To the Graduate Council:

I am submitting herewith a dissertation written by Jan D. Buxton entitled "Accuracy of Principals' Predicted Ranks of Teacher Motivational Factors as a Function of Principals' Leadership Behaviors." I have examined the final copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Education, with a major in Educational Administration and Supervision.

Dewey H. Stollar, Major Professor

We have read this dissertation
and recommend its acceptance:

Accepted for the Council:

Vice Provost and
Dean of the Graduate School

ACCURACY OF PRINCIPALS' PREDICTED RANKS OF TEACHER MOTIVATIONAL FACTORS AS A FUNCTION OF PRINCIPALS' LEADERSHIP BEHAVIORS

A Dissertation

Presented for the

Doctor of Education

Degree

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Jan D. Buxton

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ABSTRACT

The investigation was undertaken to determine whether principals' accuracy in predicting teachers' rankings of motivational factors was related to principals' observed leadership behaviors. It was hypothesized that principals making more accurate predictions would score higher on the twelve leadership dimensions as measured by the Modified Leadership Behavior Description Questionnaire-XII. The study also examined differences in the observed leadership behaviors as measured by the LBDQ-XII among elementary, middle-junior high, and high school principals. In addition, motivational factors of teachers were examined using the Job Factor Ranking Instrument (JFR) which was based upon the Herzberg Motivation-Hygiene premise. Respondents included principals and teachers in 216 public schools located in 71 school districts in Tennessee.

Specific findings of this investigation were:

1. Fifty-two percent of sample public school principals predicted more accurately than others the factors that were important to their respective faculties.

2. However, there is no specified relationship between principals' ability to predict accurately and their observed leadership behaviors as measured by the JFR and LBDQ-XII instruments.

3. There are significant differences in leadership behaviors (as perceived by teachers) among principal groups:

a. Elementary school principals are significantly more tolerant of uncertainty than are high school principals.

b. Middle/junior high school principals are also significantly more tolerant of uncertainty than are high school principals.

c. Middle/junior high school principals are significantly more tolerant of freedom than both elementary and high school principals.

d. Elementary school principals are significantly more considerate than high school principals.

e. High school principals are significantly more production emphasizing than elementary and middle/junior high school principals.

4. Teachers ranked the following job factors as important:

a. Achievement or accomplishment in present position,

b. Adequate salary and benefits,

c. The work itself,

d. Satisfactory working conditions, and

e. Competent, fair building level principals and supervisors.

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CHAPTER I

INTRODUCTION

Background of the Study

Leadership and the Work Group

As early as the 1800s, research was being conducted to discern if certain personal traits were the necessary key to understanding organizational leadership effectiveness. Characteristics such as leader height, weight, intelligence, self-confidence, control and others were examined by researchers. By 1974, however, Stogdill had concluded that there was not sufficient evidence unequivocally linking personal traits to leadership behaviors.[1] Leader behavior was obviously more complex than originally believed.

Turning from a specific focus solely on the individual leader descriptions, scientific investigators began to view the leadership phenomenon as an interactive process. The work group, as differentiated from other collections of individuals, was described as having three main characteristics. First, group members must be interdependent, and, second, they must receive certain amounts of satisfaction from belonging to the group. Third, the group must have shared goals.[2]

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[1] R. M. Stogdill, Handbook of Leadership: A Survey of Theory and Research (New York: The Free Press, 1981), p. 72.

[2] R. G. Owens, Organizational Behavior in Education (Englewood Cliffs, New Jersey: Prentice-Hall, 1981), pp. 147-148.

Bass maintained that if groups having the above characteristics did not exist, then there would be no leaders. Leadership entails more than merely holding legitimate authority in the group. Leadership is exercised, according to Burns, "when persons with certain purposes mobilize . . . resources so as to arouse, engage, and satisfy the motives of followers."[3] Cartwright and Zander concurred in Burns' definition, contending that the leadership role is that of achieving specific group goals, and the "maintenance and strengthening of the group itself."[4]

Similar to the above definition, the two dimensions of leader behavior first categorized by the Ohio State Leadership Studies were "initiating structure" and "consideration." Initiating structure entailed letting followers know what to expect from tasks and situations within the organization. Consideration was the degree to which the leader looked out for the welfare of subordinates. Those leaders who scored high in both dimensions were said to promote high degrees of follower satisfaction.[5]

After review of empirical research in this area, Sergiovanni found a consensus among researchers on one point. "Ideal leaders"

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[3]J. M. Burns, Leadership (New York: Harper and Row, 1978), p. 18.

[4]D. Cartwright and A. Zander, "Leadership and Group Peformance," Group Dynamics and Theory (Evanston, Illinois: Row, Peterson and Company, 1960), pp. 492-496. In Owens, op. cit., p. 151.

[5]A. W. Halpin, "The Leader Behavior and Leadership Ideology of Educational Administrators and Aircraft Commanders," Leader Behavior, Vol. 25.1 (Winter 1955), p. 18.

were described as scoring high on both dimensions of the Leadership Behavior Description Questionnaire, as developed by Halpin and Coons. This type of leader was believed to be the most effective in accomplishing goals of the group. These findings are consistent with those of Blake and Mouton, who described the leadership behavior dimensions "concern for people" and "concern for production" on their 81-celled grid.[6]

Other prominent researchers considered these two major dimensions, yet began to look for evidence of effectiveness in other areas. Gates, Blanchard, and Hershey developed their "Situational Leadership Theory" with a focus on the "maturity level" of the followers. Essentially, its emphasis was that as a follower becomes more skillful with the task, or more "mature," the superordinate will decrease his high relationship behaviors.[7] Likewise, other contingency theories have been developed in the effort to define effectiveness more clearly. Fred Fiedler contended that neither the "considerate" leader nor the "structuring" leader is consistently more effective.[8] Results of his research with school personnel indicated that the behavior of

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[6]T. J. Sergiovanni and F. Carver, The New School Executive: A Theory of Administration (New York: Dodd, Mead and Company, 1973), p. 203.

[7]P. E. Gates, K. H. Blanchard, and P. Hersey, "Diagnosing Educational Leadership Problems: A Situational Approach," Educational Leadership, Vol. 33 (February 1976), p. 349.

[8]F. E. Fiedler, "The Leadership Game: Matching the Man to the Situation," Organizational Dynamics, ANACOM (Winter 1976), Chapter 16.

experienced administrators indeed did vary greatly according to the situations in which they found themselves.[9] Morse and Lorsch held in their contingency theory that the most productive organization is one which meshes the workers' needs with the particular situation.[10] Tannenbaum and Schmidt posited that the manager alone could not be considered solely in the organization. The characteristics of the subordinate, manager, and situation, they maintained, were simultaneously significant.[11]

Activity within the group is an important aspect. Wiles and Lovell defined leadership as "behavior on the part of the individual which influences the behavior of other individuals."[12] Nadler, Hackman, and Lawler described leadership as that delicate balance of dependency within the organization. Subordinates are dependent upon the leader for certain rewards and the leader is dependent upon the followers to do as he asks.[13]

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[9]Ibid., Chapter 16.

[10]J. J. Morse and J. W. Lorsch, "Beyond Theory Y," Harvard Business Review (May-June 1970), p. 61.

[11]R. Tannenbaum and W. H. Schmidt, "How to Choose a Leadership Pattern," Harvard Business Review, Vol. 36 (1958) pp. 95-101.

[12]K. Wiles and J. T. Lovell, Supervision for Better Schools (Englewood Cliffs, New Jersey: Prentice Hall, Inc., 1975), p. 64.

[13]D. A. Nadler, J. R. Hackman, and E. E. Lawler III, Managing Organizational Behavior (Boston: Little Brown and Company, 1979), pp. 163-164.

The Principal as a Leader

The role of the school principal can be traced to the mid-1800s according to Blumberg and Greenfield. Many of the responsibilities outlined at that time for the building-level administrator were both clerical and teaching in nature. Over the years, the role came to include general management of the organization within the community: care of children, care of buildings and grounds, and teacher supervision. The duties became more and more complex; and by the early 1900s, school boards and superintendents had come to expect principals both to manage the school functions and to provide instructional leadership.[14]

Roe and Drake described the principal's position as having dichotomous emphases today. One set of duties has an "administrative-managerial emphasis" and the other has an "educational leadership" thrust. They maintained that it is almost impossible for a modern principal to be commensurately effective in both roles. Far too often, it is the leadership emphasis "that most principals profess to dream about, but can't achieve."[15] Roe and Drake found that principals were unclear about their roles. Most of them wanted to be

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[14] A. Blumberg and W. Greenfield, The Effective Principal: Perspectives on School Leadership (Boston: Allyn and Bacon, Inc., 1982), pp. 10-13.

[15] W. H. Roe and T. L. Drake, The Principalship (New York: Macmillan and Company, 1974), p. 13.

effective instructional leaders but were aware of their own lack of knowledge and skill in this area.[16]

In recent years much investigation has been conducted to determine what makes some schools more effective than others. Edmonds of Harvard isolated five characteristics, which are indicative of all schools in which children consistently perform better academically. At the top of his list is the item: "Principals who are active leaders."[17] The schools' climate and leadership act to support the "teacher behaviors of planning, classroom management and instruction that, in turn, foster student success."[18] D. Squires and his associates, after extensive review of the research to date, have been able to classify specifically those behaviors which are exhibited by the leaders of effective schools.[19]

Leader Perception

There is still a tremendous amount of pressure on school leaders to "keep the ship running smoothly on a daily basis."[20] Nevertheless, as new research shows, there are those individuals who have

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[16]Ibid., p. 14.

[17]D. A. Williams and E. Gelman, "Hope for the Schools," Newsweek (May 4, 1981), p. 66.

[18]D. A. Squires, W. G. Huitt, and J. K. Segars, Effective Schools and Classrooms: A Research-Based Perspective (Alexandria, Virginia: ASCD, 1983), p. 46.

[19]Ibid., p. 46.

[20]Blumberg and Greenfield, op. cit., p 24.

succeeded in school management practices yet who also fulfill a leadership function in their schools. Blumberg and Greenfield isolated five specific behaviors of the exceptional principals in their two-year study. One of those five characteristics they cited was the sensitivity level of the principals. All of those considered to be exceptional principals were found to be "good listeners and observers," who were "highly sensitive to what was occurring both in and around their schools."[21]

Bennis has written about the common thread of leadership. He contended that all organizational leaders--regardless of the type of organization--face the same problems. The amount of control the leader holds and the complexity of problems faced may be different, but it is ever important to distinguish "true leadership" from "mere management."[22] Sergiovanni, in speaking of the educational organization, would likely concur. He posited that, while many contributing factors (such as student populations served, staff selection, and often educational materials) cannot be controlled, the nature and quality of leadership certainly can be improved.[23]

Many prominent researchers agree that improving leader perception or sensitivity is a good place to start. Three basic skills

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[21] Ibid., pp. 256-257.

[22] W. Bennis, The Unconscious Conspiracy: Why Leaders Can't Lead (New York: ANACOM, 1976), p. viii.

[23] T. J. Sergiovanni and F. Carver, "Leadership and Organizational Behavior," Notre Dame Journal of Education (Spring 1973), p. 16.

were described by Katz--conceptual, technical, and human--as necessary for leader effectiveness. Human skill, according to Katz, is the manner in which the leader "perceives (and recognizes the perceptions of) his superiors, equals, and subordinates" and how he behaves as a result of his perceptions.[24]

In the 1930s, researchers listed the perceptive ability of leaders as an important quality. Investigations by Guilford indicated that how well as individual "studies the motives of others" helped to measure his intellectual leadership.[25] Later study results suggested that an "alertness to the surrounding environment and understanding of situations" are crucial to leadership ability.[26]

D. Bolton described this heightened leader perception as the quality of "discernment." The ability to be aware of various forces that impinge on the operation of the organization is a prerequisite for the good manager.[27] Tannenbaum and Schmidt described this attribute in terms of the effective leader:

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[24]R. L. Katz, "Skills of an Effective Administrator," Personnel Journal (June 1971), pp. 91-92.

[25]J. P. Guilford and R. B. Guilford, "Personality Factors D, R, T, and A," Journal of Abnormal Social Psychology (1938), 34, pp. 21-36. In B. Bass, Stogdill's Handbook of Leadership (Revised and Expanded Edition) (New York: The Free Press, 1981), p. 53.

[26]See footnote 63 of this document.

[27]D. Bolton, Evaluating Administrative Personnel in School Systems (New York: Teachers College Press, 1980), pp. 12-13.

> He accurately understands himself, the individuals and group he is dealing with and the company and broader social environment in which he operates. And certainly, he is able to assess the present readiness for growth of his subordinates.[28]

Just how accurately leaders are able actually to assess this "readiness for growth" in their workers, however, has been difficult to measure.

In the public school setting researchers have begun to assess the accuracy of leader perception of subordinate desires. Johnson found a difference between what factors school superintendents felt their principals thought were important in their work lives and what the principals actually listed as prime motivating factors.[29] Teachers in another sample ranked those job factors most important to them. When compared to the factor rankings their principals perceived as important to their teachers, it was found that most principal perceptions were not entirely accurate.[30]

Motivation in the Work Group

Motivation is a complex internal state defined in various ways. Although it is not thoroughly understood, a great deal of research

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[28] Ibid., p. 13.

[29] J. E. Johnson, "An Investigation of the Accessibility and Importance of Herzberg's Motivation and Hygiene Faxtors as Perceived by Principals and Superintendents." Unpublished Doctor of Education Dissertation, Northern Illinois University, 1975, p. 94.

[30] C. E. Roberts, "Principal Leadership Characteristics as Predictors of Teacher Job Motivation Factors." Unpublished Doctor of Education Dissertation, University of Northern Colorado, 1977, pp. 98-99.

has been conducted in this sphere. In the work setting, motivation is defined as the "will to do" within the individual worker. Hersey and Blanchard describe behavior as goal-oriented. They discussed the goals which may prove motivating to employees as well as the manners in which goal-achievement is undertaken.[31] Other investigators have chosen to study motivation in terms of "what" motivates and "how" motivation occurs.

Lawler described equity, discrepancy, and dissonance theories as falling into the category of process theories. In each of these, the individual worker makes comparisons within the organizational context. Individual satisfaction depends to a large extent upon how the worker compares his efforts to those of others in the work group.[32]

Nadler, Hackman, and Lawler reported that man's behavior is a joint function of the degree to which certain behaviors are perceived as instrumental for the attainment of some outcomes. In expectancy theory, the individual worker evaluates the outcomes in relation to his desires and he then chooses the behavior which he perceives to have the highest anticipated payoff for himself.[33] Their research in this area focused on the prediction of a worker's anticipated

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[31] P. Hersey and K. H. Blanchard, Management of Organizational Behavior: Utilizing Human Resources (Englewood Cliffs, New Jersey: Prentice Hall, 1977), Chapter 2.

[32] E. E. Lawler, "Motivation in Work Organizations." In W. C. Hamner and F. L. Schmidt (Eds.), Contemporary Problems in Personnel (Chicago: St. Clair Press, 1977), pp. 352-361.

[33] Nadler, Hackman, and Lawler, Managing Organizational Behavior, op. cit., pp. 31-33.

satisfaction with an outcome, or valence, and on assessing the individual's motivational force prompting his behavior.[34]

Of the content theories, several appear most frequently in the literature. According to Maslow, human needs can be arranged into a hierarchy. His model develops from human needs for physiological requirements and progresses to security, then to social affiliation, esteem, and finally, self-actualization needs. That need (or set of needs) which is unfulfilled will have prepotency over higher level needs until satisfaction is met in some manner at the present level. All needs are seen as potentially motivating.[35]

White, Gellerman, and McClelland saw the need for achievement as more pronounced in certain individuals. Accomplishment is of supreme importance in these persons. Through his research, McClelland identified characteristics found in certain "achievement-motivated" persons.[36]

In his research in the late fifties, Herzberg isolated factors which caused worker satisfaction and dissatisfaction. Today, Herzberg's perspective is presented in almost all discussions of content motivation theories. His factor listings are included in a great number of job satisfaction studies.[37]

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[34]Ibid., pp. 31-33.

[35]Owens, op. cit., pp. 111-114.

[36]D. McClelland, The Self-Motivated Achiever (Rockville, Maryland) (30-minute video). T. J. Sergiovanni and R. Staratt, Supervision: Human Perspectives (New York: McGraw Hill, 1979), pp. 151-159.

[37]F. Herzberg, B. Mausner, and B. Snyderman, The Motivation to Work (New York: John Wiley and Sons, Inc., 1959), pp. 44-49.

Essentially, Herzberg found that certain factors, which he called "motivators," seemed to determine whether or not a worker was satisfied on the job. Those motivators were intrinsic in nature and were related to the job itself, he posited.

Other factors seemed to determine whether or not an individual was dissatisfied on the job. These "hygiene" or "maintenance" factors, as Herzberg termed them, related to the context of the job. In order to be stimulated to greater effectiveness or productivity in their work, Herzberg contended, workers must have access to higher level rewards. Hygiene factors could serve to neutralize dissatisfaction, but they could not serve to motivate.[38]

A number of other studies have replicated Herzberg's original investigation. One estimate is that more than thirty studies have been done in the educational setting alone.[39]

Lortie formed an hierarchical arrangement of rewards sought by teachers, similar in some respects to Herzberg's studies. Seventy-six percent of the teachers in his sample valued most highly working with young people, helping others learn, and other factors resembling Herzberg's motivators.[40] In her investigation among women in

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[38]F. Herzberg, Work and the Nature of Man (Cleveland: The World Publishing Company, 1966), pp. 75-76.

[39]J. A. Medved, "An Investigation Into the Applicability of Herzberg's Motivation-Hygiene Theory to Public School Education." Unpublished Ph. D. Dissertation, Ohio University, 1971.

[40]E. L. Boyer, High School: A Report on Secondary Education in America (New York: Harper and Row Publishers, 1983), pp. 161-162.

administration in higher education institutions, Haun's findings showed that respondents classified "motivators" as factors they desired most often from their jobs.[41]

There is an enlarging body of research, then, pointing to the fact that those charged with supervision may have mistaken what items really make a difference to teachers. Those factors which attract and keep teachers on the job evidently are not the same factors which "motivate them to work in extraordinary ways."[42]

Summary

Several salient ideas can be drawn from the above background material. First of all, leadership depends to a great extent upon the group; a balance must be struck between leaders and their followers. An accurate assessment by the leader of what subordinates desire is necessary for effective leadership in all organizations, including the educational one. The assumptions made by the leader concerning his subordinates impact upon their satisfaction. It is because of the extreme importance of these ideas--leader behavior, leader perceptions, and teacher motivation--to the success of our public schools--that this study was undertaken.

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[41] H. T. Haun, "A Study of Work Satisfaction and Dissatisfaction Among Selected Women Leaders in Higher Education." Unpublished Doctor of Education Dissertation, The University of Tennessee, Knoxville, 1975, p. 109.

[42] Sergiovanni and Carver, The New School Executive, op. cit., p. 69.

Statement of the Problem

> The problems confronting American schools are substantial; the resources available to them are in most instances severely limited; the stakes are high, and it is by no means preordained that all will go well for many of them in the end.[43]

As the above quote indicates, it is no secret that the educational establishment in this country continues to be under fire. Newspaper headlines center not infrequently around declining Scholastic Aptitude Test scores, poor quality in the reading and writing abilities of high school graduates, incompetents among those in the teacher ranks, and the general ineffectiveness of the school.[44] The widely-read National Commission on Excellence Report stated that public schools were a main cause of the decline of America's industrial might.[45]

At the same time, teacher unrest is well-documented. Local teacher groups are opting to air their complaints at the negotiating table and on the picket line. Although union representatives tend to seek extrinsic rewards from financially strapped local boards for their membership, there is some evidence that teachers want more than mere salary increases, additional paid holidays, and dental

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[43] J. Goodlad, A Place Called School (New York: McGraw-Hill, 1984), p. 1.

[44] J. B. Muller, "Educational Bankruptcy and the Hillsdale Vision," Imprimis, Vol. 11, No. 2 (November 1980), pp. 3-4.

[45] National Commission on Excellence, A Nation at Risk. A Report to the Nation and the Secretary of Education, U. S. Department of Education, April 1983.

insurance.[46] More investigation is needed to pinpoint precisely what things do make a difference to teachers.

We are faced with a public cry for improvement. Moreover, it is the principal who is usually seen as the key individual for effecting any educational improvements in the public school. Goodlad found in many schools he studied that there was a decided relationship between teacher satisfaction and strong leadership by the principal.[47] However, in other studies, he found few principals who possessed the necessary skills and attitudes to make strong leaders.[48] A closer examination of both the behaviors of school leaders in the educational organization, i.e., principals and factors of importance to teachers, was believed to be thus warranted.

Purpose of the Study

The major purpose of this study was to investigate the possibility of a relationship between principals' leadership characteristics, as perceived by teachers, and the principals' perception of what things motivate teachers. Job motivation factors of teachers were examined. Additionally, differences in leadership behavior

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[46] T. J. Sergiovanni, "Factors which Affect Satisfaction and Dissatisfaction of Teachers," The Journal of Educational Administration, V (May 1967), pp. 667-682.

[47] Goodlad, op. cit., p. 174.

[48] Ibid., p. 306.

characteristics among elementary, middle/junior high, and high school principal groups were studied. This investigation was not intended to replicate the original Herzberg procedure or to test the Herzberg theory per se.

Need for the Study

Bernard Bass wrote that because the underpinnings of any sound theory include the idea that it is the leader who helps fulfill group needs, it would seem obvious that the more effective leader also would be the more perceptive or empathic one. However, he stated that more research designs are needed to determine if there is a relationship between leadership and empathy, as the findings are presently inconclusive.[49]

Educators should be interested in the knowledge that motivation factors can be assessed with a degree of validity. By more accurately determining what is most important to teachers, sources of dissatisfaction may be erased in the workplace. Also, factors which teachers find motivating may be fostered.

The idea of keeping employees happy should be of importance to boards of education as they seek to expend local tax dollars in the most equitable fashion through negotiations with educators. The information derived may show, as previous studies have, that there

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[49]Bass, Stogdill's Handbook of Leadership, op. cit., p. 118.

may be less expensive ways of enhancing teacher morale than those presently used.

Of further importance to building-level administrators should be that their own behavior, as perceived by their teachers, can be assessed with a degree of specificity through the LBDQ-XII.[50] Additionally, the preponderance of leadership studies in the educational milieu have occurred in the elementary school. This investigation includes a frequently-forgotten area--the high school.

During the last year, thirty-three states initiated studies of differential pay scales as a motivational force for public school teachers. Sixteen states recently approved tax increases, some including proposals for teacher incentive pay. Currently, seven state legislatures have been considering or have passed similar tax enactments.[51]

Addressed in Tennessee's Educational Reform Act are provisions for both extrinsic rewards (salary and fringe benefits, additional teaching materials, teacher aides, et cetera) and for intrinsic rewards (added responsibility, achievement, recognition).[52] These would seem to correlate with those factors in the Dual Continuum

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[50] R. M. Stogdill, Manual for Leadership Behavior Description Questionnaire--Form XII (Columbus, Ohio: Ohio Bureau of Business Research, 1963), p. 3.

[51] S. Walton, "State Reform Efforts Increase as Focus of Issue Shifts," Education Week, Vol. 3, No. 13 (December 7, 1983), p.5.

[52] Tennessee Comprehensive Education Reform Act, Senate Bill 1, Public Chapter No. 7. Enacted March 6, 1984.

model outlined earlier. This examination of what specifically serves to motivate Tennessee's classroom teachers will help to refine any forthcoming training programs for education leaders resulting from this legislation.

