' (18.75%) leadership style was delegating.

TABLE 7

SEX BY LEADERSHIP

(APPLIED SCIENCE MAJORS)

OBSERVED FREQUENCY

	Telling	Selling	Participating *	Total
Female	4	11	0	15
Male	7	24	2	33
Total	11	35	2	48

TABLE 8

SEX BY LEADERSHIP

(APPLIED SCIENCE MAJORS)

EXPECTED FREQUENCY

	Telling	Selling	Participating	Total
Female	3.4	10.9	0.6	14.9
Male	7.6	24.1	1.4	33.1
Total	11	34	3	48

$DF = {}_2^2$

Obtained $X^2 = 1.04$

Table $X^2 = 5.991$

$1.04 < 5.991$

*There were no respondents among applied science majors with delegating style.

TABLE 9

SEX BY LEADERSHIP STYLE

(SOCIAL SCIENCE MAJORS)

OBSERVED FREQUENCY

	Telling	Selling	Participating	Delegating	Total
Female	1	11	9	1	22
Male	1	12	11	2	26
Total	2	23	20	3	48

TABLE 10

(SOCIAL SCIENCE MAJORS)

EXPECTED FREQUENCY

	Telling	Selling	Participating	Delegating	Total
Female	0.9	10.5	9.2	1.4	22
Male	1.1	12.5	10.8	1.6	26
Total	2	23	20	3	48

DF = 3

Obtained $X^2 = 0.24$

Table $X^2 = 7.815$

$0.24 < 7.815$

One male respondent's (2.08%) leadership style was telling, 12 male respondents' (25%) leadership styles were selling, 11 male respondents' (22.92%) leadership styles were participating, and 2 male respondents (4.17%) listed their leadership styles as delegating.

The results from testing HO_2 indicate that there was no significant difference between the leadership styles of male and female applied science and social science graduate students. Therefore, HO_2 could not be rejected.

Testing HO_3

This null hypothesis was stated as follows:

HO_3: There is no statistically significant difference in mean scores between the style range (flexibility) of social science graduate students and applied science graduate students on LEAD-Self scales.

The single classification of Analyses of Variance was used to test HO_3. The results of testing this null hypothesis using one-way ANOVA are summarized in Table 11.

The social science graduate students had the higher mean score, 1.97; compared to 1.37 for the applied science students on their style range (flexibility). This finding is an indication that social science respondents in the study had more ability to vary their style in different situations than applied science graduate students.

The findings indicated that there was a statistically significant difference between the style range (flexibility) of social science graduate students and applied science graduate students on LEAD-Self scales. Therefore, HO_3 was rejected.

Testing HO_4

This null hypothesis was stated as follows:

HO_4: There is no statistically significant difference in mean scores between the style adaptability (effectiveness) of social science graduate students and applied science graduate students on LEAD-Self scales.

The single classification of analyses of variance was used to test HO_4. The results of testing this null hypothesis using oneway ANOVA are summarized in Table 12.

The social science graduate students had the higher mean score, 10.29, compared to 5.64 for applied science graduate students on their style adaptability (effectiveness). This finding is an indication that social science graduate students had more ability to vary their style appropriately to the demands of a given situation than applied science graduate students. The findings indicated that there was a statistically significant difference between the style adaptability (effectiveness) of social science graduate students and applied science graduate students on LEAD-Self scales. Therefore, HO_4 was rejected.

Testing HO_5

This null hypothesis was stated as follows:

HO_5: There is no statistically significant correlation between the style range scores and style adaptability scores of social science graduate students on LEAD-Self scales.

The Pearson r was used to test HO_5. The obtained r value was 0.09 at the .05 level. The relationship between style range and style adaptability on

TABLE 11

OUTCOME OF ONE-WAY ANOVA FOR HO_3

Source of Variation	df	Sum-of-Square (SS)	Square-Mean (S2)	Calc'd Value of F	Criti. value of F (at .05 level)
Among Groups	1	8.76	8.760	21.54*	4.41
Within Groups	94	38.221	0.406		
Total	95	46.98			

*Significant at .05 level: 21.54 > 4.41

TABLE 12

OUTCOME OF ONE-WAY AVOVA FOR HO_4

Source of Variation	df	Sum-of-Square (SS)	Square-Mean (S2)	Calc'd Value of F	Criti. value of F (at .05 level)
Among Groups	1	518.01	518.01	16.94*	4.41
Within Groups	94	2874.89	30.583		
Total	95	3392.90			

*Significant at .05 level: 16.94 > 4.41

LEAD-Self scales was analyzed for 48 social science graduate students. For this subsample, the degree of freedom was 46 (df = 46), and the table value of r was .285 at the .05 level of significance. Since the obtained value of r (0.09) was smaller than the table value of r (r = .285), HO_5 could not be rejected.

