

## INFORMATION TO USERS

This material was produced from a microfilm copy of the original document. While the most advanced technological means to photograph and reproduce this document have been used, the quality is heavily dependent upon the quality of the original submitted.

The following explanation of techniques is provided to help you understand markings or patterns which may appear on this reproduction.

1. The sign or "target" for pages apparently lacking from the document photographed is "Missing Page(s)". If it was possible to obtain the missing page(s) or section, they are spliced into the film along with adjacent pages. This may have necessitated cutting thru an image and duplicating adjacent pages to insure you complete continuity.
2. When an image on the film is obliterated with a large round black mark, it is an indication that the photographer suspected that the copy may have moved during exposure and thus cause a blurred image. You will find a good image of the page in the adjacent frame.
3. When a map, drawing or chart, etc., was part of the material being photographed the photographer followed a definite method in "sectioning" the material. It is customary to begin photoing at the upper left hand corner of a large sheet and to continue photoing from left to right in equal sections with a small overlap. If necessary, sectioning is continued again — beginning below the first row and continuing on until complete.
4. The majority of users indicate that the textual content is of greatest value, however, a somewhat higher quality reproduction could be made from "photographs" if essential to the understanding of the dissertation. Silver prints of "photographs" may be ordered at additional charge by writing the Order Department, giving the catalog number, title, author and specific pages you wish reproduced.
5. PLEASE NOTE: Some pages may have indistinct print. Filmed as received.

**Xerox University Microfilms**

300 North Zeeb Road  
Ann Arbor, Michigan 48106

75-27,234

BEHRMANN, A. Arthur, 1933-  
AN ANALYSIS OF THE LEADERSHIP CHARACTERISTICS  
OF THE ELEMENTARY PRINCIPAL AS RELATED TO  
INNOVATIVE PRACTICES IN SELECTED ELEMENTARY  
SCHOOLS IN MICHIGAN.

Michigan State University, Ph.D., 1975  
Education, administration

**Xerox University Microfilms,** Ann Arbor, Michigan 48106

AN ANALYSIS OF THE LEADERSHIP CHARACTERISTICS  
OF THE ELEMENTARY PRINCIPAL AS RELATED  
TO INNOVATIVE PRACTICES IN SELECTED  
ELEMENTARY SCHOOLS IN MICHIGAN

By

A. Arthur Behrmann

A DISSERTATION

Submitted to  
Michigan State University  
in partial fulfillment of the requirements  
for the degree of

DOCTOR OF PHILOSOPHY

Department of Administration and Higher Education

1975

## ABSTRACT

### AN ANALYSIS OF THE LEADERSHIP CHARACTERISTICS OF THE ELEMENTARY PRINCIPAL AS RELATED TO INNOVATIVE PRACTICES IN SELECTED ELEMENTARY SCHOOLS IN MICHIGAN

By

A. Arthur Behrmann

#### Purpose

This study was designed to determine if there were relationships existing between factors of: (1) principal leadership style, (2) organizational climate of the school, (3) biographical and school characteristics and (4) innovative practices in participating schools. This study also examines innovative practices as reported by principals in relation to their initiation and implementation.

The sample consisted of 13 elementary principals and 154 teachers representing their staffs from selected schools in Michigan.

#### Method

Principals were asked to indicate on a prepared list of innovations which ones were occurring within their respective buildings. Teachers were asked to complete a Principal Role Behavior Opinionnaire and the Organizational

Climate Description Questionnaire. These were used to determine principal leadership style and the climate under which a school functioned. Both principals and teachers completed a general background questionnaire. A personal interview was also conducted with each principal to verify innovative practices.

### Description

The Principal Role Behavior Opinionnaire yielded information concerning perception of the leadership style of the principals. These styles were determined as either idiographic or nomothetic. The idiographic person would be more concerned with individuals rather than accomplishing the role of the institution. The nomothetic person is one who emphasizes the demands of the institution rather than the individual.