In view of the statewide and nationwide shifts in educational climate, it seems useful that a study of this nature be conducted.

Assumptions

Basic to this investigation, the following assumptions were made:

1. The Leadership Behavior Description Questionnaire-XII provides a valid and reliable assessment of principal performance.

2. The job attitude factors identified by Herzberg, Mausner, and Snyderman provide a valid and reliable instrument for ranking items which are important to teachers.

3. The position of public school principal is a leadership position.

4. Respondents understood the questions posed, the data requested, and reported information with honesty.

Limitation and Delimitations of the Study

Limitation

The study was limited by the quality of the perceptions of the principals and teachers who completed the instruments.

Delimitations

1. The study was delimited to certified public school teachers in Tennessee listed with the Tennessee Department of Education whose teaching responsibilities included kindergarten, grades one through twelve, non-graded, Title I, or special education classes. Guidance counselors and librarians were also included.

2. The study was delimited to school principals, including teaching principals who supervise four or more teachers.

3. The study was delimited to the twelve dimensions of leadership behavior measured by the LBDQ-XII instrument.

4. The study was delimited to the fourteen factors (motivators and hygiene factors) determined by Herzberg and his associates as the most important determinants of job attitudes.

5. The study was delimited to principals' perceptions of factors which are important to their respective teachers.

6. The study was delimited to teachers' perceptions of their respective principals' leadership behaviors.

Definition of Terms

The following terms were defined for use in the study.

Extrinsic Job Factors

Those factors which concern the work environment are sometimes called "extrinsic" or hygiene factors.

Hygiene Factors (Also Known as Dissatisfiers, Maintenance, and Preventive Factors)[53]

Seven job context factors were identified through Frederick Herzberg's study as items which, if not present in correct amounts, will give rise to employee dissatisfaction. They are as follows.

Company policy and administration. Personnel policies, school policies, overall school management, and quality of the organizational administration are included in this term.

Interpersonal relations. Interpersonal relations entail interactions with peers, superiors, and subordinates in the workplace.

Job security. Job security is the likelihood of continued employment in the present position and tenure.

Salary and benefits. Salary and benefits includes monetary compensation and those supplementary items provided workers to which a monetary value can be affixed.

Status. Status entails the employee's being accorded privileges, such as eating away from the work area property, having access to secretarial help, and other special privileges.

Supervision. Supervision is defined as the quality, competence, and fairness of the individuals who supervise employees in the workplace.

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[53]F. Herzberg, "Motivation-Hygiene Profiles: Pinpointing What Ails the Organization," Organizational Dynamics, Vol. 3:2 (Autumn 1974), pp. 18-19.

Working conditions. The physical conditions of the workplace such as available space, ventilation, lighting, adequate work materials, equipment, et cetera, are included.

Intrinsic Job Factors

Those factors which relate to completing the work itself are called "intrinsics" or motivators.

JFR

This is an acronym for the Job Factor Ranking instrument devised for ranking items of importance to teachers. Principal JFR's were those instruments completed by principals; Teacher JFR's were those instruments completed by individual teachers.

Leader Behavior

The behavior on the part of one individual which influences the behavior of other individuals is entailed in this term.

LBDQ

This is an acronym for the Leadership Behavior Description Questionnaire-XII, as devised by John R. Hemphill and Alvin E. Coons, and revised by Andrew Halpin and Ralph Stogdill. Twelve dimensions of leadership behavior are measured by the instrument and are described as follows (presented in the order of instrument assessment).[54]

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[54] Stogdill, Manual for Leadership Behavior Description Questionnaire- Form XII, op. cit., p. 3.

Representation. Representation is the ability of leaders to speak and to act as spokesmen for subordinates.

Demand reconciliation. Demand reconciliation is the ability of leaders to bring conflicting demands into accord and reduce disorder.

Tolerance of uncertainty. Tolerance of uncertainty is the ability of leaders who are able to accept indefinite situations and to postpone action without anxiety or upset.

Persuasiveness. Persuasiveness is the ability of leaders to be convincing, to use arguments effectively, and to exhibit strong convictions.

Initiation of structure. Initiation of structure is the ability of leaders to clearly define their own roles and to inform subordinates of what is expected of them.

Tolerance of freedom. Tolerance of freedom is the ability of leaders to allow subordinates to exercise initiative, to make decisions, and to take action.

Role assumption. Role assumption is the ability of leaders to actively exercise the leadership role rather than to surrender leadership to others.

Consideration. Consideration is the ability of leaders to regard the comfort, well-being, status, and contributions of their subordinates.

Production emphasis. Production emphasis is the ability of leaders to apply pressure for increased output from their workers.

Predictive accuracy. Predictive accuracy is the ability of leaders to determine future situations, outcomes, and results.

Integration. Integration is the ability of leaders to maintain closely-knit organizations and to resolve inter-member conflicts.

Superior orientation. Superior-oriented leaders maintain cordial relations with superiors, have influence with superiors, and strive for higher status.

Motivation

This is a complex internal state which serves to stir individuals to action to accomplish desired goals.

Motivation Factors

Six job content factors identified through Frederick Herzberg's study as items important to employee motivation on the job, are as follows.[55]

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[55]Herzberg, "Motivation-Hygiene Profiles: Pinpointing What Ails the Organization," op. cit., pp. 18-19.

Achievement. Achievement entails the successful completion of a job, finding solutions to problems, and seeing the results of one's work.

Advancement. Advancement is an actual change in an employee's position to a higher one within the organization.

Possibility of growth. Possibility of growth is the likelihood that an employee would be able to rise upward in the organization, or would be able to refine his/her own professional skills.

Recognition. Recognition for work accomplishments entails acts of notice or praise from a supervisor, a peer, a colleague, or the public.

Responsibility. Responsibility is the authority vested in the individual for his/her own work, or for the work of other employees.

Work itself. The work itself entails actual performance of the job itself and the tasks which are associated with it.

Personal Life Factors

Classified by Herzberg, factors in personal life, such as family, hobbies, were found to be of importance to workers.

Principal

The professional school employee charged with the administrational and leadership duties at the local school is the principal.

This term does not include those in assistant principal, supervisory, or department head positions.

Teacher

The professional individual employed full-time at the local school building level who serves under the direction of a principal fits this description. Included are instructors holding a position for which the state requires certification in grades kindergarten through twelve, non-graded, special education, Title I classrooms, as well as guidance counselors and librarians.

Work Content

Work content refers to the work itself, the task being performed. While "the work itself," one of the prime motivators according to Herzberg, entails the main responsibility undertaken, "work content" usually refers to a broader array of related tasks.

Work Context

Work context refers to the environment in which the worker performs his job and the necessities which are required for his job performance.

Hypotheses

The main concern of this investigation was to determine if there is a relationship between the leadership behavior of public school principals in Tennessee, as perceived by their teachers, and the principals' ability to rank accurately teacher job motivation

factors. The following hypotheses were formulated to test the possible relationships at the .05 level of significance.

Principals who can predict most accurately the teacher ranking of motivational factors, as measured by the Job Factor Ranking instrument, will score higher on the twelve dimensions of the LBDQ-XII than will principals who are less accurate in predicting the teacher rankings.

The following twelve dimensions are representative of twelve hypotheses examined:

H_1 Representation

H_2 Demand Reconciliation

H_3 Tolerance of Uncertainty

H_4 Persuasiveness

H_5 Initiation of Structure

H_6 Tolerance of Freedom

H_7 Role Assumption

H_8 Consideration

H_9 Production Emphasis

H_{10} Predictive Accuracy

H_{11} Integration

H_{12} Superior Orientation.

Other specific questions to be answered by this study about Tennessee educators were as follows:

1. How accurately do principals predict the rankings of job factors which their teachers feel are important in their work?

2. Are there differences in leadership behaviors among elementary, middle/junior high, and high school principals, as perceived by their teachers?

3. What job factors are of greatest importance to teachers?

4. Are those job factors ranked as most important by teachers intrinsic versus extrinsic (a la Herzberg) in nature?

5. Are there differences in the importance placed on job factors among elementary, middle/junior high, and high school teachers?

Procedures

Through the use of an appropriate formula,[56] a sample size of 228 was obtained. Appendix A depicts the formula and those calculations. The sample was selected from an alphabetized master list of all public schools (kindergarten through grade twelve), including special education schools in the state. All pre-schools and schools with fewer than four teachers were excluded from selection. The schools remaining on the list were numbered consecutively. Using a table of random numbers, 228 were identified.

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[56] G. Gallup, The Sophisticated Poll Watchers Guide (New York: Holt, Rinehart and Winston, 1970), p. 68.

The chosen sample included schools situated in eighty different school districts in Tennessee. Superintendents representing 218 schools (of the 228 sample schools identified) agreed to participate in the study.

Two instruments were devised to test the hypothesis that principals who predict most accurately would be rated higher in leadership dimensions. Verification of the reliability and validity of both instruments is provided in a later section of this document. An instrument entitled "Job Factor Rankings" was prepared for sample principals and for teachers in the first teacher sample. The job factors listed in the instrument were those identified by Herzberg as satisfiers and dissatisfiers.[57] The Job Factor Ranking (JFR) was based on the instrument developed for research by Roberts.[58] The original instrument was a listing of thirteen factors. However, a broad phrase definition of each item was included on the JFR, as well as more detailed instructions for respondents. Additionally a fourteenth Herzberg item, "Factors in personal life," was included.

Principals in sample schools were asked to predict the rankings of job factors for five teachers under their supervision. The 1084 teachers in this sample (approximately five per school), as selected randomly from alphabetized school personnel rosters, were also asked to complete the JFR according to their own preferences. Principals' perceived rankings and individual teacher rankings were

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[57]Herzberg, Mausner and Snyderman, op. cit., p. 48.

[58]Roberts, op. cit., p. 111.

then analyzed through application of the Spearman formula to determine the degree of correlation for each pair.

A median rank of the correlations of the entire sample was identified. For those schools having two correlations, both correlations had to fall above the median rank for placement of the school's principal in the High Predictor Group. For those schools having three or more correlations, a majority of the correlations had to fall above the median rank in order for the school's principal to be placed in the High Predictor Group. All other principals (having a minimum of two correlations) were placed in the Low Predictor Group.

A modified version of the Leadership Behavior Description Questionnaire (LBDQ)-XII, as devised by Hemphill and Coons, was the instrument used to survey 2170 teachers in the second teacher sample. This teacher group was also selected randomly from alphabetized school rosters. The purpose of the questionnaire was to determine the leadership behaviors of principals, as perceived by teachers. Four returns per school were required for validity of the LBDQ-XII twelve subscale measurements.[59]

The leader behaviors of principals in both the High and Low Predictor Groups were then examined. A "t" distribution formula was applied to determine if the perceived leader behaviors of high predictor principals were significantly different from those behaviors of low predictor principals.

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[59]Stogdill, Manual for Leadership Behavior Description Questionnaire-XII, op. cit., p. 12.

The leader behaviors of three principal groups--elementary, middle/junior high, and high school--were subsequently examined. An analysis of variance test was applied to determine if significant differences existed among the group means on twelve subscale measurements. A more detailed description of the investigation procedures is presented in Chapter III.

Organization of the Study

Chapter I represents a statement of the problem to the studied, background information, the purpose and importance of the study. Also included are the assumptions, limitation, delimitations, a definition of terms relative to the investigation, the hypotheses, and a brief summary of the study procedures.

Chapter II presents a review of related literature and previous research into leader perception and insight as related to other leader behaviors, and human motivation in the work setting.

Chapter III presents a complete description of methods and procedures.

Chapter IV includes an analysis of the data and the data itself.

A summary of the investigation, as well as conclusions, implications, and recommendations are presented in Chapter V.

CHAPTER II

REVIEW OF RELATED LITERATURE

Leadership and motivation investigations which have been conducted through the years comprise a massive array of findings. Knowledge gleaned from these studies have contributed greatly as both researchers and managers have tried to better understand these complex concepts. Of course, not all findings are relevant to the study at hand.

The literature reviewed and presented below, therefore, includes references most germane to this investigation. An attempt was made to uncover any information and empirical data which described the links among leader perception, perceived leader behavior, and motivational leanings of workers within the organizational setting.

Leader Perception and the Trait Approach

The "Great Man" theory of leadership sprang, perhaps, from the fascination for those historical figures who rose to great heights amidst adversity. Stogdill reported that the topic sparked the interest of writers as early as 1841, with Carlyle's essay on heroes--those leaders who possessed "unique qualities that capture the imagination of the masses."[60] When asked to describe effective

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[60]Stogdill, Handbook of Leadership, op. cit., p. 17.

leadership, the personages of Gandhi, Roosevelt, and Churchill for example, often have come to mind.

It was this fixation upon great persons, then, which led other early investigators in attempts to isolate specific characteristics possessed by all effective leaders.[61] While many of these early studies met with mixed results, a total negation of the trait theory was not yet warranted. Indeed, several characteristics appeared routinely.[62]

The related variables of leader empathy, leader social insight and sensitivity, accuracy of perception, and other similar constructs have undergone empirical analysis through the years. Positive evidence from more than ten studies conducted prior to 1974 showed that "the average person who occupies a position of leadership exceeds the average member of his group to some degree in . . . alertness to, and insight into, situations . . . ."[63]

Bass reviewed and compiled a listing of those early studies which depicted a link between "alertness to the environment, ability

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[61]W. V. Bingham in H. C. Metcalf, The Psychological Foundations of Management (New York: Shaw Publishers, 1927); O. Tead, "The Techniques of Creative Leadership," in Human Nature and Management (New York: McGraw-Hill, 1929); C. E. Kilborne, "The Elements of Leadership," Journal of Coast Artillery (1935), Vol. 78, pp. 437-439. In Stogdill, Handbook of Leadership, op. cit., p. 17.

[62]Stogdill, Handbook of Leadership, op. cit., p. 62.

[63]Ibid., p. 62.

to size up situations" and leadership effectiveness.[64] Research by Bowden, Buttgereit, Crowley, Merriam and Gosnell, Carter, Haythorn, Meirowitz and Lanzetta showed that leaders evaluated situations well.[65] Bowden, Brogden and Thomas, Guilford and Guilford, Jennings and others determined that "insight into the motives, thoughts, feelings, and actions of others" characterized leaders.[66]

Further investigations helped confirm the leadership-empathy relationship. Included were those by Hatch, Smith, Cline and Richards, O'Conner, Shrauger and Altrocchi.[67] Mann, in his survey of fifteen

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[64]A. O. Bowden, "A Study of the Personality of Student Leaders in the United States," Journal of Abnormal Psychology (1926), XXI, pp. 149-160; H. Buttgereit, "Fuhrergestalten in der schulklass," Z. F. Angew. Psychology, 43 (1932), pp. 369-413; W. H. Cowley, "Traits of Face-to-Face Leaders," Journal of Abnormal Social Psychology, XXVI (1931), pp. 304-313; C. E. Merriam and H. E. Gosnell, The American Party System (New York: Macmillan, 1929); L. F. Carter, W. Haythorn, W. Meirowitz, and J. T. Lanzetta, "The Relation of Categorizations and Ratings in the Observation of Group Behavior," Human Relations (1951), IV, pp. 239-254. In Bass, Stogdill's Handbook of Leadership, op. cit., p. 114.

[65]A. O. Bowden, "A Study of the Personality of Student Leaders in the United States," op. cit., pp. 149-160. H. E. Brogden and W. F. Thomas, "The Primary Personality Traits in Personality Items Purporting to Measure Sociability," Journal of Psychology (1943), Vol. 16, pp. 85-97; J. P. Guilford and R. B. Guilford, "Personality Factors D, R, T, and A," Journal of Abnormal Social Psychology (1938), Vol. 34, pp. 21-36; H. H. Jennings, Leadership and Isolation (New York: Longmans Green, 1950). In Bass, Stogdill's Handbook of Leadership, op. cit., p. 114.

[66]Ibid., p. 114.

[67]R. S. Hatch, An Evaluation of Forced-Choice Differential Accuracy Approach to the Measurement of Supervisory Empathy (Englewood Cliffs, New Jersey: Prentice-Hall, 1962); H. C. Smith, Sensitivity to People (New York: McGraw-Hill, 1966); V. B. Cline and J. M. Richards, "Cline and Richards' Reply to O'Conner's Methodological Note," Journal of Abnormal Social Psychology (1963), Vol. 66,

research studies concluded that 74 percent yielded positive results.[68] Gallo and McClintock determined that leaders were more accurate than non-leaders in estimating their own esteem from other group members.[69]

However, in the late 1940s, Stogdill completed an extensive literature review of the trait identification studies. His published conclusion was negative,[70] as was that of Jenkins who had written one year earlier: "no single trait or group of characteristics has been isolated which sets off the leader from members of the group."[71] Bird's later review of twenty studies repeated the same message--a lack of confirmation.[72]

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pp. 195-195; S. Shrauger and J. Altrocchi, "The Personality of the Perceiver as a Factor in Person Perception," Psychological Bulletin (1964), Vol. 62, pp. 289-308. In Bass, Stogdill's Handbook of Leadership, op. cit., p. 114.

[68]R. D. Mann, "A Review of the Relationships Between Personality and Performance in Small Groups," Psychology Bulletin (1959), Vol. 56, pp. 241-270. In Bass, Stogdill's Handbook of Leadership, op. cit., p. 114.

[69]P. S. Gallo and C. G. McClintock, "Behavioral, Attitudinal, and Perceptual Differences Between Leaders and Non-Leaders in Situations of Group Support and Non-Support," Journal of Social Psychology (1962), Vol. 56, pp. 121-133. In Bass, Stogdill's Handbook of Leadership, op. cit., p. 114.

[70]Stogdill, Handbook of Leadership, op. cit., p. 72.

[71]W. O. Jenkins, "A Review of Leadership Studies with Particular Reference to Military Problems," Psychological Bulletin (1947), Vol. 44, pp. 54-79.

[72]J. C. Geirer, "A Trait Approach to the Study of Leadership in Small Groups," Journal of Communication (1957), Vol. XVII, pp. 316-323.

A Redirection

This rebuttal of the leadership trait premise led to a widespread redirection of the leadership research. "Leadership does not reside in the person," wrote Murphy. "It is a function of the whole situation."[73] For years, then, attention was to center on the situational and interactionist perspectives.

According to Newell, however, "studies [of this type] were too extreme . . . in their tendency to downgrade the importance of the personality and competencies of the leader."[74] Gibb also suggested that the total abandonment of trait investigations may have been premature.[75]

The notion of a leader insight or sensitivity trait did, in fact, persist in the literature although investigations did not focus on specific trait identification as before. By 1960, Bass had written:

> It is not enough for a leader to know how to get what followers want, or tell them how to get what they want. The leader must be able to know what followers want, when they want it . . . .[76]

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[73]A. J. Murphy, "A Study of the Leadership Process," American Sociological Review (1941), VI, p. 674.

[74]C. A. Newell, Human Behavior in Education Administration (Englewood Cliffs, New Jersey: Prentice-Hall, 1978), pp. 228-229.

[75]C. A. Gibb, "Leadership." In G. Lindzey and E. Aronson (Eds.), Handbook of Social Psychology (Reading, Massachusetts: Addison-Wesley, 1969).

[76]B. M. Bass, Leadership, Psychology, and Organizational Behavior (New York: Harper and Row, 1960), p. 167.

House and Mitchell also believed that a more complete understanding of influence in the organization could only be understood by closer examination of the forces mediating leader and subordinate behaviors.[77] House had theorized earlier that a leader affects follower behavior by understanding the motivational process itself. By learning what things are important to an individual subordinate, the leader can serve to influence his or her goal attainment.[78] Indeed, this assumption was part of the theory popularized by Nadler and Lawler, who asserted:

> Different people [in the organization] have different types of needs, desires, and goals. . . . These differences are not random; they can be examined systematically by an understanding of the differences in the strengths of individuals' needs.[79]

Further, much of the current leadership research has shown that one of the leader's prime functions is that of recognizing subordinates' needs over which the leader maintains some control.[80] One strand of psychological studies, moreover, has indicated that

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[77] R. House and T. Mitchell, "Path Goal Theory of Leadership," Journal of Contemporary Business (1974), 111:4, pp. 81-97.

[78] R. House, "A Path-Goal Theory of Leader Effectiveness," Administrative Science Quarterly (1971), XVI, p. 3.

[79] D. A. Nadler and E. E. Lawler, "Motivation: A Diagnostic Approach," in J. Hackman et al. (Eds.), Perspectives on Organizational Behavior (New York: McGraw-Hill, 1977), p. 111.

[80] K. E. Runyon, "Some Interactions Between Personality Variables and Management Styles," Journal of Applied Psychology (1973), 57:3, pp. 288-294. T. R. Mitchell, C. R. Smyser, and S. E. Weed, "Locus of Control: Supervision and Work Satisfaction," Academy of Management Journal (1975), XVIII, 3, pp. 623-630.

"sensitivity to the generalized other" is important in forming accurate perceptions about persons.[81]

Frank made two observations in his study of supervisors in seven organizations. Those leaders who felt that their roles required sensitivity to others perceived themselves also as sensitive. Second, those leaders who expressed the required sensitivity seemed to be more openly accepted by the group,[82] and therefore, perhaps, more effective in their leader roles.

Sgro et al. examined a possible connection between interpersonal trust and leadership behavior. A high degree of leader perception about subordinates was implicit in their trust definition. In some settings, it was found the presence of interpersonal trust was related to how subordinates rated their leader.[83]

Silver studied individuals' skill in perceiving the relevance of broadly diversified information to given problems or situations.[84] Streufert and Schroder referred to this trait as "cognitive

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[81] H. C. Triandis, Interpersonal Behavior (Monterey, California: Brooks/Cole Publishing Company, 1977), p. 109.

[82] E. J. Frank, "Cognitive Complexity and Leadership: The Effect of Perceptual Sensitivity on Leadership Success." Unpublished Doctoral Dissertation, Purdue University, Lafayette, Indiana, 1973. In Bass, Stogdill's Handbook of Leadership, op.cit. p. 111.

[83] J. Sgro, P. Worchel, E. Pence, and J. Orban, "Perceived Leader Behavior as a Function of the Leader's Interpersonal Trust Orientation," Academy of Management Journal (March 1980), XXIII:1, pp. 161-165.

[84] P. Silver, "Principals' Conceptual Ability in Relation to Situation and Behavior," Educational Administration Quarterly (Autumn XI:111, pp. 49-60.

complexity." Their definition includes the leader's ability to deal with varying amounts of abstract and concrete ideas concomitantly.[85]

Silver's research drew from the Streufert-Schroder proposition that different observable personality traits are displayed by the leader who perceives the environment through a highly complex orientation structure.[86] Using six of the LBDQ-XII subscales, she discovered a significant correlation between conceptual complexity and person-orientation.[87]

Although he did not characterize it as empathy per se, Fiedler, too, reported that managers must be able to discern "the degree to which the subordinates and superiors are supportive."[88] A clear assessment of the quality of relations between his followers and himself is the leader's most important task in determining situation favorableness.[89] His studies indicated that groups were more effective if the leader could distinguish accurately between members with whom he could work well and behaviors of group members with whom

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[85]S. Streufert and H. M. Schroder, "Conceptual Structure, Environmental Complexity, and Task Performance," Journal of Experimental Research in Personality (1965), pp. 132-137.

[86]Silver, op. cit., p. 56.

[87]Ibid., pp. 59-60.

[88]F. E. Fiedler, "The Leadership Game: Or Matching the Man to the Situation," Organizational Dynamics (Winter 1976), p. 59.