This finding indicated that there was no statistically significant correlation between the style range scores and style adaptability scores of social science graduate students. Therefore, HO_5 was not rejected.

Testing HO_6

This null hypothesis was stated as follows:

HO_6: There is no statistically significant correlation between the style range scores and style adaptability scores of applied science graduate students on LEAD-Self scales.

The Pearson r was used to test HO_6. The r value was -0.54 at the .05 level. The relationship between style range and style adaptability on LEAD-Self scales was analyzed for 48 applied science graduate students. For this subsample, the degree of freedom was 46 (df = 46), and the table value of r was .285 at .05 level of significance. Since the obtained value of r (r = -0.54) was larger than the table value of r (r = .285), the obtained value of r was significant at .05 level.

This finding indicated that the statistically significant relationship between the style range and style adaptability scores of applied science graduate students was inverse. Therefore, HO_6 was rejected.

CHAPTER V

SUMMARY, CONCLUSIONS, RECOMMENDATIONS

Summary of the Study

The study was conducted because the investigator observed that in the literature of leadership, empirical research on relationships between leadership styles and graduate academic majors was unavailable. Thus, the study was concerned primarily with the relationship between leadership styles and graduate academic majors. Additionally, the relationships between sex and leadership styles, style range, and style adaptability were analyzed.

The respondents in the study were 96 graduate students enrolled at the University of Oklahoma during the Spring Semester of 1982. When the sample was identified by area of specialization and sex of respondents, the subsamples were as follows: (a) 48 applied science graduate students, (b) 48 social science graduate students, (c) 37 female graduate students, and (d) 59 male graduate students.

One hundred four graduate students from the areas of applied science and the areas of social sciences were asked to complete two types of questionnaires, LEAD-Self and Demographic Information Sheet. The investigator issued packages to 104 graduate students, 52 of which were applied science majors and 52 of which were social science majors. Of the 104 graduate students, 96 completed and returned the packages. The 96 respondents consisted of 48 graduate students whose majors were in applied sciences and 48 graduate

students whose majors were in social sciences. Thus, the study had a 92.30% return. The instruments used in the study are shown in Appendices A and B.

Six null hypotheses were developed. Chi-square, single classification analysis of variance, and Pearson correlation coefficient were used for testing the null hypotheses. The Chi-Square test was utilized to determine whether differences existed between leadership styles of respondents according to their majors and their gender. One way analysis of variance was utilized to determine whether differences existed between style range and style adaptability of respondents according to their majors. The Pearson correlation coefficient was utilized to determine whether relationships existed between style range and style adaptability of social science graduate students and applied science graduate students. The level of significance for the study was set at .05.

HO_1, HO_3, HO_4, and HO_6 were rejected; HO_2 and HO_5 could not be rejected. The results are summarized as follows:

1. A significant difference existed between leadership styles of applied science graduate students and those of social science graduate students. Leadership styles of social science graduate students ranged from style 1 to style 4, while applied science graduate students' leadership styles ranged from style 1 to style 3.

2. A significant difference did not exist between leadership styles of male and female social science graduate students and those of applied science graduate students.

3. A significant difference existed between style ranges of social science graduate students and those of applied science graduate students.

4. A significant difference existed between style adaptability of social science graduate students and that of applied science graduate students.

5. A significant relationship did not exist between style range and style adaptability of social science graduate students.

6. A significant relationship existed between style range and style adaptability of applied science graduate students. It is to be noted that the statistically significance relationship was inverse.

Conclusions of the Study

The findings in the study supported the investigator's general hypothesis that a graduate student's academic area of study affects his/her leadership style as defined by Hersey and Blanchard's Situational Leadership Theory.

Based on the findings in the study, the following major conclusions can be made:

1. Applied science graduate students and social science graduate students in the study perceived differently a situation in which a leadership style was required.

2. Applied science graduate students were more inclined toward telling as a leadership style than were social science graduate students. The fact that the applied science group was more oriented toward telling may be attributed to the type of training received by the group. In solving problems, applied scientists generally seek precise answers; they follow specific procedures which focus on following instructions. Thus, it can be concluded that the methodology to solve problems used by applied scientists would make them directional in their approach.