The Organizational Climate Description Questionnaire, developed by Halpin and Croft, was designed on the theory of interaction between individuals in an organization and their ability to accurately perceive each other's behavior within a particular organizational setting. Climate profiles were arranged on a continuum from "open" to "closed."

Biographical and school characteristics were divided in areas of age, years of experience in education, years in present school, major barrier to educational

change, socio-economic status and whether or not teachers considered their school to be innovative.

### Conclusions

The principals' leadership style as measured on a nomothetic--idiographic continuum, did show a significant relationship to innovative practices measured for each school. The data also indicated a relationship between the principal's leadership style and the organizational climate of the school. Principals who were more idiographic in their leadership style were also in schools having a more open climate.

School climate did not appear to be a determining factor in school innovation. Innovative schools were not more open in their climate than schools with a more closed climate.

The innovative score computed for each building did relate to certain biographical and school characteristics. The factors found to relate to the degree of innovativeness were years of experience in present school and socio-economic status of the community.

In all cases principals' indication of innovations did not agree with the number of innovations observed by the writer.

Major sources of information for new ideas leading to innovations originated outside the local school district. In some cases, principals' perception of what

A. Arthur Behrmann

constitutes an innovation is not clear. Additional research and other means to explore innovative practice must be carried out.

## ACKNOWLEDGMENTS

The author expresses his heartfelt appreciation and gratitude for the understanding, encouragement, and inspiration given by Dr. Louis G. Romano and for serving as the chairman of my guidance committee. I sincerely appreciate his professional guidance and personal friendship.

To Dr. Edward P. Keller, Dr. Donald Nickerson, and Dr. James B. McKee a special thanks for serving on my doctoral committee. Their comments and encouragement were helpful and greatly appreciated.

For assistance in working out the technical details of procedure and statistical analysis, I would like to thank Mr. Steve Olejnik from the Research Consultation Center.

And foremost, to my wife Loretta and daughter Barbara, for their sacrifice, patience, encouragement, inspiration and love which helped make this project a reality.

## TABLE OF CONTENTS

|                                                  | Page |
|--------------------------------------------------|------|
| ACKNOWLEDGMENTS . . . . .                        | ii   |
| LIST OF TABLES. . . . .                          | v    |
| <br>Chapter                                      |      |
| I. THE PROBLEM . . . . .                         | 1    |
| Introduction . . . . .                           | 1    |
| Purposes of this Study . . . . .                 | 5    |
| Assumptions. . . . .                             | 6    |
| Significance of the Problem. . . . .             | 6    |
| Definition of Terms. . . . .                     | 9    |
| Limitations. . . . .                             | 10   |
| Hypotheses . . . . .                             | 10   |
| Procedures for Analysis of Data. . . . .         | 11   |
| The Sample. . . . .                              | 11   |
| Administration of the Instruments . . . . .      | 11   |
| Treatment of the Data . . . . .                  | 13   |
| Overview of the Study . . . . .                  | 13   |
| II. REVIEW OF THE LITERATURE. . . . .            | 15   |
| Summary . . . . .                                | 33   |
| III. DESIGN AND PROCEDURES OF THE STUDY. . . . . | 35   |
| Source of Data . . . . .                         | 35   |
| Sample Selection . . . . .                       | 36   |
| Instruments Employed . . . . .                   | 39   |
| General Background Information . . . . .         | 40   |
| Check List of Innovations . . . . .              | 40   |
| Interview Schedule . . . . .                     | 40   |
| Principal Role Behavior. . . . .                 | 41   |
| Organization Climate Description                 |      |
| Questionnaire . . . . .                          | 42   |
| Scoring Procedure . . . . .                      | 44   |
| Background Information . . . . .                 | 45   |
| Principal Characteristics. . . . .               | 45   |
| School Climate . . . . .                         | 46   |

