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AN INVESTIGATION OF EXTRA-CLASSROOM
TASK-ASSIGNMENTS/RECOMMENDATIONS AND
TEACHER INNOVATIVENESS.

The University of Oklahoma, Ph.D., 1973
Education, general

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THE UNIVERSITY OF OKLAHOMA
GRADUATE COLLEGE

AN INVESTIGATION OF EXTRA-CLASSROOM
TASK-ASSIGNMENTS/RECOMMENDATIONS
AND TEACHER INNOVATIVENESS

A DISSERTATION
SUBMITTED TO THE GRADUATE FACULTY
in partial fulfillment of the requirements for the
degree of
DOCTOR OF PHILOSOPHY

BY
BONNIE J. LYNN
Norman, Oklahoma

1973

AN INVESTIGATION OF EXTRA-CLASSROOM
TASK-ASSIGNMENTS/RECOMMENDATIONS
AND TEACHER INNOVATIVENESS

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ACKNOWLEDGMENTS

To my committee chairman, Dr. Michael Langenbach, I wish to express sincere gratitude for his supportive influence through his expressed confidence in me, through his excellence of scholarly example, and through his persistent insistence that this task be accomplished.

The members of my committee, Dr. William H. Graves, Dr. George A. Letchworth, Dr. John D. Pulliam, and Dr. Thomas W. Wiggins, contributed wisely and willingly to my academic and personal development throughout my doctoral program. I appreciate their consistent encouragement.

I am indebted to Dr. Ron Schnee, the Oklahoma City Public Schools Research Committee, and principal and teacher participants in my study. All were most cooperative and prompt in responding to requests made of them.

Dr. Edwin M. Bridges was most generous in permitting the use of his instrument. His correspondence regarding the use of the Teacher Receptivity to Change Measure and his expressed interest in my study were invaluable sources of support.

To Bob, Susy, and Christopher I am most grateful. They unremittingly provided the affection and confidence their oft-absent wife and mother needed most. Thank you dear family.

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AN INVESTIGATION OF EXTRA-CLASSROOM
TASK-ASSIGNMENTS/RECOMMENDATIONS
AND TEACHER INNOVATIVENESS

CHAPTER I

INTRODUCTION

A point on which educators and lay persons can generally agree is that a need for change pervades the public school system. Disagreement results when actual attempts to initiate or implement change occur. Goals and processes for change which meet the perceived purposes of education for all groups have yet to be articulated. Still the demand for change prevails.

The environmental focus of this study was the public elementary school. Hilfiker maintained that, as a social institution, the public school's role in social change should be to provide effective ways and means of instituting and diffusing changes and innovations within school systems themselves.¹

The terms change, creativity, and innovation defy absolute or universal definitions. An investigation of a variety of meanings, however, revealed relationships and

¹Leo R. Hilfiker, "Factors Relating to the Innovativeness of Systems," The Journal of Educational Research, LXIV (1970), p. 23

generalizations among the three terms. ". . . what is regarded as creative at any one point in time is a function of many factors operative in the society."¹

Change is some noticeable alteration which has occurred between two given times. ". . . alteration in the goals, structure, or processes of a system," and "Innovation is a species of the genus 'change' . . . a deliberate, novel, specific change, which is thought to be more efficacious in accomplishing the goal of a system."² Crosby limits innovation to the implementation process, but supports the ideas of uniqueness and expectation of benefit. He distinguishes between the design stage--creativity, and the production, (implementation) stage--innovation, but he recognizes their overlapping and interdependency.³

Creativity manifests itself at many levels and in a variety of forms; it is often defined as a process involving hypothesis formation, testing, and communication.⁴ Ciardi

¹Morris I. Stein, "Creativity as an Intra- and Interpersonal Process," A Source Book for Creative Thinking, ed. by Sidney J. Parnes and Harold F. Harding (New York: Charles Scribner's Sons, 1962), p. 91.

²Matthew B. Miles, "Educational Innovation: The Nature of the Problem," Innovation in Education, ed. by Matthew B. Miles (New York: Bureau of Publications, Teachers College, Columbia University, 1964), p. 13.

³Andrew Crosby, Creativity and Performance in Industrial Organization (London: Tavistock Publications, 1968), p. 43.

⁴Morris Stein, et al., "Creativity and/or Success: A Study in Value Conflict," The Second (1957) University of Utah Research Conference on the Identification of Creative Scientific Talent, ed. by Calvin W. Taylor (Salt Lake City: University of Utah Press, 1958), p. 201.

expands the meaning of creativity to include ". . . the imaginatively gifted recombination of known elements into something new."¹

The creative personality pattern is manifest in creative behaviors--inventing, designing, contriving, composing, combining, and planning. People who exhibit these types of behaviors to a marked degree are said to be creative.²

Although the terms change, innovation and creativity are often used interchangeably, in this study, a more precise concept of teacher innovativeness was drawn from the works of Bridges, the developer of the Teacher Receptivity to Change Measure.³ Following the business organization model, Bridges studied teacher reactions to innovation by basing his research on the concept of proneness to work-related changes. He defined the characteristic, innovativeness, in terms of teacher receptivity to change, or more precisely, in terms of teacher willingness to try new curriculum ideas and practices. Such a willingness constituted receptivity to work-related change. This concept of innovativeness is incorporated in the items and response choices of the Teacher Receptivity to Change

¹John Ciardi, "What Every Writer Must Learn," Saturday Review, (December, 1956), p. 7.

²J. P. Guilford, "Creativity: Its Measurement and Development," A Source Book for Creative Thinking, ed. by Sidney J. Parnes and Harold F. Harding (New York: Charles Scribner's Sons, 1962), p. 152.

³Edwin M. Bridges, "The Measurement Problem in Teacher Receptivity to Change" (unpublished manuscript, First Draft Copy, 1968, Personal Communication with the author), pp. 1-13.

Measure. For example, Item 1 states: "After considering a new, promising curriculum practice which one hasn't had an opportunity to see in operation (a teacher like myself) is likely to (a) Initiate a request to use on a trial basis; (b) Respond affirmatively to a request for volunteers; (c) Use if asked; (d) Express desire to stay with present practice; or (e) Be strongly against trial of the practice." For each item, the response choices are the same, but items differentiate on the bases of prior testing of the innovation and the degree of teacher responsibility involved. Other sample items are: "After considering use of a new curriculum practice about which very little is known concerning the consequences of its use (a teacher like myself) is likely to . . . ;" and, "After considering a new, untested curriculum idea which involves a large amount of daily preparation if it is to have any chance of success (a teacher like myself) is likely to"¹

Innovativeness was operationally defined in this study in terms of teachers' expressed willingness to try work-related change. The Teacher Receptivity to Change Measure, in the form of the "Teacher Reaction Questionnaire,"² was the measure from which innovativeness scores for subjects were derived.

The innovativeness of teachers and the environment in which they implement change were the principal elements

¹Edwin Bridges' Teacher Receptivity to Change Measure, in the form of the "Teacher Reaction Questionnaire," is presented in Appendix B.

²Ibid.

of this study. Creativity is a component of the individual's total profile and a contributing factor to his life style of relating to various situations.¹ Stein introduced an essential element for the facilitation of innovation--its acceptance as useful, tenable, or satisfying by significant others--which is reflected in his statement; "The creative work 'resonates' with needs and values of significant others in the environment."² Innovation thrives under proper understanding of men and motives, rewards and recognitions.³

Statement of the Problem

The general problem from which this study was generated may be expressed by the question, What is the relationship between extra-classroom task-assignments/recommendations and teacher innovativeness? It was anticipated that the study would provide information for answering the following questions:

(1) Are the extra-classroom task-assignments/recommendations (TARs) that teachers receive from principals perceived by the principals to have any reward value? and (2) If the TARs have principal-perceived reward value, to which teachers will the TARs be assigned?

¹Crosby, Creativity and Performance, p. 115.

²Stein, et al., "Creativity and/or Success," p. 201.

³Harold F. Harding, "The Need for a More Creative Trend in American Education," A Source Book for Creative Thinking, ed. by Sidney J. Parnes and Harold F. Harding (New York: Charles Scribner's Sons, 1962), p. 6.

The first question was the subject of a study of principals' perception of extra-classroom task-assignments/recommendations which is reported in Appendix A. The hierarchical reward scale value obtained supported the prediction that elementary principals do perceive the TARs to have reward value (see Appendix A).

Question number two expresses the major consideration of the remainder of the study which is: Are teachers' scores on the Teacher Receptivity to Change Measure (TRCM), i.e., teacher innovativeness scores, related to the scale values of the task-assignments/recommendations teachers receive from principals?

Significance of the Study

A review of the literature revealed that there are few extrinsic rewards and virtually no incentives available for teachers who do not aspire to become principals. There is strong indication that teachers no longer respond to the traditional "satisfactions of professionalism," however. It is important to assess potential rewards and to determine who are the recipients of such rewards.

Assuming that change is desirable, it would be expected that innovative efforts would be rewarded. If change occurs in schools through the dissemination of creative ideas and practices by innovative teachers, then it is assumed that innovative

teachers are recognized as an invaluable resource for accomplishing change and, as such, are rewarded for their efforts.

Neither rewards for teachers, nor the characteristics of teachers who are recipients of the rewards, have received attention of researchers. This study contributes to an assessment of teacher rewards through the investigation of one reward set, i.e., task-assignments/recommendations, and teacher characteristics which influence their selection as recipients of TARs. This information has implications for (1) personnel selection, (2) teacher training programs, and (3) strategies for implementing educational change.

Rationale and Hypotheses

The primary hypothesis was drawn directly from the problem statement.

H₁ The scale values of the TARs teachers receive from principals are related to teacher innovativeness as indicated by scores on the TRCM.

Brown posited that "principals exhibit differences between teacher-behaviors they tend to notice and those they value (value is used in the restricted sense of worth on the job, i.e., effectiveness)."¹ He stated that the administrator (principal) must make many "personnel judgments: that is

¹Alan F. Brown, "A Perceptual Taxonomy of the Effective-Rated Teacher," The Journal of Experimental Education, XXXV, No. 1 (1966), p. 1.

judgments as to the relative effectiveness, or worth to the school system, of individual teachers."¹

Further rational support developed through the review of literature suggests that principals, for whatever reasons, sometimes do not consider creative or innovative teachers to be of most value to the system, hence the most effective. It was expected, therefore, that the innovative teachers, as classified by the TRCM, would receive the lower value reward TARs, which are available to principals to assign. Conversely, it was expected that the non-innovative teachers, as classified by the TRCM, would be considered of value to the system, hence effective, and would receive the higher value reward TARs, which are available to principals to assign. The following hypotheses reflect the converse predictions:

- H_{1.1} Low reward TARs scores, as indicated by the relative scale values, vary inversely with innovativeness scores on the TRCM.
- H_{1.2} High reward TARs scores, as indicated by the relative scale values, vary inversely with innovativeness scores on the TRCM.

Ancillary hypotheses were based on the relationship between the TARs received by teachers and certain demographic variables. The variables were teacher age, experience, tenure, formal education, and teaching level. Because of conflicting

¹Ibid., p. 2.

evidence regarding the relationship of the demographic variables to innovativeness, the independent variable which was most relevant to this study, these hypotheses were not directional.

Sub-hypotheses for each ancillary hypothesis were also investigated. These hypotheses were based on the relationship between the classificatory characteristic, the innovativeness of teachers, and the same demographic variables tested in the ancillary hypotheses.

Bridges and Ramer tested for the relationship between age and receptivity to change. Their findings were different. Bridges found the relationship to be non-significant, contrary to his expectations from the literature.¹ Ramer found the age variable to be significantly related to receptivity to change² in keeping with some identified characteristics of innovators discussed in the literature.^{3,4} Because of the discrepancy in the results of the two studies cited, and in an effort to

¹Edwin M. Bridges, "Teacher Receptivity to Change," Administrator's Notebook, XVI (1968), p. 2 of reprint.

²Burton Ramer, "The Relationship of Belief Systems and Personal Characteristics of Chief School Administrators and Attitudes Toward Educational Innovation," (unpublished Ed.D. dissertation, State University of New York at Buffalo, 1968), p. 52.

³Everett M. Rogers, "What Are Innovators Like?" Change Processes in the Public Schools (Eugene, Oregon: Center for the Advanced Study of Educational Administration, 1965), p. 65.

⁴Richard O. Carlson, Adoption of Educational Innovation (Eugene, Oregon: Center for the Advanced Study of Educational Administration, 1965), p. 66.

add to the evidence concerning the relationship between the age factor and receptivity to change, age was selected as an independent variable in this study. It was hypothesized that:

H₂ There is no relationship between the
 scale value of the TARs teachers receive
 from principals and teacher age.

H_{2.1} There is no relationship between teacher
 innovativeness and teacher age.

Classroom teaching experience is a subject of diverse opinions with respect to its relationship to receptiveness to educational innovation. Socialization processes in organizations tend to produce conforming behaviors among their members. Logically, then, the longer one stays in an organization, the less willingly he responds to behavioral or role changes. Carson, et al., found that teachers with fewer years of experience adapt more readily to changes in role expectations and behaviors.¹ Bridges reported a non-significant relationship between years of experience and receptivity to change. He analyzed the implications of his finding and suggested that it is probable that the type of experience rather than number of years might be a more relevant variable to investigate.²

Adequate measurements for type of experience have not been developed, but the inconsistent findings from antecedent

¹Robert B. Carson, et al., Teacher Participation in the Community (Eugene, Oregon: Center for the Advanced Study of Educational Administration, 1967), p. 45.

²Bridges, "Teacher Receptivity to Change," p. 2.

studies of the relationship between length of experience and propensity to change were sufficient rationale to prescribe the following hypotheses:

H₃ There is no relationship between the scale value of the TARs teachers receive from principals and number of years of teacher experience.

H_{3.1} There is no relationship between teacher innovativeness and number of years of teacher experience.

"Creativity, . . . is a function of the transactional relationships between the individual and the environment"¹ That environmental constraints are among the chief obstacles to creativity is generally supported by research.² That principals are chief controllers of the local school environment, i.e., climate, is generally recognized.³ Principals are the immediate supervisors of teachers, consequently, the principal-controlled environment in which teachers perform is a major factor in teachers' perception of the freedom to exercise creativity.

¹Morris I. Stein, "Creativity as an Intra- and Inter-Personal Process," A Source Book for Creative Thinking, ed. by Sidney J. Parnes and Harold F. Harding (New York: Charles Scribner's Sons, 1962), p. 91.

²Crosby, Creativity and Performance, p. 89.

³Andrew Halpin and Don B. Croft, "The Organizational Climate of Schools," Elementary School Administration: Readings, ed. by Oscar T. Jarvis (Dubuque, Iowa: Wm. C. Brown Company, 1969), p. 90.

An extended tenure in the environment, whether conducive to or inhibitive of innovation, tends to regulate the degree to which teachers actually attempt innovative practices. It was recognized that a teacher may not be identified as innovative while teaching in one environmental setting, but, transfer to a more conducive climate might release previously inhibited innovative characteristics possessed by that teacher. Therefore, it was predicted that the length of time a teacher spends in a particular school with the same principal would have a relationship to the innovativeness of that teacher. The emergent hypotheses were:

H_4 There is no relationship between the scale value of the TARs teachers receive from principals and teacher tenure in the same environmental situation.

$H_{4.1}$ There is no relationship between teacher innovativeness and teacher tenure in the same environmental situation.