3. Applied science graduate students were more inclined toward selling as a leadership style than were social science graduate students. If in this context, selling is viewed as trying to persuade someone to buy a "product," then

it may be concluded that the applied science group does more selling than the social science group.

4. Social science graduate students were more inclined toward participating as a leadership style than were applied science graduate students. This fact would indicate that the social science group is involved in settings where participation is utilized in the solution of problems. A dependence on participation by social scientists is indicative of the fact that the group is involved primarily in solving people-oriented problems. It is to be noted that in solving people-oriented problems, social scientists not only consider and evaluate variables created by persons but also use methodologies like team managements, shared decision-making processes, and client-centered therapies. Summarily, it can be concluded that the inclination of social science graduate students toward the participating style of leadership indicates that they are involved in solving human behavior problems. A similar conclusion can not be made for applied science graduate students.

5. If participating is an important style of leadership for social science graduates, then it is logical to expect that that group would also be inclined toward the delegating style of leadership. Hersey and Blanchard have identified delegating as the most advanced style of leadership in the advanced situation. Only social science graduate students in the study demonstrated an inclination toward delegating. Thus, it might be inferred that the social science group is probably less traditional and conservative in its philosophical orientations than the applied science group. It can also be inferred that the applied science graduate students in the study were being trained in programs which were themselves traditional and conservative. No applied science graduate students

were inclined toward the delegating style of leadership. This fact would enforce the conclusion stated earlier that this group primarily solves problems by the use of specific procedures which yield precise and specific answers.

6. It is to be noted that the gender of a respondent in the study did not seem to be related to leadership style as defined by Hersey and Blanchard. However, other untested variables may have influenced leadership styles, nevertheless it might be tentatively concluded from this finding that both applied science graduate students and social science graduate students were relying primarily on their professional training and experiences as they answered the LEAD-Self instrument.

The findings on style range (flexibility) and style adaptability (effectiveness) make the following conclusions possible.

7. Social science graduate students demonstrated greater flexibility in leadership styles than applied science graduate students. The fact that the social science group showed greater flexibility indicated that social science majors had more ability to vary their leadership style in different situations and were more aware of the situation as defined by Hersey and Blanchard. Thus, the nature of the situation more likely dictates the leadership style exhibited by social scientists than it does that for applied scientists. The fact that social science majors were more flexible leaders than applied science majors would reinforce the conclusion that social science majors have greater potential to be effective in a number of situations than have the applied science majors, as defined by Hersey and Blanchard.

8. Since applied science graduate students concentrated their leadership styles in the areas of telling and selling, it can be concluded that this group

is less aware of the situation as defined by Hersey and Blanchard. This fact would reinforce the conclusion made earlier in this section that social science graduate students are more involved in solving problems concerning people. The limited flexibility in leadership styles for applied science graduate students reinforces the observation stated earlier in this section that applied scientists seek precise answers for solving problems.

9. Since social science graduate students achieved higher scores on style adaptability, it can be concluded that the social science graduate students were more able to vary their leadership styles appropriately to the demands of a given situation. It can also be concluded that the social science majors were more effective leaders than were the applied science majors, according to Hersey and Blanchard's Situational Leadership Theory. Those responsible for training applied science graduate students might ask themselves: "What activity might be designed to train students to vary their leadership styles appropriately to fit a given situation?"

10. The low correlation between style range and style adaptability scores of social science graduate students, and the inverse correlation between style range and style adaptability scores of applied science graduate students makes the following conclusion possible: both applied science majors and social science majors may need to receive training to increase their style range and style adaptability in order to become more effective leaders.

11. The facts that social science graduate students achieved higher scores on style range (flexibility) and style adaptability (effectiveness), and that they were more inclined toward participating as a leadership style than were

applied science graduate students, reinforce the following general conclusion: Social science majors may be more relationship-oriented than are applied science majors; this may suggest the need for applied science majors who aspire to administrative position to become involved in appropriate training programs designed to help them perform more adequately in administrative positions.

Recommendations for Further Research

The following recommendations for further studies are suggested.

1. The study should be replicated again with a larger sample and other independent variables such as birth order should be tested.

2. Additional research should be conducted on the relationship between leadership styles and graduate academic majors utilizing leadership theories like Fiedler's (1967) Contingency Theory, House's (1971, 1974) Path-Goal Theory, and Stogdill's (1963, 1974) Leader Role Differentation Theory in addition to Hersey and Blanchard's (1972, 1977, 1982) Situational Leadership Theory.

3. Further research should be conducted using people who are actually practicing in roles of leadership, utilizing LEAD-Self and LEAD-Other instruments.