[89]Ibid., p. 59.

he could not work well.[90] Subsequent studies have uncovered a positive relationship between a leader's LPC score (as developed by Fiedler) and his cognitive complexity.[91]

Other major theorists have considered empathy or perception as a key leadership dimension. Reddin referred to a "relationship orientation" which is the "extent to which a manager is likely to have highly personal job relationships characterized by . . . "respect for subordinates' ideas and consideration of their feelings."[92] Hersey and Blanchard posited that the leader must be able to perceive the maturity level of the group in relation to the task at hand.[93] Halpin's findings related leader effectiveness with high consideration, including high person orientation.[94]

Several studies have examined the link of leader behavior to empathy through the use of the Leadership Behavior Description

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[90]F. E. Fiedler, A Theory of Leadership Effectiveness (New York: McGraw-Hill, 1967).

[91]T. R. Mitchell, "Leader Complexity and Leadership Style," Journal of Personality and Social Psychology (1970), XVI, pp. 166-174; P. Weissenberg and L. W. Gruenfield, "Relationships Among Dimensions and Cognitive Style," Journal of Applied Psychology (1966), 50, pp. 392-395.

[92]W. J. Reddin, "The 3-D Management Style Theory: A Typology Based on Task and Relationships Orientation," Training and Development Journal (April 1967), XXI, p. 161.

[93]Hersey and Blanchard, op. cit., Chapter 2.

[94]A. W. Halpin, Theory and Research in Administration (New York: The Macmillan Company, 1966), p. 111.

Questionnaire. Empathy was found to be significantly related to supervisor consideration scores by Fleishman and Salter, when supervisors predicted how subordinates would complete a self-description questionnaire.[95] Graham's research showed that high LPC leaders (as determined through Fiedler's instrument) were also perceived as being higher in both consideration and initiating structure.[96] Schroder, Driver, and Streufert indicated that LPC scores might be a measure of differences in leader perception of information.[97]

In his revision of the Leader Behavior Description Questionnaire, Stogdill felt it ncessary to add a "predictive accuracy" scale for ascertaining how well a leader predicts what lies ahead. He posited that the more effective leaders would be those scoring high in exhibiting foresight and in predicting outcomes, as well as in other dimensions.[98]

Problems with Predictive Measurements

The accuracy of leader insight has been gauged a number of times through employment of predictive devices. Leaders, and in

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[95]E. A. Fleishman and J. A. Salter, "Relation Between the Leader's Behavior and His Empathy Toward Subordinates," Journal of Industrial Psychology (1963), XIII, pp. 79-84. In Stogdill, Handbook of Leadership, op. cit., p. 135.

[96]G. A. Yukl, "Leader Personality and Situational Variables as Co-determinants of Leader Behavior," Dissertation Abstracts, XXIX, p. 406. In Stogdill, Handbook of Leadership, op. cit., p. 135.

[97]H. M. Schroder, M. J. Driver, and S. Streufert, Human Information Processing (New York: Holt, Rinehart and Winston, 1967), p. 134.

[98]Stogdill, Handbook of Leadership, op. cit., p. 143.

some cases group members, have been asked to predict the behavior and/or responses of cohorts.

Problems with predictive measurements of this genre have surfaced in the literature. Crow and Hammond maintained that accuracy in prediction depends on the perceiver's ability to stereotype.[99] Stogdill asserted that any accuracy might simply reflect group norm conformity rather than leader insight. Further, a correctness in predicting group response could be a measure of pure "calculation" on the leader's part.[100]

Leaders often misjudge others because they rely on their own experiences and assume others are like themselves.[101] Instead of accuracy in judging others, then, they are just adept at judging themselves.[102]

The work of Gage and Cronbach showed that familiarity (degree of acquaintance) with the ratee also affected rater accuracy of perception. Judges, too, differ in their abilities to observe and

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[99] W. J. Crow and K. B. Hammond, "The Generality of Accuracy and Response Sets in Interpretation of Interpersonal Perception," Journal of Abnormal and Social Psychology (1957), 54, pp. 384-390.

[100] Stogdill, Handbook of Leadership, op. cit., p. 105.

[101] D. C. Cartwright, "Achieving Change in People: Some Applications of Group Dynamics Theory," Human Relations (1951), IV, pp. 381-393.

[102] Triandis, op. cit., p. 109.

to make inferences.[103] Duncan suggested that a manager's tolerance for ambiguity affected his perceptual functioning.[104] Nadler et al. contended that leader decisions are often based on one or two information processing abilities.[105] Interviewers have tended to be poor predictors,[106] as have organizational managers,[107] and school principals.[108]

Triandis suggested that some of those methodologies testing accuracy of perception or predictive ability were generally unsophisticated.[109] Similarly, Gibb stated that most of the empirical measures used to isolate any predominant traits of effective leaders contained methodological flaws.[110] Silver noted that traits in early

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[103] N. Gage and L. Cronbach, "Conceptual and Methodological Problems in Interpersonal Perception," Psychological Review (1955), 62, pp. 411-422 in Triandis, op. cit., p. 108.

[104] R. D. Duncan, "Characteristics of Organizational Environments and Perceived Environmental Uncertainty," Administrative Science Quarterly (1972), XVII, pp. 313-327.

[105] Nadler et al., Managing Organizational Behavior, op. cit., pp. 33-34.

[106] W. F. Giles and S. Field, "Accuracy of Interviewer Perceptions of the Importance of Intrinsic and Extrinsic Job Characteristics to Male and Female Applicants," Academy of Management Journal (March 1982), pp. 148-157.

[107] K. R. Andrews, The Concept of Corporate Strategy (Homewood, Illinois: Dow Jones-Irwin, 1979).

[108] Roberts, op. cit., pp. 98-99.

[109] Triandis, Interpersonal Behavior, op. cit., p. 109.

[110] C. A. Gibb, "Leadership." In G. Lindzey and E. Aronson (Eds.), Handbook of Social Psychology, op. cit.

studies had been identified in specific task and group situations. The leader's ability to adapt his behavior to different situations, however, was not shown,[111] even when group and task rotation designs were used.[112] Stogdill, then, asserted, "there is a need for new research designs to provide a definitive test of the hypothesis."[113]

A Modern Perspective

Researchers in the 1980s have concurred with Stogdill, and contend that the inadequacy of earlier research and techniques have resulted in our inability to link personality traits, such as ability to make accurate predictions, to leadership behavior.[114] In 1981, Kenny determined that leadership was more "stable across situations" than previously believed.[115] His subsequent study with Zaccaro substantiated the stability of leadership emergences. However, no specific leader traits of behaviors were linked as causes of the stability.[116]

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[111]Silver, op. cit. , p. 55.

[112]D. C. Barnlund, "Consistency of Emergent Leadership in Groups with Changing Tasks and Members," Speech Monographs (1962), XXIX, pp. 45-52.

[113]Stogdill, Handbook of Leadership, op. cit., p. 105.

[114]D. A. Kenny and S. J. Zaccaro, "An Estimate of Variance Due to Traits in Leadership," Journal of Applied Psychology (1983), 68, p. 683.

[115]D. A. Kenny, "Interpersonal Perception: A Multivariate Round Robin Analysis." In Kenny and Zaccaro, op. cit., p. 683.

[116]Ibid., pp. 678-685.

Nevertheless, the authors suggested that stability can be linked to a leader-trait perspective and proposed that:

> Persons who are consistently cast in the leadership role possess the ability to perceive and predict variations in group situations and pattern their own approaches accordingly. Such leaders may be highly competent in reading the needs of their constituencies and altering their behavior to more effectively respond to these needs.[117]

Human Motivation

The Herzberg Premise

After considerable study in the field of human motivation in the work setting, Herzberg and his associates isolated important factors which later proved to comprise the basic tenet of a new motivation theory.[118] By 1958, Herzberg had immersed himself in a broad-based investigation of motivation using the critical-incident method.

During a series of individual interviews with accountants and engineers, workers detailed orally specific work incidents which made them feel satisfied and those which made them feel dissatisfied. Investigators found that one set of factors seemed to contribute to job satisfaction. They labeled these items as achievement, advancement, possibility of growth on the job, recognition, responsibility,

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[117] Ibid., p. 683.

[118] Herzberg et al., The Motivation to Work, op. cit., pp. 44-49.

and the work itself.[119] On the other hand, the latter set of factors included company policy and administration, job security, personal relations with supervisors and peers, status, supervision, and general working conditions.[120]

Herzberg maintained that, heretofore, the study of job attitudes had been "fragmentary." Earlier motivation research reflected sparse data about "the individuals concerned, their perceptions, their needs . . . ."[121] It was through the employment of this different methodology, then, that Herzberg uncovered this satisfaction-dissatisfaction duality.

Two distinct continua were said to exist. One cluster of factors was believed to operate independently to prevent dissatisfaction. The hygiene factors, as they were called because of their preventive nature, must be present in adequate supply, it was theorized, if individual unrest is to be avoided in the work setting. According to Herzberg, job dissatisfaction arises from work context, the surroundings in which the individual performs. The presence of these preventive factors does not guarantee, however, satisfaction. But their absence does distract the individual from work performance.

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[119] Ibid., p. 80.

[120] Ibid., p. 80.

[121] Ibid., p. 11.

Conversely, the second cluster of factors, the motivators, are concerned with the content of the work. Herzberg and his associates determined that it was attention to these particular factors which tended to increase effort on the job.[122]

By 1966, the complete Motivation-Hygiene model was presented.[123] Known also as the Motivation-Maintenance Theory, the Dual-Continuum Theory, the Satisfaction-Dissatisfaction Theory, and the Two-Factor Theory, the proposition proved to be a unique way of explaining the various factors which operate to keep the individual on the job. The Motivation to Work, in which the theory was discussed, was described as "an important step forward in our efforts to understand human motivation."[124] Years later, one writer asserted that probably no other motivation theory has ever been "more extensively researched and argued about more than this, and, in all likelihood, none has been as widely applied to complex organizations."[125]

Herzberg clearly stressed in his model that satisfaction and dissatisfaction are not opposites. Rather, the two aspects should be analyzed separately. The opposite of job satisfaction is no job

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[122]Ibid., p. 80.

[123]Herzberg, Work and the Nature of Man, op. cit., p. 76.

[124]M. Dunnette and W. Kirchner, Psychology Applied to Industry (New York: Appleton-Century Crofts, 1965), p. 148.

[125]Owens, op. cit., p. 120.

satisfaction. The opposite of job dissatisfaction is no job dissatisfaction. His opinion, as distinct from other theoretical positions, made no attempt to deal with overall worker satisfaction. Because his theory was not based upon one unified satisfaction continuum, Herzberg recognized early that it would be "a difficult concept [for many] to grasp."[126]

Similarity to Other Theories

Sergiovanni and Owens described the Motivation-Hygiene Theory as similar in thrust to the fulfillment of intrinsic and extrinsic needs. They asserted that the satisfiers, or motivators, are related to intrinsic feelings stimulated by the work itself. The dissatisfiers are related to extrinsics, the work environment. A similarity is mentioned by the same authors between Motivation-Hygiene and the Approach-Avoidance Theory. Dissatisfiers can be said to extinguish avoidance needs--"basic in an animalistic sense"; satisfiers appease the approach needs--"basic in a humanistic sense."[127] Herzberg concurred in the approach-avoidance explanation and himself wrote:

> Factors in job context meet the needs of the individual for avoiding unpleasant situations. In contrast to this motivation by meeting avoidance needs, the job factors reward the needs of the individual to reach his aspirations. These effects on the individual can be conceptualized as

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[126] Herzberg, Work and the Nature of Man, op., cit. pp. 75-76.

[127] Sergiovanni and Carver, The New School Executive, op. cit., pp. 70-71; Owens, op. cit., p. 122.

> actuating approach rather than avoidance behavior. . . . It should be understood that both kinds of factors meet the needs of the employee; but it is primarily the "motivators" that serve to bring about the kind of job satisfaction and . . . the kind of improvement in performance that industry is seeking from its work force.[128]

Maslow's Hierarchy of Needs is also compatible with Dual-Continuum, according to Robbins. Although Maslow's proposition concerned itself with motivation in general and assumes all needs are potential motivators, it has been modified by Porter and applied to the work organization. Maslow's designated lower order needs for security and affiliation overlay Herzberg's maintenance or hygiene factors. Human need for esteem, autonomy, and self-actualization were seen as commensurate with the motivating factors of status, recognition, advancement, responsibility, possibility of growth, achievement, and the work itself.[129]

Supporting Evidence

The Two-Factor Theory seems to be well supported through empirical research. Herzberg himself reported over 200 investigations which closely followed his procedures. The researchers he reviewed studied varying occupational groups, organizations, professional

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[128]Herzberg et al., The Motivation to Work, op. cit., p. 114.

[129]S. P. Robbins, The Administrative Process: Integrating Theory and Practice (Englewood Cliffs, New Jersey: Prentice-Hall, 1976), p. 312.

levels, races, sexes and cultures; results tended to verify the Herzberg theory.[130]

Myers investigated motivation among more than 200 employees at Texas Instruments of Dallas, resulting in findings similar to Herzberg's.[131] Stern replicated the Herzberg methodology and substantiated the findings among college students.[132] Research involving housekeeping workers at two hospitals in Cleveland by Gendel documented similar results.[133] Herzberg and others cited additional support for the Two-Factor Theory after further tests had been conducted in Great Britain.[134]

In the school organization in particular, the Herzberg proposition has been well verified over the years. Sergiovanni's findings are most similar in identifying specific motivators and maintenance factors, with the exception of "advancement" as a motivator among

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[130]Herzberg, "Motivation-Hygiene Profiles: Pinpointing What Ails the Organization," op. cit., p. 18.

[131]M. S. Myers, "Who Are Your Motivated Workers?," Harvard Business Review (January-February 1964), XLIII, pp. 73-88.

[132]M. L. Stern, "An Investigation of Slippage in the Motivation-Hygiene Theory." Unpublished Doctoral Dissertation, Department of Psychology, Case Western Reserve University, 1968.

[133]H. Gendel, Unpublished Doctoral Dissertation, Case Western University, 1965. In Herzberg, Work and the Nature of Man, op. cit., Chapter 7.

[134]W. J. Paul, K. B. Robertson, and F. Herzberg, "Job Enrichment Pays Off: Findings of Studies Carried Out in British Companies," Harvard Business Review (March-April 1969), XLVII, pp. 118-126.

teachers.[135] Iannone's study with high school principals supported the Two-Factor approach.[136] Owens cited additional replication studies in the educational milieu which showed results similar to those of Herzberg: Savage's research among teachers in Georgia,[137] Wickstrom's report on Canadian teacher responses,[138] and Schmidt's investigation of Chicago-area high school principals.[139]

Further investigations, while not exact replication studies, have tended to further buttress the Two-Factor Concept. Herzberg listed eight additional similar studies which add verification.[140] Gooding's findings showed that maintenance factors do not serve to motivate employees.[141]

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[135]T. J. Sergiovanni, "Factors Which Affect Satisfaction and Dissatisfaction of Teachers," Journal of Educational Administration (May 1967), V, pp. 66-82.

[136]R. V. Iannone, "What Motivates Principals?," Journal of Educational Research (February 1973), VI, pp. 260-262.

[137]R. M. Savage, "A Study of Teacher Satisfaction and Attitudes: Causes and Effects." Unpublished Doctoral Dissertation, Auburn University, 1965. In Owens, op. cit., p. 124.

[138]R. A. Wickstrom, "An Investigation Into Job Satisfaction Among Teachers." Unpublished Doctoral Dissertation, University of Oregon, 1971. In Owens, op. cit., p. 124.

[139]G. L. Schmidt, "Job Satisfaction Among Secondary School Administrators," Educational Administration Quarterly (1976), XI, p. 81. In Owens, op. cit., p. 124.

[140]Herzberg, Work and the Nature of Man, op. cit., pp. 132-167.

[141]J. Gooding, "Blue-Collar Blues on the Assembly Line," Fortune (July 1970), LXXXII, pp. 68-71.

Educational studies, using various methodologies, have tended to substantiate Herzberg's original premise. Holdaway's research with 800 Canadian educators showed that overall teacher satisfaction is related to motivators.[142] Spuck determined that the most "powerful" incentives for high school educators were intrinsic in nature.[143] Teachers in Adair's study chose primarily intrinsic items as motivators and job-context items as dissatisfiers.[144]

Criticism of the Two-Factor Theory

While the Two-Factor Theory has indeed received widespread acceptance, it has, nevertheless, been the recipient of broad criticism. Primarily, the opposing arguments can be grouped as: methodological questions, facet satisfaction questions, and Herzberg's claims of linkage to heightened productivity.

Vroom questioned the use of the critical incident technique itself for several reasons. Subjects, he maintained, may have held personal prejudices which prevented them from responding correctly to researchers' questions.[145] Ewen, his associates, and others

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[142]E. Holdaway, "Facet and Overall Satisfaction of Teachers," Educational Administration Quarterly (Winter 1978), pp. 30-47.

[143]D. W. Spuck, "Reward Structures in Public High Schools," Educational Administration Quarterly, pp. 18-33.

[144]J. W. Adair, "Keeping Teachers Happy," American School Board Journal (January 1968), CLV, pp. 28-29.

[145]V. H. Vroom, Work and Motivation (New York: John Wiley and Sons, 1964), pp. 127-128.

questioned subjects' ability to recall accurately.[146] Several critics pointed to the methodology fault whereby no provision was made for assessing workers' current work experiences.[147] As Owens explained, when unpleasant experiences occur on the job, employees generally project the origins elsewhere in the organization. On the other hand, when pleasant things happen, they take the credit themselves.[148]

Raters, as well as subjects, sometimes are prone to hold biases which can influence their interpretation of responses. Several investigators referred to inter-rater reliability as questionable.[149] Ewen, Medved, and Vroom each stated that the free-choice method employed by Herzberg and his replicators merely guaranteed similar results.[150]

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[146]R. B. Ewen et al., "An Empirical Test of Herzberg's Two-Factor Theory," Journal of Applied Psychology (December 1966), L, pp. 545-546, and Holdaway, op. cit., pp. 30-47.

[147]R. J. House and L. A. Wigdor, "Herzberg's Dual-Factor Theory of Job Satisfaction and Motivation: A Review of the Evidence and a Criticism," Personnel Psychology (Winter 1967), XX, p. 375.

[148]Owens, op. cit., p. 123.

[149]G. P. Fournet, M. K. Distefano, Jr., and M. W. Pryer, "Job Satisfaction Issues and Problems," Personnel Psychology (1966), XIX, p. 177.

[150]Ewen, op. cit., p. 545; J. A. Medved, op. cit., p. 66; V. H. Vroom, "Some Observations Regarding Herzberg's Two-Factor Theory." Paper read at the American Psychological Association Convention, New York, September 1966, pp. 6-9. In Johnson, op. cit., p. 13.

Owens noted further that an individual may derive satisfaction from part of his job, but not from all of it.[151] Others suggest that the individual may find the job as a whole satisfying while finding certain isolated factors dissatisfying.[152]

Relatedly is the theory's failure to recognize that some workers are either solely motivated by hygiene factors or solely by motivators. Sergiovanni cautioned against oversimplification in this regard.[153] He cited arguments by Herzberg and others which suggest that it is somehow "not natural" to be motivated by dissatisfiers.[154] Hersey further stated, "The implication is that healthy individuals respond to the motivation-hygiene theory, while less than healthy individuals do not."[155]

Sergiovanni and his associates, after conducting leadership research with educators, soundly refuted the above contention. Their

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[151]Owens, op. cit., p. 123.

[152]P. C. Smith, L. M. Kendall, and C. L. Hulin, The Measurement of Satisfaction in Work and Retirement: A Strategy for the Study of Attitudes (Chicago: Rand-McNally, 1969).

[153]Sergiovanni and Carver, The New School Executive, op. cit., p. 79.

[154]Herzberg, "Motivation-Hygiene Profiles," op. cit., pp. 18-25. R. Hamlin and R. Nemo, "Self-Actualization in Choice Scores of Improved Schizophrenics," Journal of Clinical Psychology (January 1962), XVIII, pp. 51-57. C. Haywood and V. Dobbs, "Motivation and Anxiety in High School Boys," Journal of Personality (September 1964), XXXII, pp. 371-379. In Sergiovanni and Carver, The New School Executive, op. cit., p. 87.

[155]Sergiovanni and Carver, The New School Executive, op. cit., p. 80.

findings indicated that there were, indeed, "large numbers of hygiene-seekers teaching in public schools," as well as motivation-seekers, and those who were somewhere in between these two orientations.[156]

Thornton found that educators tended to put more emphasis on hygiene factors than did industrial managers.[157] Walt, as reported by Herzberg, found that a group of women professionals identified relationships with peers and subordinates as motivators.[158] Miskel discovered significant differences between men and women educators in regard to work motivation under various conditions.[159]

Further suggestion of an intermingling of motivation and hygiene factors was given by Wolf, who found that both sets of factors can be related to job dissatisfaction or satisfaction, depending upon the individual's position in the need hierarchy.[160] Pallone,

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[156] T. J. Sergiovanni, R. Metzcus, and L. Burden, "Toward a Particularistic Approach to Leadership Style: Some Findings," American Educational Research Journal (January 1969), VI, pp. 62-79. In Sergiovanni and Carver, The New School Executive, op. cit., p. 80.

[157] B. W. Thornton et al., "Comparison of Educators and Industrial Manager's Work Motivation Using Parallel Forms of the Work Components Study Questionnaire," Educational Resource Information Center, ED 076 567, 1973.

[158] Herzberg, Work and the Nature of Man, op. cit., p. 105.

[159] C. Miskel, "Public School Teachers' Work Motivation, Organizational Incentives, Job Satisfaction, and Primary Life Interests," Educational Resource Information Center, ED 072 000, 1972, pp. 48-49.

[160] M. G. Wolf, "Need Gratification Theory: A Theoretical Reformulation of Job Satisfaction/Dissatisfaction and Job Motivation," Journal of Vocational Behavior (January 1971), I, p. 90.

Hurley, and Rickard reviewed twenty-four studies of the Motivation-Hygiene Theory and determined that only five actually confirmed that extrinsic factors acted as dissatisfiers and intrinsic factors acted as motivators.[161] Johnson reviewed research in which the Herzberg job factors were found to be "either satisfiers or dissatisfiers, depending upon the situation" (Malinovsky, Halper, Myers, Waters and Waters).[162]

Several of the most often cited studies critical of the Dual-Continuum premise and methodology[163] have been addressed by Whitsett

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[161]N. J. Pallone, R. B. Hurley, and F. S. Rickard, "Emphases in Job Satisfaction Research, 1968-1969," Journal of Vocational Behavior (January 1971), I, p. 15.

[162]M. R. Malinovsky and J. R. Barry, "Determinants of Work Attitude," Journal of Applied Psychology (December 1965), XLIX, pp. 446-451; G. Halpern, "Relative Contributions of Motivator and Hygiene Factors to Overall Job Satisfaction," Journal of Applied Psychology (June 1966), L, pp. 198-200; M. S. Myers, op. cit., pp. 73-88; L. K. Waters and C. W. Waters, "Correlates of Job Satisfaction and Job Dissatisfaction Among Female Clerical Workers," Journal of Applied Psychology (December 1968), LII, pp. 469-473. In Johnson, op. cit., p. 17.