Stein, while studying factors related to creativity in industrial researchers, observed that although the subjects studied had been employed by their present companies for an average of four years, they were still under the influence of their academic cultures and had not acculturated to their industrial environments. In the academic culture, original contributions of theoretical value are among the more important factors to be rewarded to stimulate creativity; ". . . skills and abilities

in this area are not as important for success in the culture of industrial research."¹ Analogous to the academic-industrial paradox is that of graduate level education and public school teaching. Higher education values and rewards theory-expanding contributions whereas, the teachers employed in public school systems may experience a lack of appreciation for similar efforts.

Among the factors which Urick and Frymier studied that significantly discriminate between teachers identified as most willing and least willing to consider curriculum change was that of formal education. There was a significantly greater percentage of teachers who held master's degrees in the group identified as most willing to consider curriculum change.² The formal education factor can be addressed via the question: What is the relationship between formal education and the innovativeness of teachers?

H₅ There is no relationship between the scale value of the TARs teachers receive from principals and teacher formal education level.

H_{5.1} There is no relationship between teacher innovativeness and teacher formal education level.

¹Stein, et al., "Creativity and/or Success," p. 212.

²Ronald Urick and Jack R. Frymier, "Personalities, Teachers and Curriculum Change," Educational Leadership, XXI (November, 1963), p. 110.

Crosby found that ". . . persons centrally involved in innovative activity should possess the qualities and assume the orientation of the generalist."¹ Persons with specialist training are indispensable in the total creative process; however, persons with generalist preparation have most to contribute to creative work, he contends.

Teachers at the primary level have traditionally functioned in a self-contained classroom environment. Only in recent years have open-school concepts begun to filter into the public schools necessitating team teaching and some specialization. Nevertheless, the vast majority of primary teachers have received training for, and practice in, the generalist tradition required by the self-contained organizational pattern. Intermediate level teachers, in many cases, operate in departmentalized organizations requiring some specialized training, i.e., music, art, social studies, language arts, mathematics or some other specialization.

In view of the different expectations of primary and intermediate teachers, and based on the premise that there is a relationship between creativity and the generalist-specialist preparation, it was appropriate to test the following hypotheses:

- H₆ There is no relationship between the
 scale value of the TARs teachers receive
 principals and teaching grade level.

¹Crosby, Creativity and Performance, p. 169.

- H_{6.1} There is no relationship between teacher innovativeness and teaching grade level.

Limitations of the Study

Because of the ex post facto nature of the design, causal inferences related to the findings could be only speculative.

The sample was drawn from the Oklahoma City Independent School District and, specifically, from the group of elementary schools (K-4) whose principals met the qualifying variables of age, tenure, and formal education as described under Population. Schools selected also had to meet the requirement of fourteen or more faculty members. Generalizations to larger populations are limited. Generalizations to schools where extra assignments are contractual are not appropriate. Subjects were those teachers only (14 per school) who received a task-assignment or a recommendation from their principal.

The relative reward value of the task-assignments/recommendations was established by principals' perceptions. Teachers' perceptions of reward value of the TARs were not a factor in this study.

Certain variables sometimes associated with creativity were not considered in this study. "If two variables have a high correlation with each other, . . . the inclusion of both, instead of one or the other, will contribute little to the

prediction achieved."¹ The characteristics labeled open- or closed-mindedness, defined by the Rokeach Dogmatism Scale,² and innovation are highly correlated.³ Therefore, only innovativeness was selected for a variable in this study. Similarly, the masculinity/femininity factor appears to be related to creativity;⁴ however, the small number of male teachers in the elementary school precluded their being treated separately in this study.

The review of the literature did not include studies concerned with the developmental aspects of creativity. Innovative behaviors and attitudes of teachers--the inhibiting and facilitating factors--were the main foci of the literature investigated.

Operational Definitions of Terms

Innovativeness: The mean score received by teachers on Bridges' Teacher Receptivity to Change Measure, identified by the symbol, TRCM.

Task-Assignments/Recommendations: The extra-classroom responsibilities (tasks) and/or recommendations that principals

¹George A. Ferguson, Statistical Analysis in Psychology & Education (New York: McGraw-Hill Book Company, 1971), p. 403.

²Milton Rokeach, The Open and Closed Mind (New York: Basic Books, Inc., 1960).

³Ramer, "The Relationship of Belief Systems . . .," p. 52.

⁴Abraham H. Maslow, "Emotional Blocks to Creativity," A Source Book for Creative Thinking, ed. by Sidney J. Parnes and Harold F. Harding (New York: Charles Scribner's Sons, 1962), p. 97.

typically assign to selected teachers, identified by the symbol, TARs. (For a complete list of the TARs selected for scaling, see Appendix A, p. 74).

TARs Scale Values: The empirically obtained scale values of the task-assignments/recommendations from a study of principals' perceptions of the relative reward value of the TARs (see Appendix A, p. 80).

Low-Reward/High-Reward TARs: The highest obtained scale values of TARs (1.250 to 2.554), ranked as most rewarding; the lowest obtained scale values of TARs (.000 to 1.190), ranked as least rewarding.

Age: The chronological age of the teacher to the nearest birthday.

Experience: The total number of years that the teacher has taught counting the current year as a full year.

Tenure: The total number of years that the teacher has taught in the present environmental situation (same school, same principal) counting the current year as a full year.

Formal Education: The degree level, plus additional credit hours, which the teacher has attained counting any hours in which s/he may be presently enrolled as completed.

Teaching Grade Level: The primary level--represented by grades K through 3; the intermediate level--represented by grade 4, media center personnel and special education teachers who were not assigned to the primary level exclusively.

Organization of the Remainder of the Study

The remainder of the study is organized into four chapters. Chapter II contains a review of selected studies and theory pertinent to the subject of innovativeness in schools and other organizations.

Chapter III consists of information related to the design, the variables, and the instruments used. Procedures for collecting data and a statement of standards for decisions regarding the hypotheses complete the chapter.

The findings of the study are reported in Chapter IV. Included are descriptive data related to the independent variables and analyses related to the hypotheses.

Conclusions and additional findings resulting from supplemental analyses, are the subjects of the final Chapter. Recommendations for further study complete the chapter.

CHAPTER II

REVIEW OF RELATED LITERATURE

Chiselin cited the example of the invention of the hand saw and the compass as related by Ovid and translated by Rolfe Humphries to demonstrate the display of true creative talent.¹ An excerpt from the legend provides an appropriate and delightful illustration which combines several elements considered in this study.

. the story
Reflects no credit on Daedalus. His sister,
Ignorant of the fates, had sent her son
To Daedalus as apprentice, only a youngster,
Hardly much more than twelve years old, but clever,
With an inventive turn of mind. For instance,
Studying a fish's backbone for a model,
He had notched a row of teeth in a strip of iron,
Thus making the first saw, and he had bound
Two arms of iron together and apart,
One standing still, the other traversing
In a circle, so men came to have the compass.
And Daedalus, in envy, hurled the boy
Headlong from the high temple of Minerva,
And lied about it, saying he had fallen
Through accident,²

One of three essential, basic behavior sets for a functioning organization, beyond that of carrying out role assignments,

¹Brewster Chiselin, "Ultimate Criteria for Two Levels of Creativity," The Second (1957) University of Utah Research Conference on the Identification of Creative Scientific Talent, ed. by Calvin W. Taylor (Salt Lake City: University of Utah Press, 1958), p. 144, quoting from Ovid: Metamorphoses, translated by Rolfe Humphries (Bloomington: Indiana University Press, 1955), p. 189.

²Ibid.

is that of innovative and spontaneous activity in relieving organizational objectives which goes beyond the role specifications. Those actions, innovative and spontaneous, which are not specified by role prescriptions, are the neglected requirements for realizing the accomplishment of organizational goals. A great paradox of social organizations is that human variability must be reduced to insure reliable role performance, yet some variability must be allowed and encouraged.¹ Katz wrote:

There must be a supportive number of actions of an innovative or relatively spontaneous sort. No organizational planning can foresee all contingencies within its operations, or can anticipate with perfect accuracy all environmental changes or can control perfectly all human variability. The resources of people in innovation, in spontaneous cooperation, in protective and creative behavior are thus vital to organizational survival and effectiveness.²

Studies dealing with persons important in effecting educational change have generally focused on the chief school administrator.³ Ross assumed that the superintendent, having the top hierarchical position in the school organization, is the most important individual effecting educational change. He also identified the superintendent as having the most influence among school personnel in the adoption process of change. He

¹Daniel Katz, "The Motivational Basis of Organizational Behavior," Educational Administration and the Behavioral Sciences: A Systems Perspective, ed. by Mike M. Milstein and James A. Belasco (Boston: Allyn and Bacon, Inc., 1973), p. 320.

²Ibid., pp. 321-22.

³Donald P. Mitchell, Leadership in Public Education Study (Washington, D. C.: Academy for Educational Development, Inc., 1972), p. 12.

documented his findings with studies by Mort, Skosberg, Ebey, and others.¹ The superintendent is not an active participant in the implementation of change, however.

The subjects of this study were those persons in the educational organization who are the most directly responsible for the success or failure of educational innovation at the local school level--the principal who is the top internal executive, and the teachers who are the major implementation agents of change. Dissemination of innovation is the responsibility of the local school personnel. In the words of Ginzberg: "The onus of change in the business world has always rested ultimately on practitioners. It is they who must weigh the abstract work of theorists and decide if, when, and how change is to be implemented."²

Bridges provided rationale for the teachers' key role in the implementation stage of the innovation process. He clarified organizational reality of educational settings noting that a major factor in the success of an innovation is the users' opinion. The users (teachers) can distort the value of an innovation by their positive or negative reaction to it, and by their evaluation of it. Teachers' relative isolation and the autonomy provided them by the self-contained classroom allow virtually unmonitored implementation of prescribed innovations.

¹Donald H. Ross, Administration for Adaptability (New York: Teachers College, Columbia University, 1958), p. 407.

²Eli Ginzberg, quoted by Andrew Crosby, Creativity and Performance, p. 161.

This rationale suggests that the teacher exerts primary "fate control" over an innovation which has reached the implementation stage.¹

If teachers possess such potential for controlling the success or failure of innovation, and if education is to undergo numerous and significant changes,² teachers must exhibit at least a willingness to become involved in the change process. Bridges developed an instrument for measuring teachers' receptivity to the trial of innovative practice.³ His Teacher Receptivity to Change Measure (TRCM) was used in this study to obtain teacher innovativeness scores. The description and validity of the measure are presented in another section.

Studies of Principals

Teachers have primary responsibility for the implementation of innovation in the classroom, but they receive information and, at least, tacit approval or disapproval most directly through principals. The principal's position in the bureaucratic organization is equivalent to that of "middle management" in industry.⁴ Griffiths formulated a series of

¹Bridges, "The Measurement Problem," p. 1.

²Educational change is a subject of great interest and emphasis in professional, as well as, lay literature. Federal interest in educational change resulted in the Elementary and Secondary Education Act of 1965, which established a network of national institutions to facilitate change.

³Bridges, "The Measurement Problem," pp. 1-13.

⁴Fred A. Snyder and Duane R. Peterson, Dynamics of Elementary School Administration (Boston: Houghton Mifflin Company, 1970), p. 208.

propositions relating to conditions which inhibit change in organizations. Proposition 7 reads, "When change in an organization does occur, it will tend to occur from the top down, not from the bottom up."¹ The principal's middle position precludes the probability of his initiating or directly implementing change. The principal seldom introduces a new idea into the school system.² His organizational role appears to be more that of an administrator than that of a leader, i.e., that of maintaining stability and perpetuating the status quo rather than that of initiating change ventures.³

Other empirical studies disclosed that elementary school principals who scored relatively high on a measurement of initiation of change were not aggressive leaders, but adopted such change as they did to please outsiders and superiors, or to comply with subordinates (teachers and/or staff). Response to demands for change from outsiders was somewhat higher than response to subordinates. The implication was clear that principals discourage change by subordinates, i.e., teachers.⁴

¹Daniel E. Griffiths, "Administrative Theory and Change in Organizations," Innovation in Education, ed. by Matthew B. Miles (New York: Bureau of Publications, Teachers College, Columbia University, 1964), p. 435.

²Daniel E. Griffiths, "The Elementary School Principal and Change in the School System," Theory Into Practice, II (December, 1963), p. 278.

³Mitchell, Leadership in Public Education Study, p. 16.

⁴James Hemphill, Daniel E. Griffiths, and N. Frederiksen, Administrative Performance and Personality (New York: Bureau of Publications, Teachers College, Columbia University, 1962).

A perceived lack of social support from principals sometimes inhibits elementary teachers' initiation of innovative practices. Social support was defined by Hilfiker as "The degree to which teachers perceive the principal as a warm, socially responsive individual who tends to create an empathic and non-threatening environment."¹ Social support and teachers' receptive attitudes toward the trial of innovation are assumed to be minimal essential factors for successful accomplishment of educational change.

As the "key determiner of climate"² in the school, the principal has a major responsibility of creating an atmosphere conducive to innovative practices if educational change is to occur. Crosby stressed that deliberate effort is imperative in order to maintain an atmosphere of innovation.³ In order to achieve a climate for change, various studies suggest conditions that must prevail if a felt-freedom for trial and practice of innovation is to provide the social support teachers need.

Halpin and Croft developed the Organizational Climate Description Questionnaire for use with elementary schools.⁴ The organizational climate is characterized on a conceptual continuum extending from open to closed, analogous to the

¹Hilfiker, "Factors Relating to the Innovativeness of Systems," p. 23.

²Mitchell, Leadership in Public Education Study, p. 13.

³Crosby, Creativity and Performance, p. 43.

⁴Andrew Halpin, Theory and Research in Administration (New York: The Macmillan Company, 1967), pp. 150-51.

individual personality continuum which extends from open-mindedness to closed-mindedness.¹ The dimensions of organizational climate focus on both teacher and principal behavior. In the Open Climate, "the principal's policies facilitate the teachers' accomplishment of their tasks," and the prevailing climate is "most conducive to dynamic instruction."²

Eichholz reported that principals' hostility to change, if not manifested directly, may be recognized in the environment of the school which is not conducive to experimentation.³ For example, regulations may not permit change, or staff (custodial, secretarial, etc.) needs may take precedence over faculty suggestions for change.

It was noted by Mohrman that to "obtain the most creativity from an organization, it is necessary to have managers who are themselves more creative"⁴ Research studies have yielded certain definitive characteristics of elementary principals. They have been found to be conforming, cooperative people, "upwardly mobile" in aspiration, and highly task-

¹Halpin, Theory and Research, p. 131.

²Thomas J. Sergiovanni and Robert J. Starratt, Emerging Patterns of Supervision: Human Perspectives (New York: McGraw-Hill Book Company, 1971), p. 101.

³Gerhard C. Eichholz, "Why Do Teachers Reject Change?" Theory Into Practice II (December, 1963), p. 264.

⁴Jacob Jacoby, "Creative Ability of Task-Oriented Versus Person-Oriented Leaders," Journal of Creative Behavior II, No. 4 (1968), p. 252, quoting H. W. Mohrman, "Industrial Research Management and Creativity," Essays on Creativity in the Sciences (New York: New York University Press, 1963), p. 83.

oriented.¹ In his studies of the relationship between group climate and leader attributes, Jacoby found that task-oriented leaders do not contribute to the establishment of environments which facilitate creative output because they are not creatively endowed.²

Halpin described two dimensions of leadership behavior. One component of the dimension labeled "Initiating Structure" is that of assigning staff members to particular tasks. Such assignments involve elements of evaluation and selectivity from among personnel to fit the task.³ A review of the literature revealed that non-instructional, extra-classroom responsibilities that principals assign to teachers are virtually unexplored. Their significance is not overlooked, however. One school system's evaluation instruments refer to such responsibilities as "committee and duty assignments."⁴

The burden of nonteaching chores (legitimate use of teacher time) represents one area of conflict for professional educators. Detailed regulations are stated with increasing specificity regarding the prerogatives of teachers vis-à-vis principals as a result of contract negotiations. Principals'

¹Mitchell, Leadership in Public Education Study, p. 40.