4. Further research should be conducted using two populations who are training in administration. For example, educational administration majors and public administration majors.

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APPENDIX A

THE INSTITUTIONAL REVIEW BOARD - NORMAN CAMPUS

The
University of Oklahoma at Norman

Office of Research Administration

March 2, 1982

Mr. Mohammad Ali Sabermahani
108 W. Constitution, #G
Norman, Oklahoma 73069

SUBJECT: Approval of Research Proposal

Dear Mr. Sabermahani:

Dr. Eddie C. Smith, Chair of the Institutional Review Board-Norman Campus has reviewed and approved the project you submitted entitled, "The Relationship Between Leadership Styles and Graduate Academic Majors." Therefore, the use of human subjects in this research has now been fully approved.

Thank you for your submission. Please find enclosed the extra copies of your proposal.

Sincerely yours,

Mark Elder
Administrative Officer
Institutional Review Board-Norman Campus

ME:nra

Encl.

cc: Dr. Eddie C. Smith, Chair, IRB-NC
Dr. Jack Parker, Education
IRB-NC Files

Date: March 1, 1982

To: Dr. Eddie C. Smith, Chairperson
Institutional Review Board-Norman Campus

From: Mohammad Ali Sabermahani
Dissertation Student
108 West Constitution, #G
Norman, Oklahoma 73069

Subject: Description of Doctoral Study

I am submitting a description of the doctoral research that I propose to conduct during the months of March, April, and May, 1982, at The University of Oklahoma.

The principal problem of the study is as follows: Is there a relationship between leadership styles and academic majors of graduate students?

I am submitting a copy of my prospectus. Feel free to use it in any manner that the committee might want. I would, however, like to have my prospectus copy back.

It is my expectation that the materials I am submitting for your evaluation are adequate and that your judgment will permit me to continue with the doctoral study as planned.

APPENDIX B

DEMOGRAPHIC INFORMATION QUESTIONNAIRE

Demographic Information Sheet

Please indicate the correct response by circling one appropriate letter (A, B, C, D or E) to indicate a choice or by writing out the correct response briefly. Responses will be used for research purposes only.

_____1. In what college are you presently enrolled as a graduate student?

_____2. What is your major?

3. Sex:
   A. Female
   B. Male

4. Marital status:
   A. Married
   B. Single

5. Age range:
   A. Below 25 years of age
   B. 25-40
   C. Above 40 years of age

6. How many siblings (brothers and sisters) do you have?
   A. 1
   B. 2
   C. 3 or more

7. What is your ordinal position among your sisters and brothers?
   A. First born
   B. In the middle
   C. Youngest

8. Which one of the following groups best describes you?
   A. White
   B. Black
   C. Hispanic
   D. Asian or Pacific Islander
   E. American Indian or Alaskan Native

9. Have you worked or been a superior or supervisor in any organization?
   A. Yes
   B. No

10. At the present time, are you working in any kind of organization besides going to school?
    A. Yes
    B. No

11. If yes, are you a superior or supervisor in your organization?
    A. Yes
    B. No

12. If yes, how many persons do you supervise?
    A. Under 10 persons
    B. 10 to 20 persons
    C. 20 to 40 persons
    D. Over 40 persons

13. If you are not working as a superior or supervisor in any organization, do you desire to have a supervisory position?
    A. Yes
    B. Maybe
    C. No

APPENDIX C

LEAD-SELF QUESTIONNAIRE

LEAD Self

Developed by Paul Hersey and Kenneth H. Blanchard

Directions:
Assume YOU are involved in each of the following twelve situations. Each situation has four alternative actions you might initiate. READ each item carefully. THINK about what YOU would do in each circumstance. Then CIRCLE the letter of the alternative action choice which you think would most closely describe YOUR behavior in the situation presented. Circle only *one choice*.