[163]The following investigations were reviewed by Whitsett and Winslow: F. Friedlander, "Underlying Sources of Job Satisfaction," Journal of Applied Psychology (August 1963), XLVII, pp. 246-250; G. B. Graen, "Addendum to 'An Empirical Test of the Herzberg Two-Factor Theory,'" Journal of Applied Psychology (December 1966), L, pp. 551-555; R. J. Burke, "Are Herzberg's Motivators and Hygienes Undimensional?," Journal of Applied Psychology (August 1966), L, pp. 317-321; H. Rosen, "Occupational Motivation of Resource and Development Personnel," Personnel Administrator (March 1963), pp. 37-43; P. F. Wernimont, "Intrinsic and Extrinsic Factors in Job Satisfaction," Journal of Applied Psychology (February 1966), L, pp. 41-50.

and Winslow. Their defense of the Herzberg premise centered on the fact that detractors either frequently misinterpreted Herzberg's original findings or they usually employed faulty follow-up methodologies in their related studies.[164] Gringaliunas and Herzberg offer defenses similar to Whitsett and Winslow.[165]

Many of the detracting assertions concerning Herzberg's work have been addressed. One contention, however, although not related to this study, nevertheless, warrants attention. Herzberg maintained that motivation and worker productivity are related and he further suggested ways to obtain added productivity from the listed motivators.[166] The belief that high worker satisfaction causes high performance, however, is a belief not substantiated by the literature.[167] Owens further suggested that neither satisfaction nor dissatisfaction have been related to worker effectiveness by the Herzberg research.[168]

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[164]D. A. Whitsett and E. K. Winslow, "An Analysis of Studies Critical of the Motivator-Hygiene Theory," Personnel Psychology (Winter, 1967), XX, pp. 391-415.

[165]B. S. Gringaliunas and F. Herzberg, "Relevancy in the Test of Motivator-Hygiene Theory," Journal of Applied Psychology (February 1971), XL, pp. 73-74.

[166]F. Herzberg, "One More Time: How Do You Motivate Employees?." Harvard Business Review (January-February 1968), XLVI, pp. 53-60.

[167]E. E. Lawler, "Satisfaction and Behavior," in Hamner and Schmidt (Eds.), Contemporary Problems in Personnel, op. cit., p. 360.

[168]Owens, op. cit., p. 123.

Validity Confirmed

In spite of contentions of those critical of the Two-Factor Theory, its premise still remains a hallmark in the study of human motivation. Owens stated that in almost all aspects, "Herzberg's research--after exhausting review in the literature over a period of two decades--must be accepted as representing the state of the art."[169]

Summary

Although definitions vary among investigations, the idea of leader insight or a heightened perceptiveness is an entity about which theorists and researchers have been curious through the decades. Indeed, it is a leader quality to be cultivated, some contend. We know, also, that individual workers are motivated to work for various sorts of rewards.

Specifically, however, no one has offered empirical evidence that public school principals are perceptive enough to routinely realize what it is that motivates their own subordinates. Nor, further, has it been successfully demonstrated that the leader high in the ability to make predictions about his/her own staff will exhibit other certain leader behaviors. These ideas and related aspects were examined through this present investigation.

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[169]Ibid., p. 123.

CHAPTER III

PROCEDURES

Introduction

The purpose of this study was to investigate the possibility of a relationship between principals' leadership characteristics, as perceived by teachers, and the principals' accuracy in perceiving what things motivate their teachers. Additionally, differences in leadership characteristics among elementary, middle/junior high, and high school principal groups were studied. Job motivation factors of teachers were also examined.

In particular, this study attempted to answer the following questions about Tennessee educators:

1. How accurately do principals predict the rankings of job factors which their teachers feel are important in their work?

2. Is there a relationship between principals' ability to predict job factors of importance to their teachers and principals' leadership behaviors?

3. Are there differences in leadership behaviors among elementary, middle school/junior high, and high school principals, as perceived by their teachers?

4. What job factors are of greatest importance to teachers?

5. Are those job factors rated as most important by teachers intrinsic (versus extrinsic), a là Herzberg?

6. Are there differences in the importance placed on job factors among elementary, middle/junior high, and high school teachers?

Sampling Methods and Distribution of Materials

A random sample of public schools in Tennessee, as registered with the Tennessee Department of Education was selected for inclusion in this study. Sample size was determined through application of the formula given by Gallup[170] as shown in Appendix A.

The number of schools in Tennessee was reported as 1682, which resulted in a sample size of 228 by this formula, with a .90 confidence level. Included in the sample were elementary, middle/junior high, high schools, and special schools situated in seventy-one different public school systems in Tennessee.

In February 1984, a letter was mailed to each superintendent, representing each of the districts in which sample schools were located. A brief explanation of the investigation purposes were included in the letter. A return post card was enclosed with each letter on which each superintendent was asked to indicate his/her approval or disapproval for the sample schools in his/her district to be contacted in regard to the study or on which to indicate a need for additional information. Both the letter and return card are shown in Appendix B.

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[170]Gallup, op. cit., p.68.

To those superintendents who failed to respond within a three-week period, a follow-up letter was mailed with a second response card. Those superintendents who failed to respond after a second notice were contacted by telephone for permission.

By early April, seventy-one district superintendents had given their approval for sample schools to be contacted. A total of 218 schools had been granted approval by the superintendents to participate. The principals of these 218 schools comprised the first sample for the investigation.

Accurate listings of current personnel in each sample school were necessary to the study. These rosters were gathered in a variety of ways:

1. Five districts published system-wide directories of individual school staffs. These were obtained through their respective central administrative offices and provided rosters for fifty-eight schools.

2. One hundred forty-five lists were obtained either by mail or by dictation via telephone conversations with school secretaries, principals, and/or central administrative offices across the state.

3. Thirteen school personnel lists were obtained during a personal visit to one superintendent's office.

4. Two lists were derived from an 1982-1983 master computer listing of teachers published by the Tennessee Department of Education in Nashville.

Names of all part-time teaching personnel, pre-school instructors, assistant principals, and non-certificated personnel (teacher aides, clerks, etc.) were expunged from each of the personnel lists, leaving only principals and teachers identified. As stated above, principals comprised one sample for the study. Teacher names on each of the 218 school personnel lists were subsequently numbered consecutively. Two random samples were then drawn from each school.

Teacher Sample I consisted of five teachers per school, or four teachers in the six schools which employed only four full-time teachers. The group consisted of 1084 subjects. The sample teachers were asked to complete the Job Factor Ranking (JFR) instrument described below.

The Leader Behavior Description Questionnaire-XII, in order to be valid, requires a minimum of four responses per leader. For an ample response from those completing this questionnaire, it was determined that a random sample of ten teachers per school (or all teachers in schools with fewer than ten teachers) should comprise Teacher Sample II. A total of 2017 subjects were included in this sample. Subjects in each of the three samples--Principal Sample Group, Teacher Sample Group I, and Teacher Sample Group II--were assigned code numbers to assure confidentiality of information and greater ease in data processing. Research instruments were color-coded as an aid in sorting returns.

Instrumentation

Two major instruments provided data for the study. A description of each follows.

Job Factor Ranking

The Job Factor Ranking instrument (JFR) was based upon the Herzberg proposition that certain job factors are important to individuals in their work. Evidence of the validity and reliability of the Herzberg items has been stated above.[171] Roberts utilized thirteen of the original Herzberg factors in his instrument;[172] for purposes of this study, a fourteenth item--"Factors in Personal Life"--was included for study. The fourteen items identified as motivators and hygiene factors were each defined in phrase form, and were arranged in alphabetical order. Both the JFR instrument, a single-sheet questionnaire, and the accompanying cover letter were screened by teacher and administrator groups to assure clarity. The Principal JFR and the Teacher JFR, as well as their respective cover letters, are shown in Appendices C and D.

Leadership Behavior Description Questionnaire

The Leadership Behavior Description Questionnaire-XII was chosen as the instrument to measure leadership behaviors of the

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[171] See pp. 48-57 of this document.

[172] Roberts, op. cit., p. 111.

principals in the study. While it is not a perfect instrument, the validity of each of the twelve subscales has been tested. The scales, it has been concluded, measure what they purport to measure.[173]

The reliability of the LBDQ-XII subscales has been determined through the modified Kuder-Richardson formula.[174] The reliability coefficient averages for each of the subscales are:

Representation	.69
Demand Reconciliation	.72
Tolerance of Uncertainty	.78
Persuasiveness	.80
Initiating Structure	.76
Tolerance of Freedom	.76
Role Assumption	.77
Consideration	.81
Production Emphasis	.68
Predictive Accuracy	.81
Integration	.76
Superior Orientation	.69

The LBDQ has undergone four revisions and has been used with governmental, military, community, business and school groups. The

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[173]R. M. Stogdill, "Validity of Leader Behavior Descriptions," Personnel Psychology, XXII (1969), pp. 153-158.

[174]Stodgill, Manual for the Leader Behavior Description Questionnaire--Form XII, op. cit., pp. 8-11.

latest revision included 100 items in a multiple-choice format designed to measure the twelve leadership dimensions described on pages 19 through 25 of this document. The test subscales are measured by the teacher responses to each item group: "Representation" (five items); "Demand Reconciliation" (five items); "Tolerance of Uncertainty" (ten items); "Persuasiveness" (ten items); "Initiation of Structure" (ten items); "Tolerance of Freedom" (ten items); "Role Assumption" (ten items); "Consideration" (ten items); "Production Emphasis" (ten items); "Predictive Accuracy" (five items); "Integration" (five items); and "Superior Orientation" (ten items).

Most items are scored a (5) for "always"; (4) for "often"; (3) for "occasionally"; (2) for "seldom"; and (1) for "never." Items 6, 12, 16, 26, 36, 42, 46, 53, 56, 57, 61, 62, 65, 66, 68, 71, 87, 91, 92, and 97, however, are scored in the reverse direction.[175]

For purposes of this investigation, the LBDQ-XII was modified for application to the school leader. Written permission to modify, duplicate, and disseminate copies of the LBDQ-XII was requested of and was granted by the Bureau of Business Research at the Ohio State University. The modified LBDQ-XII was screened by teachers, principals, and other school administrator groups prior to the investigation to ascertain maximum item clarity. The accompanying letter of explanation to teachers was also reviewed by the same professional

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[175]Ibid., pp. 8-11.

groups. Appendix E shows the letter of permission; the letter to Sample II Teachers and a copy of the modified instrument are located in Appendix F.

Demographics

Demographic information was requested from each of the three samples of respondents. Principals were asked to list their years of experience as a principal and the number of years they had served in their present principalships. Teacher respondents for the LBDQ-XII and the JFR were asked to indicate their sex, age, years of teaching experience, grade levels of students served, and their educational attainment levels.

Data Collection and Treatment

As stated above, the data for this investigation were collected from three sample groups: Principal Group, Teacher Group I, and Teacher Group II. For participation in the complete investigation (including the testing of the hypotheses), it was determined that minimum return criteria were necessary from each of the sample schools. Those criteria are as follow:

(1) Two usable Principal JFR instruments,

(2) Two usable Teacher JFR instruments, and

(3) Four usable LBDQ-XII instruments.

While all sample schools, except two,[176] furnished returns, 89 schools met the three above criteria for analysis of the main hypothesis. A third contact was made at intervals during the data collection period when it was determined that a particular school needed only one principal or one teacher return to have fulfilled the above stipulations. Procedures for data collection and treatment are described below.

Job Factor Rankings. Two hundred eighteen principals were mailed Job Factor Rankings (Principal JFR's). Each mailing consisted of a letter explaining the purposes of the study, five copies of the Principal JFR, and a stamped, addressed return envelope (see Appendix C).

Principals were asked to assign a rank of one through fourteen factors listed to each of five JFR's as they believed each of the five designated individual teachers under their supervision would rank the factors. The five teachers ranked by principals were those who comprised Teacher Sample I, as randomly selected per school. Each principal's five JFR's were identified by individual teacher name and code number.

Teachers in Sample I (five per sample school), were each mailed a single JFR, a letter explaining the study purposes, and a stamped return envelope (see Appendix D). Each of the 1084 teachers

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[176]Two elementary schools in the sample of 218 furnished no returns for any of the three sample groups.

was asked to complete demographic information and rank items on the alphabetized list from the most important to least important (one through fourteen) according to his or her own personal preferences. No teacher names, only code numbers, were included on the Teacher JFR's.

A method for determining principal predictive accuracy was devised. Each teacher ranking response and his/her principal's corresponding predicted ranking were considered as a separate pair. The rank of each of the fourteen factors by each principal was listed. Beside the principals' individual predicted rankings were listed the actual rankings given by the corresponding teachers. The difference between each of the two rankings were noted, then summed for use in the correlation formula.

The Spearman formula, as shown in Appendix G, was used to determine correlations.[177] All resulting correlations were listed from highest to lowest and the median correlation ascertained, as shown in Table H-1, Appendix H. A rank of .42 was determined to be the median rank.

Those principals having a minimum of two correlations were included in this analysis. For those schools having two correlations, both correlations had to fall above the median rank for placement of the school's principal in the High Predictor Group. For those schools having three or more correlations, a majority of the

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[177]G. A. Ferguson, Statistical Analysis in Psychology and Education (New York: McGraw-Hill, 1981), pp. 381-382.

correlations had to fall above the median rank in order for the principal to be placed in the High Predictor Group. All other principals (having a minimum of two correlations) were placed in the Low Predictor Group.

One hundred thirty-five schools had returned a minimum of two principal and two corresponding teacher returns and were considered for classification in the High and Low Predictor Groups respectively. Twenty-four principals also had a minimum of two correlations, yet were excluded from consideration for the high or low group placement because of insufficient corresponding leader behavior information. Each of twenty-two principals had two valid correlations, but had to be excluded because of either a lack of demographic information, or keypunch error in school identification coding which could not be corrected.

A total of forty-six principals, as identified by the above criteria, were placed in the High Predictor Group. Of the forty-six, thirty-four were elementary school principals, eight were middle or junior high, and four were high school principals. The remaining forty-three principals were placed in the Low Predictor Group. The forty-three in the Low Predictor Group were principals representing one K-12 school, twenty-six elementary schools, three middle or junior high schools, and thirteen high schools. Table I shows both the High and Low Principal Predictor Groups.

Table I. Two Principal Predictor Groups (High and Low Predictors) as Selected by Spearman Correlations Above and Below the Median Rank in Tennessee, 1984, n = 89.

School	Number of Correlations	Correlations Above the Median	School	Number of Correlations	Correlations Above the Median
A. Principals in High Predictor Group (Based upon Majority of Correlations Falling Above Median) (n = 46)					
2	5	3	109	3	3
4	5	4	113	4	3
5	5	5	118	4	3
11	4	3	126	4	4
12	3	2	128	5	5
13	4	3	138	5	4
19	3	2	145	3	2
31	3	3	149	3	3
36	3	3	150	5	5
42	3	3	157	3	2
51	4	3	167	3	2
52	5	3	177	4	4
54	3	3	178	3	2
57	3	2	184	4	3
71	4	3	185	3	2
76	4	3	192	3	2
79	4	4	197	4	3
86	3	3	198	3	2
90	5	5	201	3	2
100	3	2	204	4	3
104	4	3	209	3	2
107	4	4	226	3	2
108	3	2	227	3	2

Table I (Continued).

School	Number of Correlations	Correlations Above the Median	School	Number of Correlations	Correlations Above the Median
B. Principals in Low Predictor Group (Based upon Majority of Correlations Falling Below Median) (n = 43)					
3	5	1	136	5	2
7	4	1	137	3	0
16	5	0	140	3	0
17	3	1	141	5	2
21	4	1	142	3	1
22	5	2	144	4	1
29	3	1	147	4	2
35	4	1	154	4	0
59	3	1	155	3	1
75	4	1	160	4	1
81	3	1	163	4	1
87	5	0	172	5	2
94	5	2	176	5	0
98	4	2	189	3	0
110	3	0	194	5	2
112	3	0	206	4	1
115	5	0	214	3	1
120	5	2	215	3	1
124	3	0	218	3	1
125	4	1	224	3	1
131	3	1	240	5	0
135	4	2			

Leader Behavior Description Questionnaire (LBDQ-XII). The third group, Teacher Sample II, received copies of the modified, 100-item LBDQ-XII Questionnaire for completion. A total of 2017 instruments were coded for identification by individual and school and were mailed. Included as part of the mailing was an individually addressed letter and a return envelope as stated earlier (see Appendix F).

The LBDQ-XII reports perceived leader behavior in twelve dimension descriptions, each represented by a mean score. The twelve mean scores of principals in both the High and Low Predictor Groups were examined statistically for differences.

The mean scores on each of the twelve subscale items for each of the two principal groups were compared to determine significance, using a "t" distribution formula, shown in Appendix G, for unrelated variables.[178]

Additional Analysis

Relatedly, under consideration were the differences among three principal groups' leadership behaviors. In order to determine if significant differences existed among the three group means of each subscale, an analysis of variance procedure was used.[179] The ANOVA formula model applied is shown in Appendix G. The Scheffe'

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[178] Ibid., pp. 178-179.

[179] Ibid., pp. 234-244.

Test,[180] also shown in Appendix G, was applied to each ANOVA result set which proved significant.

A number of additional questions regarding teacher motivation were asked prior to this investigation. Those factors which principals felt to be important to teachers along with the teachers' actual rankings were arranged within frequency tables and compared for similarities and differences. Subsequently, teacher group responses to Job Factor Rankings were examined by sex, by educational level, and by school assignment classifications.

Nature of the Response

Completed instruments from the three sample groups were collected over a five-month period. Eight instruments were received after the specified final date for acceptance and were counted as unusable for analysis.

Nineteen of the principals' returns were not completed correctly. Two principals returned their instruments (ten blank instruments), noting their disagreement with the purposes of the study and their refusal to complete the rankings. A total of 149 principals returned 721 instruments, for a return rate of 67 percent. However, only 65 percent of returned instruments were judged usable.

Teachers in Teacher Sample I, a total of 1084 having received the JFR instrument, returned 740. Thirty instruments of Teacher Sample I were incorrectly completed. Six teachers returned blank

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[180] L. R. Gay, Educational Research (Columbus, Ohio: Charles E. Merrill, 1981), pp. 337-339.

ranking sheets. Two returns were miscoded during keypunch operations and had to be discarded.

The 740 figure represented an original return rate of 69 percent. A total of 702 were judged usable. The usable rate for Teacher Sample I was 65 percent.

Teachers in Teacher Sample II numbered 2017 and received copies of the LBDQ-XII. It was hoped that return rate of 40 percent for this sample would be realized. A total of 984, or 49 percent, were returned. Fourteen of those returned were incorrectly completed and had to be discarded. Four returns were miscoded during keypunch operations and could not be used for analysis. A total of 968, or 48 percent, were usable for purposes of the investigation. Table II depicts the return rate for the various sample groups discussed here. A map depicting the location of respondent schools is presented in Appendix I.

Follow-Up Sample Analysis

After the deadline date for acceptance of returns, thirty-eight schools had returned an adequate number of both kinds of teacher instruments yet principals of these thirty-eight schools had failed to respond to two mailings. In order to determine if those in the non-respondent principal group were representative of the total principal sample, a random sample of ten from the non-responding thirty-eight was selected. These principals were asked a third time to

Table II. Response Totals and Rates to Three Investigation Instruments (Principal Job Factor Ranking, Teacher Job Factor Ranking, and the Modified LBDQ-XII) by Respondent Groups in Tennessee, 1984.

Instrument	Response to 1st Mailing	Response to 2nd Mailing	Response to 3rd Contact[a]	Total Responses[b]	Return Rate	Usable Rate
Principal JFR	482	162	77	721	67%	65%
Teacher JFR	464	255	21	740	69%	65%
LBDQ-XII	644	324	16	984	49%	48%

[a]A third contact was made only when principal and teacher individual responses were necessary for their respective school's inclusion in testing the hypotheses.

[b]Represented responses from 149 principals.

complete the Principal JFR for their respective faculty samples. Only four of the ten principals completed and returned the instruments. Their responses were analyzed, as shown in Appendix J. It was determined, however, that since the return rate of the sample group had only been 40 percent, the results did not sufficiently address the question of sample representativeness. Therefore, a second analysis was made of the respondent groups.

Schools in which principals did respond prior to the deadline were compared with schools in which principals failed to respond prior to the deadline date. Comparisons were made according to sex of the principals, type and location of school, composition and size of the faculty, as shown in Table III. The comparison helped to show that the schools with no responding principal were similar to those schools from which principals had, indeed, responded.

The two groups were similar in most respects. The majority of schools were elementary and most principals were males. Female teachers in elementary schools (of both groups) far outnumbered males. A greater number of male faculty members, some as high as 50 percent, however, were assigned to the larger high schools in both groups. The classification of schools in the urban category included those which were known to be situated in the greater metropolitan areas. Hence, some schools, even though they were operated by small "city" school districts, were more appropriately categorized as rural schools.

Table III. Characteristics of Tennessee Sample Schools in 1984 in Which Principals Responded to Job Factor Ranking Instruments and Those in Which Principals Failed to Respond by Deadline Date.

School Characteristics	Percentage Represented in Respondent Group[a] n = 104	Percentage Represented in Non-Respondent Group[b] n = 38
School Classification		
Elementary	61.1	35.3
Middle/Junior High	19.4	28.9
High School	18.4	15.8
Other	1.1	0
Sex of Principal		
Females	16.7	23.7
Males	83.3	76.3
Location		
Urban Area	23.3	28.9
Rural Area	76.7	71.1
Number of Teachers in Faculty		
5 or Fewer	0.9	2.0
6-10	5.8	8.7
11-15	12.6	21.0
16-25	39.9	31.6
26-35	20.4	23.6
36-50	14.6	8.0
More than 50	5.8	5.1
Percentage of Male Faculty Members		
Less than 5%	26.8	28.9
11-25%	18.5	18.4
26-40%	23.1	15.8
41-50%	10.1	13.2
More than 50%	3.0	7.9

[a]Includes only those schools in which a minimum of two usable Principal JFR's, two usable corresponding Teacher JFR's and four usable LBDQ's were received.

[b]Includes only those schools in which principals did not respond, yet a minimum of two Teacher JFR's and four usable LBDQ's were received.

As a result of both of the follow-up analyses, it was assumed that sample schools with non-responding principals were similar in characteristics to other sample schools in which principals did respond. The data for respondents were thus processed and analyzed. Chapter IV provides a description of the data derived from respondent groups. A discussion of the analyses outlined in this section is also provided.

CHAPTER IV

DATA ANALYSIS AND DISCUSSION

Introduction

The main purpose of this study was to determine if a relationship exists between principals' ability to predict what things motivate their teachers (as outlined in the Herzberg position) and the principals' leadership behaviors. Additionally, other related questions were addressed. The information in this chapter is presented as appropriate to each area of concern. An explanation, along with data derived from analyses, shall be supplied in the following manner.

Section A is relevant to consideration of the main hypotheses under investigation. Specifically, a comparison was made between the observed leadership behaviors of the two primary principal groups: a High Predictor and a Low Predictor Group. Principals' mean scores on the LBDQ-XII were examined to determine if significant behavioral differences appeared between the two groups.

Section B presents a description of the differences in leadership behaviors of principals grouped in a different manner. An examination was made of group LBDQ-XII mean scores to determine whether there were any significant differences in leadership behaviors among the three sample groups: elementary, middle/junior high, and high school principals.

Section C presents those job factors which were rated by respondents as most important. The Job Factor Ranking instruments, as completed by both teachers and principals, were examined. Those factors which principals believed to be the most important to teachers and those which teachers ranked as important are presented and discussed. A presentation of the factors ranked most frequently as important by sex, by education level, and by school assignment of respondents is also included.

Presentation of the Data and Discussion

The data were processed with the aid of the IBM 3081-D computer at The University of Tennessee, Knoxville. There were three sets of research instrument data. Each of the Principal Job Factor Rankings (principals' predicted ranks) and each of the Teacher Job Factor Rankings (teachers' actual ranks) were keypunched, using one card per response. The Leader Behavior Description Questionnaire-XII responses required two keypunch cards per respondents. Cards were punched by Data Integrity Center personnel at The University of Tennessee, Knoxville.