²Jacoby, "Creative Ability of Task-Oriented," p. 251.

³Andrew W. Halpin, "How Leaders Behave," Organizations and Human Behavior: Focus on Schools, ed. by Fred D. Carver and Thomas J. Sergiovanni (New York: McGraw-Hill Book Company, 1969), p. 290.

⁴Oklahoma City Independent School District. Teacher Evaluation Forms AF-2, AF-3, and AF-4, 1971.

contracts in New York City and Chicago, some twenty pages in length, detail what principals can and cannot ask teachers to do.¹ But many systems remain which have not yet stated such policies.

Chesler found assignments, time commitments, and lack of awareness concerning staff relationships and the effect his own behavior has on the staff with regard to influencing innovation to be means of obstruction to innovation exerted by principals.² Because principals make task-assignments and give recommendations which affect teachers, it was appropriate to test their (principals') perceptions of the reward value of the assignments.³

The types of task-assignments/recommendations that principals give to or for teachers referred to in this study are those which only a selected few teachers can receive. Routinely rotated responsibilities, such as playground duty or lunch room duty, were not considered. As a part of this study, scaling procedures were applied to fourteen typical TARs. Not only was a hierarchical order revealed, but scale values which exhibit the relative reward values of the TARs were also computed.⁴

¹Joseph M. Cronin, "School Boards and Principals--Before and After Negotiations," Elementary School Administration: Readings, ed. by Oscar T. Jarvis (Dubuque, Iowa: Wm. C. Brown Company, 1969), p. 169.

²Mark Chesler, "The Principal's Role in Facilitating Innovation," Theory Into Practice II (December, 1963), p. 276.

³The complete scale-value study conducted as a part of this research is reported in Appendix A.

⁴Ibid.

Studies of Teachers

The effectiveness of teachers remains an ambiguous concept so complex that it has no universally acceptable definition. Although individual educators have individual ideas of what constitutes effective teaching, these concepts are vague and do not identify specific observable teacher behaviors.¹

The Teacher Characteristics Study directed by Ryans focused on teacher behavior dimensions rather than the effectiveness or ineffectiveness of particular behaviors.² From a factor analysis of twenty-four elementary teacher behavior dimensions, five centroid factors were extracted. Factor I was defined in terms of originality and adaptability. The teacher behaviors were characterized by descriptors such as original, resourceful, imaginative, adaptable, flexible, ingenious, and democratic.³ However, Jex reported a negative correlation between teachers' ingenuity scores and their effectiveness ratings by principals and supervisors. He concluded that ". . . the more ingenious a teacher as measured by Flanagan's test, the less effective he was apt to be judged as a teacher."⁴ He further questioned whether ". . . ingenuity,

¹David G. Ryans, Characteristics of Teachers (Washington, D. C.: American Council on Education, 1960), p. 2.

²Ibid., p. 6.

³Ibid., pp. 97-8.

⁴Frank Jex, "Negative Validities for Two Different Ingenuity Tests," The Third (1959) University of Utah Research Conference on the Identification of Creative Scientific Talent, ed. by Calvin W. Taylor (Salt Lake City: University of Utah Press, 1959), p. 127

in teachers especially . . . , is more apt to be penalized than rewarded in formal academic programs."¹ The implication was clear that the present academic system may look with disfavor upon teachers who show certain creative traits.

Campbell's investigation of the relationship between teachers' role-personality conflict and their effectiveness ratings by their principals substantiated the hypothesis that teachers low in role-personality conflict would be rated as more effective than teachers with a high degree of conflict. The emergent, practical implication was that if a teacher's effectiveness rating is likely to be lowered when his disposition for teaching techniques and materials differ from the principal's expectations, the risk of negative judgments will prohibit change and innovation efforts by teachers. Instead of encouraging teacher initiative, the discrediting of both teacher and innovation will enforce even more conformity.²

From his studies of creativity on the job which investigated products as well as processes of people, Taylor reported that there were several unexpected results. One such finding revealed that the number of published articles by scientists was negatively related to ratings by their supervisors on cooperation and flexibility. A second finding more directly concerned

¹Ibid.

²Jacob W. Getzels, James M. Lipham, and Roald F. Campbell, Educational Administration as a Social Process: Theory, Research, Practice (New York: Harper & Row, 1968), pp. 243-44.

with creativity revealed that "those with a strong desire for discovery, who also make good official suggestions to the organization, have a below average rate of promotion."¹

Beck expressed the dilemma that innovative teachers must confront. He stated: "No great feat of perception is required to recognize the obvious fact that many principals not only accept, but reward dependent, subordinant behavior as opposed to creative initiating behavior in teachers."² Whether or not principals perceive persons who possess such "non-stabilizing" characteristics as effective, and manifest their perceptions by the type of reward assignments that they give them, is questionable and unsupported in the literature.

Summary

Organizational role theory and descriptive studies of principals' characteristics support the more general theory that schools have a socializing influence and, like other organizations, are instruments for conformity which mold the beliefs, outlook, and behavior of their members. Further, the compliant, well socialized members are generally recipients of the rewards of the school system. Principalships, for example, which are among the few tangible rewards that school systems

¹Calvin E. Taylor, "A Tentative Description of the Creative Individual," A Source Book for Creative Thinking, ed. by Sidney J. Parnes and Harold F. Harding (New York: Charles Scribner's Sons, 1962), p. 174.

²William R. Beck, "The Teachers and the Principal," Perspectives on the Changing Role of the Principal, ed. by Richard W. Saxe (Springfield: Charles C. Thomas, 1968), p. 86.

have to offer, are awarded to the people who are "eager to conform to the expectations of authorities and to the anonymous authority that resides in 'the group'."¹ Past research has focused on principals or on teachers perceived to have principal potential. Rewards for the majority of classroom teachers who are neither candidates, nor aspirants for principalships, have not been investigated.

Therefore, a need exists to broaden the principal-focused studies to include rewards which schools can and do allocate to the major portion of the staff, i.e., the teachers.

If concern were limited to extrinsic rewards, and if the criteria by which principalships are awarded were assumed to be valid, it might be predicted that teachers who are perceived to possess character traits similar to those of the principal would be the recipients of principal-perceived reward task-assignments/recommendations (TARs). Conversely, those teachers possessing different character traits would be the recipients of non-reward TARs. Projecting from previous studies, it might be presumed that teachers who receive reward TARs from principals are considered to be assets to the school organization by the principal.

Paradoxically, traditional and contemporary professional educational literature recommends innovation in curriculum and instruction. Principals and teachers are admonished to be, if

¹Andrew W. Halpin and Don B. Croft, The Biological Characteristics of Elementary Principals (Washington, D. C.: Government Printing Office, 1960), p. 19.

not agents for initiating change, at least receptive to and participants in the implementation processes of change. Both groups, principals and teachers, are similarly exposed to new concepts and methods through the critical literature, in-service training, and other change efforts. It might, therefore, be expected that the two groups would respond similarly to the adoption and support of educational innovation. Past research, however, does not support this conventional wisdom.

CHAPTER III

METHODS AND PROCEDURES

Design of the Study

This study is a variation of the ex post facto form of the one-group design described by Kerlinger.¹ Teacher task-assignments/recommendations (TARs) scale values are examined by looking at nonmanipulated teacher variables--innovativeness, the primary independent variable in the study, and age, experience, tenure, formal education, and teaching level. This design is not experimental and does not yield causal information from the independent variables to the dependent variable. The statistical treatment, a regression analysis, was selected because it provides analytical data in the form of correlation coefficients among all variables, as well as the predictive capabilities of the independent variables, singly and in combination, in relation to the dependent variable. The regression analysis results in a multiple correlation coefficient denoted by R. A set of weights is obtained which will maximize the correlation between the criterion (dependent variable) and the weighted sums of the predictors (independent variables).

¹Fred N. Kerlinger, Foundations of Behavioral Research (New York: Holt, Rinehart and Winston, Inc., 1973), p. 318.

Population and Sample

All public elementary schools in the Oklahoma City Independent School District comprised the population for this study. Twenty-one schools which met certain qualifications, set forth in the following paragraphs, comprised the sub-population. Ten schools were subsequently randomly selected from the sub-population. It was from these ten schools that the teacher-subjects comprising the sample were ultimately drawn.

Since principals participated in the sample selection by hypothetical designations of certain task-assignments/recommendations (TARs) to 14 teachers on their faculties, some control of variables that might affect the principal's decisions in the assigning of the TAR was deemed important. There is some evidence that the younger, and usually the newer, administrators in the system are more receptive to innovation. To control for age and experience, only those schools whose principals are 30 years of age or above and who have been in the position for 3 years or more were selected for the sub-population of this study. Another factor, formal education, was found to be positively correlated with innovation in a study of school administrators conducted by Ramer.¹ Therefore, only schools whose administrators have received standard certification, but no degree beyond the Master's Degree were considered for the sub-population.

¹Ramer, "The Relationship of Belief Systems," p. 50.

One other qualification for the sub-population was that each school selected for the sample must have at least 14 teachers or teaching personnel. Media center personnel and special education teachers were counted as teaching personnel.

The number of variables in the study was the basis for determining sample size. Ten subjects per variable (seven) was a minimum. Teachers were the subject variables, hence, the unit of analysis. Because one teacher only in each school was hypothetically assigned each of the fourteen task-assignments/recommendations (TARs), i.e., one TAR to each of fourteen teachers, subjects included fourteen teachers from each of ten schools. With a total of seven variables, the sample, totaling one hundred forty (140) subjects was double the minimum ten subjects per each of the seven variables (70) indicated.

Variables

The independent variables were teacher innovativeness, age, total years of experience, number of years in the present school, level of formal education, and teaching (grade) level. The dependent variable was the scale value of the task-assignments/recommendations (TARs) that each teacher received.

Independent Variables

Teacher innovativeness was the independent variable considered most significant in this study. This variable was measured

by administering Bridges' Teacher Receptivity to Change Measure and calculating a mean score for each teacher.

Other independent variables included: teacher age to the nearest birthday, total number of years of teaching experience (experience), number of years of teaching experience in the present school (tenure), formal level of education (present degree plus any hours above). These variables were selected because other studies concerning the relationship between the selected variables, listed above, and innovativeness have not produced consistent results.¹ Information related to the independent variables was collected from each subject (teacher) by administering the Teacher Receptivity to Change Measure which consisted of Part I, "Teacher Reaction Questionnaire" and Part II, personal data questions.

Dependent Variable

The dependent variable was the scale value of the task-assignments/recommendations which each subject was hypothetically assigned by his principal. The scale values, which assume an hierarchical order, denote the relative reward values of the TARs with which they correspond. The reward aspect was based on the reward value which principals perceived the task-assignments/recommendations to have for teachers (see Appendix A). The TARs and their corresponding scale values are shown below:

¹Further rationale and documented support for the selection of the independent variables are presented in section titled Hypotheses.

TARs	SCALE VALUE
1. Assign to manage the concession stand at the annual elementary school track and field meet.	.000
2. Assign to serve as monitor of the study hall during the days that achievement tests are given.	.467
3. Assign to serve as building representative for the local United Fund campaign.	.664
4. Assign to serve as student newspaper sponsor.	1.023
5. Assign to serve as supervisor of AV equipment, film ordering, etc.	1.131
6. Assign to serve as sponsor for student safety patrol group.	1.142
7. Assign to serve as membership drive chairman for local, state, and/or national professional organizations.	1.190
8. Assign to serve as student council sponsor.	1.250
9. Give no assignments beyond regular classroom duties and such rotated duties as lunch room supervision, playground duty, etc.	1.685
10. Assign to serve as the "informally appointed" faculty member in charge when the principal is away from the building.	1.749
11. Recommend to serve as a cooperating teacher for the University's Teacher Training (Student Teacher) Program.	2.091
12. Assign to represent the school on a system-wide curriculum revision committee.	2.323
13. Recommend for assignment to a supervisory position in the local system.	2.414
14. Assign to attend an in-service workshop, expenses paid, on released time, in order to bring back materials and information to the school. ¹	2.554

¹A complete account of the development of the TAR scale is presented in Appendix A. The investigation and writing of "A Study of Principals' Perception of Extra-Classroom Task-Assignments/Recommendations" was the initial step toward the fulfillment of this research effort. Subsequently, the scale produced was utilized as the instrument of measurement of the dependent variable in this study.

Instrumentation

Two instruments were selected for the study. They were the Task-Assignments/Recommendations Form (TAR FORM)¹ and Bridges' Teacher Receptivity to Change Measure (TRCM).² Both instruments are included in the Appendices.

Task-Assignments/Recommendations Form (TAR FORM)

This instrument, as utilized by the principals consisted of a list of the fourteen TARs, in random order, and spaces on which to place the teacher's name to whom he would give the assignment or recommendation at the present time and under the present circumstances if he were called upon to do so. The assignments and recommendations were all hypothetical. Only the researcher and the principal in each school were aware that the assignments were made. No scale values appeared on the TAR FORM; principals were not informed that scale values existed. However, the scale values were the dependent variable, i.e., the scale value of the TAR assigned to a teacher became that teacher's TAR measure which was analyzed in relation to the independent variables for that teacher.

The TARs designations by principals provided the means for selecting the fourteen teachers from each school who participated, comprising the sample for the study. Only those teachers who were named by the principals for the hypothetical

¹See Appendix B.

²See Appendix B.

assignments were asked to respond to the "Teacher Reaction Questionnaire."

The investigation leading to the development of the TARs scale was the first, and a major portion of this research. The TARs scale study, devised to elicit principals' perceptions of the extra-classroom task-assignments/recommendations (TARs) which principals designate to teachers, resulted in the scale values listed above. Obtained scale values indicated the reward value, as perceived by 104 principals that each of the fourteen TARs held for teachers. A hierarchical value-order was revealed. Empirical validation of the value-order was achieved.¹ Reliability was tested by the internal consistency method demonstrated by Edwards.² The absolute average discrepancy (AD) between observed and expected proportions was -.0016 which was considered adequate for this study (see Appendix A, p. 81).

Teacher Receptivity to Change Measure

Bridges' Teacher Receptivity to Change Measure was developed in 1968 by Edwin M. Bridges.³ His interest in developing such an instrument was related to the "fate control" which classroom teachers exert over innovations. He recognized the dearth of research in the area of the teachers' role in changing educational practices and the limitations of the strategy

¹See Appendix A for the complete account of the development of the TAR hierarchical scale.

²Allen Edwards, Techniques of Attitude Scale Construction (New York: Appleton-Century-Crofts, Inc., 1957), p. 40.

³Bridges, "The Measurement Problem," pp. 1-13.

of the research that had been done. He noted two basic problems of the research strategy: (1) It focused on attitudes of teachers toward specific innovations which limited generalizability, and (2) There was no method of classification whereby the results of different studies of responsiveness to change could be systematically organized and subjected to meaningful testing.