| Chapter                                                                       | Page |
|-------------------------------------------------------------------------------|------|
| Data Collection . . . . .                                                     | 46   |
| Procedure for Analyzing Data . . . . .                                        | 48   |
| Summary . . . . .                                                             | 49   |
| IV. ANALYSIS OF THE DATA. . . . .                                             | 50   |
| Findings from Instruments . . . . .                                           | 50   |
| Innovative Practices . . . . .                                                | 50   |
| Principal Leadership Style . . . . .                                          | 51   |
| Organizational Climate of Schools . . . . .                                   | 53   |
| Biographical and School Characteristics. . . . .                              | 54   |
| Relationship Among the Variables . . . . .                                    | 55   |
| Hypotheses . . . . .                                                          | 55   |
| Hypothesis I. . . . .                                                         | 55   |
| Hypothesis II . . . . .                                                       | 57   |
| Hypothesis III . . . . .                                                      | 57   |
| Hypothesis IV . . . . .                                                       | 66   |
| Hypothesis V. . . . .                                                         | 68   |
| Other Significant Relationship Among<br>Selected Variable . . . . .           | 69   |
| Findings from Principal Data. . . . .                                         | 69   |
| Findings from Interviews . . . . .                                            | 74   |
| Responsibility for Beginning Impetus<br>of Innovations by Categories. . . . . | 74   |
| Information Source of Innovations<br>Initiated by Principal. . . . .          | 76   |
| Principals Role for Innovation<br>Initiated by Others . . . . .               | 76   |
| Summary. . . . .                                                              | 79   |
| Hypothesis I. . . . .                                                         | 79   |
| Hypothesis II . . . . .                                                       | 79   |
| Hypothesis III . . . . .                                                      | 79   |
| Hypothesis IV . . . . .                                                       | 80   |
| Hypothesis V. . . . .                                                         | 80   |
| V. SUMMARY AND CONCLUSIONS . . . . .                                          | 81   |
| Summary. . . . .                                                              | 81   |
| Conclusions Related to the Variables . . . . .                                | 83   |
| Hypothecated Question . . . . .                                               | 83   |
| Other Variables . . . . .                                                     | 84   |
| Conclusions Related to Innovative Prac-<br>tices . . . . .                    | 85   |
| Implications . . . . .                                                        | 86   |
| Recommendations for Further Study. . . . .                                    | 88   |
| APPENDICES . . . . .                                                          | 90   |
| APPENDIX A. COVER LETTERS. . . . .                                            | 91   |
| APPENDIX B. INSTRUMENTS. . . . .                                              | 96   |
| BIBLIOGRAPHY . . . . .                                                        | 111  |

## LIST OF TABLES

| Table |                                                                                                                                  | Page |
|-------|----------------------------------------------------------------------------------------------------------------------------------|------|
| 1     | Population of Elementary School Principals<br>from which Final Selection was Drawn . . .                                         | 38   |
| 2     | Teacher Response to Questionnaires . . . . .                                                                                     | 39   |
| 3     | Innovation Scores for Participating<br>Schools Using the Innovation Check List<br>and Interview Schedule . . . . .               | 51   |
| 4     | Scores by Principal Leadership as Perceived<br>by Teachers and Measured by the Principal<br>Role Behavior Opinionnaire . . . . . | 52   |
| 5     | Organizational Climate Description Question-<br>naire Scores as Measured by Teachers . . .                                       | 53   |
| 6     | Type of Organizational Climate as Deter-<br>mined by Scores from Organizational Cli-<br>mate Description Questionnaire . . . . . | 54   |
| 7     | Number and Percentage of Various School Cli-<br>mates as Perceived as Teachers . . . . .                                         | 54   |
| 8     | Key to 14 Variables. . . . .                                                                                                     | 55   |
| 9     | Statistical Relationship Between Variables<br>1 and 3. . . . .                                                                   | 56   |
| 10    | Statistical Relationship Between Variables<br>3 and 4. . . . .                                                                   | 57   |
| 11    | Contingency Table for Age Range. . . . .                                                                                         | 59   |
| 12    | Contingency Table for Years Experience in<br>Education. . . . .                                                                  | 60   |
| 13    | Contingency Table for Years Experience in<br>Present School . . . . .                                                            | 62   |
| 14    | Contingency Table for Major Barrier to<br>Educational Change . . . . .                                                           | 63   |