Section A

In order to classify high and low predictive ability as a first step in examination of the main hypotheses, a method for group selection was determined. The fourteen job factors listed in the Herzberg model (including both motivators and hygiene factors) were

listed in alphabetical order as follows: "Achievement or accomplishment," "Adequate salary and benefits," "Advancement to another career level," "Fair school system policies," "Job security," "Personal life factors," "Possibility of growth," "Recognition or praise from others," "Responsibility," "Satisfactory working conditions," "Status and privileges, "The work itself." Both principal and teacher respondents completed the rankings and two groups of principals were identified on the basis of predictive ability through the application of the Spearman Rho formula.

It was clear that principals in most schools did differentiate to some degree among the teachers for whom they completed predicted rankings. However, there was usually little variance within each school.[181] Five principals ranked all or almost all of their sample teachers in identical manners.

As stated above, teacher perceptions of principal leadership behaviors were gauged through the Leadership Behavior Description Questionnaire-XII. Twelve subscale measurements are accrued from each teacher assessment. Twelve mean subscale scores of principals in the High Predictor and Low Predictor Groups were calculated. Those twelve subscale scores are shown for the eighty-nine principals in both principal groups in Tables K-1 and K-2 of the Appendix.

Subsequent application of the "t" distribution formula, in Appendix G, determined whether or not the difference between each

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[181]The median coefficient of concordance among the predicted rankings was .63, as calculated through the formula for Kendall's Coefficient of Concordance W in Ferguson, op. cit., pp. 389-392.

pair of group means was significant at the .05 level of confidence. It was hypothesized that mean scores of those principals in the High Predictor Group would be significantly higher on the twelve dimensions of leadership behavior. Table IV depicts the results of these calculations.

Specifically, the hypotheses under investigation were as follow: Principals who can predict most accurately the teacher rankings of motivational factors, as measured by the Job Factor Ranking instrument, will score higher on the twelve dimensions of the LBDQ-XII than will principals who are less accurate in predicting the teacher rankings. The twelve dimensions are representative of the twelve hypotheses examined:

H_1 Representation

H_2 Demand Reconciliation

H_3 Tolerance of Uncertainty

H_4 Persuasiveness

H_5 Initiation of Structure

H_6 Tolerance of Freedom

H_7 Role Assumption

H_8 Consideration

H_9 Production Emphasis

H_{10} Predictive Accuracy

H_{11} Integration

H_{12} Superior Orientation

Table IV. Mean LBDQ-XII Subscale Scores, Standard Deviations and "t" Calculations for Two Tennessee Principal Groups (High Predictor Principal Group and Low Predictor Principal Group) in 1984, n = 89.

Leadership Dimensions	Mean Subscale Scores: High Predictor Group	Mean Subscale Scores: Low Predictor Group	Standard Deviations: High Predictor Group	Standard Deviations: Low Predictor Group	Calculated "t" Value[a]
Representation	18.81	19.30	1.66	2.56	1.074
Demand Reconciliation	18.15	17.68	2.47	2.95	.830
Tolerance of Uncertainty	34.09	33.22	4.66	5.14	.839
Persuasiveness	34.83	34.86	4.45	5.23	.032
Initiation of Structure	37.60	37.52	4.76	4.59	.082
Tolerance of Freedom	37.57	37.40	4.37	4.21	.186
Role Assumption	37.48	37.55	5.46	5.91	.051
Consideration	34.86	35.04	5.25	5.09	.164
Production Emphasis	31.89	31.96	4.53	4.35	.078
Predictive Accuracy	17.20	17.10	1.83	2.40	.225
Integration	16.66	16.60	3.02	2.88	.094
Superior Orientation	35.32	35.11	2.99	4.02	.280
	n = 46	n = 43			
	df = 46 + 43 - 2				
	α = .05.				

[a]With 87 degrees of freedom, the critical value of "t" was determined to be 2.0 for a two-tailed test. All twelve calculated "t" values fell below the critical value.

No significant differences were found between the High Predictor Principal Group means and the Low Predictor Group means after application of the test for significance. The twelve hypotheses under examination, therefore, were not sustained.

Section B

This investigation also endeavored to ascertain if any differences existed in observed leadership behaviors among elementary, middle/junior high, and high school principals. The mean LBDQ-XII scores for each of these groups were examined, as shown in Table V. One hundred four school principals were included in this portion of the investigation.

The analysis of variance test pinpointed statistically significant differences among the three principal groups on four separate leadership subscales: "Tolerance of Uncertainty," "Tolerance of Freedom," "Consideration," and "Production Emphasis." Table L-1 in the Appendix shows Leadership Behavior Description Questionnaire subscale measurements resulting from the ANOVA test. Also shown in the Appendix (Table M-1), the Scheffe' test application identified the points at which the three group means differed and the levels of significance.

A significant difference was found in the "Tolerance of Uncertainty" dimension between the middle/junior high and high school principal groups, with the former group scoring higher on this measurement. Similarly, a significant difference between elementary

Table V. Mean LBDQ-XII Subscale Scores of Three Groups of Tennessee Principals (Elementary, Middle/Junior High and High School Groups) in 1984, n = 104.[a]

	LBDQ-XII Mean Subscale Scores		
Leadership Dimensions	Elementary Principals n = 70	Middle/Junior High Principals n = 15	High School Principals n = 19
Representation	19.126	18.963	18.920
Reconciliation	17.848	18.088	18.010
Tolerance of Uncertainty	34.045	35.795	31.608
Persuasiveness	34.891	34.125	35.098
Initiation of Structure	37.320	38.061	38.748
Tolerance of Freedom	37.517	39.378	35.971
Role Assumption	37.583	36.363	38.184
Consideration	35.540	35.122	32.922
Production Emphasis	31.653	30.987	33.796
Predictive Accuracy	17.057	17.455	17.190
Integration	16.696	16.638	15.971
Superior Orientation	34.935	35.565	35.286

[a]One hundred four principals received a minimum of four usable LBDQ-XII teacher observations and were included in this analysis.

and high school principals was discovered, with the elementary principal group scoring highest. No significant difference was found, however, between the elementary and middle/junior high principal groups.

Of the three principal groups under investigation, other significant findings were noted. Middle/junior high principals scored significantly higher than elementary principals on "Tolerance of Freedom." The middle/junior high principals were also found to score significantly higher than high school principals in this domain. No significant differences were realized in this dimension between the elementary and high school principals, however.

No significant difference in "Consideration" was found between elementary and middle/junior high principals. Nor was significance identified between middle/junior high principals and high school principals. However, the elementary principals' group mean score was significantly higher than the high school group.

Two points of significance were isolated within the "Production Emphasis" dimension. The high school principals scored significantly higher than both elementary and middle/junior high principals. No significant difference was found in "Production Emphasis," however, between elementary and middle/junior high school principals.

Section C

For purposes of analyzing factors which teachers ranked as most motivating, it was determined that a frequency table was most

suitable. Therefore, the factor listings which appear in this section are arranged in the following manner. Factors are listed from highest in importance to lowest in importance based on the number of times each factor was ranked within the top five positions by respondents. With the exception of one listing, each table included in this section is arranged from highest to lowest percentage of frequency as described above.

There was little difference between those specific factors which teachers indicated were most important and those which principals indicated were important to teachers. A total of 484 principal rankings placed "Adequate salary and benefits" most often in the top five positions for teachers, as shown in Table VI. "Achievement, or accomplishment in the present position," a separate factor, was ranked in second place by the total principal group. "The work itself" was given third place most often.

The principal respondent group had included one hygiene factor and two motivational factors in the second and third positions. Factors which ranked in fourth and fifth positions, respectively, were two hygiene factors. Three hundred forty-seven principal rankings placed "Job security" as fourth place for teachers, while 291 rankings predicted that teachers desired "Competent principals and supervisors" as fifth choice.

Most of the teachers (532) ranked "Achievement or accomplishment in the present position" within the top five positions most often. The factor receiving the second highest frequency for teachers was "Adequate salary and benefits," with 481 making this

Tabie VI. Principal Group's Predicted Rankings and Teacher Group's Actual Rankings of Factors of Importance as Measured by Principals' Job Factor Ranking Instruments and Teachers' Job Factor Ranking Instruments in Tennessee, 1984.

Factor Rank	Factor	Factor Classification[a]	Frequency of Selection[b]	Percentage of Selection[c]
	A. Principal Group Rankings (n = 711)			
1	Adequate salary and benefits	(H)	484	13.65
2	Achievement or accomplishment in present position, successful completion of a task, seeing results of one's own work	(M)	481	13.56
3	The work itself, i.e., teaching	(M)	358	10.09
4	Job security and likelihood of continued employment in the same position	(H)	347	9.78
5	Competent, fair building-level principals and supervisors	(H)	291	8.20
6	Fair school system policies and administration	(H)	267	7.53
7	Personal life factors such as family, hobbies	(H)	262	7.39
8	Good interpersonal relationships with fellow teachers and supervisors	(H)	250	7.05
9	Satisfactory working conditions such as adequate space and ventilation, work materials and equipment, manageable class size	(H)	238	6.71
10	Recognition, praise, or notice from colleagues, superiors, or the public	(M)	137	3.86
11	Responsibility, authority for one's own work or the work of others	(M)	134	3.78
12	Possibility of growth, refinement of professional skills	(M)	127	3.58
13	Advancement to another career level	(M)	122	3.44
14	Status and privileges, such as eating off school grounds, having secretarial help	(H)	49	1.38

Factor Rank	Factor	Factor Classification[a]	Frequency of Selection[b]	Percentage of Selection[c]
	A. Teacher Group Rankings (n = 702)			
1	Achievement or accomplishment in present position, successful completion of a task, seeing results of one's own work	(H)	532	15.08
2	Adequate salary and benefits	(H)	481	13.63
3	The work itself, i.e., teaching	(M)	439	12.44
4	Satisfactory working conditions	(H)	325	9.21
5	Competent, fair building-level principals and supervisors	(H)	292	8.27
6	Job security and likelihood of continued employment in the same position	(H)	290	8.22
7	Personal life factors such as family, hobbies	(H)	275	7.79
8	Fair school system policies and administration	(H)	259	7.34
9	Good interpersonal relationships with fellow teachers and supervisors	(H)	236	6.69
10	Possibility of growth, refinement of professional skills	(M)	121	3.43
11	Responsibility, authority for one's own work or the work of others	(M)	117	3.32
12	Recognition, praise, or notice from colleagues, superiors, or the public	(M)	79	2.24
13	Advancement to another career level	(M)	68	1.93
14	Status and privileges, such as eating off school grounds, having secretarial help	(H)	15	.43

[a]Column indicates the classification of job factors according to the Herzberg findings: (H) indicates hygiene factors; (M) indicates motivator factors.

[b]Column represents the number of times each particular factor was ranked within the top five ranks by respondents.

[c]Column represents the percentage each particular factor was ranked within the top five ranks by respondents.

indication. Four hundred thirty-nine teachers placed "The work itself" in the top five spaces most frequently. Table VI also depicts the rankings of the total teacher group.

The item ranked as number one in importance to teachers was a motivator, while a hygiene factor was placed in the number two position. A motivator, "The work itself," was placed, again, in third position. Teachers ranked two hygiene factors--"Satisfactory working conditions" and "Competent principals and supervisors"--in fourth and fifth positions.

An intermingling of hygiene and motivational factors was found within the top five listings for both the principal and the teacher respondent groups. Principals placed two motivators and three hygiene factors among the top five. Teachers, likewise, placed two motivators and three hygiene factors among the top five.

An intermingling of both hygiene factors and motivators was noted among those factors ranked least often among the most important. Four of the five factors ranked by both groups least often as important were motivators.

Principals were least accurate in predicting the rank teachers would assign to "Satisfactory working conditions." While principals placed the factor in ninth position, teachers assigned it a much higher rank of four--just below "The work itself."

Table VII depicts the ranking comparisons of principals and teachers in two different manners. Portion A of the table compares the two groups' rankings as determined through the frequency system

Table VII. Two Comparisons of the Principal Respondent Group Predictor Rankings and the Teacher Respondent Group Actual Rankings as Measured by the Job Factor Ranking Instrument in Tennessee, 1984.

Job Factor	Principal Group Rankings n = 711	Teacher Group Rankings n = 702	Difference Between Ranks
A. Comparison of the Principal Respondent Group Predictor Rankings and Teacher Respondent Group Actual Job Factor Rankings[a]			
Achievement or accomplishment in present position, successful completion of a task, seeing results of one's own work	2	1	1
Adequate salary and benefits	1	2	1
Advancement to another career level	13	13	0
Competent, fair building level principals and supervisors	5	5	0
Fair school system policies and administration	6	8	2
Good interpersonal relationships with fellow teachers and supervisors	8	9	1
Job security and likelihood of continued employment in the present position	4	6	2
Personal life factors such as family, hobbies	7	7	0
Possibility of growth, refinement of professional skills	12	10	2
Recognition, praise or notice from colleagues, supervisors or the public	10	12	2
Responsibility, authority for one's own work or the work of others	11	11	0
Satisfactory working conditions such as adequate space and ventilation, work materials and equipment, manageable class size	9	4	5
Status and privileges such as eating off school grounds, having secretarial help	14	14	0
The work itself, i.e., teaching	3	4	1

Job Factor	Principal Group Rankings n = 711	Teacher Group Rankings n = 702	Difference Between Ranks
B. Comparison of the Average Ranks of Principal Respondent Group Predictor Rankings and the Average Ranks of Teacher Respondent Group Actual Rankings			
Achievement or accomplishment in present position, successful completion of a task, seeing results of one's own work	1	1	0
Adequate salary and benefits	2	2	0
Advancement to another career level	13	13	0
Competent, fair building level principals and supervisors	5	5	0
Fair school system policies and administration	6	6	0
Good interpersonal relationships with fellow teachers and supervisors	7	8	1
Job security and likelihood of continued employment in the present position	3	7	4
Personal life factors such as family, hobbies	8	9	1
Possibility of growth, refinement of professional skills	12	10	2
Recognition, praise or notice from colleagues, supervisors or the public	11	12	1
Responsibility, authority for one's own work or the work of others	10	11	1
Satisfactory working conditions such as adequate space and ventilation, work materials and equipment, manageable class size	9	4	5
Status and privileges such as eating off school grounds, having secretarial help	14	14	0
The work itself, i.e., teaching	4	3	1

[a]Factor ranks are based upon the number of times each factor was ranked among the top five factors by the respective respondent groups.

described on page 86 of this chapter. Using the Spearman Rho formula, the correlation between the total Principal Group and the total Teacher Group frequency rankings (in this portion of the table) was found to be high--.91.

Portion B of Table VII depicts the average ranks for each of the two groups. In this perspective, as in the previous one, principals ranked "Satisfactory working conditions" as less important to teachers than teachers actually indicated. A difference of five, again, was found to exist between these rankings.

Another noticeable difference was that of the "Job security" item; teachers ranked this seven, while the average principal rank was three. Overall, however, another high correlation--.87--was found between the average rankings for these two professional groups.

Male and female teacher respondent groups, as shown in Table VIII, differed little in the job factors which they ranked as most important. Females ranked "Achievement or accomplishment" most frequently in the highest positions, while males ranked "Adequate salary and benefits" and "The work itself" equally as positions two and three. Males ranked "Achievement" the second highest number of times, while placing "The work itself" (as had females) in the third position.

Both groups chose hygiene factors as items for fourth, fifth, and sixth positions. Female teachers selected "Satisfactory working conditions," "Competent building level principals," and "Job security," respectively, for these ranks. Male teachers chose "Job security," "Fair school system policies," and "Satisfactory

Table VIII. Male and Female Teacher Rankings of Job Factors of Importance as Measured by Teachers' Job Factor Ranking Instruments in Tennessee, 1984.

Factor Rank	Factor	Factor Classification[a]	Frequency of Selection[b]	Percentage of Selection[c]
	A. Female Respondents (n = 537)			
1	Achievement or accomplishment in present position, successful completion of a task, seeing results of one's own work	(M)	413	15.32
2-3	Adequate salary and benefits	(H)	356	13.21
	The work itself, i.e., teaching	(M)	356	13.21
4	Satisfactory working conditions such as adequate space and ventilation, work materials and equipment, manageable class size	(H)	254	9.42
5	Competent, fair building-level principals and supervisors	(H)	224	8.31
6	Personal life factors such as family, hobbies	(H)	217	8.05
7	Job security	(H)	214	7.94
8	Good interpersonal relationships with fellow teachers and supervisors	(H)	188	6.98
9	Fair school system policies and administration	(H)	185	6.86
	Possibility of growth, refinement of professional skills	(M)	89	3.30
10-11	Responsibility, authority for one's own work or the work of others	(M)	89	3.30
12	Recognition, praise, or notice from colleagues, superiors, or the public	(M)	61	2.26
13	Advancement to another career level	(H)	35	1.30
14	Status and privileges, such eating off school grounds, having secretarial help	(H)	14	.52

Factor Rank	Factor	Factor Classification[a]	Frequency of Selection[b]	Percentage of Selection[c]
	B. Male Respondents (n = 165)			
1	Adequate salary and benefits	(H)	125	15.08
2	Achievement or accomplishment in present position, successful completion of a task, seeing results of one's own work	(M)	118	14.23
3	The work itself, i.e., teaching	(M)	82	9.89
4	Job security and likelihood of continued employment in the same position	(H)	75	9.05
5	Fair school system policies and administration	(H)	74	8.93
6	Satisfactory working conditions such as adequate space and ventilation, work materials and equipment, manageable class size	(H)	70	8.44
7	Competent, fair building-level principals and supervisors	(H)	67	8.08
8	Personal life factors such as family, hobbies	(H)	58	7.00
9	Good interpersonal relationships with fellow teachers and supervisors	(H)	48	5.79
10	Advancement to another career level	(M)	33	3.98
11	Possibility of growth, refinement of professional skills	(M)	32	3.86
12	Responsibility, authority for one's own work or the work of others	(M)	28	3.38
13	Recognition, praise, or notice from colleagues, superiors, or the public	(M)	18	2.17
14	Status and privileges, such as eating off school grounds, having secretarial help	(H)	1	.12

[a]Column indicates the classification of job factors according to the Herzberg findings: (H) indicates hygiene factors, (M) indicates motivator factors.

[b]Column represents the number of times each particular factor was ranked within the top five ranks by respondents.

[c]Column represents the percentage each particular factor was ranked within the top five ranks by respondents.

working conditions" for fourth, fifth, and sixth positions. The male and female teachers who had completed the instruments had each included two motivational factors and four hygiene factors among the top six places.

Teacher respondents grouped according to educational level also differed little in their rankings of job factors. Table IX shows these rankings. Those who had attained a bachelor's degree or less assigned "Achievement," "Adequate salary and benefits," and "The work itself" the top ranks most frequently. Those teachers who had attained a master's degree or higher also chose the same factors for the top ranks. The two groups had each selected two motivators and four hygiene factors as among the six most frequently selected factors within the top five.

Those teachers with less education chose "Job security," "Satisfactory working conditions," and "Competent building level principals and supervisors" in fourth, fifth, and sixth highest frequency positions respectively. Teachers with the highest educational levels chose "Satisfactory working conditions," "Competent building level principals and supervisors" and "Personal life factors as fourth, fifth, and sixth highest frequency positions respectively.

Table X includes the factor rankings of three respondent groups: teachers assigned to elementary schools, teachers assigned to middle/junior high schools, and those teaching in high schools. All three respondent groups placed "Achievement or accomplishment"

Table IX. Teacher Rankings of Factors of Importance by Educational Level of Teachers and Measured by Teachers' Job Factor Ranking Instruments in Tennessee, 1984.

Factor Rank	Factor	Factor Classification[a]	Frequency of Selection[b]	Percentage of Selection[c]
A. Respondents Having Attained Bachelor's Degree or Less (n = 402)[d]				
1	Achievement or accomplishment in present position, successful completion of a task, seeing results of one's own work	(M)	309	15.33
2	Adequate salary and benefits	(H)	279	13.84
3	The work itself, i.e., teaching	(M)	253	12.55
4	Job security and likelihood of continued employment in the same position	(H)	184	9.13
5	Satisfactory working conditions such as adequate space and ventilation, work materials and equipment, manageable class size	(H)	182	9.03
6	Competent, fair building-level principals and supervisors	(H)	163	8.09
7	Personal life factors such as family, hobbies	(H)	158	7.84
8	Fair school system policies and administration	(H)	146	7.24
9	Good interpersonal relationships with fellow teachers and supervisors	(H)	126	6.25
10	Possibility of growth, refinement of professional skills	(M)	71	3.52
11	Responsibility, authority for one's own work or the work of others	(M)	62	3.08
12	Recognition, praise, or notice from colleagues, superiors, or the public	(M)	37	1.84
13	Advancement to another career level	(M)	35	1.74
14	Status and privileges, such as eating off school grounds, having secretarial help	(H)	11	.55

Factor Rank	Factor	Factor Classification[a]	Frequency of Selection[b]	Frequency of Selection[c]
B. Respondents Having Attained a Master's, Specialist, or Doctoral Degree (n = 297)				
1	Achievement or accomplishment in present position, successful completion of a task, seeing results of one's own work	(M)	221	14.76
2	Adequate salary and benefits	(H)	200	13.36
3	The work itself, i.e., teaching	(M)	184	12.29
4	Satisfactory working conditions such as adequate space and ventilation, work materials and equipment, manageable class size	(H)	140	9.35
5	Competent, fair building-level principals and supervisors	(H)	128	8.55
6	Personal life factors such family, hobbies	(H)	116	7.75
7	Fair school system policies and administration	(H)	113	7.55
8	Good interpersonal relationships with fellow teachers and supervisors	(H)	109	7.28
9	Job security and likelihood of continued employment in the same position	(H)	105	7.01
10	Responsibility, authority for one's own work or the work of others	(M)	54	3.61
11	Possibility of growth, refinement of professional skills	(M)	48	3.21
12	Recognition, praise, or notice from colleagues, superiors, or the public	(M)	42	2.81
13	Advancement to another career level	(M)	33	2.20
14	Status and privileges, such as eating off school grounds, having secretarial help	(H)	4	.27

[a]Column indicates the classification of job factors according to the Herzberg findings: (H) indicates hygiene factors, (M) indicates motivator factors.

[b]Column represents the number of times each particular factor was ranked within the top five ranks by respondents.

[c]Column represents the percentage each particular factor was ranked within the top five ranks by respondents.

[d]Three of 702 teacher respondents did not indicate their educational levels.

Table X. Teacher Rankings of Factors of Importance by Teacher School Assignments and as Measured by the Teacher Job Ranking Instruments in Tennessee, 1984.