Development of the instrument. Beginning with the example provided by business organizations, Bridges proposed to approach the study of teacher reactions to innovation on the basis of the "concept of proneness to work-related changes." The first major obstacle he encountered was the lack of a valid measure of teacher responsiveness to change. Receptivity to work-related change was defined for teachers as willingness to try new curriculum ideas and practices on the assumption that "this willingness would be reflected in the behavior manifested by the teacher under certain kinds of conditions."¹ The conditions are reflected in the item statements. Items were based on some of the properties of an innovation cited by Miles as affecting an innovation's initiation and continued use.² The innovation properties selected for inclusion in the statements were: (1) the extent to which the new idea was already a proven practice, (2) the amount of work involved in trying the practice, and (3) the amount of role change involved during the trial use.³

¹Ibid., p. 3.

²Miles, Innovation in Education, pp. 635-637.

³Bridges, "The Measurement Problem," p. 3.

Scale analysis was applied to the ten items generated for the scale using data from a pilot study consisting of 100 junior high teachers; the analysis was later verified with 100 elementary teachers. A coefficient of reproducibility of .85 with a minimal marginal reproducibility coefficient of .638 was obtained in the verificational study.¹

Validation procedures. Two validation studies have been conducted for the instrument. Employing the nomination technique, elementary school principals, in one study, and elementary school teacher colleagues in another, nominated two groups of teachers from their faculties. One group of three teachers nominated was judged to be most likely to initiate a request to try a new, untested curriculum practice and was labeled Highs in innovativeness. The other group of three teachers nominated was judged to be least likely to initiate a request or to volunteer to use a new practice on a trial basis and was labeled Lows in innovativeness. The nominated teachers then responded to the "Teacher Reaction Questionnaire" (see Appendix B).

Results from both validation studies showed that teachers' scores on the receptivity to change instrument corresponded with the high/low innovativeness nominations, i.e., teachers nominated as high in innovativeness scored significantly higher than did teachers nominated as low in innovativeness. An F value of 23.65, significant beyond .001, was achieved when principals' judgments and teachers' scores were tested on the measure of

¹Bridges, "Teacher Receptivity to Change," p. 2.

innovativeness.¹ The F value, 8.65, obtained when colleagues' nominations were tested in relation to teachers' scores, was significant at the .01 level.²

Still more evidence for validity resulted when scores from the two previously cited validation studies were combined. There was a significant overlap at the upper and lower ends of the scale. In the upper range of the scale (above the 3.97 four state sample mean), 75.4% of the scores were obtained by Highs; in the lower range of the scale (below the 3.97 four state sample mean), 77.8% of the scores were obtained by Lows.³

Scoring procedures. The form of the Teacher Receptivity to Change Measure on which teachers' responses are recorded is the "Teacher Reaction Questionnaire" (see Appendix B). It is composed of ten items with five response choices for each item. Instructions direct the respondent to indicate the one action from among the response choices that a teacher like himself would likely take. Response choices are: (a) Initiate a request to use on a trial basis; (b) Respond affirmatively to request for volunteers; (c) Use if asked; (d) Express desire to stay with present practice; and (e) Be strongly against trial of the practice.

A score of 5 was assigned to an a response, 4 to a b response, 3 to a c response, 2 to a d response, and 1 to an

¹Bridges, "The Measurement Problem," p. 9.

²Ibid., p. 10.

³Ibid., p. 11.

e response. A total score range of from 10 to 50 was possible. Mean scores, ranging from 1.0 to 5.0, were used in the data analysis. Although Bridges dichotomized the high and low scores on the basis of a four state mean, no such division was necessary in the design of this study. The mean score was computed, however. It was 2.92 with a standard deviation of .70.

Procedures for Collection of Data

A proposal to conduct this research in the Oklahoma City Independent School District was submitted to the Research Committee of that system. Approval was granted (see Appendix C).

In the proposal, the limitations regarding principal characteristics and school staff size necessary for the study were specified. Principal qualifications were: (1) he must be 30 years of age or above; (2) he must have three or more years of experience as a principal; and (3) he must have standard certification, but no degree beyond the Master's Degree level. Staff size required was at least fourteen teaching personnel members. Twenty-one schools were identified as meeting all qualifications.¹ Staff sizes ranged from 16 to 27 faculty members. All areas of the city were represented; socio-economic levels ranged from high to low. The twenty-one qualified schools comprised the sub-population from which the teacher sample was drawn.

Principals of all twenty-one schools received a memorandum from Dr. Ron Schnee, Research Coordinator, to the effect that

¹Rationale for the qualifications is stated on p. 34.

this research had the committee approval and that the principals might expect to be contacted by this researcher if selected to participate in the study. According to the research committee's policy, principals were reminded that the decision to participate was their option.¹

Twelve schools were randomly selected from the sub-population. Ten of the twelve principals contacted agreed to participate in the study.

Appointments were arranged at which time the researcher went to each of the schools for a personal conference with each principal. During the conference, the research plan was described; principal's and teachers' involvement was outlined. At the same conference, the Task-Assignments/Recommendations Form (TAR FORM) was completed by the principal in the presence of the researcher. A system was devised to assure that principals considered all faculty members when assigning the TARs. Two sets of cards were provided with the TAR FORM for each principal. On one set of cards each of the TAR was typed; on the other set, each faculty member's name was typed. The principal was asked to manipulate the two sets of cards, placing teachers' names by the TAR they would most likely be assigned. In some cases, several faculty members names were placed by the same TAR. Ultimately, the principal selected the one teacher whom he considered to be the "best fit" for each TAR. The final fourteen assignments were then recorded on the TAR FORM.

¹A copy of the memorandum from Dr. Ron Schnee to principals of the qualifying schools is included in Appendix C.

Cards with the names of teachers who were recipients of assignments were attached to packets containing the "Teacher Reaction Questionnaire." The packets had been coded to correspond with the number of the TAR to which the teacher was hypothetically assigned. At no time was the teacher aware of the method of selection of teacher participants.

Several alternative plans for collecting the data from the teachers were described for the principal in the conference period. Alternatives were: (1) The researcher would go to the classrooms, taking a few moments of the teachers' time to request their participation, leave the packet with the teacher, and return later in the day to pick up the packet from the teacher; (2) The principal could call a special, brief faculty meeting before or after school for all faculty members, or for those who had been selected, by means of the TARs designations, to participate in the study. The researcher would attend the meeting and distribute the teacher packets. Teachers would be instructed to complete and return the questionnaire at that meeting, or they might return them in sealable packets provided them, to the school secretary at their earliest convenience. The researcher would return to the schools for all packets; and (3) The principal could distribute the packets through intra-school delivery methods or in a regular faculty meeting. Teachers could return the sealed packets to the school secretary from whom the researcher would collect them.

Each alternative was used in one or more schools. Teachers had been apprised that the study was authorized by the research committee and principals expressed their cooperation to the teachers. All of the 140 participants completed the "Teacher Reaction Questionnaire." Principals provided personal data information which teachers had omitted in three cases.

Treatment of the Data

Descriptive data consisted of information about age, experience, tenure, formal education, and teaching grade level of the subjects. Innovativeness scores and TARs scale values (the dependent variable) were obtained for each subject. A series of histograms provided the display format for the independent variables.

An IBM 1130 Statistical System program, the Stepwise Linear Regression program, was selected to "determine the coefficients of a linear equation of the form:

$$y = b_0 + b_1x_1 + b_2x_2 + . . . b_nx_n$$

which best approximates the observations in the least squares sense."

The first step in the program was the computation of a matrix of correlation coefficients from the source data. It contained the correlations between all the independent variables and the dependent variable. Hypotheses were tested by comparing each of the correlations with the coefficient level (.30) and the statistical level (.01), set a priori, as the levels for acceptance or

¹IBM Corporation, IBM Application Program, 1130 Statistical System, User's Manual. Program Number 1130-CA-06X (White Plains, New York: IBM Corporation, Technical Publications Department, 1971), p. 7.

rejection as called for by the Hypothesis form. The Matrix of Correlation Coefficients is displayed in Table II (see p. 56).

In the multiple regression analysis, the independent variables are entered or removed in the equation (see above) on the basis of variance criterion, set by the user, which enabled the program to determine which variables made the greatest improvement in "goodness of fit." F-levels for entry or removal of variables were set at 1.000.¹ If a variable's entry or removal significantly changed the residual variance, it was included in the equation and the program continued; if there was no significant change in the residual variance with the entry or removal of any remaining variable, the program stopped.

Through the regression technique, relative contributions of each independent variable, and certain combinations of variables, to the prediction of the criterion variable were assessed. Table III (see p. 60) displays the regression analysis data.

Summary

In this chapter the design of the study was set forth. The method used in selecting the sample was described. Independent variables and the dependent variable were defined in operational terms. Two instruments were used in data collection; each was discussed in terms of development, validation, and scoring. Methods employed to administer the instruments and procedures for collecting and treating the data completed the chapter.

¹ IBM Application Program, p. 13.

CHAPTER IV

FINDINGS OF THE STUDY

Ten Oklahoma City Public Schools were selected from which the subjects for the study were drawn. The ten principals of the quasi-randomly selected schools¹ participated in the study by assigning fourteen hypothetical task-assignments/recommendations (TAR) to the fourteen teachers among their present faculty members to whom they would give those TAR, if the TAR actually existed. A system was devised by which each principal considered each faculty member as a possible candidate for every given TAR. Each principal ultimately narrowed his selection to one person who best "fit" each specific TAR. The result was that each of the fourteen TAR, and its corresponding scale value, was assigned to one teacher only in each school. These teachers (TARs recipients) became the 140 subjects who participated in the remainder of the study.

Analysis of Descriptive Data

Personal descriptive data were obtained from each teacher. The Teacher Receptivity to Change Measure consisted

¹Random selection was used to select ten schools from a total of twenty-one Oklahoma City Public Elementary schools whose principals met the qualifications described on p. 34.

of both the "Teacher Reaction Questionnaire," from which innovativeness scores were derived, and a set of questions to provide information about the selected independent variables: age, teaching experience, tenure in the present school, level of formal education, and teaching grade level. The summary table (TABLE I) shows the range, mean, and standard deviation for each of these variables.

TABLE I
SUMMARY STATISTICS--INDEPENDENT VARIABLES

VARIABLE	LOW	HIGH	MEAN	STD. DEV.
Age	23.0	65.0	41.94	11.42
Experience	2.0	45.0	13.45	9.58
Tenure	1.0	30.0	6.98	6.17
Formal Education	1.0	5.0	2.84	1.38
Teaching Level	1.0	2.0	1.30	.46
TRCM (Innovativeness)	1.0	5.0	2.92	.70

The mean age of teachers in the sample was 41.9 years with a range from 23.0 years to 65.0 years, and a standard deviation of 11.4 years. Figure 1 is a histogram representing ages of the 140 subjects (teachers).

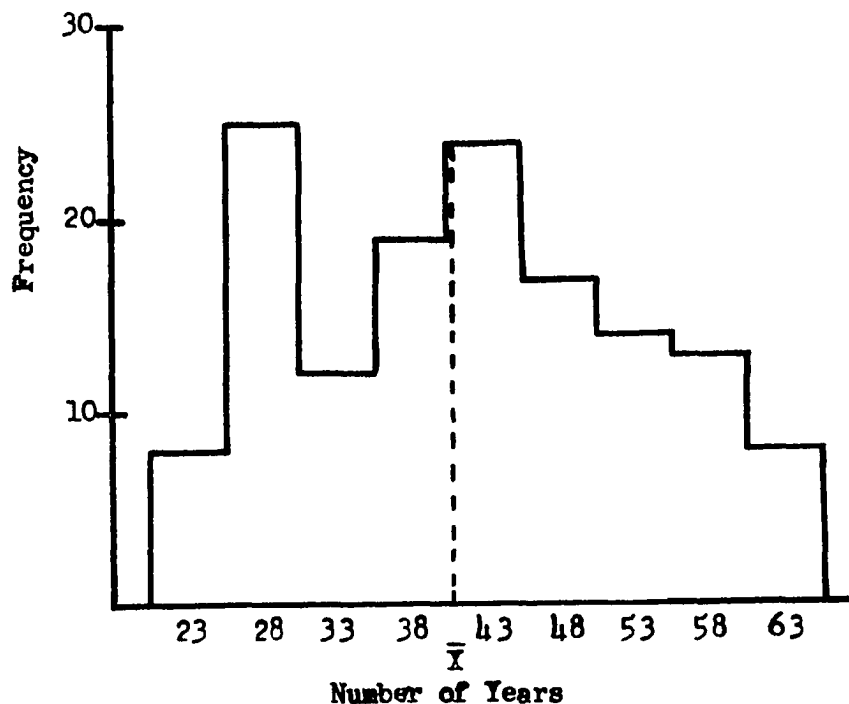


Fig. 1. Distribution by Age of Recipients of TARs

Total years of teaching experience ranged from 2.0 years to 45.0 years. No first year teachers received task-assignments or recommendations from their principals, although principals were not directed to exclude them. The mean number of years experience was 13.4 with a standard deviation of 9.5. TARs were generally assigned to those teachers with experience ranging between 3.9 and 22.9 years. As shown in Figure 2, 79% of the recipients of TARs had 20 or fewer years of teaching experience.

Years of teaching in the present school ranged from 1.0 to 30.0 years, the mean number of years of tenure being 6.9 with a standard deviation of 6.1. Analogous to the case of years of teaching experience, teacher tenure shows a positively skewed distribution (see Figure 3). Teachers who had 10 or fewer years of tenure received 80% of the TARs.

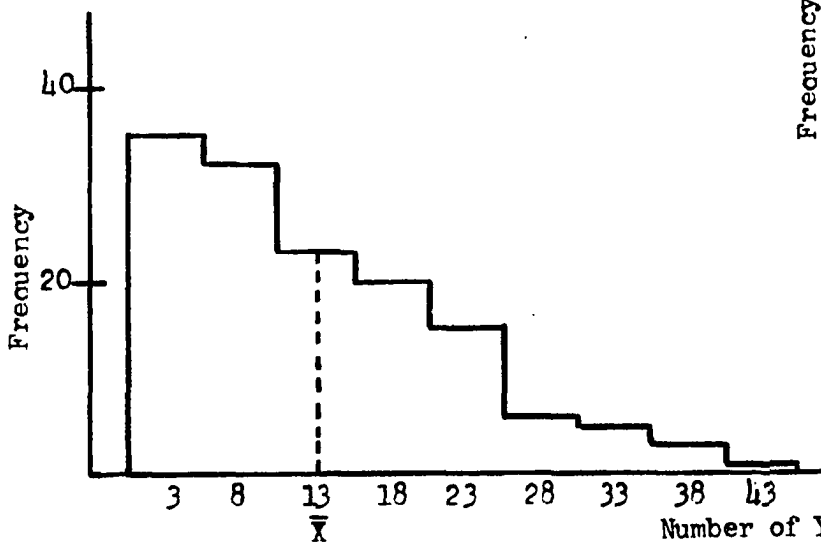


Fig. 2. Distribution by Years of Experience of Recipients of TARs

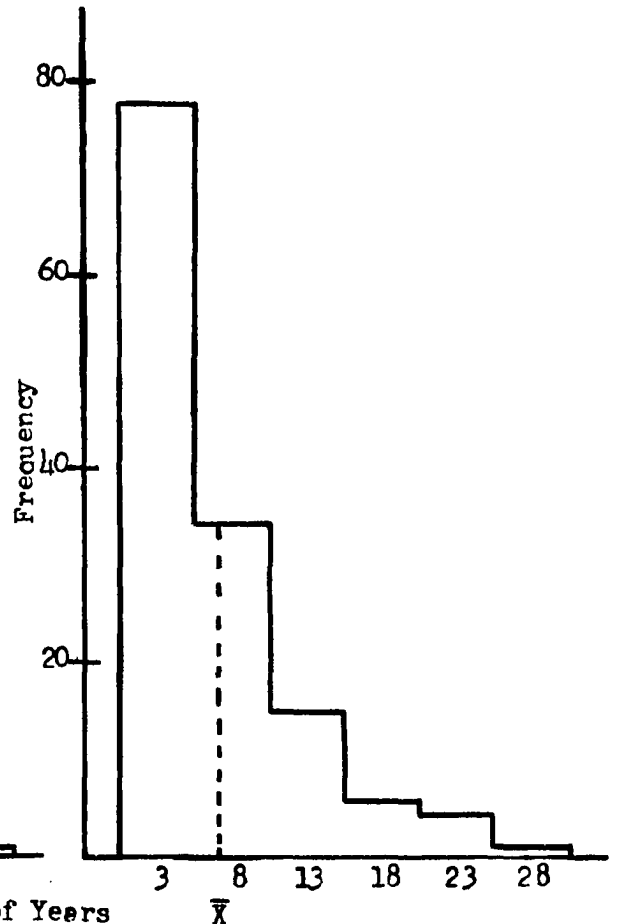


Fig. 3. Distribution by Years of Tenure of Recipients of TARs

Information was not available to show the distribution of experience and tenure of non-selected teachers in the sample schools.