| Table |                                                                                                       | Page |
|-------|-------------------------------------------------------------------------------------------------------|------|
| 15    | Contingency Table for Socio-Economic<br>Status of Community . . . . .                                 | 65   |
| 16    | Contingency Table for Innovative School . .                                                           | 66   |
| 17    | SUMMARY OF CHI-SQUARE ANALYSIS<br>Biographical and School Characteristics .                           | 67   |
| 18    | Statistical Relationship Between Variables<br>5 and 1 . . . . .                                       | 68   |
| 19    | Statistical Relationship Between Variables<br>1 and 2 . . . . .                                       | 69   |
| 20    | Sex . . . . .                                                                                         | 69   |
| 21    | Age Range . . . . .                                                                                   | 70   |
| 22    | Years Experience in Education . . . . .                                                               | 70   |
| 23    | Years in Present School . . . . .                                                                     | 71   |
| 24    | Major Barrier to Educational Change . . . .                                                           | 72   |
| 25    | Socio-Economic Status . . . . .                                                                       | 72   |
| 26    | Average Yearly Expenditures . . . . .                                                                 | 73   |
| 27    | Enrollment. . . . .                                                                                   | 73   |
| 28    | Number and Percentage of Innovations for<br>Beginning Impetus as Reported by Prin-<br>cipals. . . . . | 75   |
| 29    | Number and Percentages of Innovations for<br>those Initiated by Principals . . . . .                  | 77   |
| 30    | Number and Percentages of Innovations for<br>those not Initiated by Principals . . . .                | 78   |

## CHAPTER I

### THE PROBLEM

#### Introduction

Innovation, relative to the processes and materials of education, has long been a subject which has aroused interest and stirred controversy among educators and laymen alike. Few topics will produce a more heated discussion among teachers and interested parents than a new method of teaching reading, a new device intended to make arithmetic more meaningful, or a new technique for stimulating interest in learning among children.

Everything might be fine and uncomplicated if new ideas were the ideas of the majority. They are not, however, and never can be; they are usually the ideas of the minority. Only experience, gained after intelligent deliberation, can prove whether any given new idea is progressive, and experience is possible only if the idea is disseminated - if people gather round it and fight in its name. Many new ideas appear irrelevant, unexamined and illogical. The well-prepared, open-minded educator will overcome the tradition of conservatism, and in some cases indifference, to grapple with the problems of change.

Traditionally schools and school people have been extremely conservative.<sup>1</sup> This is especially true with regard to implementing change in the curriculum and the methodology used. The time necessary to institute innovation can be substantially reduced when innovation is given widespread publicity and financial support.

Educational leaders frequently meet resistance in attempting to introduce and implement innovations. Authorities and researchers offer varied and sometimes contradictory advice to the educational leader regarding how he might most effectively proceed with innovation and change. Attempts must be made to lend research support for existing hunches, assumptions, and guesses of experts and the clarification of contradictory findings of researchers regarding the many facets of the innovative predicament.

Much previous focus on educational innovations has pertained to the content of the desired change with little emphasis regarding the role of the persons who are responsible for introducing and implementing particular innovations. In studying the school organization and educators who innovate, the less predictable and more illusive behavioral sciences must be consulted. When this is done, leadership behavior, within a particular environment, becomes an

---

<sup>1</sup>Paul R. Mort and F. G. Cornell, American Schools in Transition (New York: Teachers College Press, 1941).

important ingredient. In the final analysis, educational leadership has the responsibility to provide adequate planning, needed criteria, and strategies to implement innovation.

If it is true that innovations are never adopted on the basis of their own merits,<sup>1</sup> then persons and organizations, formal and informal, must be studied as crucial factors for determining causes of being innovative or not. The leadership of superintendents has been studied by Carlson<sup>2</sup> but few have reported the results of leadership or explored the productive thinking aspects of school principals in relation to the adoption and implementation of innovations.