Leader Effectiveness & Adaptability Description

Leader Effectiveness & Adaptability Description

	SITUATION	ALTERNATIVE ACTIONS
1	Your subordinates are not responding lately to your friendly conversation and obvious concern for their welfare. Their performance is declining rapidly.	A. Emphasize the use of uniform procedures and the necessity for task accomplishment. B. Make yourself available for discussion but don't push your involvement. C. Talk with subordinates and then set goals. D. Intentionally do not intervene.
2	The observable performance of your group is increasing. You have been making sure that all members were aware of their responsibilities and expected standards of performance.	A. Engage in friendly interaction, but continue to make sure that all members are aware of their responsibilities and expected standards of performance. B. Take no definite action. C. Do what you can to make the group feel important and involved. D. Emphasize the importance of deadlines and tasks.
3	Members of your group are unable to solve a problem themselves. You have normally left them alone. Group performance and interpersonal relations have been good.	A. Work with the group and together engage in problem-solving. B. Let the group work it out. C. Act quickly and firmly to correct and redirect. D. Encourage group to work on problem and be supportive of their efforts.
4	You are considering a change. Your subordinates have a fine record of accomplishment. They respect the need for change.	A. Allow group involvement in developing the change, but don't be too directive. B. Announce changes and then implement with close supervision. C. Allow group to formulate its own direction. D. Incorporate group recommendations, but you direct the change.
5	The performance of your group has been dropping during the last few months. Members have been unconcerned with meeting objectives. Redefining roles and responsibilities has helped in the past. They have continually needed reminding to have their tasks done on time.	A. Allow group to formulate its own direction. B. Incorporate group recommendations, but see that objectives are met. C. Redefine roles and responsibilities and supervise carefully. D. Allow group involvement in determining roles and responsibilities but don't be too directive.
6	You stepped into an efficiently run organization. The previous administrator tightly controlled the situation. You want to maintain a productive situation, but would like to begin humanizing the environment.	A. Do what you can to make group feel important and involved. B. Emphasize the importance of deadlines and tasks. C. Intentionally do not intervene. D. Get group involved in decision-making, but see that objectives are met.

	SITUATION	ALTERNATIVE ACTIONS
7	You are considering changing to a structure that will be new to your group. Members of the group have made suggestions about needed change. The group has been productive and demonstrated flexibility in its operations.	A. Define the change and supervise carefully. B. Participate with the group in developing the change but allow members to organize the implementation. C. Be willing to make changes as recommended, but maintain control of implementation. D. Avoid confrontation; leave things alone.
8	Group performance and interpersonal relations are good. You feel somewhat unsure about your lack of direction of the group.	A. Leave the group alone. B. Discuss the situation with the group and then you initiate necessary changes. C. Take steps to direct subordinates toward working in a well-defined manner. D. Be supportive in discussing the situation with the group but not too directive.
9	Your superior has appointed you to head a task force that is far overdue in making requested recommendations for change. The group is not clear on its goals. Attendance at sessions has been poor. Their meetings have turned into social gatherings. Potentially they have the talent necessary to help.	A. Let the group work out its problems. B. Incorporate group recommendations, but see that objectives are met. C. Redefine goals and supervise carefully. D. Allow group involvement in setting goals, but don't push.
10	Your subordinates, usually able to take responsibility, are not responding to your recent redefining of standards.	A. Allow group involvement in redefining standards, but don't take control. B. Redefine standards and supervise carefully. C. Avoid confrontation by not applying pressure; leave situation alone. D. Incorporate group recommendations, but see that new standards are met.
11	You have been promoted to a new position. The previous supervisor was uninvolved in the affairs of the group. The group has adequately handled its tasks and direction. Group inter-relations are good.	A. Take steps to direct subordinates toward working in a well-defined manner. B. Involve subordinates in decision-making and reinforce good contributions. C. Discuss past performance with group and then you examine the need for new practices. D. Continue to leave group alone.
12	Recent information indicates some internal difficulties among subordinates. The group has a remarkable record of accomplishment. Members have effectively maintained long-range goals. They have worked in harmony for the past year. All are well qualified for the task.	A. Try out your solution with subordinates and examine the need for new practices. B. Allow group members to work it out themselves. C. Act quickly and firmly to correct and redirect. D. Participate in problem discussion while providing support for subordinates.

Address inquiries or orders to one of the following:

Learning Resources Corporation
3517 Production Avenue
P.O. Box 2o240
San Diego, California 92126
(714) 578-5900
800-854-2143 (toll free except in California, Alaska, & Hawaii)

University Associates of Canada
4190 Fairview Street
Burlington, Ontario L7L 4Y8
(416) 632-5832

University Associates of Europe
Challenge House
45-47 Victoria Street
Mansfield, Notts NG18 5SU
England
0623 640203

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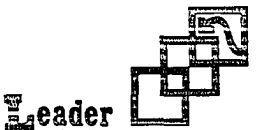
APPENDIX D

LEAD SCORING AND ANALYSIS

LEAD

Developed by Paul Hersey and Kenneth H. Blanchard

DIRECTIONS FOR SELF SCORING AND ANALYSIS



Leader Effectiveness & Adaptability Description

Leader Effectiveness & Adaptability Description

DIRECTIONS FOR SCORING

Circle the letter that you have chosen for each situation on the same line to the right, under Column I (STYLE RANGE) and also Column II (STYLE ADAPTABILITY). *After you have circled alternative actions, total the number* of circles for each sub-column under Column I (STYLE RANGE) and Column II (STYLE ADAPTABILITY) and enter totals in the spaces provided below.