Formal education information was coded on a 1 to 5 scale as follows: (1) Bachelor's degree; (2) Bachelor's degree plus 15 hours or less; (3) Bachelor's degree plus 16 hours or more; (4) Master's degree; (5) Master's degree plus any number of hours. Respondents had achieved educational levels ranging from 1.0 to 5.0 on the scale with a mean of 2.8 and a standard deviation of 1.4 (see Figure 4).

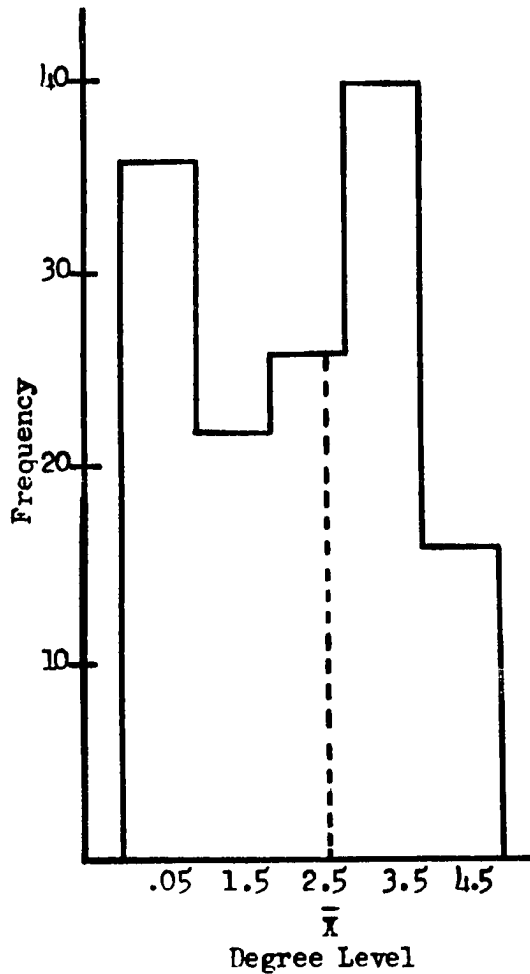


Fig. 4. Distribution of Formal Education of Recipients of TARs

Teaching level was dichotomized with (1) representing primary levels, kindergarten through third, and (2) representing the intermediate grades.¹ (Because of the fifth year centers plan which was newly implemented in 1972-1973, the fourth grade level was the only grade in the sample schools in the second category.) The decision to investigate and dichotomize teaching level was based upon the different training and expectations of teachers in regard to generalization versus

¹Rationale for the dichotomy is discussed on p. 14.

specialization. Consequently, media center personnel and special education teachers, who have specialist training, were coded in the second category, unless they were identified as working with primary level exclusively. Of the TARs recipients, 69% were primary level teachers.

Teacher Receptivity to Change Measure (TRCM) scores were used as a measure of teacher innovativeness. Scores ranged from 10 to 50. Mean scores used in this study ranged from 1.0 to 5.0.¹ The average mean score was 2.92; the standard deviation was .70 indicating a small dispersion of scores and suggesting homogeneity among subjects as reflected by this measure of their innovativeness.

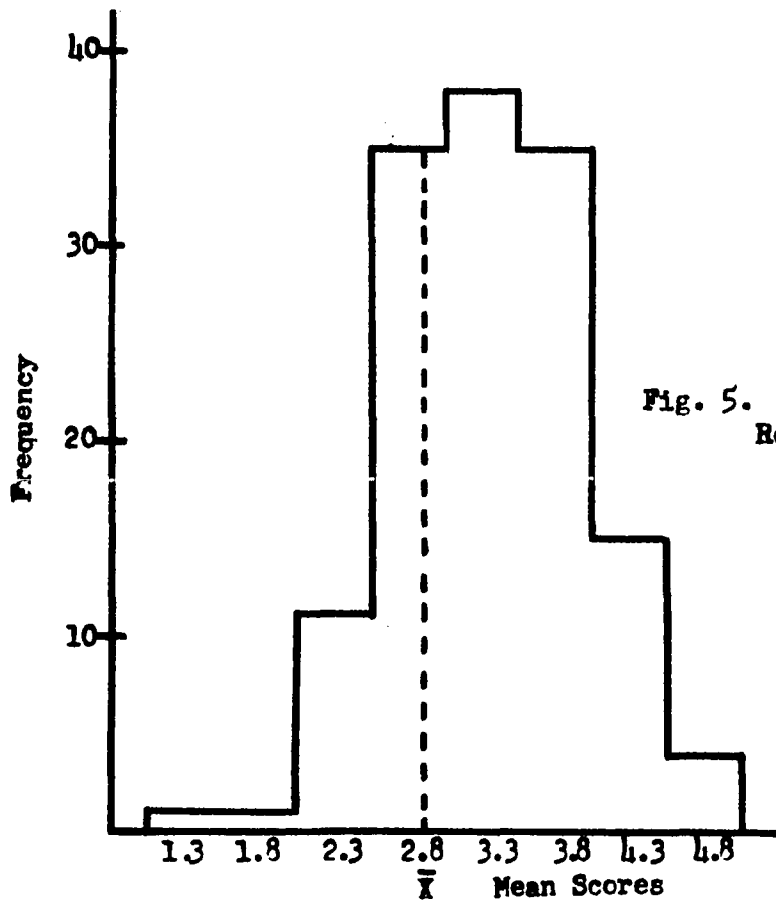


Fig. 5. Distribution of Teacher Receptivity to Change Scores of Recipients of TARs

¹Scoring procedures were presented in the section titled Instrumentation.

Reliability was estimated from item intercorrelations in the single application of the TRCM. By applying Cronbach's formula¹

$$r_{tt} = \frac{n_1}{n_1 - 1} \times \left[1 - \frac{\sum r_{ij}}{n_1} \right] \quad \text{where } i > j$$

where r_{tt} = sample estimate of reliability coefficient

n_1 = number of items in TRCM

r_{ij} = correlation coefficients of items

the estimate of r_{tt} was .264.

The narrow range of scores and the low r_{tt} lend support to the speculation that subjects in the sample exhibit little individual difference in innovativeness. Another possible explanation is that the measuring instrument may not have been scaled with a degree of accuracy sufficient to discriminate among individual differences.²

Information regarding the demographic variables was limited to those fourteen teachers per school who received TAR. There was no comparative information for non-recipients. It is not possible to speculate about differences between recipients and non-recipients.

¹Lee J. Cronbach, Nageswari Rajaratnam, and Goldine C. Gleser, "Theory of Generalizability: A Liberalization of Reliability Theory," British Journal of Statistical Psychology XVI, Part II (November, 1963), pp. 137-163.

²Allen Edwards, The Measurement of Personality Traits by Scales and Inventories (New York: Holt, Rinehart and Winston, Inc., 1970), p. 6.

Analysis of Data Related to the Hypotheses

A matrix of correlation coefficients was computed from which the hypotheses were tested by comparing coefficients with values required for statistical significance. A coefficient level of at least .30 ($p < .01$, $df = 125$) was established a priori. Intercorrelations between all independent variables and the dependent variable are displayed in TABLE II.

The primary purpose of the study was to ascertain whether relationships exist between teachers' innovativeness scores derived from the Teacher Receptivity to Change Measure and extra-classroom task-assignments/recommendations (TARs) teachers receive.¹

The TRCM label in column one in both TABLE I and TABLE II refers to teachers' scores on the Teacher Receptivity to Change Measure which is titled "Teacher Reaction Questionnaire" (see Appendix B). It was this measure which provided the innovativeness scores for teachers, the independent variable that received primary attention in this study.

TARs were scaled from low to high reward value for teachers and were hypothetically assigned to teachers by their principals. Subsequently, the scale values corresponding to the assigned TARs were recorded as each teacher's TAR score. All TARs are listed with their numerical scale values on page 37 of this text and in Appendix A.

¹Extra-classroom TARs were shown to have principal-perceived, hierarchically ordered reward value for teachers in the initial segment of this study (see Appendix A).

TABLE II
MATRIX OF CORRELATION COEFFICIENTS (N = 140)

VARIABLE	1	2	3	4	5	6	7
Age	1.000	.826**	.655**	.268**	.129	-.142	.195*
Experience	.826**	1.000	.717**	.338**	.109	-.266**	.157
Tenure	.655**	.717**	1.000	.159	.074	-.261**	.142
Formal Education	.268**	.338**	.159	1.000	.188*	-.079	.148
Teaching Level	.129	.109	.074	.188*	1.000	-.102	-.079
TRCM (Innovativeness)	-.142	-.266**	-.261**	-.079	-.102	1.000	.029
TAR (Task-Assignments/ Recommendations)	.195*	.157	.142	.148	-.079	.029	1.000

*Significant at .05, df 125 = .174

**Significant at .01, df 125 = .228

Hypothesis 1, which states that there is a relationship between scale values of TARs received by teachers and teacher innovativeness, as indicated by TRCM scores, must be rejected on the basis of non-significant correlation coefficients.

Hypotheses 1.1 and 1.2 are converse and directional in form. The former predicts an inverse relationship between innovativeness (TRCM) scores and low-reward TAR scores. The latter, hypothesis 1.2, predicts an inverse relationship between innovativeness (TRCM) scores and high-reward TAR scores. There was no evidence of such relationships; therefore, the primary hypothesis, Hypothesis 1, and its two secondary hypotheses, Hypotheses 1.1 and 1.2, are rejected.

Ancillary hypotheses (H_2 , H_3 , H_4 , H_5 , H_6), all stated in null form, are based on the relationship between TARs scores and each of the remaining independent variables: age, experience, tenure, formal education, and teaching level. The intercorrelation matrix, displayed in TABLE II, shows that none of the independent variables has a correlation with task-assignments/recommendations (TAR) at the level set a priori. All ancillary hypotheses were accepted.

Sub-hypotheses for the ancillary hypotheses ($H_{2.1}$, $H_{3.1}$, $H_{4.1}$, $H_{5.1}$, $H_{6.1}$) refer to the relationship between innovativeness (TRCM) scores and each of the other independent variables: age, experience, tenure, formal education, and teaching level. Experience and tenure were significantly correlated with innovativeness at the .01 level, but they did not achieve the

specified coefficient level of .30. The strength of the negative relationship between innovation and experience and innovation and tenure provides strong support for the effect of socialization on teachers. Age, formal education level, and teaching level were not significantly correlated with innovativeness (TRCM) scores. Stated in null form, all sub-hypotheses were accepted.

Additional Findings

Inverse relationships were predicted between TRCM scores and TAR values, but no such relationships were revealed in the first analysis. It was noted, however, that the obtained coefficients for the other independent variables--age, experience, tenure, formal education, teaching level--and innovativeness were negative. This negative correlation means that as the above listed variables increased, innovativeness scores decreased. Strength of relationships did not warrant rejecting the null hypotheses, however.

A stepwise linear regression analysis was computed to obtain the weighted combination of independent variables upon the dependent variable. All variables were entered into the regression analysis. Hope suggests that "the choice of variables to enter into a multiple regression analysis is not simply a matter of selecting those which have the highest (positive or negative) correlation with the criterion. It is quite possible for a variable to have a zero correlation with the criterion and yet for it to contribute indirectly by 'suppressing' that

part of another variable which reduces the latter's correlation with the criterion."¹ The programmed linear regression technique takes into account such suppressing effects by the order in which variables are entered into the analysis.²

TABLE III shows the order in which the independent variables were entered in the analysis. The process for selection of variables' entry order began by selecting that variable (age) with the highest prediction validity from the predictor set. Subsequently, the variable which maximally increased the squared multiple correlation (RSQR) when used with the preceding variable/s was entered.

With the entry of each of the variables, age, teaching level, and formal education as predictors, the multiple correlation coefficient, R , was statistically significant. However the strength of the correlation (the percentage of predictive power) was not of practical significance for either the three statistically significant variables, or the total set of predictors. The RSQR coefficient provides a check on this aspect of the statistical analysis. An RSQR of .0686 indicates

¹Keith Hope, Methods of Multivariate Analysis (New York: Gordon and Breach Science Publishers, 1969), p. 84.

²By comparing TABLE II and TABLE III it is observed that independent variables were not entered in the regression analysis in the same order (high to low) in which they correlated with the criterion (dependent) variable (TAR). For example, experience had the second highest correlation coefficient (see TABLE II), but it was the last (sixth) variable entered into the analysis (see TABLE III).

that only 6.86% of the criterion variance has been explained by predictor information.¹

TABLE III
REGRESSION ANALYSIS DATA

VARIABLE ENTERED	MULTIPLE R	F
Age	.1955	5.4878*
Teaching Level	.2223	3.5620*
Formal Education	.2519	3.0731*
TRCM (Innovativeness)	.2574	2.3948
Tenure	.2595	1.9355
Experience	.2619	1.6328

* Significant at .05 level

R = Multiple Correlation Coefficient

F = F ratio used to test the significance of R

Summary

Descriptive data relating to the independent variables in this study were explained and a summary of the data was displayed in this chapter (see TABLE I). An intercorrelation matrix (see TABLE II), from which information for making decisions regarding the hypotheses was derived, was also presented. Findings for each hypothesis were stated. Additional observations

¹Donald J. Veldman, Fortran Programming for the Behavioral Sciences (New York: Holt, Rinehart, and Winston, 1967), p. 300.

and findings related to the multiple regression analysis were discussed and data were displayed in TABLE III.

CHAPTER V

CONCLUSIONS

The principal-perceived hierarchical order of reward values of the TARs does exist (see Appendix A). Principals, who were asked to use procedures and criteria they would employ if assignments to teachers were actual rather than hypothetical, failed to systematically single out teachers with any one or a combination of the observed variables. It must be concluded then that reward value of the TARs, the criterion employed in the initial ranking of the TARs, was obscured by other decision-making standards.

The selected combination of demographic predictor variables accounts for a very small proportion (6.86%) of the variance in the criterion variable (TAR). It would appear that principals do not consistently consider such criteria as age, experience, tenure, formal education, teaching level, or innovativeness separately, or in combination, in their decision process for allocating task-assignments/recommendations to teachers.