Factor Rank	Factor	Factor Classification[a]	Frequency of Selection[b]	Percentage of Selection[c]
	A. Respondents Assigned to Elementary Schools (n = 307)			
1	Achievement or accomplishment in present position, successful completion of a task, seeing results of one's own work	(M)	232	15.08
2	Adequate salary and benefits	(H)	209	13.59
3	The work itself, i.e., teaching	(M)	187	12.16
4	Satisfactory working conditions such as adequate space and ventilation, work materials and equipment, manageable class size	(H)	158	10.27
5	Personal life factors such as family, hobbies	(H)	126	8.19
6	Competent, fair building-level principals and supervisors	(H)	125	8.13
7	Job security and likelihood of continued employment in the same position	(H)	121	7.87
8	Fair school system policies and administration	(H)	111	7.22
9	Good interpersonal relationships with fellow teachers and supervisors	(H)	102	6.63
10	Possibility of growth, refinement of professional skills	(M)	54	3.51
11	Recognition, praise, or notice from colleagues, superiors, or the public	(M)	42	2.73
12	Responsibility, authority for one's own work or the work of others	(M)	39	2.54
13	Advancement to another career career level	(M)	24	1.56
14	Status and privileges, such as eating off school grounds, having secretarial help	(H)	8	.52
	B. Respondents Assigned to Middle/Junior High Schools (n = 251)			
1	Achievement or accomplishment in present position, successful completion of a task, seeing results of one's own work	(M)	180	15.52
2	The work itself, i.e., teaching	(M)	157	13.53
3	Adequate salary and benefits	(H)	155	13.36
4	Job security and likelihood of continued employment in the same position	(H)	101	8.71
5	Personal life factors such as family, hobbies	(H)	98	8.45
6	Satisfactory working conditions such as adequate space and ventilation, work materials and equipment, manageable class size	(H)	94	8.10
7	Competent, fair building-level principals and supervisors	(H)	85	7.33
8	Good interpersonal relationships with fellow teachers and supervisors	(H)	84	7.24
9	Fair school system policies and administration	(H)	80	6.90
10	Responsibility, authority for one's own work or the work of others	(M)	47	4.05
11	Possibility of growth, refinement of professional skills	(H)	33	2.84
12-13	Recognition, praise, or notice from colleagues, superiors, or the public	(M)	21	1.81
	Advancement to another career level	(H)	21	1.81
14	Status and privileges, such as eating off school grounds, having secretarial help	(H)	4	.34

Table X (Continued)

Factor Rank	Factor	Factor Classification[a]	Frequency of Selection[b]	Percentage of Selection[c]
	C. Respondents Assigned to High Schools (n = 127)			
1	Achievement or accomplishment in present position, successful completion of a task, seeing results of one's own work	(M)	92	14.35
2	Adequate salary and benefits	(H)	89	13.88
3	The work itself, i.e., teaching	(M)	70	10.92
4	Competent, fair building-level principals and supervisors	(H)	64	9.98
5	Satisfactory working conditions such as adequate space and ventilation, work materials and equipment, manageable class size	(H)	59	9.20
6	Job security and likelihood of continued employment in the same position	(H)	52	8.11
7	Fair school system policies and administration	(H)	51	7.96
8	Good interpersonal relationships with fellow teachers and supervisors	(H)	41	6.40
9	Personal life factors such as family, hobbies	(H)	38	5.93
10	Possibility of growth, refinement of professional skills	(M)	28	4.37
11	Responsibility, authority for one's own work or the work of others	(M)	24	3.74
12	Advancement to another career level	(M)	19	2.96
13	Recognition, praise, or notice from colleagues, or the public	(M)	12	1.87
14	Status and privileges, such as eating off school grounds, having secretarial help	(H)	2	.31

[a]Column indicates the classification of job factors according to the Herzberg findings: (H) indicates hygiene factors, (M) indicates motivator factors.

[b]Column represents the number of times each particular factor was ranked within the top five ranks by respondents.

[c]Column represents the percentage each particular factor was ranked within the top five ranks by respondents.

in the top ranks most frequently. Both elementary and high school teachers placed "Adequate salary and benefits" in the second highest position. Both groups placed "The work itself" in the number three position. With a small difference in percentage of selection, the middle/junior high teacher respondent group reversed this order: they placed "The work itself" in second position, and "Adequate salary and benefits" in third.

Each of the three respondent groups listed a hygiene factor in fourth position. Elementary and high school teachers both placed "Satisfactory working conditions" while the middle/junior high school respondents placed "Job security" in this position.

The "Personal life factors" item was placed as fifth in importance by both elementary and middle/junior high respondent groups. High school respondents placed "Satisfactory working conditions" in this position. "Personal life factors" was ranked much lower--in ninth frequency position--by this latter group.

Clearly, a number of the Herzberg motivators, or intrinsics, were ranked among the top five positions less frequently. Four out of five of the lowest ranked factors in all three teacher group ranking lists were motivators. "Status and privileges" was the only hygiene factors noted within this bottom level of the rankings.

Chapter V presents a summary of the complete investigation, along with conclusions, implications, and recommendations.

CHAPTER V

SUMMARY, CONCLUSIONS, IMPLICATIONS AND RECOMMENDATIONS

Summary

The purposes of this investigation were several. However, the main thrust of the study was to determine if a relationship existed between the observed leader behaviors of principals in Tennessee and the principals' ability to accurately predict what factors served to motivate teachers. A similar study conducted earlier by Roberts uncovered no significant differences among principal leadership behaviors.[182] However, it was felt that significant differences in leadership behaviors between principals who predicted teacher rankings accurately and principals who did not predict accurately could be ascertained if changes were made in the research methodology.

Additional purposes of this study were to examine how principals as a group predicted what teachers desired and what teachers actually indicated they desired from their jobs. The differences among leadership behaviors of elementary, middle/junior high, and high school principals were also studied. A portion of the investigation served to determine whether or not the factors which

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[182] Roberts, op. cit., p. 90.

teachers indicated they most desired were intrinsic in nature and whether or not there were differences in what teacher groups (elementary, middle school/junior high, and high school) indicated they most desired.

The data for the study were gathered from employees of seventy-one public school systems across the state of Tennessee during a six-month period. The three samples included one K-12 school, one special education school, 138 elementary schools, 36 middle/junior high schools, and 40 high schools. Seven hundred eleven usable principal responses were received from 149 principals. A total of 702 usable returns were received from Teacher Sample I, while 968 usable responses were derived from Teacher Sample II.

A Job Factor Ranking instrument was devised for assessing those items which teachers desire most from their jobs. This instrument was patterned after one by Roberts.[183] Principals also completed a Job Factor Ranking instrument on each of five members of their respective faculties. A method for determining principal accuracy of prediction involved the use of a correlation procedure. The Spearman Rho formula was applied to each pair of principal-teacher rankings, resulting in 461 correlations. Principals having a majority of their predicted rankings falling above the median rho were placed in a High Predictor Group. All other responding principals were placed in the Low Predictor Group.

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[183]Ibid., p. 111.

The twelve leadership behaviors of principals were gauged by teachers who completed the Leadership Behavior Description Questionnaire-XII. Each leadership dimension was represented by a mean score derived from a minimum of four members of each principal's faculty. A "t" test procedure was applied to each pair of means of the twelve subscales of High Predictors and Low Predictors. Using a table of significance, however, it was determined that there were no significant differences between the means of the two principal groups.

Summary of Findings

As a result of this investigation, the following list of findings were drawn:

1. Some public school principals predict more accurately than others the factors that are important to their respective faculties.

2. However, there is no relationship between principals' ability to predict accurately and their observed leadership behaviors.

3. There are significant differences in leadership behaviors among principal groups, as perceived by their teachers:

    a. Elementary school principals are significantly more tolerant of uncertainty than are high school principals.

b. Middle school/junior high school principals are significantly more tolerant of uncertainty than are high school principals.

c. Middle/junior high school principals are significantly more tolerant of freedom than both elementary and high school principals.

d. Elementary school principals are significantly more considerate than high school principals.

e. High school principals are significantly more production emphasizing than elementary and middle/junior high school principals.

4. Important job factors ranked among the five most frequently by teachers are:

a. Achievement or accomplishment in present position, successful completion of a task, seeing results of one's own work.

b. Adequate salary and benefits.

c. The work itself, i.e., teaching.

d. Satisfactory working conditions, such as adequate space and ventilation, work materials and equipment, manageable class size.

e. Competent, fair building-level principals and supervisors.

5. Job factors rated as most important to teachers are both intrinsic and extrinsic in nature.

6. There is little difference in importance placed on job factors among elementary, middle/junior high, and high school teachers.

7. There is little difference in importance placed on job factors among teachers based upon their educational level or sex.

8. There is little difference in importance placed on job factors between principals' predictions and teacher actual rankings.

Discussion of Findings

Of the principals included in this study, some were able to predict quite accurately the rankings their respective teachers would give to job factors. However, principals' ability to predict correctly apparently made little difference in the way principals were observed in their leadership roles.

It seems appropriate to state that principals' behaviors are influenced more by the type of school in which they serve. Indeed, several significant differences were noted in observed leadership behaviors among the three principal groups studied. Elementary principals and middle/junior high school principals were more tolerant of uncertainty in their environments. The over-arching philosophy of many elementary schools is one of flexibility and adaptation to special needs of individuals and groups of students. As many elementary schools in Tennessee, too, serve smaller student

populations (and generally have smaller faculties, as well), changes in programs, learning situations, et cetera, may be handled more easily. As they usually are able, then, to respond more quickly to different situations as they occur, it seems reasonable that principals of elementary schools would indeed be more tolerant of uncertainty.

Middle/junior high schools and elementary schools in this state particularly seem to be in a state of flux. With the adoption of the middle school philosophy by many educators, boards of education have been persuaded that a change in the traditional school organization (grades kindergarten through grade six or grade eight) has been necessary. Therefore, a great number of elementary schools continue to be reorganized as middle or junior high schools--specifically to better satisfy the special learning needs of intermediate-age children. As a result of ongoing organizational and philosophical changes, principals of these schools may be better able to cope with uncertainty.

Middle/junior high school principals in this study were found to be more tolerant of freedom than both elementary and high school principals. The reorganization patterns mentioned above may be one reason for this finding. However, other concerns may provide an understanding. Increased attention has been given to falling student achievement scores during recent years. It is in the middle grades that a great number of competency testing situations and new remedial programs have been initiated. Adequate testing of students

prior to promotion to high school is now being stressed more strongly by parent groups and school authorities. Perhaps for these reasons, principals now tend to rely more heavily on their teaching staffs to implement these new programs as they themselves determine appropriate.

Elementary principals were found to be more considerate of their teaching staffs than were high school principals. Again, because the elementary school is usually a smaller body, the school leader is able to interact with faculty on an individual basis more frequently than the principal of the larger school. Many of the activities of the elementary school are more social in nature because of the younger students served. Parent-teacher organizations, much more prevalent at the elementary level, may provide a less structured framework within which principals and teachers can work together on an informal, interpersonal basis. Also the fact that a great many elementary principals are women may have an impact on this finding.

High school principals in this study were found to place more emphasis on production than other principal groups. The greater size of both student body and faculty in most high schools may explain this finding. High school principals, as a rule, have more problems with which to contend. The passage of stricter college entrance requirements has tended to make the secondary program more rigid in itself.

In addition to more rigid academic standards (adherence to the Carnegie unit system) at this level, the high school principal

must often coordinate sophisticated vocational programs, athletic programs, a myriad of extracurricular activities such as school newspaper and yearbook publications, and related student club activities. In short, the high school is a more complex system. Therefore, it would appear that to complete this wide array of duties satisfactorily, the principal at the upper level must make more stringent staff assignments, must adhere more closely to scheduling, and must emphasize task completion.

Overall, principals in this study predicted quite well what teachers as a group desired from their jobs. Principals did not indicate that teachers would choose intrinsic factors most often as important. Nor did teachers make this indication. The Herzberg premise, then, was not upheld in this investigation. Teachers clearly ranked both intrinsic and extrinsic factors as among those things they most desired. Important was the fact that intrinsic factors identified by Herzberg were also among the least desired items. "Status and privileges" was the item desired least by all teacher groups.

Teachers indicated that they desired "Achievement or accomplishment in the present position" most. However, "Adequate salary and benefits" was placed second in importance. "The work itself, i.e., teaching" was ranked third. "Satisfactory working conditions" and "Competent, fair building-level principals and supervisors" were ranked in fourth and fifth positions respectively.

Educators today represent an enlightened professional group for several reasons. Most public school teachers in this state are women; women's rights groups have worked diligently to publicize discrepant pay scales between male- and female-dominated professions. Given the economic situation today, then, it appears natural that educators would place great importance on salary and benefits.

More importantly, however, is the fact that even though salary was important to teachers, "Achievement or accomplishment in the present position" was ranked higher. Additionally, because of their placement of "The work itself" in the third position, it appears that those non-tangibles or intrinsics remain strong motivating forces for teaching professionals.

Teachers placed "Advancement to another career level"--one of Herzberg's motivators--in a low-ranking position. Some confusion may have existed here. As has happened in similar studies of teacher motivation, teachers have ranked advancement low. Traditionally, advancement for teachers has meant leaving the classroom and teaching behind. The recently-implemented career-level plan in Tennessee, however, provides that educators may advance in salary and assignment levels, while maintaining their teaching duties. Since thousands of teachers have already applied to become part of this plan, this may be an indication that many do indeed desire advancement.[184]

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[184]Thirty-nine thousand certified teachers had applied for inclusion in the Career Ladder Plan, Tennessee Department of Education statistics, November 1984.

Conclusions

The data suggest a number of ideas concerning items that teachers value, which principals perceive teachers to value, and principal leadership behaviors. Certain conclusions may be drawn from this information.

1. Teachers desire a number of different things from their jobs and school officials should be mindful of these items. Improvement in "Salary and benefits" does not address the need for "Achievement or accomplishment," the factor ranked highest in importance by teachers.

2. "Salary and benefits" are important to teachers and were ranked of highest importance to male teachers in particular. However, as teaching salaries are steadily increased to more reasonable professional levels, as is planned for this state, the factor may not continue to receive such strong endorsement.

3. Teachers did not rank "Career level advancement" as highly desirable. This ranking may perhaps reflect anxiety on the part of teachers toward the new career level concept presently being implemented across Tennessee. This low ranking should serve to alert school officials that there continues to be resistance toward swift acceptance in this direction.

4. Principals and other school officials should become more aware of the high value that teachers place on working conditions and surroundings.

Implications

1. Principals may have become oblivious to teachers' desire for improved environmental conditions since principals do not have, as a rule, the financial flexibility or authority to ameliorate poor conditions--inadequate space, equipment, teaching materials, et cetera. Without strong endorsements from principals on behalf of teachers' requests, it is furthermore even less likely that school boards will readily spend funds for these items.

2. Teachers indicated that "Achievement" was more motivating to them than other job factors. On the other hand, they gave "Advancement to another career level" a low ranking. If teachers are to embrace the latter concept, then the relationship between the two ideas must be more apparent to them. The components of the intrinsic force, achievement--successful completion of tasks related to teaching, feelings of accomplishment in the present position, et cetera--must be stressed throughout the state's career advancement plan if the plan is to be more desirable to teaching professionals.

3. Male teachers placed a greater importance on "Salary and benefits" than did females. It is likely, therefore, that a larger percentage of male, rather than female, teachers will opt to become part of this state's career level plan--in which advancement means definite salary increases.

4. As basic skill and minimum competency requirements continue to be stressed in the earlier grades, principals of elementary

and middle schools may be perceived as being more production emphasizing in the future.

Recommendations

The following recommendations are offered as a result of the findings and conclusions of this investigation:

1. Public relations efforts surrounding the Tennessee Career Ladder Model should stress the achievement or job enrichment components (avenues for individual accomplishments and contributions in the teachers' present position) within the plan.

2. The task of teaching is important to teachers. School officials should, therefore, investigate ways of removing menial tasks (such as counting lunch money, maintaining student attendance records, et cetera) thereby upgrading the professional quality of the job itself.

3. In spite of economic implications, school officials and principals should continue to investigate ways of improving the work environment of teachers (providing adequate teaching materials, equipment, and facilities).

4. School officials should consider current research which links smaller class size to improved student learning.

5. A study of teacher motivation after the Tennessee Career Ladder plan has been in effect for five years would help to determine if teacher attitudes have shifted.

6. A study of the importance placed on job factors by teachers with respect to teacher experience and age is recommended.

7. A comparison study of principal leadership behaviors would aid in understanding individuals with varying levels of experience as principals.

8. A study of leadership behavior of principals of small high schools as compared to principals of large high schools would shed some light on differences in administrative practices.

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APPENDICES

APPENDIX A

CALCULATION OF SAMPLE SIZE

$$n = \frac{[\chi^2 N\Phi(1-\Phi)]}{[d^2(N-1) + \chi^2\Phi(1-\Phi)]}$$

where:

N = population size

n = sample size

Φ = the population proportion it is desired to estimate (.5 will yield the largest sample size)

d = the degree of accuracy expressed as a proportion (.05)

χ^2 = table value of chi-square for one degree of freedom (2.71) and the desired confidence interval (.90).

$$n = \frac{[2.706(1682)(.5)(1-.5)]}{[(.05)^2(1682-1) + 2.706(.5)(1-.5)]}$$

$$n = \frac{1138}{5} = 227.6$$

APPENDIX B

LETTER TO SUPERINTENDENTS AND SUPERINTENDENT RESPONSE CARD

THE UNIVERSITY OF TENNESSEE
KNOXVILLE 37916
COLLEGE OF EDUCATION

DEPARTMENT OF
EDUCATIONAL ADMINISTRATION
AND SUPERVISION

Dear :

Presently statewide research is being conducted in the area of teacher motivation and leadership behaviors of principals. Several schools in your district have been randomly selected for participation in this study.

Principals and five randomly-selected teachers within each sample school shall be asked to complete job motivation questionnaires. A second group of teachers within each school will be asked at a later time to complete questionnaires concerning leadership behaviors of principals. Completion of these instruments should require no more than fifteen minutes of staff time. All responses shall be kept in strictest confidence.

We therefore request your permission to contact the school personnel by mail for the above-mentioned purposes. A return postcard is enclosed for your response.

I am very much aware of the time constraints and heavy pressures under which school personnel must work. However, if educational research is to be meaningful, it is essential that educators be allowed to participate. Again, all responses shall be considered confidential and shall be used solely for the purpose outlined above.

Thank you for your consideration of this request.

Sincerely,

Jan D. Buxton

Enclosure

SUPERINTENDENT RESPONSE CARD

School District: _____

Date: _____

Please check one of the following:

____ I give my approval for school personnel to be contacted for participation in the study of teacher motivation and principal leadership behavior.

____ I do not give my approval.

____ I desire additional information about the study before granting approval.

_____
Superintendent

APPENDIX C

LETTER AND INSTRUMENT MAILED TO PRINCIPALS (SAMPLE I)

THE UNIVERSITY OF TENNESSEE
KNOXVILLE 37916
COLLEGE OF EDUCATION

Dear :

Your superintendent has given his consent for you to be contacted concerning statewide research presently being conducted in the area of teacher motivation and leadership behaviors of principals. Your school has been randomly selected for participation in this study.

We are, therefore, asking that you complete a set of ranking sheets (which should take no more than fifteen minutes of your time) and return them in the attached envelope as soon as possible. All responses shall remain confidential.

Five teachers in your school were randomly selected from a roster. Each of their names appears at the top of a ranking sheet. Please look at the teacher name, and complete the form as you believe that particular teacher would complete it. Do the same for each of the five teachers. You may cross out the teacher's name after completing the form if you wish, since all data will be processed by code number.

Subsequently, those same five teachers will be asked to complete the same rankings, specifying the importance each places on the items listed. No teacher will see any of your responses or be aware of the manner in which your rankings were completed.

A second randomly-selected group of teachers will be asked at a later time to complete the modified Leadership Behavior Description Questionnaire and return it to us by separate mailing. If you desire a copy of the instrument for your files, I will be happy to supply one on request. This instrument merely describes principal behaviors and will be used to study behaviors of educational leaders. Again, all information shall be seen by a single investigator only and will be held in strictest confidence.

I am very much aware of the time constraints and heavy pressures under which you as a principal must work. However, your cooperation is essential if educational research is to be meaningful and useful. Your assistance in completing these instruments is, therefore, very much appreciated.

Very truly yours,

Jan Buxton

WHAT DO TEACHERS WANT MOST?

CONFIDENTIAL

Please check below if you desire a copy of the study results (to be available in August, 1984).

O Yes, I would like a copy.

Thank You For Your Assistance

Please return this form to:

College of Education
c/o Jan Buxton
Room 4, Claxton Hall
The University of Tennessee
Knoxville, Tennessee 37916

Please disregard this column

School: _____

(1-7) Teacher: _____

(8-9) ☐ Years of experience as a principal.

(10-11) ☐ Years in your present principalship.

JOB FACTOR RANKING

What motivates teachers? What do teachers want from their jobs? Below is a list of fourteen items which describe things which may be important to teachers.

Please rank these items from most important to least important, as you believe the above-named teacher would rank them. Please place the ticular teacher, a "2" before the next most important item, and so forth until you have assigned ranks of "1" through "14" to the items. (Note: All requested information is confidential. No teacher shall be contacted in any manner concerning these rankings.)

Skip to 16

(16-17) _____ Achievement or accomplishment in present position, successful completion of a task, seeing results of one's own work.

(18-19) _____ Adequate salary and benefits.

(20-21) _____ Advancement to another career level.

(22-23) _____ Competent, fair building-level principals and supervisors.

(24-25) _____ Fair school system policies and administration.

(26-27) _____ Good interpersonal relationships with fellow teachers and supervisors.

(28-29) _____ Job security and likelihood of continued employment in the same position.

(30-31) _____ Personal life factors such as family, hobbies.

(32-33) _____ Possibility of growth, refinement of professional skills.

(34-35) _____ Recognition, praise, or notice from colleagues, superiors, or the public.

(36-37) _____ Responsibility, authority for one's own work or the work of others.

(38-39) _____ Satisfactory working conditions such as adequate space and ventilation, work materials and equipment, manageable class size.

(40-41) _____ Status and privileges, such as eating off school grounds, having secretarial help.

(42-43) _____ The work itself, i.e., teaching.

APPENDIX D

LETTER AND INSTRUMENTS MAILED TO TEACHERS (SAMPLE II)

THE UNIVERSITY OF TENNESSEE
KNOXVILLE 37916
COLLEGE OF EDUCATION

At the present time statewide research is being conducted in the areas of teacher motivation and leadership behavior of principals. Your name has been randomly selected for participation in the study and your district administration has given permission for teachers to be contacted.

Enclosed, therefore, you will find a sheet entitled "Job Factor Ranking," which I am asking you to complete. Please read the directions carefully, complete the personal information items, and then rank those items named from the highest to lowest according to their importance to you personally. The task should take no more than ten minutes of your time. Then return the completed form in the attached envelope.

All responses will be kept in strictest confidence. The computer coding, which you may note in the left-hand column, helps us to ensure that we are obtaining an adequate number of replies per school. Your responses shall be seen by no one other than a single investigator at our institution.

As a former classroom teacher, I am very much aware of the time constraints under which you must work. However, your cooperation is essential if educational research is to be meaningful and useful. Your assistance in completing this instrument is very much appreciated.

Sincerely,

Jan Buxton

Enclosure

EDUCATIONAL ADMINISTRATION AND SUPERVISION • 204 CLAXTON ADDITION

Please disregard this column

(1-7)

(8)

(9-10) Age: ☐

(11-12) Years of Teaching Experience: ☐

(13-14) Grade or Grades of Students Presently Served:
(Check appropriate box or boxes)

☐ 1. K-3 ☐ 4. 9-12
☐ 2. 4-6 ☐ 5. K-8
☐ 3. 7-8 ☐ 6. K-12
☐ 7. Other _____

(15) Highest Degree Earned:

☐ 1. less than B.S. ☐ 3. Master's
☐ 2. Bachelor's ☐ 4. Specialist or Doctor's

Please Complete the Following:

Sex: ☐ 1. Male ☐ 2. Female

JOB FACTOR RANKING

What motivates teachers? What do teachers want from their jobs? Below is a list of fourteen items which describe things that may be important to teachers. Please rank these items from most important to least important to you. Place a number "1" in front of the item of greatest importance to you, a "2" before the next most important item, and so forth until you have assigned ranks of "1" through "14" to the items.

(16-17) _____ Achievement or accomplishment in present position, successful completion of a task, seeing results of one's own work.

(18-19) _____ Adequate salary and benefits.

(20-21) _____ Advancement to another career level.