The school principal is a key person in creating a climate that nurtures or discourages change. The traditional manager role of preserving the status quo must give way to that of educational leader.

A healthy school organization emerges as a result of the interactions between and among persons and groups.

---

<sup>1</sup>Matthew B. Miles, "Innovation in Education: Some Generalizations," in Innovation in Education, (New York: Bureau of Publications, Teachers College, Columbia University, 1964), p. 635.

<sup>2</sup>Richard O. Carlson, Adoption of Educational Innovations (Eugene, Oregon: Center for the Advanced Study of Educational Administration, 1965).

The quality of interpersonal relations is identified as "climate" or more generally recognized as morale. Improving the organizational health of a school, within a bureaucratic system, is the challenging responsibility of the principal.

Glines emphasizes the importance and responsibility of the principal.

The first and foremost factor in planning and affecting needed changes in a school is that of developing creative and committed leadership. The school reflects its principal as well as the climate of the school system. Most schools are rather dull, unimaginative, conventional 1930 kinds of institutions because most principals in America today are products of obsolescent educational training and additional experiences. Most are afraid to venture very far off the time-worn path.<sup>1</sup>

It is therefore imperative that one study the role of the principal in the innovative process. The principal is aware of his particular locality and its inherent problems and can most effectively meet these problems in any innovation contemplated. If principals are to be responsible for improving education they must be well prepared academically and be able to keep an open mind. They will have to involve themselves in the process of implementation.

---

<sup>1</sup>Don E. Glines, "Planning and Effecting Needed Change in Individual Schools," in Designing Education for the Future, ed. by Edgar L. Morphett and Charles O. Ryan (New York: Citation Press, 1967), p. 166.

### Purposes of the Study

This study will explore the leadership characteristics of elementary principals and the organizational climate in which they work as two inseparable and key elements of the change process. The findings of Halpin and Croft make possible the measurement and interpretation of school climate as perceived by the principals and their staffs.<sup>1</sup> From these findings, answers will be sought to the basic question: "Why are some elementary schools more willing to adopt and maintain new ideas, while others, often neighbors in the same school district, are less innovative and more resistive to change?"

Direction to this study was given through a primary and secondary purpose:

1. Of primary importance was to determine what relationships, if any, exist among the factors of: (1) principal leadership style, (2) organizational climate of the school, (3) biographical and school characteristics and (4) innovative practices in participating elementary schools.

2. Secondary emphasis was to examine the innovative practices reported by principals in relation to their initiation and implementation.

---

<sup>1</sup>Andrew Halpin and Don C. Croft, The Organizational Climate of Schools, Cooperative Research Project No. 543, (Washington: Office of Education, U.S. Department of Health, Education and Welfare, 1962).

### Assumptions

For purposes of this study, the following assumptions are made:

1. Most innovations occurring in elementary schools are desirable. The exploration and implementation of change is to be encouraged.

2. The items selected as innovative changes are assumed for the purpose of this study to be innovative regardless of date of adoption.

3. The instruments used to measure the characteristics desired are assumed to be adequate.

4. The principal's leadership style and the organizational climate of the school are primary factors in determining innovativeness.

5. The sample is representative, selected in an appropriate manner and adequate for the conclusions and inferences to be drawn.

6. Perceptions of principals and teachers in responding to instruments were accurate expressions of what was actually in practice.

7. All schools possess an organizational climate which can be measured and the democratic type is more preferred than to that of less democratic type.

### Significance of the Problem

If education is to progress at a rate consistent with the rate of progress in the general technology, it

must have the kind of creative leadership which is conducive to bringing about needed improvements.

The importance of accelerating change in our schools was given great emphasis with the launching of the first Russian Sputnik. Improvement of our educational program became for many one of the important tasks of national survival. There is still the belief on the part of many that, if we are to endure as a world power, we in the United States must have the most modern, efficient and effective means of education in the world. This is possible only by constant and dedicated attention to an ever-improving program of research and development in the field of education.