Causal inferences for the minimal percentage of criterion variance accounted for can only be speculative. Ferguson's assertion that variables which are highly correlated with each other contribute little separately to the prediction achieved because they measure much the same aspects of the criterion,

provides some insight.¹ The intercorrelation matrix (TABLE II) does reveal substantial correlations between age/experience, age/tenure, and experience/tenure. While age is the single variable with the most predictive power, and consequently the first variable entered in the regression analysis, the two variables, experience and tenure, which correlate strongly with age and with each other, were the last two variables entered in the regression analysis. Experience and tenure had the least effect, in combination with the other predictors, on the criterion variable.

Hope discussed a possible explanation for the weak predictive power. Besides supporting the idea that the predictive weight from highly correlated independent variables is dispersed, he also suggested that the measuring instrument may have been faulty.² Innovativeness (TRCM) was the only independent variable which required the use of a measurement instrument. It is possible that the low reliability of the instrument (.264), the Teacher Receptivity to Change Measure, explained the reduction of the weight of the characteristic it purported to measure.³

It remains that since such a small portion of variance (6.86%) was accounted for, one could expect random assignments

¹George A. Ferguson, Statistical Analysis in Psychology & Education, p. 403.

²Hope, Methods of Multivariate Analyses, p. 84.

³Ibid., p. 84.

or random selection of variables to account for as much. The question is raised as to what criteria, if not those selected for this study, are considered by principals in assigning extra-classroom responsibilities to teachers?

In an attempt to further analyze possible confounding elements, ten supplementary regression analyses were computed, one per school (N=14). It was recognized that this would not provide an adequate sample for statistical verification, but it was undertaken in an heuristic sense for speculative data and as a basis for recommending further study. It was believed that possibly individual principals considered specific teacher characteristics in decisions regarding assignments, but because of differences in the range of characteristics of teachers among schools, the predictive weights of the variables might be reduced.

Findings Related to Supplementary Analyses

Teaching level, variable 5, was the first entry in five cases (schools), the second in three cases and the third in one case. It was not entered, i.e., the program was terminated before its entry,¹ which means that it did not meet the programmed F-level to enter a variable (1.000) in only one of the ten cases (schools). No other variable was entered so consistently at, or

¹In the regression analysis program, a criterion level for entry and removal of variables is set to determine whether the variable's entry or removal significantly reduces or increases the sample residual variance. If there is no significant change in the residual variance, i.e., if there is no variable whose entry or removal meets the set F-levels for entry or removal (both were 1.000 in this case), the program is stopped.

near, the beginning of the program. (In this program, Entry 1 has the greatest single variable predictive weight--highest correlation (r) with TAR--subsequent entries have greatest 'in combination' predictive power in the order in which they are entered.) In three first-entry cases, teaching level had a negative correlation with TAR; in two cases the relationship was positive. The negative/positive aspects may have suppressed this variable's effect in the overall analysis.

Variable 1, age, was entered first in three cases, indicating that variable to be the most effective in predicting TAR scores in those three schools. However, in only one other case did age attain the F-level (1.000) to enter the equation, and in that case it was not entered until the fifth step. This is interesting because in the initial analysis, age was the first entry in the program, which meant that among all schools, it had the greatest predictive power of any of the independent variables. In each first-entry case, age had a positive relationship with TAR.

Variable 4, formal education, was the only other first-entry variable. It appeared twice as a first entry. It did not enter in any other equation indicating that it did not reach the F-level for entry in combination with other variables. In both first-entry cases, formal education was positively related to TAR.

Variable 3, tenure, was entered in the second step in two cases and in the third step in one case. At these entry

levels, tenure had a negative and two positive correlations with TAR.

Variable 2, experience, was entered in three cases in the second, third, and fourth steps. One negative and two positive relationships between experience and TAR were recorded.

Variable 6, innovativeness (TRCM) was entered in two cases in the second step and in one case in the third step. It did not achieve the F-level for entry in any other case. In five cases only, innovativeness had a negative correlation with TAR as predicted; the other five being positive correlations. Positive correlations (.30, .14, .45, .20, .41) are somewhat higher than negative ones (-.19, -.42, -.19, -.12, -.23) which accounts for the over-all schools positive correlation between TRCM and TAR reported from the first analysis (see TABLE II). The negative/positive aspects of relationships could account for the small proportion of variance attributed to this variable in the initial analysis.

From the matrices of correlation coefficients, comparisons of the independent variables' intercorrelations within and between schools can be analyzed. Because the ancillary sub-hypotheses pertain to the variables, age, experience, tenure, formal education, and teaching level, and their relationships with TRCM (innovativeness), these relationships were examined.

With few exceptions (16 out of 50 correlations) independent variables correlated negatively, or had a zero correlation, with the independent variable, innovativeness. In one

case (school) only, all correlations between the above listed five independent variables and innovativeness were positive, the correlation between innovativeness and TARs was negative, indicating an inverse relationship, as predicted, in that school.

In summary, the most significant speculation supported by these heuristic analyses is that no focusing on any single variable is evidenced in the decision processes employed by individual principals as they assign TAR.

Either negative/positive correlational influences, low reliability of the innovativeness measure, or such factors as lack of consistency in considering specific characteristics in assignment making, reduce the predictive power of any one, or any set of variables among those selected for this study, to an insignificant level to be of practical value.

Recommendations for Further Research

Some recommendations for further investigation are as follows:

1. Determine the characteristics of teachers that principals perceive themselves to consider in the decision process of assigning extra-classroom task-assignments/recommendations. If the same characteristics selected for the present study are suggested by principals, those which are highly correlated should be combined to avoid dispersion of the predictive power. (See reference regarding supressor variables.)¹ Utilizing

¹Veldman, Fortran Programming, p. 301.

those teacher characteristics which principals deem the most important determinants of the TARs they make to teachers, the procedures of the present study might be replicated. This type of investigation could give insight into more powerful predictive variables.

2. Select or construct another measure of innovativeness; administer Bridge's measure and the newly selected measure of innovativeness to a group of teachers; determine the significance between teachers' TRCM mean scores and their scores on the second measure of innovativeness selected.

3. Dichotomize subjects on the basis of TARs scores. Select only those teachers who received TARs 1, 2, or 3 (Lows), and those who received TARs 12, 13, or 14 (Highs) to participate in the study. Test the subjects to obtain innovativeness scores, and secure information related to other selected variables. Analyze the relationships among all variables and TARs scores. With the elimination of the middle range scores, differences may be more significant.

4. Administer the TRCM to both recipients and non-recipients of TARs. Collect descriptive data for both groups. Compare the groups to determine whether there is any significant difference between groups.

5. Randomly select schools disregarding limitations such as principals' characteristics, school size, socio-economic levels, population, or number of teachers. Replicate the present study.

6. Pair sample schools on the basis of size, principals' characteristics, number of students, socio/economic area, teacher characteristics and/or other variables. Replicate the present study.

APPENDICES

APPENDIX A

A STUDY OF PRINCIPALS' PERCEPTION OF
EXTRA-CLASSROOM TASK-ASSIGNMENTS/RECOMMENDATIONS

A STUDY OF PRINCIPALS' PERCEPTION OF
EXTRA-CLASSROOM TASK-ASSIGNMENTS/RECOMMENDATIONS

Bonnie Lynn - University of Oklahoma

ABSTRACT

The analysis of principals' perception of the reward value inherent in the types of extra-classroom responsibilities they assign to teachers was the focus of this study. Objectives were: to obtain scale values on a most-to-least rewarding continuum for fourteen task-assignments/recommendations (TAR) that principals typically give teachers and to determine whether or not obtained scale values indicated a hierarchical value-order of the TAR. One hundred four principals participated in ranking the fourteen TAR. Guilford's (1954) pair-comparison treatment of complete ranks, assuming Case V, resulted in the achievement of both objectives. Two subsequent validation procedures produced minimal scale value discrepancies, and all three scaling techniques supported the hierarchical value order.

A STUDY OF PRINCIPALS' PERCEPTION OF EXTRA-CLASSROOM TASK-ASSIGNMENTS/RECOMMENDATIONS

Bonnie Lynn - University of Oklahoma

It is not unusual for schools to have many unassigned responsibilities and tasks that need to be assumed and accomplished. These extra-classroom tasks are disposed of most commonly by the principals' assigning them to the teachers. Studies of school climate which have attempted to probe the latent and active attitudes and behaviors of school personnel have only tangentially, if at all, dealt with extra-classroom assignments or recommendations of teachers by principals.

Problem

This study is concerned with elementary school principals' attitudes toward extra-classroom task-assignments and recommendations. It has attempted to answer the question: Do principals perceive the task-assignments/recommendations in any kind of a hierarchical order regarding their reward value? It was anticipated that scale values could be assigned to the task-assignments/recommendations in order to determine their relative values.

Procedure

Several university faculty members, graduate students, public school administrators and teachers suggested types of task-assignments/recommendations beyond the classroom teachers' normal teaching duties. From some twenty-five items generated, fourteen typical task-assignments or recommendations that

might be within the realm of an elementary school principal's responsibility to give to, or about, teachers were selected. (Throughout the remainder of this paper, the fourteen task-assignments/recommendations will be referred to as TAR.)

The following list of TAR was selected for this study:

1. Assign to manage the concession stand at the annual elementary school track and field meet.
2. Assign to serve as monitor of the study hall during the days that achievement tests are given.
3. Assign to serve as building representative for the local United Fund campaign.
4. Assign to serve as student newspaper sponsor.
5. Assign to serve as supervisor of AV equipment, film ordering, etc.
6. Assign to serve as sponsor for student safety patrol group.
7. Assign to serve as membership drive chairman for local, state, and/or national professional organizations.
8. Assign to serve as student council sponsor.
9. Give no assignments beyond regular classroom duties and such rotated duties as lunch room supervision, playground duty, etc.
10. Assign to serve as the "informally appointed" faculty member in charge when the principal is away from the building.
11. Recommend to serve as a cooperating teacher for the University's Teacher Training (Student Teacher) Program.
12. Assign to represent the school on a system-wide curriculum revision committee.
13. Recommend for assignment to a supervisory position in the local system.
14. Assign to attend an in-service workshop, expenses paid, on released time, in order to bring back materials and information to the school.

In a Southwestern state, superintendents from six cities with elementary schools ranging in number from eight through seventy-seven were contacted to

obtain names and addresses of elementary school principals. This resulted in 153 principals being identified and requested to participate in the study. All contacts were made by direct mail from the researcher to the principal with each principal responding by direct mail to the researcher.

Each principal received an envelope containing each of the fourteen TAR on separate slips of paper which had been randomly placed in the envelope. (S)he was instructed to arrange the TAR in rank order as (s)he (the principal) perceived them to be more or less rewarding to teachers. The most rewarding was to be labeled "1", the next most rewarding "2", and so on, with number "14" being the least rewarding. Subsequently, these orders were reversed for purposes of analyzing and displaying the data.

Result

One hundred four of the 153 principals returned their rankings. These 104 replies constituted the sample.¹ Personal data revealed a wide range of ages, years of experience as a teacher, and years of experience as a principal. Both males and females were present in the sample and it was considered to be a representative group of the elementary school principals in the state.

The pair-comparison approach based on complete ranking recommended by Guilford was used (Guilford, 1954).² A special procedure for estimating

¹This represented 68% of the principals contacted.

²"This most complete scaling procedure is best used when the number of stimuli is small (not more than 15 and preferably not more than 10). It should usually presuppose a large N, preferably not less than a hundred." (Guilford, p. 193). In this study stimuli equal 14; N equals 104.

proportions of comparative judgments from complete rank-order data is recommended by Guilford. His procedure yields proportions which approximate pair-comparative judgments showing the number of times one stimulus is judged greater than every other stimulus (Guilford, 1954). The following formula was used:

$$P_{j>k} = \frac{2[f_{ji}(f_{k<i} + \frac{1}{2}f_{ki})]}{N^2},$$

where $P_{j>k}$ is the proportion of times one stimulus is judged higher than each of the others.³

The suggestion of both Guilford and Edwards that the proportion matrix be arranged with least favorable stimulus being assigned the number "1" and the most favorable the number "14" based on the column sums was followed (Guilford, 1954; Edwards, 1957). Table I displays the proportion of times each stimulus (TAR) is judged as more rewarding than every other stimulus.

(Insert Table I here)

Thurstone's law of comparative judgment provides the rationale for obtaining psychological scale values (Thurstone, 1927a, 1927b). The Case V solution for Complete Data was employed to calculate scale values. The formula $Z_{ij} = \bar{S}_i - \bar{S}_j$ was used⁴ where $\bar{S}_i$ and $\bar{S}_j$ represent scale values (Edwards, 1957).

³See Guilford, p. 183 ff, for further amplification of this formula.

⁴Subscripts do not follow the customary matrix notation in which the row subscript is first and the column subscript is second. In scaling, the reverse order of subscripts is more convenient.

TABLE 1

PROPORTION MATRIX FOR 14 TAR IN TERMS OF PERCEIVED REWARD
VALUE UTILIZING PAIR-COMPARISON TREATMENT OF COMPLETE RANKS

TAR*	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>	<u>14</u>
1	<u>.500</u>	.728**	.756	.895	.897	.908	.902	.931	.880	.938	.980	.980	.988	.996
2	.272	<u>.500</u>	.578	.774	.781	.793	.783	.852	.810	.875	.948	.957	.967	.985
3	.234	.422	<u>.500</u>	.683	.703	.709	.712	.782	.784	.843	.923	.946	.952	.973
4	.105	.226	.317	<u>.500</u>	.542	.536	.561	.640	.730	.782	.891	.924	.924	.956
5	.103	.219	.297	.458	<u>.500</u>	.493	.520	.584	.701	.744	.845	.901	.904	.933
6	.092	.207	.291	.464	.507	<u>.500</u>	.527	.403	.707	.756	.859	.914	.913	.945
7	.098	.217	.288	.439	.480	.473	<u>.500</u>	.551	.677	.719	.823	.888	.890	.918
8	.069	.148	.218	.360	.416	.597	.449	<u>.500</u>	.680	.720	.826	.896	.894	.927
9	.120	.190	.216	.270	.299	.293	.323	.320	<u>.500</u>	.492	.573	.652	.691	.687
10	.062	.125	.157	.218	.256	.244	.281	.280	.508	<u>.500</u>	.607	.712	.742	.752
11	.020	.052	.077	.119	.155	.141	.177	.174	.427	.393	<u>.500</u>	.610	.660	.659
12	.020	.043	.054	.076	.099	.086	.112	.104	.348	.288	.390	<u>.500</u>	.571	.558
13	.012	.033	.048	.076	.096	.087	.110	.106	.309	.258	.340	.429	<u>.500</u>	.480
14	.004	.015	.027	.044	.067	.055	.082	.073	.313	.248	.341	.442	.520	<u>.500</u>
Σpjk	1.711	3.125	3.834	5.376	5.798	5.915	6.039	6.300	8.374	8.556	9.836	10.751	11.116	11.269

* Number corresponds to the original list (see page 2).

** Proportion of times stimulus 2 is judged as more rewarding than stimulus 1.

Mosteller (1951) demonstrates that this procedure for finding the scale values of the stimuli is a least-squares solution. Having obtained the proportion matrix from complete ranks, the computation of the scale values (R_j) is essentially the same as that for the treatment of pair-comparisons. Utilizing the normal curve table, proportions from Table I are transformed into corresponding deviate values, z_{jk} , to obtain a z matrix. These values are displayed in Table II, with obtained scale values presented in row R_j . Cell entries correspond to the scale separations, $\bar{S}_1 - \bar{S}_2$, etc.