(22-23) _____ Competent, fair building-level principals and supervisors.

(24-25) _____ Fair school system policies and administration.

(26-27) _____ Good interpersonal relationships with fellow teachers and supervisors.

(28-29) _____ Job security and likelihood of continued employment in the same position.

(30-31) _____ Personal life factors such as family, hobbies.

(32-33) _____ Possibility of growth, refinement of professional skills.

(34-35) _____ Recognition, praise, or notice from colleagues, superiors, or the public.

(36-37) _____ Responsibility, authority for one's own work or the work of others.

(38-39) _____ Satisfactory working conditions such as adequate space and ventilation, work materials and equipment, manageable class size.

(40-41) _____ Status and privileges, such as eating off school grounds, having secretarial help.

(42-43) _____ The work itself, i.e., teaching.

APPENDIX E

LETTER OF PERMISSION

March 23, 1984

Ms. Arlene Robinson
Administrative Science Research
The Ohio State University
Columbus, Ohio 43210

Dear Ms. Robinson:

In February of this year I received permission by phone from your office to reproduce and disseminate copies of the Leadership Behavior Description Questionnaire - Form XII in conjunction with research involving public school teachers and principals in Tennessee. You subsequently mailed the latest edition of the instrument and manual, as well as your policy statement regarding duplication procedures.

The directions for completion of the instrument and wording of the questions have been altered for use with this specific professional group. Also the alphabetical responses following each statement within the body of the instrument have been changed to numerical responses for greater ease in keypunching operations. At a later date, the modified instrument shall be included for publication in a dissertation. Please inspect the attached booklet and ascertain that the modifications meet with your policy and are indeed approvable.

Your earliest response to my request will be appreciated. A return envelope is included for your reply.

Very truly yours,

Jan Buxton

Jan Buxton

* *

March 26, 1984

Dear Ms. Buxton:

Permission is granted to modify the LBDQ-XII as shown in the attached. Please use proper credit citation.

Yours truly,

P. M. Carroll, Director
Administrative Science Research

APPENDIX F

LETTER AND INSTRUMENTS MAILED TO TEACHERS (SAMPLE III)

THE UNIVERSITY OF TENNESSEE
KNOXVILLE 37916
COLLEGE OF EDUCATION

Dear :

We are presently conducting research in Tennessee to determine significant leadership behaviors of public school principals as described by their respective staffs. Your name has been randomly selected for participation in this study.

Enclosed is a questionnaire, the LBDQ--Form XII, which I am requesting that you complete and return in the attached stamped envelope. It should require no more than fifteen minutes of your time. Your answers will not be seen by any principal. Individual responses shall be held in strictest confidence and shall be seen by a single researcher only. Responses shall be used for no purpose other than that purpose stated above.

As a former classroom teacher, I am very much aware of the time constraints and pressures under which you must work. However, your cooperation is essential if educational research is to be meaningful and useful to us. Your cooperation in completing this questionnaire is, therefore, very much appreciated.

Sincerely,

Jan Buxton

Enclosure

LEADER BEHAVIOR DESCRIPTION QUESTIONNAIRE--FORM XII

Purpose of the Questionnaire

On the following pages is a list of items that may be used to describe the behavior of your principal. Each item describes a specific kind of behavior, but does not ask you to judge whether the behavior is desirable or undesirable. Although some items may appear similar, they express differences that are important in the description of leadership. Each item should be considered as a separate description. This is not a test of ability or consistency in making answers. Its only purpose is to make it possible for you to describe, as accurately as you can, the behavior of your principal.

All responses shall be held in strictest confidence. No effort shall be made to use responses for any purpose other than determining and understanding leadership behaviors of principals.

Reprinted With Permission From:

Bureau of Business Research
The Ohio State University
Columbus, Ohio

Please disregard this column

(1-7)

(8) Sex: male ☐, female ☐

(9-10) Age: ☐

(11-12) Years of Teaching Experience: ☐

(13-14) Grade or Grades of Students Presently Served:
(Check appropriate box or boxes)

☐ 1. K-3 ☐ 4. 9-12

☐ 2. 4-6 ☐ 5. K-8

☐ 3. 7-8 ☐ 6. K-12

☐ 7. Other _____

(15) Highest Degree Earned:

☐ 1. less than B.S. ☐ 3. Master's

☐ 2. Bachelor's ☐ 4. Specialist or Doctor's

DIRECTIONS:

a. READ each item carefully.

b. THINK about how frequently your principal engages in the behavior described by the item.

c. DECIDE whether he/she (5) always, (4) often, (3) occasionally, (2) seldom, or (1) never acts as described by the item.

d. DRAW A CIRCLE around one of the five numbers (5 4 3 2 1) following the item to show the answer you have selected.

5 = Always
4 = Often
3 = Occasionally
2 = Seldom
1 = Never

e. MARK your answers as shown in the examples below

Example: Often acts as described 5 (4) 3 2 1
Example: Never acts as described 5 4 3 2 (1)
Example: Occasionally acts as described 5 4 (3) 2 1

Please disregard this column -- For computer use only.

1.	Acts as the spokesperson of the group	5 4 3 2 1	(16)
2.	Waits patiently for the results of a decision	5 4 3 2 1	(17)
3.	Makes pep talks to stimulate the group	5 4 3 2 1	(18)
4.	Lets group members know what is expected of them	5 4 3 2 1	(19)
5.	Allows the members complete freedom in their work	5 4 3 2 1	(20)
6.	Is hesitant about taking initiative in the group	5 4 3 2 1	(21)
7.	Is friendly and approachable	5 4 3 2 1	(22)
8.	Encourages overtime work	5 4 3 2 1	(23)
9.	Makes accurate decisions	5 4 3 2 1	(24)
10.	Gets along well with the people above him/her	5 4 3 2 1	(25)
11.	Publicizes the activities of the group	5 4 3 2 1	(26)
12.	Becomes anxious when he/she cannot find out what is coming next	5 4 3 2 1	(27)

5 = Always
4 = Often
3 = Occasionally
2 = Seldom
1 = Never

			Please disregard this column
13.	His/her arguments are convincing	5 4 3 2 1	(28)
14.	Encourages the use of uniform procedures	5 4 3 2 1	(29)
15.	Permits the members to use their own judgment in solving problems	5 4 3 2 1	(30)
16.	Fails to take necessary action	5 4 3 2 1	(31)
17.	Does little things to make it pleasant to be a member of the group	5 4 3 2 1	(32)
18.	Stresses being ahead of competing groups	5 4 3 2 1	(33)
19.	Keeps the group working together as a team	5 4 3 2 1	(34)
20.	Keeps the group in good standing with higher authority . . .	5 4 3 2 1	(35)
21.	Speaks as the representative of the group	5 4 3 2 1	(36)
22.	Accepts defeat in stride	5 4 3 2 1	(37)
23.	Argues persuasively for his/her point of view	5 4 3 2 1	(38)
24.	Tries out his/her ideas in the group	5 4 3 2 1	(39)
25.	Encourages initiative in the group members	5 4 3 2 1	(40)
26.	Lets other persons take away his/her leadership in the group	5 4 3 2 1	(41)
27.	Puts suggestions made by the group into operation	5 4 3 2 1	(42)
28.	Needles members for greater effort	5 4 3 2 1	(43)
29.	Seems able to predict what is coming next	5 4 3 2 1	(44)
30.	Is working hard for a promotion	5 4 3 2 1	(45)
31.	Speaks for the group when visitors are present	5 4 3 2 1	(46)
32.	Accepts delays without becoming upset	5 4 3 2 1	(47)
33.	Is a very persuasive talker	5 4 3 2 1	(48)
34.	Makes his/her attitudes clear to the group	5 4 3 2 1	(49)
35.	Lets the members do their work the way they think best . . .	5 4 3 2 1	(50)
36.	Lets some members take advantage of him/her	5 4 3 2 1	(51)

5 = Always
4 = Often
3 = Occasionally
2 = Seldom
1 = Never

Please disregard this column

37.	Treats all group members as his/her equals	5	4	3	2	1	(52)
38.	Keeps the work moving at a rapid pace	5	4	3	2	1	(53)
39.	Settles conflicts when they occur in the group	5	4	3	2	1	(54)
40.	His/her superiors act favorably on most of his/her suggestions	5	4	3	2	1	(55)
41.	Represents the group at outside meetings	5	4	3	2	1	(56)
42.	Becomes anxious when waiting for new developments	5	4	3	2	1	(57)
43.	Is very skillful in an argument	5	4	3	2	1	(58)
44.	Decides what shall be done and how it shall be done	5	4	3	2	1	(59)
45.	Assigns a task, then lets the members handle it	5	4	3	2	1	(60)
46.	Is the leader of the group in name only	5	4	3	2	1	(61)
47.	Gives advance notice of changes	5	4	3	2	1	(62)
48.	Pushes for increased production	5	4	3	2	1	(63)
49.	Things usually turn out as he/she predicts	5	4	3	2	1	(64)
50.	Enjoys the privileges of his/her position	5	4	3	2	1	(65)
51.	Handles complex problems efficiently	5	4	3	2	1	(66)
52.	Is able to tolerate postponement and uncertainty	5	4	3	2	1	(67)
53.	Is not a very convincing talker	5	4	3	2	1	(68)
54.	Assigns group members to particular tasks	5	4	3	2	1	(69)
55.	Turns the members loose on a job, and lets them go to it	5	4	3	2	1	(70)
56.	Backs down when he/she ought to stand firm	5	4	3	2	1	(71)
57.	Keeps to himself/herself	5	4	3	2	1	(72)
58.	Asks the members to work harder	5	4	3	2	1	(73)
59.	Is accurate in predicting the trend of events	5	4	3	2	1	(74)
60.	Gets his/her superiors to act for the welfare of group members	5	4	3	2	1	(75)

5 = Always
4 = Often
3 = Occasionally
2 = Seldom
1 = Never

Please disregard this column

61.	Gets swamped by details	5	4	3	2	1	(76)
62.	Can wait just so long, then blows up	5	4	3	2	1	(77)
63.	Speaks from a strong inner conviction	5	4	3	2	1	(78)
64.	Makes sure that his/her part in the group is understood by the group members	5	4	3	2	1	(79)
65.	Is reluctant to allow the members any freedom of action	5	4	3	2	1	(80)

Card 2 (CC1 = 2) Dup.CC2-7

66.	Lets some members have authority that he/she should keep	5	4	3	2	1	(08)
67.	Looks out for the personal welfare of group members	5	4	3	2	1	(09)
68.	Permits the members to take it easy in their work	5	4	3	2	1	(10)
69.	Sees to it that the work of the group is coordinated	5	4	3	2	1	(11)
70.	His/her word carries weight with superiors	5	4	3	2	1	(12)
71.	Gets things all tangled up	5	4	3	2	1	(13)
72.	Remains calm when uncertain about coming events	5	4	3	2	1	(14)
73.	Is an inspiring talker	5	4	3	2	1	(15)
74.	Schedules the work to be done	5	4	3	2	1	(16)
75.	Allows the group a high degree of initiative	5	4	3	2	1	(17)
76.	Takes full charge when emergencies arise	5	4	3	2	1	(18)
77.	Is willing to make changes	5	4	3	2	1	(19)
78.	Drives hard when there is a job to be done	5	4	3	2	1	(20)
79.	Helps group members settle their differences	5	4	3	2	1	(21)
80.	Gets what he/she asks for from his/her superiors	5	4	3	2	1	(22)
81.	Can reduce a madhouse to system and order	5	4	3	2	1	(23)
82.	Is able to delay action until the proper time occurs	5	4	3	2	1	(24)
83.	Persuades others that his/her ideas are to their advantage	5	4	3	2	1	(25)

5 = Always
4 = Often
3 = Occasionally
2 = Seldom
1 = Never

							Please disregard this column
84.	Maintains definite standards of performance	5	4	3	2	1	(26)
85.	Trusts members to exercise good judgment	5	4	3	2	1	(27)
86.	Overcomes attempts made to challenge his/her leadership . .	5	4	3	2	1	(28)
87.	Refuses to explain his/her actions	5	4	3	2	1	(29)
88.	Urges the group to beat its previous record	5	4	3	2	1	(30)
89.	Anticipates problems and plans for them	5	4	3	2	1	(31)
90.	Is working his/her way to the top	5	4	3	2	1	(32)
91.	Gets confused when too many demands are made of him/her . .	5	4	3	2	1	(33)
92.	Worries about the outcome of any new procedure	5	4	3	2	1	(34)
93.	Can inspire enthusiasm for a project	5	4	3	2	1	(35)
94.	Asks that group members follow standard rules and regulations	5	4	3	2	1	(36)
95.	Permits the group to set its own pace	5	4	3	2	1	(37)
96.	Is easily recognized as the leader of the group	5	4	3	2	1	(38)
97.	Acts without consulting the group	5	4	3	2	1	(39)
98.	Keeps the group working up to capacity	5	4	3	2	1	(40)
99.	Maintains a closely knit group	5	4	3	2	1	(41)
100.	Maintains cordial relations with superiors	5	4	3	2	1	(42)

*Please fold your completed questionnaire, place it in the accompanying envelope, and return as soon as possible.

Thank you for your cooperation.

APPENDIX G

STATISTICAL PROCEDURES APPLIED TO RESEARCH DATA

The Spearman Rank Correlation formula:

$$rho = 1 - \frac{6\Sigma d_i^2}{N(N^2-1)}$$

where:

N = number of job factors

d_i = the difference between the two ranks.

"t" distribution formula:

$$"t" = \frac{\overline{X}_1 - \overline{X}_2}{\left[\frac{\Sigma x^2 + \Sigma y^2}{n_1 + n_2}\right]\left[\frac{1}{n_1} + \frac{1}{n_2}\right]}$$

where:

$\overline{X}_1$ = mean of the high predictor principal group subscale scores

$\overline{X}_2$ = mean of the low predictor principal group subscale scores

Σx^2 = the sum of the high predictor group subscale scores squared, minus the sum of the scores squared, divided by the number of principals in the group

Σy^2 = the sum of the low predictor group subscale scores squared, minus the sum of the scores squared, divided by the number of principals in the group

n_1 = the number of principals in the high predictor group

n_2 = the number of principals in the low predictor group

α = .05.

The ANOVA model:

Source of Variations	Sum of Squares	Degrees of Freedom	Variance Estimate	Estimate
Between Treatments	BTSS =	K-1	s_b^2	
	$\sum_{j=1}^{k} nj(\bar{x}_j-\bar{x})^2$		$\frac{BTSS}{K-1}$	$\sigma^2 + \sigma$
Within Treatments	WTSS =	n-k	s_w^2 =	σ^2
	$\sum_{j=1}^{k} \sum_{i=1}^{nj} (x_{ij}-\bar{x}_j)^2$	n-k	s_w^2 = $\frac{WTSS}{n-k}$	
Total	TSS =			
	$\sum_{}^{k} \sum_{}^{nj} (x_{ii}-\bar{x})^2$	n-1	K-1+ n-k	

The Scheffe' test:

$$F = \frac{(\bar{x}_1 - \bar{x}_2)}{MS_w(\frac{1}{n_1} + \frac{1}{n_2})\ (K-1)} \quad \text{with df} = (K-1)\ (N-K)\ .$$

APPENDIX H

PRINCIPAL/TEACHER CORRELATION LISTINGS

Table H-1. Tennessee Principal/Teacher Correlations Arranged by Value (Highest to Lowest) as Determined by the Spearman Rho Procedure, 1984, n = 461.

Rank	Value	Rank	Value	Rank	Value
1	1.0000	29	0.824176	57	0.758242
2	1.0000	30	0.814980	58	0.749451
3	1.0000	31	0.806593	59	0.745875
4	1.0000	32	0.806593	60	0.736264
5	1.0000	33	0.806593	61	0.736264
6	1.0000	34	0.806593	62	0.731868
7	0.98242	35	0.806593	63	0.731868
8	0.95604	36	0.802198	64	0.731868
9	0.94725	37	0.802198	65	0.727472
10	0.93846	38	0.793407	66	0.723077
11	0.93846	39	0.793407	67	0.714286
12	0.91648	40	0.793407	68	0.709890
13	0.90649	41	0.793407	69	0.709890
14	0.89451	42	0.793407	70	0.705494
15	0.88571	43	0.789011	71	0.705494
16	0.88132	44	0.789011	72	0.704071
17	0.87692	45	0.784615	73	0.701099
18	0.87692	46	0.784615	74	0.696703
19	0.87253	47	0.781079	75	0.696703
20	0.86813	48	0.780220	76	0.692308
21	0.859341	49	0.775824	77	0.692308
22	0.854945	50	0.771429	78	0.692308
23	0.854945	51	0.763736	79	0.690869
24	0.841758	52	0.762637	80	0.679121
25	0.841758	53	0.758242	81	0.674725
26	0.837363	54	0.758242	82	0.674725
27	0.828571	55	0.758242	83	0.674725
28	0.824176	56	0.758242	84	0.674725

Table H-1 (Continued).

Rank	Value	Rank	Value	Rank	Value
85	0.674725	114	0.621978	143	0.556044
86	0.670330	115	0.617582	144	0.554945
87	0.670330	116	0.617582	145	0.551648
88	0.670330	117	0.617582	146	0.547253
89	0.670330	118	0.613862	147	0.547253
90	0.670330	119	0.613187	148	0.547253
91	0.664835	120	0.608791	149	0.547253
92	0.657143	121	0.608791	150	0.547253
93	0.657143	122	0.604396	151	0.547253
94	0.657143	123	0.604396	152	0.547253
95	0.657143	124	0.602861	153	0.542857
96	0.652747	125	0.600000	154	0.542857
97	0.652747	126	0.600000	155	0.542856
98	0.652747	127	0.595604	156	0.542857
99	0.648352	128	0.591860	157	0.538462
100	0.648352	129	0.591209	158	0.538462
101	0.648352	130	0.591209	159	0.538462
102	0.648352	131	0.591209	160	0.534066
103	0.643956	132	0.582418	161	0.534066
104	0.643956	133	0.582418	162	0.534066
105	0.643596	134	0.582418	163	0.532967
106	0.639560	135	0.578022	164	0.525275
107	0.639560	136	0.578022	165	0.520879
108	0.638560	137	0.578022	166	0.520879
109	0.630769	138	0.573626	167	0.520879
110	0.627063	139	0.573626	168	0.516483
111	0.626374	140	0.569231	169	0.516483
112	0.626374	141	0.569231	170	0.512088
113	0.621978	142	0.564835	171	0.507692

Table H-1 (Continued).

Rank	Value	Rank	Value	Rank	Value
172	0.507692	201	0.463736	230	0.419780
173	0.503298	202	0.463736	231	0.419780[a]
174	0.503297	203	0.463736	232	0.419780
175	0.503297	204	0.459341	233	0.419780
176	0.500000	205	0.459341	234	0.441441
177	0.499450	206	0.459341	235	0.410989
178	0.498901	207	0.454945	236	0.410989
179	0.498901	208	0.450549	237	0.402198
180	0.498901	209	0.448845	238	0.402198
181	0.495596	210	0.446154	239	0.402198
182	0.495050	211	0.446154	240	0.402198
183	0.494505	212	0.446154	241	0.402198
184	0.494505	213	0.446154	242	0.402198
185	0.490110	214	0.441758	243	0.402198
186	0.490110	215	0.441758	244	0.397802
187	0.490110	216	0.437363	245	0.397802
188	0.481319	217	0.432967	246	0.395604
189	0.481319	218	0.432967	247	0.393407
190	0.476923	219	0.432967	248	0.393407
191	0.476923	220	0.428561	249	0.389011
192	0.476923	221	0.428571	250	0.384615
193	0.472527	222	0.428571	251	0.384615
194	0.472527	223	0.428571	252	0.380220
195	0.468132	224	0.424176	253	0.380220
196	0.468132	225	0.424176	254	0.380220
197	0.468132	226	0.424176	255	0.380220
198	0.468132	227	0.424176	256	0.375824
199	0.468132	228	0.419780	257	0.375824
200	0.463736	229	0.419780	258	0.375824

Table H-1 (Continued).

Rank	Value	Rank	Value	Rank	Value
259	0.371429	288	0.323077	317	0.274725
260	0.367033	289	0.323077	318	0.274725
261	0.367033	290	0.318681	319	0.270330
262	0.365237	291	0.318681	320	0.270330
263	0.363037	292	0.318681	321	0.269231
264	0.362637	293	0.314286	322	0.266227
265	0.358242	294	0.314286	323	0.265934
266	0.358242	295	0.314286	324	0.265934
267	0.358242	296	0.314286	325	0.265934
268	0.353846	297	0.309890	326	0.261538
269	0.353846	298	0.303631	327	0.261538
270	0.353846	299	0.301430	328	0.257143
271	0.349451	300	0.301099	329	0.252747
272	0.349451	301	0.301099	330	0.248352
273	0.349451	302	0.301099	331	0.243956
274	0.349451	303	0.296703	332	0.243956
275	0.346630	304	0.296703	333	0.243956
276	0.345055	305	0.296703	334	0.243956
277	0.343234	306	0.296703	335	0.243956
278	0.340659	307	0.292308	336	0.239560
279	0.335165	308	0.288229	337	0.239560
280	0.334434	309	0.287912	338	0.239560
281	0.331868	310	0.287912	339	0.235165
282	0.331868	311	0.287912	340	0.235165
283	0.331868	312	0.287912	341	0.230769
284	0.327473	313	0.287912	342	0.230769
285	0.327473	314	0.283516	343	0.221978
286	0.327473	315	0.283516	344	0.217582
287	0.323433	316	0.280220	345	0.209657

Table H-1 (Continued).

Rank	Value	Rank	Value	Rank	Value
346	0.208791	375	0.161648	404	0.054945
347	0.208791	376	0.174253	405	0.041756
348	0.204396	377	0.147253	406	0.038462
349	0.204396	378	0.142857	407	0.037363
350	0.200000	379	0.142857	408	0.037363
351	0.200000	380	0.134066	409	0.03736
352	0.200000	381	0.134066	410	0.03736
353	0.195604	382	0.120879	411	0.02418
354	0.195604	383	0.116484	412	0.02418
355	0.191209	384	0.116484	413	0.02418
356	0.187070	385	0.112088	414	0.01978
357	0.186813	386	0.107692	415	0.01099
358	0.186813	387	0.107692	416	0.00220
359	0.182418	388	0.103297	417	0.00220
360	0.178022	389	0.103297	418	-0.00220
361	0.173626	390	0.103297	419	-0.00659
362	0.169231	391	0.098901	420	-0.01099
363	0.169231	392	0.098901	421	-0.01099
364	0.169231	393	0.098901	422	-0.01099
365	0.164835	394	0.098901	423	-0.01978
366	0.164835	395	0.094505	424	-0.01978
367	0.160440	396	0.094505	425	-0.02857
368	0.160440	397	0.082418	426	-0.02857
369	0.160440	398	0.081319	427	-0.03297
370	0.160440	399	0.081319	428	-0.04176
371	0.156044	400	0.072527	429	-0.04615
372	0.156044	401	0.068132	430	-0.05061
373	0.151648	402	0.066007	431	-0.05934
374	0.151648	403	0.054945	432	-0.07692

Table H-1 (Continued).

Rank	Value	Rank	Value	Rank	Value
433	-0.07692	443	-0.15165	453	-0.31868
434	-0.08571	444	-0.17363	454	-0.33187
435	-0.09451	445	-0.25824	455	-0.39341
436	-0.09451	446	-0.26154	456	-0.41978
437	-0.09890	447	-0.27033	457	-0.45495
438	-0.09890	448	-0.27912	458	-0.46813
439	-0.10330	449	-0.28791	459	-0.55165
440	-0.10330	450	-0.31868	460	-0.60440
441	-0.10330	451	-0.31868	461	-0.62637
442	-0.14725	452	-0.31868		

[a]Denotes median rho.