SITUATIONS	COLUMN I (Style Range) Alternative Actions				COLUMN II (Style Adaptability) Alternative Actions			
	(1)	(2)	(3)	(4)	(a)	(b)	(c)	(d)
1	A	C	B	D	D	B	C	A
2	D	A	C	B	B	D	C	A
3	C	A	D	B	C	B	A	D
4	B	D	A	C	B	D	A	C
5	C	B	D	A	A	D	B	C
6	B	D	A	C	C	A	B	D
7	A	C	B	D	A	C	D	B
8	C	B	D	A	C	B	D	A
9	C	B	D	A	A	D	B	C
10	B	D	A	C	B	C	A	D
11	A	C	B	D	A	C	D	B
12	C	A	D	B	C	A	D	B
Sub-columns	(1)	(2)	(3)	(4)	(a)	(b)	(c)	(d)
Multiply by					(a) ×2	(b) −1	(c) +1	(d) +2
					[ ]	− [ ]	− [ ]	− [ ] =

TOTAL

Processing Data from C

Sub-column totals from Column I (S styles, (the middle portion) of the " Model[1] below. *The column numbers* of the leadership model as follows.

Sub-column (1)—alternative actio (High Task/Low Relat

Sub-column (2)—alternative actio (High Task/High Relat

Sub-column (3)—alternative actio (High Relationship/Lo

Sub-column (4)—alternative actio (Low Relationship Lo

Enter the totals associated with each boxes provided on the leadership model

THE TRI-DIMENSIONAL LEADER EFFECTIVENESS MODEL[1]

umn I (Style Range)

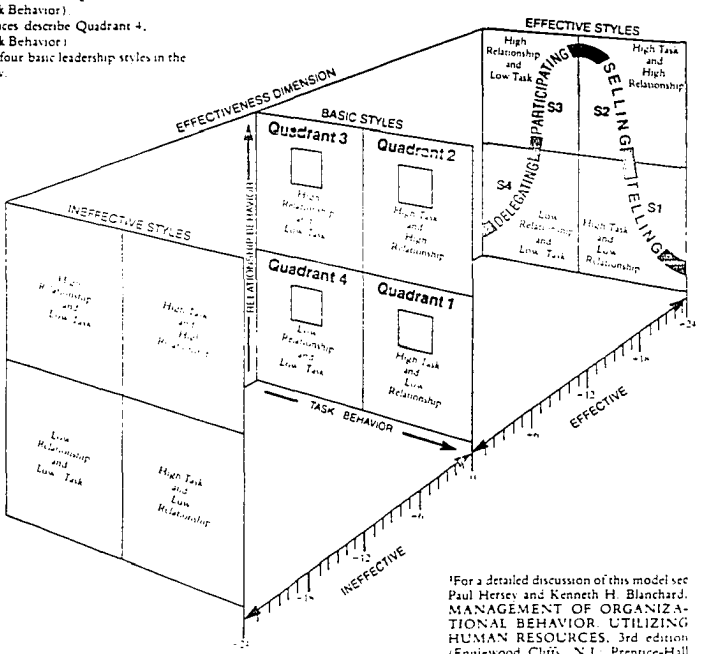
: Range) can be located on the basic Dimensional Leader Effectiveness respond to the quadrant numbers

noices describe Quadrant 1.
hip Behavior).
noices describe Quadrant 2.
ship Behavior).
noices describe Quadrant 3.
ask Behavior).
noices describe Quadrant 4.
ask Behavior).
ne four basic leadership styles in the ow.

Processing Data from Column II (Style Adaptability)

Multiply the totals entered in sub-columns (a), (b), (c), and (d) under column II by the positive and negative factors in the same sub-columns. Enter the product in the space provided directly below. (Be sure to include pluses and minuses.) Then add all four figures and record the sum in the box designated TOTAL.

Then place an arrow (↖) at the corresponding number along the ineffective or effective dimension of the leadership model below.



[1]For a detailed discussion of this model see Paul Hersey and Kenneth H. Blanchard, MANAGEMENT OF ORGANIZATIONAL BEHAVIOR: UTILIZING HUMAN RESOURCES, 3rd edition (Englewood Cliffs, N.J.: Prentice-Hall Inc., 19[illegible]).