(Insert Table II here)

The arithmetic means of the z values in each column are the scale values of the stimuli in terms of their deviations from the mean scale value of all the stimuli (row M_{zjk} of Table II). Negative scale values are judged to represent less rewarding TAR than the average of the scale values of all TAR; positive scale values are judged to be more rewarding than the average. By adding the absolute scale value of the stimulus with the largest negative deviation (-1.406) to each scale value, we establish the scale value for that stimulus as zero and all other scale values are converted to positive numbers. The scale values obtained are in row R_j of Table II. A figurative representation of the scale values is displayed in Figure 1.

(Insert Figure 1 here)

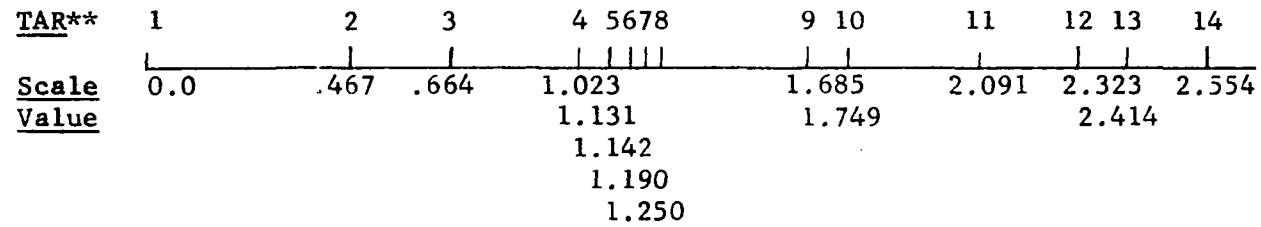
TABLE II
SCALE-SEPARATIONS MATRIX Z FOR 14 TAR
AND SCALE VALUES, ASSUMING CASE V

TAR ^a	1	2	3	4	5	6	7	8	9	10	11	12	13	14	Z
1	.000	+.607	+.726	+1.254	+1.265	+1.328	+1.293	+1.483	+1.175	+1.538	+2.054	+2.054	+2.257	+2.652	19.686
2	-.607	.000	+.197	+.752	+.776	+.817	+.782	+1.045	+.878	+1.150	+1.626	+1.717	+1.838	+2.170	13.141
3	-.726	-.197	.000	+.476	+.533	+.550	+.559	+.779	+.786	+1.007	+1.425	+1.607	+1.665	+1.927	10.391
4	-1.254	-.752	-.476	.000	+.105	+.090	+.153	+.358	+.613	+.779	+1.180	+1.432	+1.432	+1.706	5.366
5	-1.265	-.776	-.533	-.105	.000	-.017	+.050	+.212	+.527	+.656	+1.015	+1.287	+1.305	+1.498	3.854
6	-1.328	-.817	-.550	-.090	+.017	.000	+.068	-.246	+.545	+.693	+1.076	+1.366	+1.359	+1.598	3.691
7	-1.293	-.782	-.559	-.153	-.050	-.068	.000	+.128	+.459	+.580	+.927	+1.216	+1.226	+1.392	3.023
8	-1.483	-1.045	-.779	-.358	-.212	+.246	-.128	.000	+.468	+.583	+.938	+1.259	-1.248	+1.454	2.191
9	-1.175	-.878	-.786	-.613	-.527	-.545	-.459	-.468	.000	-.020	+.184	+.391	+.499	+.487	-3.910
10	-1.538	-1.150	-1.007	-.779	-.656	-.693	-.580	-.583	+.020	.000	+.271	+.559	+.649	+.681	-4.806
11	-2.054	-1.626	-1.425	-1.180	-1.015	-1.076	-.927	-.938	-.184	-.271	.000	+.279	+.412	+.410	-9.595
12	-2.054	-1.717	-1.607	-1.432	-1.287	-1.366	-1.216	-1.259	-.391	-.559	-.279	.000	+.179	+.146	-12.842
13	-2.257	-1.838	-1.665	-1.432	-1.305	-1.359	-1.226	-1.248	-.499	-.649	-.412	-.179	.000	-.050	-14.119
14	-2.652	-2.170	-1.927	-1.706	-1.498	-1.598	-1.392	-1.454	-.487	-.681	-.410	-.146	-.050	.000	-16.071
Z _{jk}	-19.686	-13.141	-10.391	-5.366	-3.854	-3.691	-3.023	-2.191	3.910	4.806	9.595	12.842	14.119	16.071	.000
M _{zjk}	-1.406	-.939	-.742	-.383	-.275	-.264	-.215	-.156	.279	.343	.685	.917	1.005	1.148	-.001
R _j	.000	.467	.664	1.023	1.131	1.142	1.190	1.250	1.685	1.749	2.091	2.323	2.414	2.554	19.683

* Number corresponds to original list (see page 2).

FIGURE 1

SCALE VALUES* OF 14 TASKS (TAR)



* Based on complete data.

** Number corresponds to original list (see page 2).

The obtained scale values of the fourteen TAR on a least to most rewarding continuum were checked for internal consistency by determining how well observed proportions agree with expected proportions.⁵ The sum of the discrepancies between the two sets of proportions was divided by the number of discrepancies to obtain the absolute average discrepancy.

Edward's (1957) formula was applied. Formula:
$$AD = \frac{\sum (p_{ij} - p_{ij}')}{n(n-1)} \cdot \frac{1}{2}$$
 . The

resulting absolute average discrepancy was -.0016. This discrepancy value for fourteen stimuli is much smaller than several cases that Edwards (1957) reports when stimuli were scaled by the method of pair-comparison.⁶

A test for the property of additivity which supports the assumption that the psychological continuum is unidimensional was met (Edwards, 1957).

Another test of the data involved the application of Case V for Incomplete Data. This procedure involves eliminating extreme comparative judgments since the difference between two z values corresponding to the difference

⁵Since our proportions (Table I) are not exact observed proportions but estimations of proportions, some caution in interpreting the results of the test of internal consistency may be advised. However, the rigorous procedure for obtaining the estimates based on the rationale and formula presented by Guilford (1954) is strong defense for applying this check of internal consistency. The same reasoning, i.e., that we are dealing with quasi-proportions, would suggest that a .01 level of confidence should be adopted in advance.

⁶Edwards cites: Hevner (1930) reports an average error of .024 for 20 stimuli, and Saffir (1937) a value of .031 for 25 stimuli (Edwards, 1954, p. 40).

between two proportions is greater at the extremes of a normal distribution. Edwards' standard for less than 200 judges is to disregard judgments of $> .98$ and of $< .02$ (Edwards, 1957). Table I reveals only three proportions $> .98$ in the upper right corner of the P matrix and only three proportions $< .02$ in the lower left corner of the P matrix.

Implementing Edwards' procedures, slightly different scale values were obtained but the rank order of TAR remained unchanged. Table III is based on incomplete data and indicates the same rank order achieved when all the data were used.

(Insert Table III here)

Still another method of scaling was used to determine whether or not scale values would fall in a similar hierarchical order. The method was to multiply cell frequencies by rank values, i.e., the number of times any stimulus was ranked first was multiplied by one and so on throughout the frequency matrix. Column sums were obtained and divided by N which was 104.

In the previous two scaling methods, resulting scale values were observed to be in a hierarchical order from lowest value to highest value, with lowest value corresponding to the least rewarding stimulus and greatest value corresponding to most rewarding stimulus. Conversely, in this scale, values obtained ranged from smallest value representing the most rewarding stimulus to greatest value representing the least rewarding stimulus. An analysis of Table IV indicates that only two of the scale values, 5 and 6, failed to

TABLE III

MATRIX OF DIFFERENCES BETWEEN Z VALUES OF
ADJACENT COLUMNS AND SCALE VALUES USING INCOMPLETE DATA

TAR*	2-1	3-2	4-3	5-4	6-5	7-6	8-7	9-8	10-9	11-10	12-11	13-12	14-13	
1	.607	.119	.528	.011	.063	-.035	.190	-.308	.363	.516	.000	-----	-----	
2	.607	.197	.555	.024	.041	-.035	.263	-.167	.282	.476	.091	.121	-----	
3	.529	.197	.476	.057	.017	.009	.220	.007	.221	.418	.182	.058	.262	
4	.502	.276	.476	.105	-.015	.063	.205	.255	.166	.401	.252	.000	.274	
5	.489	.243	.428	.105	.017	.033	.162	.315	.129	.359	.272	.018	.193	
6	.511	.247	.460	-.073	.017	.068	-.178	.299	.148	.383	.290	-.007	.239	
7	.511	.223	.406	.103	-.018	.068	.128	.331	.121	.347	.299	.010	.166	
8	.438	.266	.421	.146	.034	.018	.128	.468	.115	.355	.321	-.011	.206	
9	.297	.092	.173	.086	-.018	.086	-.009	.468	.020	.164	.207	.103	-.012	
10	.388	.143	.228	.123	-.037	.113	-.003	-.563	.020	.271	.256	.090	.032	
11	.328	.201	.245	.165	-.061	.149	-.011	.754	-.087	.271	.279	.133	-.002	
12	.337	.110	.175	.145	-.079	.150	-.043	.868	-.168	.280	.279	.179	-.033	
13	-----	.173	.233	.127	-.054	.133	-.022	.749	-.150	.237	.233	.179	-.050	
14	-----	-----	.221	.208	-.100	.206	-.062	.967	-.194	.271	.264	-.096	-.050	
	5.544	2.487	5.025	1.405	.193	1.026	.968	4.443	.986	4.749	3.257	.782	1.225	
n	12	13	14	14	14	14	14	14	14	14	14	13	12	
M	.462	.191	.359	.100	.014	.073	.069	.317	.070	.339	.233	.060	.102	
Scale Values	$\bar{S}_1$.000	$\bar{S}_2$.462	$\bar{S}_3$.653	$\bar{S}_4$ 1.012	$\bar{S}_5$ 1.112	$\bar{S}_6$ 1.126	$\bar{S}_7$ 1.199	$\bar{S}_8$ 1.268	$\bar{S}_9$ 1.585	$\bar{S}_{10}$ 1.655	$\bar{S}_{11}$ 1.994	$\bar{S}_{12}$ 2.227	$\bar{S}_{13}$ 2.287	$\bar{S}_{14}$ 2.389

* Number corresponds to original list (see page 2).

follow the pattern of the initial two scaling methods. Their order was reversed but being near the center of the ranks such reversal was considered not unusual.

(Insert Table IV here)

Conclusion and Implications

All three scaling techniques resulted in virtually identical hierarchies of the fourteen TAR. It was apparent that the elementary school principals involved in this study perceived the fourteen tasks in a hierarchical order regarding their reward values. Therefore, unless a principal randomly assigns the fourteen tasks or rotates them among teachers, (s)he is probably communicating more to the teachers than either of them may be aware of.

It would be of interest to determine what teacher characteristics are associated with the assignments and whether or not teachers share the same perceptions of the tasks. Other empirical investigations of behaviors and attitudes of school personnel are needed in order to more fully understand common and ostensibly value-free behaviors.

TABLE IV
MEAN RANKS OF TAR
(N = 104)

<u>Mean Rank*</u>	<u>TAR**</u>
3.231	14
3.385	13
3.750	12
4.663	11
6.058	10
6.125	9
8.096	8
8.586	7
8.606	5
8.779	6
8.932	4
10.663	3
11.375	2
12.788	1

* Highest value is least rewarding.

** Number corresponds to original list (see page 2).

REFERENCES

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- Guilford, J. P. Psychometric Methods, (New York: McGraw Hill Book Company, 1954), 154-196.
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I. The Least Squares Solution Assuming Equal Standard Deviations and Equal Correlations. Psychometrika, 1951, 16, 3-9.
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- Thurstone, L. L. Psychophysical Analysis, American Journal of Psychology, 1927b, 38, 368-389.

APPENDIX A.1

LETTER TO SUPERINTENDENTS SEEKING PERMISSION TO
CONDUCT STUDY REPORTED IN APPENDIX A

The University of Oklahoma

820 Van Vleet Oval

Norman, Oklahoma 73069

October 9, 1972

Dear (Supt.'s Name)

I am in the process of developing a prospectus for my doctoral dissertation. As the study requires the development of a special instrument, I am, in the "pre-prospectus" stage, attempting to create that instrument. Naturally, I do not wish to propose the use of some undeveloped technique.

This letter is to request your approval of my contacting all of the elementary principals in your system for their aid. The extent of their participation would be to rank 14 assignments, or tasks, that principals typically give to teachers. About 15 minutes of their time would be required.

College of
Education

My procedure is to acquire the names and school addresses of each principal from your office, if possible. I would then write directly to each principal mentioning your approval, if given, and enclosing the directions for fulfilling the ranking procedure.

A self-addressed, stamped envelope will be enclosed so that each principal may return the information directly to me. Your office would not be involved in any of the dispersals or collections.

The rankings made by some 100 principals over the state will be used to construct a scale of principal-to-teacher assignments.

If you have any reservations about sanctioning your principals' involvement, I will be happy to send you the materials that the principals will receive for your further consideration.

If you will grant your approval, may I have a letter to that effect, along with a list of names and school addresses of your elementary school principals?

Your attention to this request at your earliest convenience will be most gratefully appreciated.

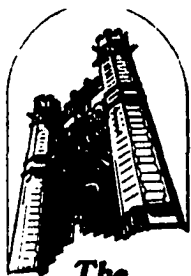
Sincerely,

Mrs. Bonnie J. Lynn

Mrs. Bonnie J. Lynn
Special Instructor, Education

APPENDIX A.2

LETTER AND INSTRUCTIONS TO PRINCIPALS SEEKING
THEIR PARTICIPATION IN THE STUDY
REPORTED IN APPENDIX A



**The
University of Oklahoma**

820 Van Vleet Oval Norman, Oklahoma 73069

College of Education

October 13, 1972

Dear

Your superintendent has granted me permission to request your assistance in a research project.

The extent of your participation will require only a few minutes of your time. You are simply asked to rank assignments (tasks) that principals often make to teachers. The ranking will be used in devising a scale for such assignments.

Directions, as well as the materials you will need, are included in the enclosed envelope. Please fill in the information sheet and rank the tasks as directed.

Return ALL of the materials that you find in the enclosed envelope, which is self-addressed and stamped, to me as soon as possible.

Your completion of this request at your earliest convenience will be greatly appreciated. May I thank you in advance for your cooperation.

Sincerely,

Mrs. Bonnie J. Lynn

Mrs. Bonnie J. Lynn
Special Instructor, Education
University of Oklahoma

INSTRUCTIONS

In this envelope you will find 14 tasks which are typically assigned to teachers, or recommendations made about teachers, by their principals. Each task, or recommendation, is listed on a separate slip of paper to facilitate your ranking procedure.

Rank the tasks as you, the principal, perceive them to be more or less rewarding to teachers. Place a 1 on the slip of paper which states the task or recommendation, that you consider to be MOST rewarding to teachers, a 2 by the next MOST rewarding, and so on, with number 14 on the task which you consider to be the LEAST rewarding.

Replace all of the slips of paper in the self-addressed, stamped envelope.

Complete the information section on this sheet and place this page back in the return envelope with the ranked tasks.

Place the return envelope in the mail as soon as possible, please.

Thank you very much.