APPENDIX I

MAP OF SAMPLE SCHOOL LOCATIONS

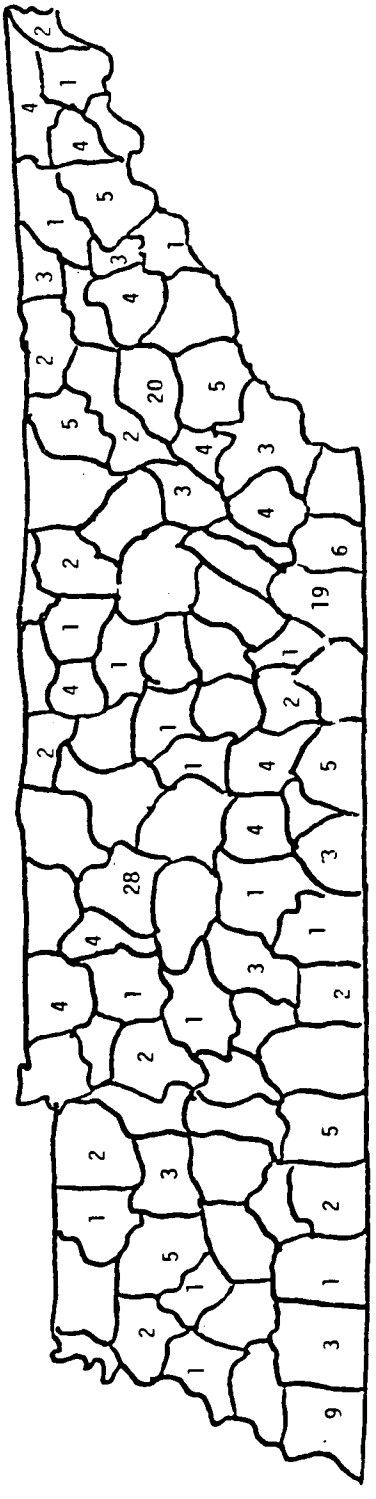


Figure I-1. Locations of Respondent Schools in Tennessee, 1984.[a]

[a]Respondents in 216 schools, representing 71 different public school districts and 59 county locations.

APPENDIX J

FOLLOW-UP ANALYSIS USING DATA FROM FOUR JFR RESPONDENT PRINCIPALS

Table J-1. Tennessee Principal/Teacher Correlations (In Follow-Up Analysis) Arranged by Value (Highest to Lowest) as Determined by Spearman Rho Procedure in Tennessee, 1984, n = 15.[a]

Rank	Value	Rank	Value
1	.723077	8	.336264[b]
2	.718681	9	.336264
3	.525275	10	.334434
4	.520879	11	.331868
5	.476923	12	.239560
6	.397802	13	.160440
7	.380220	14	.094505
		15	-.046154

[a]Five of the twenty principal returns did not have corresponding teacher data and, therefore, could not be used.

[b]Represents the median rho.

Table J-2. Tennessee Principals (In Follow-Up Analysis) in High and Low Predictor Groups Based Upon Spearman Correlations Above and Below the Median Rho, 1984, n = 3.[a]

High Predictor Group	Number of Correlations	Correlations Above Median	Low Predictor Group	Number of Correlations	Correlations Above Median
48	3	2	20	5	2
174	5	4			

[a]One of the four respondent principals had an equal number of correlations above and below; therefore, only three respondent principals could be grouped according to this procedure.

Table J-3. LBDQ-XII Mean Scores for Principals (In Follow-Up Analysis) in High and Low Predictor Groups in Tennessee, 1984, n = 3.

Leadership Dimensions	High Predictor Group n = 2	Low Predictor Group n = 1	Calculated "t" Value[a]
Representation	17.167	20.667	.522
Reconciliation	16.917	19.667	.697
Tolerance of Uncertainty	33.550	35.667	.750
Persuasiveness	32.000	39.167	.560
Initiation of Structure	37.417	42.333	.762
Tolerance of Freedom	37.167	40.333	.170
Role Assumption	34.250	42.166	.661
Consideration	34.250	39.000	.205
Production Emphasis	30.500	32.000	.914
Predictive Accuracy	16.250	19.167	.682
Integration	14.917	20.167	.359
Superior Orientation	32.433	39.000	.572

[a]12.7 was the critical level for the two-tailed test at the .05 level of significance, with 1 degree of freedom.

APPENDIX K

LBDQ-XII MEAN SUBSCALE SCORES FOR PRINCIPALS IN THE HIGH AND LOW PRINCIPAL PREDICTOR GROUPS

Table K-1. LBDQ-XII Mean Subscale Scores (for Leadership Dimensions) of Tennessee Principals in the High Predictor Group, 1984, n = 46.

	Subscales											
Principal	Represen-tation	Reconcil-iation	Tolerance of Uncer-tainty	Persua-siveness	Initia-tion of Structure	Tolerance of Freedom	Role Assump-tion	Consider-ation	Produc-tion Emphasis	Predic-tive Accuracy	Integra-tion	Superior Orienta-tion
2	19.60	20.80	38.20	40.00	38.20	39.80	41.80	40.20	29.40	18.20	18.60	36.00
4	18.71	20.86	36.14	35.29	41.57	40.57	44.33	44.14	33.43	18.43	23.20	37.86
5	20.83	20.17	38.17	36.50	39.67	36.80	42.17	36.17	32.50	18.33	18.20	35.50
11	17.00	19.40	31.60	33.80	42.00	37.40	34.25	37.50	39.75	17.00	11.50	33.25
12	19.20	18.60	32.00	40.00	42.60	35.80	41.60	35.80	34.80	18.20	18.60	36.00
13	18.00	20.60	42.40	30.00	32.00	42.40	36.00	38.80	24.60	15.80	16.80	36.00
19	20.13	16.25	28.43	33.75	35.13	33.75	37.50	29.38	31.75	14.88	13.88	33.29
31	20.40	19.80	36.25	36.80	37.25	37.00	40.50	38.20	36.00	17.40	19.80	36.00
36	20.29	19.71	33.14	40.43	42.00	36.43	42.71	35.17	38.86	18.57	16.43	37.00
42	15.60	15.60	33.00	29.00	31.20	32.20	30.00	27.40	27.80	14.00	13.20	33.00
51	17.75	15.00	35.50	33.00	25.80	38.80	24.80	29.50	25.60	17.00	11.60	33.25
52	21.67	17.67	32.00	41.67	44.20	36.17	38.00	37.00	42.67	17.33	17.50	40.17
54	21.75	18.50	35.33	37.67	35.50	40.00	40.50	37.75	27.25	18.00	17.00	36.75
57	18.75	13.50	34.75	31.33	31.25	40.00	27.25	31.25	21.75	14.75	10.75	40.00
71	17.67	17.50	30.00	29.75	39.00	28.50	38.00	28.75	37.00	17.00	18.50	34.25
76	17.20	17.40	29.80	41.00	35.50	39.00	38.20	34.20	31.40	18.20	16.20	32.40
79	16.25	13.38	37.88	27.13	28.25	39.50	26.50	35.13	24.13	13.75	13.63	34.29
86	17.00	19.29	36.00	33.14	36.57	39.00	38.14	36.14	30.43	16.71	17.29	34.83
90	17.89	17.67	35.11	30.44	33.78	36.67	32.22	32.56	30.56	15.89	13.33	30.56
100	16.88	17.50	26.57	33.13	41.13	29.13	41.00	28.57	33.75	17.50	16.00	35.14
104	20.75	19.25	31.75	36.50	42.75	40.75	44.00	35.25	36.25	18.00	17.75	35.50
107	18.00	19.50	34.50	38.00	36.25	39.50	37.00	39.50	35.25	17.50	20.00	35.67
108	18.80	18.83	31.67	29.80	40.33	36.67	43.33	35.67	24.00	18.17	14.00	32.80

Table K-1 (Continued).

Principal	Subscales											
	Represen-tation	Reconcil-iation	Tolerance of Uncer-tainty	Persua-siveness	Initia-tion of Structure	Tolerance of Freedom	Role Assump-tion	Consider-ation	Produc-tion Emphasis	Predic-tive Accuracy	Integra-tion	Superior Orienta-tion
109	17.50	16.50	38.25	31.25	30.25	43.33	29.75	41.75	25.25	15.00	13.25	33.67
113	20.00	12.75	28.00	27.25	38.50	35.50	33.00	27.50	33.75	15.50	15.50	31.50
118	21.20	19.50	33.60	40.00	42.33	37.67	43.33	37.66	35.40	18.83	18.83	39.40
126	20.33	20.80	40.17	35.50	38.50	44.67	38.17	36.50	31.67	19.33	17.60	36.50
128	20.60	19.40	41.40	39.60	41.60	43.40	43.40	39.00	32.60	19.20	18.60	37.20
138	16.57	16.43	38.00	27.57	30.14	35.14	30.33	33.71	25.85	14.00	14.43	30.17
145	17.33	15.33	38.83	34.00	32.33	36.17	33.00	31.67	33.67	15.67	15.17	32.80
149	18.83	15.50	34.20	32.83	34.33	37.16	30.83	33.33	30.17	16.80	14.83	39.40
150	21.00	31.75	41.50	41.00	41.25	41.75	43.00	39.50	34.25	19.25	20.25	38.00
157	19.40	19.80	37.00	38.00	42.83	40.83	37.80	38.83	34.00	20.33	20.33	33.00
167	19.00	20.50	31.75	39.75	43.50	39.00	42.00	36.50	31.00	17.75	16.25	35.33
177	19.75	20.00	39.00	39.00	43.00	43.75	43.25	40.35	32.50	21.33	20.75	39.00
178	20.50	19.75	37.50	39.00	41.25	42.25	42.50	39.75	35.75	19.00	20.00	42.33
184	17.75	14.25	25.75	32.75	30.00	36.25	29.50	30.75	31.75	14.75	14.00	32.50
185	18.40	13.60	24.60	29.40	36.20	31.60	30.00	26.20	36.40	15.60	13.20	31.60
192	15.20	16.20	28.25	28.20	33.00	29.00	35.60	22.60	27.00	14.80	12.20	28.25
197	18.63	19.63	36.57	37.63	38.75	36.13	37.43	38.38	33.88	17.57	19.25	37.33
198	16.71	15.57	22.57	32.14	37.57	23.71	36.29	23.71	37.86	14.71	12.71	33.14
201	18.50	22.00	34.00	40.50	40.50	41.00	46.00	42.75	32.67	19.33	21.00	40.00
204	20.83	21.17	31.60	38.60	43.33	38.67	43.67	37.83	39.20	30.00	18.67	39.00
209	20.13	21.38	40.13	39.13	43.63	42.88	43.13	44.88	32.88	18,75	20.88	37.13
226	18.00	19.29	37.71	29.14	38.29	38.50	35.71	32.29	29.50	17.29	15.71	34.14
227	19.80	17.20	37.40	31.75	37.60	34.00	35.75	34.00	30.00	16.00	19.20	33.80

Table K-2. LBDQ-XII Mean Subscale Scores (for Leadership Dimensions) of Tennessee Principals in the Low Predictor Group, 1984, n = 43.

	Subscales											
Principal	Represen-tation	Reconcil-iation	Tolerance of Uncer-tainty	Persua-siveness	Initia-tion of Structure	Tolerance of Freedom	Role Assump-tion	Consider-ation	Produc-tion Emphasis	Predic-tive Accuracy	Integra-tion	Superior Orienta-tion
3	22.00	18.86	40.00	40.43	43.71	42.86	46.83	41.71	34.86	19.14	20.86	40.00
7	22.25	17.25	38.75	33.50	32.00	33.00	34.50	29.50	33.00	15.75	15.00	38.25
16	16.00	16.86	31.50	29.25	28.00	27.75	30.14	31.25	25.38	15.50	13.75	31.25
17	18.75	15.33	33.25	32.25	34.50	27.75	35.25	30.67	32.67	14.50	12.50	34.00
21	10.40	8.40	17.20	20.40	25.00	29.40	24.80	30.40	19.60	10.20	9.40	27.00
22	17.83	16.33	38.20	31.00	39.33	35.67	32.80	30.00	34.50	16.17	15.67	29.00
29	22.00	14.25	31.25	36.00	41.75	35.75	40.33	34.00	36.67	14.75	19.50	30.67
35	18.67	17.11	29.50	35.67	39.00	32.50	33.89	30.78	32.67	16.33	13.89	37.37
59	20.25	22.00	41.25	40.50	41.60	42.60	44.25	42.00	33.00	19.80	20.00	39.67
75	21.00	16.50	26.50	40.17	40.33	35.50	38.66	33.33	37.60	17.67	16.00	37.50
81	21.00	20.78	33.63	40.63	42.38	40.78	44.33	39.44	35.00	18.44	19.56	38.63
87	15.86	10.14	22.83	38.43	30.86	28.86	26.71	26.00	29.43	13.00	10.71	25.71
94	17.17	15.00	35.80	29.40	33.17	39.60	29.17	37.00	27.50	15.80	14.20	34.25
98	19.00	19.00	35.00	35.20	40.83	41.17	40.50	34.50	28.00	18.00	17.80	33.00
110	22.00	17.80	36.80	41.20	38.60	41.20	35.40	39.40	37.20	17.40	18.40	36.40
112	21.00	23.00	38.00	41.25	43.75	46.25	43.75	42.75	37.00	20.75	20.75	42.00
115	20.25	20.25	38.25	36.25	32.25	35.50	38.33	35.50	34.00	17.50	17.75	35.75
120	14.75	13.50	32.00	22.50	29.25	31.25	29.00	25.00	28.00	11.75	10.50	30.50
124	20.20	19.20	30.40	37.00	38.20	39.80	37.80	36.60	36.00	19.20	16.25	35.50
125	19.83	16.00	24.33	39.00	38.50	39.16	42.83	39.00	32.00	16.50	17.00	33.00
131	21.00	20.38	37.63	40.57	40.75	41.00	42.33	42.43	32.75	20.43	21.25	38.25
135	18.50	21.50	33.00	40.00	42.50	37.00	42.50	40.50	31.75	20.67	21.00	32.50
136	18.40	18.00	35.20	30.60	36.00	39.60	30.60	36.80	26.60	17.80	15.80	30.25

Table K-2 (Continued).

Principal	Representation	Reconciliation	Tolerance of Uncertainty	Persuasiveness	Initiation of Structure	Tolerance of Freedom	Role Assumption	Consideration	Production Emphasis	Predictive Accuracy	Integration	Superior Orientation
137	20.33	20.00	29.67	38.57	42.33	36.17	46.50	31.67	42.17	21.17	16.29	41.17
140	22.33	18.00	34.83	35.00	40.00	36.83	43.50	34.83	32.17	16.60	17.83	36.00
141	14.40	15.20	39.20	30.20	29.00	36.00	35.00	30.20	23.80	12.80	13.40	37.40
142	21.00	18.57	33.43	38.00	39.29	36.00	40.71	33.00	32.00	16.71	14.57	30.17
144	20.00	17.43	31.33	36.57	36.57	39.29	41.17	38.71	33.50	18.57	18.50	34.50
147	18.14	18.29	33.43	35.57	36.71	34.71	38.43	32.00	33.42	17.57	17.50	32.29
154	17.75	13.25	27.14	25.00	34.00	36.32	30.38	32.13	27.71	14.88	16.71	29.14
155	21.71	20.67	40.00	29.14	43.00	32.86	43.67	36.71	31.17	19.17	16.83	34.80
160	20.25	19.75	40.50	33.50	41.33	43.75	41.25	40.50	30.00	17.50	20.25	38.25
163	18.67	19.17	36.83	39.33	36.67	40.83	38.17	38.17	31.50	18.33	16.50	36.83
172	18.20	19.60	36.60	37.40	35.40	40.20	36.60	37.20	29.60	18.40	16.40	33.60
176	20.33	19.56	35.44	38.56	40.44	37.44	40.44	37.67	36.11	19.22	18.11	38.89
189	23.50	17.00	31.00	31.00	40.60	42.40	42.67	38.40	34.50	18.20	18.50	39.33
194	17.80	17.60	34.00	30.00	36.20	35.20	33.40	32.80	30.00	15.80	15.80	34.00
206	22.44	20.44	37.67	44.22	42.00	40.56	45.00	43.13	35.75	20.00	20.22	42.57
214	18.33	15.75	26.67	32.00	38.00	32.00	32.75	29.00	36.00	15.67	13.50	41.33
215	21.25	18.75	34.75	35.00	40.75	39.50	42.25	33.50	31.00	17.00	16.75	34.67
218	21.00	16.83	30.50	32.80	38.50	33.40	36.50	33.83	36.83	15.80	14.40	35.00
224	17.00	15.75	36.00	33.00	33.50	38.00	33.25	34.00	26.00	16.50	16.00	34.75
240	17.25	21.00	39.00	33.00	36.75	42.50	38.00	40.50	26.00	18.50	18.25	34.33

APPENDIX L

ANOVA SUMMARY TABLE

Table L-1. ANOVA Summary Tables for Tennessee Elementary, Middle/ Junior High, and High School Principals' Leadership Behavior Subscale Measurements

Source of Variation	Sum of Squares	Degrees of Freedom	F Values[a]
Subscale I: Representation			
Between treatments	4.365	2	
Within treatments	6774.203	560	.18
Totals	6778.568	562	
Subscale II: Reconciliation			
Between treatments	5.004	2	
Within treatments	10182.572	562	.14
Totals	10187.576	564	
Subscale III: Tolerance of Uncertainty			
Between treatments	796.729	2	
Within treatments	29026.063	548	7.52
Totals	29822.792	550	
Subscale IV: Persuasiveness			
Between treatments	48.399	2	
Within treatments	32174.287	554	.42
Totals	3222.686	556	

Table L-1 (Continued).

Source of Variation	Sum of Squares	Degrees of Freedom	F Values[a]
Subscale V: Initiation of Structure			
Between treatments	178.955	2	
Within treatments	27725.733	566	1.83
Totals	27904.688	568	
Subscale VI: Tolerance of Freedom			
Between treatments	530.151	2	
Within treatments	26874.333	567	5.59
Totals	27404.484	569	
Subscale VII: Role Assumption			
Between treatments	151.799	2	
Within treatments	38726.111	549	1.08
Totals	38877.910	551	
Subscale VIII: Consideration			
Between treatments	553.680	2	
Within treatments	37841.276	564	4.13
Totals	38394.956	566	

Table L-1 (Continued).

Source of Variation	Sum of Squares	Degrees of Freedom	F Values[a]
Subscale IX: Production Emphasis			
Between treatments	437.411	2	
Within treatments	22559.839	546	5.29
Totals	22997.250	548	
Subscale X: Predictive Accuracy			
Between treatments	10.469	2	
Within treatments	6563.217	557	.44
Totals	6573.686	559	
Subscale XI: Integration			
Between treatments	43.178	2	
Within treatments	13059.413	558	.92
Totals	13102.591	560	
Subscale XII: Superior Orientation			
Between treatments	27.194	2	
Within treatments	14556.100	496	.46
Totals	14583.294	498	

[a]F value is significant at 2.99 level.

APPENDIX M

SCHEFFE' CALCULATIONS

SCHEFFE' CALCULATIONS OF FOUR STATISTICALLY-SIGNIFICANT LBDQ-XII SUBSCALE MEASUREMENTS FOR TENNESSEE PRINCIPALS, 1984[a]

Subscale III: Tolerance of Uncertainty

Elementary--Middle/Junior High School:

$$F = \frac{1.749^2}{52.967\ (.01 + .00)\ (2)} = \frac{3.059}{1.060} = 2.88$$

Middle/Junior High--High School:

$$F = \frac{4.187^2}{52.967\ (.01 + .01)\ (2)} = \frac{17.531}{2.119} = 8.27^b$$

Elementary--High School:

$$F = \frac{2.437^2}{52.967\ (.00 + .01)\ (2)} = \frac{5.939}{1.060} = 5.60^b$$

Subscale VI: Tolerance of Freedom

Elementary--Middle/Junior High School:

$$F = \frac{1.86^2}{47.397\ (.01 + .00)\ (2)} = \frac{3.460}{9.480} = 3.65^b$$

Middle/Junior High--High School:

$$F = \frac{3.41^2}{47.397\ (.01 + .01)\ (2)} = \frac{11.630}{1.895} = 6.14^b$$

Elementary--High School:

$$F = \frac{1.55^2}{47.397\ (.00 + .01)\ (2)} = \frac{2.400}{.948} = 2.53$$

Subscale VIII: Consideration

Elementary--Middle/Junior High School:

$$F = \frac{.419^2}{67.094\ (.00 + .01)\ (2)} = \frac{.176}{1.342} = 0.13$$

Middle/Junior High--High School:

$$F = \frac{2.200^2}{67.094\ (.01 + .01)\ (2)} = \frac{4.840}{2.684} = 1.81$$

Elementary--High School:

$$F = \frac{2.619^2}{67.094\ (.00 + .01)\ (2)} = \frac{6.859}{1.341} = 5.12^b$$

Subscale IX: Production Emphasis

Elementary--Middle/Junior High School:

$$F = \frac{.666^2}{41.318\ (.00 + .01)\ (2)} = \frac{.444}{.826} = 0.54$$

Middle/Junior High--High School:

$$F = \frac{2.81^2}{41.318\ (.01 + .01)\ (2)} = \frac{7.896}{1.652} = 4.78^b$$

Elementary--High School:

$$F = \frac{2.143^2}{41.318\ (.00 + .01)\ (2)} = \frac{4.593}{.826} = 5.56^b$$

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[a]Scheffe' Test applied only to subscale measurements which depicted significant differences among the sample groups through application of Analysis of Variance Procedure (see Appendix L).

[b]Indicate points of significant statistical difference between principal groups at the .05 level.

VITA

Jan Donahue Buxton was born in Knoxville, Tennessee on April 12, 1946. She attended public school in Powell, Tennessee and was graduated from Powell High School in 1964. She earned an Associate of Arts degree from Hiwassee Methodist Junior College in Madisonville, Tennessee in 1966, a Bachelor of Science degree in Elementary Education in 1969 from Tennessee Technological University in Cookeville, and a Master of Education degree in 1972 from Memphis State University.

She has performed as a classroom teacher at Lakenheath Air Force Base American Dependent School in Lakenheath, England; in the Anderson County and Memphis City School systems in Tennessee. She has worked as a reading instructor and consultant on a part-time basis with the Memphis Area Vocational-Technical School, on a full-time basis with Roane State Community College in Harriman, Tennessee and with the Oak Ridge, Tennessee City Schools. She is the author of a reading activity book for elementary age children.

In 1979, she served as a regional member of the Tennessee Health Facilities Commission in Nashville. While pursuing her doctoral program at The University of Tennessee, Knoxville (1980-1984), she served as one of four East Tennessee representatives on the Tennessee State Board of Education/Vocational Education. She served for two years as chairperson of the Elementary Education Committee of that Board. In 1982-83 she served as one of twelve members of

the Governor's Special Task Force for Planning the Tennessee Technology Corridor in the Knoxville-Maryville-Oak Ridge region.

Presently, Ms. Buxton serves concomitantly as Executive Director of the State Technical Institute at Knoxville Educational Foundation and as the college's Director of Development. She serves on the Board of Directors of the Tennessee Mathematics and Computer Sciences Foundation, and is a member of the Council for Advancement of Support for Education. Her major field of study at The University of Tennessee, Knoxville, was educational administration, with collateral emphases in public relations and personnel management. She received her Doctor of Education degree in March 1985.