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Challenge House
45-47 Victoria Street
Mansfield, Notts NG18 5SU
England
0623 640203

APPENDIX E

DATA

DATA FOR APPLIED SCIENCE GRADUATE STUDENTS

No.	Sex	Leadership Style S1	S2	S3	S4	Style Range	Style Adaptability
1	F	5*	4	2	1	2	-1
2	F	2	6*	4	--	2	2
3	F	3	5*	3	1	2	3
4	F	5*	3	3	1	2	-4
5	F	3	8*	1	--	1	8
6	F	1	7*	3	1	1	17
7	F	1	6*	5	--	1	4
8	F	1	6*	5	--	1	2
9	F	1	7*	1	3	1	9
10	F	5*	4	2	1	2	-2
11	F	1	7*	1	3	1	9
12	F	3	5*	4	--	2	3
13	F	3	7*	2	--	2	3
14	F	3	8*	1	--	1	4
15	F	7*	4	1	--	1	-2
16	M	--	6*	5	1	1	16
17	M	6*	2	4	--	2	16
18	M	1	8*	3	--	1	11
19	M	1	6*	3	2	2	0
20	M	--	8*	3	1	1	16
21	M	1	7*	4	--	1	11
22	M	1	9*	--	2	1	12
23	M	5*	3	4	--	2	-6
24	M	5*	4	2	1	2	-3
25	M	2	9*	1	--	1	9
26	M	3	7*	2	--	2	9
27	M	3	7*	1	1	1	8
28	M	5*	3	1	3	2	-1
29	M	3	6*	2	1	2	3
30	M	--	8*	4	--	1	9
31	M	1	6*	4	1	1	12
32	M	--	8*	4	--	1	4
33	M	5*	3	4	--	2	0
34	M	5*	4	2	1	2	1
35	M	1	6*	5	--	1	1
36	M	--	5	7*	--	1	2
37	M	--	10*	2	--	1	6
38	M	1	7*	4	--	1	10
39	M	1	7*	4	--	1	8
40	M	1	9*	1	1	0	12
41	M	6*	5	1	--	1	-8
42	M	3	7*	2	--	2	5
43	M	--	5	7*	--	1	9
44	M	1	8*	2	1	1	14
45	M	1	7*	4	--	1	10
46	M	1	8*	3	--	1	9
47	M	--	6*	4	2	2	11
48	M	3	5*	4	--	2	3

*Primary Leadership Style

DATA FOR SOCIAL SCIENCE GRADUATE STUDENTS

No.	Sex	Leadership Style S1	S2	S3	S4	Style Range	Style Adaptability
1	F	1	4	7*	--	1	14
2	F	4	5*	3	--	2	8
3	F	2	7*	3	--	2	14
4	F	2	7*	3	--	2	11
5	F	1	5	6*	--	1	12
6	F	2	4*	3	3	3	14
7	F	1	4	6*	1	1	19
8	F	4*	3	3	2	3	11
9	F	1	--	--	11*	0	0
10	F	2	6*	2	2	3	17
11	F	3	3	6*	--	2	6
12	F	2	3	5*	2	3	17
13	F	--	2	9*	1	1	13
14	F	3	3	4*	2	3	13
15	F	3	2	5*	2	3	10
16	F	3	5*	4	--	2	11
17	F	1	7*	3	1	1	17
18	F	2	5*	4	1	2	13
19	F	2	7*	3	--	2	11
20	F	1	5*	3	3	2	12
21	F	2	7*	3	--	2	8
22	F	2	3	3*	1	2	-2
23	M	2	6*	4	--	2	8
24	M	--	5	7*	--	1	13
25	M	3	5*	4	--	2	9
26	M	2	5*	3	2	3	10
27	M	2	8*	--	2	2	6
28	M	4*	3	3	2	3	-7
29	M	3	5*	4	--	2	14
30	M	1	--	3	8*	1	5
31	M	--	2	9*	1	1	7
32	M	--	6*	3	3	2	9
33	M	2	7*	2	1	2	2
34	M	--	4	7*	1	1	9
35	M	3	5*	4	--	2	7
36	M	2	4	5*	1	2	15
37	M	1	4	5*	2	2	15
38	M	4	2	5*	1	2	10
39	M	3	3	5*	1	2	9
40	M	3	4	5*	--	2	7
41	M	3	5*	2	2	3	13
42	M	1	2	9*	--	1	10
43	M	2	6*	4	--	2	9
44	M	2	2	3	5*	3	13
45	M	2	4*	3	3	3	14
46	M	2	4*	3	3	3	14
47	M	3	3	5*	1	2	13
48	M	4	6*	2	--	2	12

*Primary Leadership Style

APPENDIX F

INCIDENTAL SAMPLES

Incidental Samples

The term incidental samples is applied to those samples which are taken because they are the most available. Many psychological studies have been made with utilization of students of beginning psychology as the samples merely because they are most convenient. Results thus obtained can be generalized beyond such groups with some risk.