INFORMATION

1. Name _____

2. ☐ Male
☐ Female

3. Age to nearest birthday

- ☐ 20-29
☐ 30-39
☐ 40-49
☐ 50-59
☐ 60 and above

4. Number of years as a teacher

- ☐ < 3
☐ 3--6
☐ > 6

5. Number of years as a principal (Count this year as a full year.)

- ☐ < 3
☐ 3--6
☐ > 6

- _____ Serve as student newspaper sponsor.
- _____ No assignments beyond regular classroom duties and such rotated duties as lunch room supervision, playground duty, etc.
- _____ Represent the school on a system wide curriculum revision committee.
- _____ Serve as membership drive chairman for local, state, and/or national professional organizations.
- _____ Serve as sponsor for student safety patrol group.
- _____ Attend an in-service workshop, expense paid, on released time, in order to bring back materials and information to the school.
- _____ Serve as a cooperating teacher for the University's Teacher Training (Student Teacher) program.
- _____ Serve as student council sponsor.
- _____ Serve as "informally appointed" faculty member in charge when the principal is away from the building.
- _____ Serve as building representative for local United Fund Campaign.
- _____ Manage the concession stand at the annual elementary school track and field meet.
- _____ Recommend for assignment to a supervisory position in the local system.
- _____ Serve as supervisor of AV equipment, film orderer, etc.
- _____ Serve as monitor of the study hall during the days that achievement tests are given.

APPENDIX B

INSTRUMENTS :

TASK-ASSIGNMENTS/RECOMMENDATIONS (TAR) FORM
TEACHER RECEPTIVITY TO CHANGE MEASURE (TRCM)
TEACHER REACTION QUESTIONNAIRE

 School

TASK-ASSIGNMENTS/RECOMMENDATIONS (TAR) FORM

Instructions: The following task-assignments/recommendations (TAR) are typically made by principals to teachers. Please respond to the instructions as if you do have these assignments to make.

For each TAR, select the teacher or teachers from your present faculty to whom you would be most apt to assign that TAR. Write the teacher's, or teachers', names in the space provided beside each TAR. If necessary, assign more than one teacher to some of the TAR. Be sure that every teacher has one assignment only, and that every TAR has been assigned to at least one teacher.

TAR

Teacher/s Assigned

Assign to serve as monitor of the study hall during the days that achievement tests are given.

Assign to serve as sponsor for the student safety patrol group.

Assign to represent the school on a system-wide curriculum revision committee.

Assign to serve as building representative for the local United Fund campaign.

Give no assignments beyond regular classroom duties and such rotated duties as lunch room supervision, playground duty, etc.

Assign to serve as supervisor of AV equipment, film ordering, etc.

Assign to serve as the "informally appointed" faculty member in charge when the principal is away from the building.

Assign to serve as student newspaper sponsor.

Assign to manage the concession stand at the annual elementary school track and field meet.

Assign to serve as student council sponsor.

Assign to attend an in-service workshop, expenses paid, on released time, in order to bring back materials and information to the school.

Recommend for assignment to a supervisory position in the local system.

Assign to serve as membership drive chairman for local, state, and/or national professional organizations.

Recommend to serve as a cooperating teacher for the University's Teacher Training (Student Teacher) Program.

Instructions: We need to know a number of things about you as a teacher. Please fill in the blanks or check the appropriate spaces on the following page.

Midwest Administration Center
The University of Chicago
5835 Kimbark Avenue
Chicago, Illinois 60637

For each of the first 3 items place the number of years on the line following the descriptor. For items 4 and 5 place an X in the parenthesis opposite the response that best describes your situation.

TEACHER REACTION QUESTIONNAIRE

1. Age to nearest birthday _____
2. Number of years of teaching experience. (Count this year as full year.) _____
3. Number of years of teaching experience in this school. (Count this year as full year.) _____
4. Formal education level
 - () B.S. degree
 - () B.S. plus ≤ 15 hours
 - () B.S. plus >15 hours
 - () M.S. degree
 - () M.S. plus _____ hours
 Other degrees held _____
5. Teaching grade level
 - () Primary (K-3)
 - () Intermediate (4-6)

Instructions:

For each of the following statements indicate by means of a check (✓) the one action from among the choices a through e that a teacher like yourself would likely take.

- a. Initiate a request for permission to use it on a trial basis.
- b. Respond affirmatively to a request for volunteers to use it on a trial basis.
- c. Decide to use it on a trial basis if asked.
- d. Express a desire to stay with the present practice.
- e. Be strongly against the use of it on a trial basis.

Remember to indicate but one action from the above choices (a through e) for each of the following statements.

	Initiate a request to use on a trial basis	Respond affirmatively to request for volunteers	Use if asked	Express desire to stay with present practice	Be strongly against trial of the practice
A teacher like myself . . .	a.	b.	c.	d.	e.
1. After considering a new, promising curriculum practice which she hasn't had an opportunity to see in operation is likely to					
2. After considering a new curriculum idea whose superiority over the old practices hasn't been demonstrated conclusively in trials elsewhere is likely to					
3. After considering a new approach to teaching which requires at least one full summer of formal training (at government or district expense) to use well is likely to					
4. After considering a new curriculum practice which can be used by classroom teachers without disturbing too much what they are currently doing is likely to					
5. After considering use of a new curriculum practice about which very little is known concerning the consequences of its use is likely to					

A teacher like myself . . .

6. After considering a curriculum change which involves planning and carrying out a major portion of one's classroom activities with other teachers is likely to . . .
7. After considering a new, untested curriculum idea which involves a large amount of daily preparation if it is to have any chance of success is likely to
8. After considering a curriculum change to which teachers and students in a neighboring district are responding favorably is likely to
9. After considering a new, promising curriculum practice which involves a major shift in her current teaching procedures is likely to
10. After considering a new, promising curriculum practice which involves an increase in record keeping and paper work is likely to

	Initiate a request to use on a trial basis	Respond affirmatively to request for volunteers	Use if asked	Express desire to stay with present practice	Be strongly against trial of the practice
A teacher like myself . . .	a.	b.	c.	d.	e.
6. After considering a curriculum change which involves planning and carrying out a major portion of one's classroom activities with other teachers is likely to . . .					
7. After considering a new, untested curriculum idea which involves a large amount of daily preparation if it is to have any chance of success is likely to					
8. After considering a curriculum change to which teachers and students in a neighboring district are responding favorably is likely to					
9. After considering a new, promising curriculum practice which involves a major shift in her current teaching procedures is likely to					
10. After considering a new, promising curriculum practice which involves an increase in record keeping and paper work is likely to					

APPENDIX C

CORRESPONDENCE RELATED TO USE OF TRCM

The University of Oklahoma

820 Van Vleet Oval

Norman, Oklahoma 73069

Bonnie J. Lynn
September 18, 1972

Edwin M. Bridges
College of Education
University of Chicago
5835 Kimbark Avenue
Chicago, Illinois 60637

Dear Sir:

Your article, "Teacher Receptivity to Change," Administrator's Notebook, Volume XVI, February, 1968, Number 6, has recently come to my attention.

I am in the process of developing a prospectus for my dissertation to complete requirements for my Ph. D. degree. I have been searching for an instrument for classifying innovative--non-innovative teachers. Your Teacher Receptivity to Change Measure may be what I need. As yet, I have not located a copy of the instrument, however.

College of
Education

It would be most helpful if you could: (1) direct me to a source where I may secure the measure; (2) grant me permission to secure and reprint it if your instrument proves to be appropriate for my needs; and (3) provide me with information concerning validity and reliability.

If I am able to utilize the TRCM in my study, I will be happy to provide you the results of my findings.

Your approval of these requests at your earliest convenience will be greatly appreciated.

Sincerely,

*Bonnie J. Lynn*Bonnie J. Lynn
Special Instructor, Elem. Educ.

The following reply was written by Dr. Edwin M. Bridges directly on the letter, dated September 18, 1972, to Dr. Bridges from this researcher:

Dear Miss Lynn:

Enclosed is a copy of the instrument which you requested; you have my permission to use it as long as you provide me with a copy of your study results. The instrument is scored quite simply: 5 for an a response, 4 for a b response, and so on. A total score (see Bridges, 1968) for each subject is determined by summing the scores for each of the 10 items. I have conducted three validation studies thus far. Scores on the instrument correspond with judged innovativeness by principals and colleagues, in other words, those teachers nominated as high on receptivity to change scored significantly higher on the TRCM than teachers nominated as low on receptivity to change. These findings hold for both elementary and secondary teachers.

Sincerely,

Edwin M. Bridges	
Professor, Department of Education	
University of California, Santa Barbara	} Note address change
Santa Barbara, Calif. 93106	

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DEPARTMENT OF EDUCATION

SANTA BARBARA, CALIFORNIA 93106

February 22, 1973

Ms. Bonnie J. Lynn
The University of Oklahoma
College of Education
820 Van Vleet Oval
Norman, Oklahoma 73069

Dear Ms. Lynn:

Please excuse my delay in responding to your request on references for the validation studies and scoring procedures. Unfortunately, I have never bothered to publish the information which I furnished in my other letter to you. Two of the validation studies are reported in the enclosed manuscript dated 9/17/68, however. Subsequent to the preparation of this paper, I used the much simpler scoring procedure described in my previous letter to you. The results were identical. As for citing the sources, let me suggest that you handle this problem by referring to "Personal communication with the author." I hope my response, though late, is useful.

Sincerely,

A handwritten signature in cursive script that reads "Edwin M. Bridges".

Edwin M. Bridges
Professor of Education

EB/ks
enclosure

APPENDIX D

APPLICATION AND PERMISSION TO CONDUCT STUDY IN
OKLAHOMA CITY PUBLIC SCHOOLS

RESEARCH APPLICATION TO OKLAHOMA CITY PUBLIC SCHOOLS

Applicant's Name Mrs. Bonnie J. Lynn University O.U.
 Office: Education Bldg. O.U. Telephone 325-6469 Degree
 Address 609 W. University--Shawnee Number 273-0389 Program Ph. D. Elem. Educ.

Advisor's Signature Michael Langerbach Department Education

TITLE: An Investigation of Extra-Classroom Task-Assignments/Recommendations and Teacher Innovativeness

OBJECTIVES: (1) To make an initial assessment of one set of rewards available to teachers, i.e., the task-assignments/recommendations (TAR) given them by principals; and (2) To determine what teacher characteristic or combination of characteristics contribute to their selection as recipients of the TAR.

PROCEDURE: (General Design, Population and Sample, Instrumentation, Analysis, Time Schedule, etc.; use back of sheet, if necessary)

This study is a variation of the ex post facto form of the one-group design. Teacher innovativeness and certain demographic characteristics--age, experience, tenure in this system, formal education, and teaching grade level--will be correlated with the types of extra-classroom task-assignments/recommendations (TAR) that they receive from their principals.

Population and Sample: The sample will be drawn from all of the elementary schools in the Oklahoma City Independent School District which meet the following qualifications: (1) At least 14 teachers assigned to the building; and (2) Principal qualifications: 30 years of age or above; three years or more (counting the current year as a full year) experience as a principal; and standard certification, but no degree beyond the Master's Degree. Sample size will be 140 teachers drawn from 10 schools (14 teachers per school). Teachers selected to participate will be based on the hypothetical TAR principals give them.

Instrumentation: The Task-Assignments/Recommendations Form will be administered to principals. Each principal will select the teacher or teachers on his staff to whom he would give the 14 assignments if he actually had them to assign. It is important that he consider his entire teaching staff, therefore, every teacher will be assigned to some TAR, and every TAR will be assigned to at least one teacher. In cases where more than one teacher is assigned to a TAR, only one of the assigned will be selected to participate in the further study.

The 14 teachers who have been assigned to the 14 TAR will be given Bridges's Teacher Receptivity to Change Measure, labeled Teacher Reaction Questionnaire. A personal data section elicits the information regarding the demographic characteristics listed above.

(Continued on attached sheet.)

INVOLVEMENT OF OKLAHOMA CITY SCHOOLS: (use back of sheet, if necessary)

The study will involve 10 elementary schools from which 14 teachers will be selected to provide a sample of 140 teachers. Principals will select the teachers via the TAR Form and consult with the researcher regarding procedures and scheduling of data collection. A letter of authorization from the Committee on Research to qualifying schools is requested. It is understood, however, that a principal is not obligated to participate. A list of schools is requested which have: 14 or more teachers, and whose principal is 30 years of age, or

(Continued on attached sheet.)

Submit 4 copies to: Research Coordinator, Oklahoma City Public Schools, 900 N. Klein,
 Oklahoma City, Oklahoma 73106

All applications will be reviewed by a Research Committee. You will be notified by mail as to the decision of the committee, and this process will usually take about two weeks.

PROCEDURE: (Continued) There will be no reference to the principal's hypothetical assignments to the teachers. Teacher number assignments, rather than names, can be used if preferred. Every effort will be made to assure participants of confidentiality.

It is anticipated that the principal's participation would involve approximately 30 minutes of his time; this would include a personal contact with the researcher to discuss procedure, etc. Teachers' time involvement should not exceed 20 minutes. It is anticipated that it will be possible to administer the TRCM (Teacher Questionnaire) to all 14 teacher participants in a given school in one session. These arrangements will be discussed with individual principals.

Analysis: Multiple correlations will be the method of analysis to test the significance of relationships between the two measures. A regression analysis will be utilized to determine the combination of variables which best predict the type of TAR that a teacher is likely to receive.

Time Schedule: It is projected that within a two or three week period, data collection could be completed without imposition on the principals or teachers. I hope to begin collecting data by the second week in April.

INVOLVEMENT OF OKLAHOMA CITY SCHOOLS: (Continued) above, has 3 years of experience as a principal counting the current year as a full one, and has standard certification, but no degree beyond a Master's Degree.

The criteria set forth in the Procedure For Requesting Approval to Conduct Research form will be adhered to.

Oklahoma City Public Schools

900 North Klein

Oklahoma City, Oklahoma 73106

April 10, 1973

Mrs. Bonnie J. Lynn
609 W. University
Shawnee, Oklahoma

Dear Mrs. Lynn:

I am happy to inform you that your proposal to conduct a study in the Oklahoma City Public Schools has been approved by the Research Committee. No principal nor teacher is required to participate in your study, and it is up to you to convince them that it is worthwhile.

The following schools are recommended for your research:

<u>School</u>	<u>Principal</u>
Adams	Merle Monroe
Arthur	Alma Schmidt
Bodine	Howard Morrow
Coolidge	Bob Condren
Dewey	Roy Watson
Hillcrest	Robert Webb
Lee	Lee Wyatt
Mark Twain	Allen Vann
North Highland	Vernon Brewer
Parker	Arthur Boyd

Please contact me to obtain school addresses, etc.

Sincerely,



Dr. Ron Schnee
Research Coordinator

RS/rc

Note: It was noted that the research sample, as proposed, required certain qualifications of principals. Subsequent to the receipt of this letter a complete list of qualifying principals (21) was secured from which the sample was selected.

M E M O R A N D U M

April 18, 1973

TO: Elementary Principal
FROM: Ron Schnee *RS*
SUBJECT: Research Proposal

Mrs. Bonnie Lynn, a Ph.D. candidate in Elementary Education at O.U., has received approval by the Research Committee to conduct her study in the Oklahoma City Public Schools. Her investigation is concerned with "Extra-Classroom Task-Assignments/Recommendations and Teacher Innovativeness."

She may be contacting you to determine whether you would be interested (if it will not interfere too much). No students' time is involved; only principals and teachers complete the questionnaires.

Her study does seem to be somewhat more worthwhile than many that I receive, but it must have your approval before it can be conducted in your school.

RS:rc

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