Generalization beyond any sample can be made safely only when we have defined the population that the sample represents in every significant respect. If we know the significant properties of the incidental sample well enough and can show that those properties apply to new individuals, those new individuals may be said to belong to the same population as the members of the sample. By significant properties is meant those variables which correlate with the experimental variables involved. They are the kind of properties considered above in connection with stratification of samples. It is unlikely that membership in a political party would have much bearing upon the results of certain experiments performed upon sophomores in a beginning psychology course, but such variables as age, education, social background, and the like may definitely be pertinent.

SOURCE: Guilford, J. P., & Fruchter, B. Fundamental Statistics in Psychology and Education (5th ed.). New York: McGraw-Hill, 1973.

APPENDIX G

LETTERS

March 25, 1982

Dear Professor:

The design of my dissertation study calls for the drawing of samples from social science graduate students and applied science graduate students enrolled in graduate courses in these areas of study for the spring semester of 1982.

I would like to administer a demographic questionnaire and one instrument to graduate students enrolled in one of the graduate courses that you teach.

May I use 30 minutes of your regular class time to administer the package of instruments? The data generated by each subject will be used for research purposes only. The data will be published in my dissertation.

My major professor is Dr. Jack Parker, professor of General Administration in the OU College of Education.

Thank you for your cooperation.

Sincerely yours,

Mohammed Ali Saber
Dissertation Student
Area of General Administration

March-May 1982

Dear Fellow Graduate Student:

I am conducting a dissertation study on leadership styles of graduate students who are enrolled in social science areas graduate courses and in applied science areas graduate courses in the University of Oklahoma for the spring semester of 1982.

Since you are a member of one of the two groups delineated above, I would be grateful for your participation in the study. I am requesting that you respond to the demographic information sheet and LEAD-self instruments in this package. Although there is no time limit, the whole process should take about 15 minutes.

Should you be interested in looking at the results of the study, I would be pleased to discuss them with you.

The data generated by you will be used for research purposes only. The information and results of your individual leadership styles will be reported in my dissertation, and shall be destroyed upon completion of the study and approval of the dissertation.

To assure the anonymity of participants in the study, an individual participant shall not be identified by name, but only will be identified by sex, major, and individual college.

The results should be completed and interpreted by May 14, 1982. I may be reached at my home telephone number - (405) 360-3637.

Thank you for your investment of time and energy in the study.

Sincerely yours,

Mohammed Ali Saber
Dissertation Student
Area of General Administration
OU College of Education

APPENDIX H

ABSTRACT

Abstract

The purpose of the study was to investigate the relationship between leadership styles and graduate academic majors. The theoretical framework of the study was Hersey and Blanchards' Situational Leadership Theory.

The populations from which the samples were drawn consisted of graduate students who were majoring in the areas of applied sciences and in the areas of social sciences, at the University of Oklahoma, during the spring semester of 1982. The 96 respondents consisted of 48 applied science graduate students (15 females; 33 males) and 48 social science graduate students (22 females; 26 males).

The Leader Effectiveness and Adaptability Description (LEAD-Self) developed by Hersey and Blanchard was used to measure the leader style, style range, and style adaptability. The Demographic Information Questionnaire developed by the investigator was used for the purpose of defining and describing respondents who participated in the study.

A number of null hypotheses were developed for the purpose of investigating the problem. Three statistical tests were performed: the chi-square, analysis of variance, and the Pearson correlation coefficient. Two null hypothesis could not be rejected.

Major conclusions which were supported by the results of this research were that there are statistically significant differences between leadership styles, style range (flexibility), and style adaptability (effectiveness) of applied science graduate students and social science graduate

students. The facts that the social science graduate students achieved higher scores on style range and style adaptability, and that they were more inclined toward participating as a leadership style than were applied science graduate students, reinforce the following general conclusion: social science majors are probably more relationship-oriented than are applied science majors. This may suggest the need for applied science majors who aspire to administrative positions to become involved in appropriate training programs designed to help them perform more adequately in administrative positions.