As a consequence of the extensive activity and emphasis being placed on research and its findings which led to the implementation of innovations in education, the question arises, "Where does the local administrator and particularly the elementary school principal fit into the complex picture of educational change?" He cannot stand aside or be ignored. He is powerful not because he has a monopoly on imagination or creativity to precipitate decision, but because he possesses the necessary leadership skills to initiate innovation. Authority is a critical element in innovation because proposed changes generate mixed reactions which can prevent consensus among peers and result in stagnation.

Educational innovation has become a popular crusade. Pressures both within and without, are encouraging schools to innovate. Sufficient evidence showing that schools can change is available. Both content (curriculum) and process (methodology) have successfully yielded to change. Organizational patterns of team teaching and multi-gradedness are being tried. Movable wall, computer-assisted instruction, independent study, micro teaching, simulation and single concept films are but a few of the new terms in the education vocabulary.

While change cannot always be equated with progress, most would agree that changes have benefitted education. Attacks from the conservative right and from anti-intellectuals have created healthy discussions on the directions of education. It appears that a majority of people and organizations now support the fact that educational change is needed and desirable.<sup>1</sup>

The area of responsibility of the principal regarding innovation has largely been neglected. In view of the fact that there is increasing pressure being brought upon the schools to change, it is becoming vitally important that the principal be research oriented and

---

<sup>1</sup>Richard I. Miller, "An Overview of Educational Change," in Perspectives on Educational Change, (New York: Appleton-Century-Crofts, 1967), p. 19.

sensitive to innovation. Studies of the role of the principal in the area of research and innovation are not only timely but are very much needed.

### Definition of Terms

For the purpose of this study the following terms are defined:

Educational Innovation--any practice, device or procedure which is relatively new to the user in an educational situation.

Innovativeness--that characteristic, possessed by an individual or a group, of being willing and able to try new ideas and to replace outmoded ones.

Innovator--an individual who possesses the characteristic of innovativeness.

Elementary Principal--the elected or appointed administrative head of a public school whose organizational pattern does not exceed that of grade six.

Principal Leadership Style--the manner in which teachers view the way in which the principal behaves. This is measured by the Principal Role Behavior Opinionnaire.

Planned Change--a conscious effort to improve the operation of the school.

Adoption--a decision to continue full use of an innovation.

Climate--a flavor or quality of life existing within an organization.

Change Agent--the person who provides the idea, impetus, and guidance in initiating, developing, promoting, and adopting desirable change.

Mode of Operation--the pattern of behavior displayed by an individual relative to the degree of permissiveness permitted subordinates in determining policy and courses of action.

#### Limitations

1. Practices and conditions currently existing will be observed and reported.
2. The study will be limited to the elementary school principals who volunteer from those attending Michigan State University Extern Program, Elementary Principal sections X and Y during the 1974-75 school year.
3. All principals included in this study have served a minimum of one year in their present school.
4. Only teachers who had one or more years experience as full time staff members in the particular school under study are included in this study.

#### Hypotheses

All hypotheses will be tested at .05 level for appropriateness of significance.

1. There is no significant relationship between the teachers' perception of the principals' leadership style and innovative practices as determined by the principal.
2. There is no significant relationship between teachers' perception of principals' leadership style and school climate as determined by the teachers.
3. There is no significant relationship between biographical and school characteristics, as reported by principals and teachers; and innovative practices as determined by the principal.
4. There is no significant relationship between school climate as determined by the teacher and innovative practices as determined by the principal.
5. There is no significant relationship between principals', perception of innovations and the innovations observed.

#### Procedures for Analysis of Data

##### The Sample

The population of this study will be all elementary principals enrolled in the Michigan State University Extern program, elementary principals sections X and Y during the 1974-75 school year. The sample will be drawn from the population and will include elementary principals whose schools have been designated innovative by them. Principals will also have had to serve at least one year as principal in their respective buildings.

##### Administration of the Instruments

1. "Checklist of Innovations" instrument will be administered during the September, 1974 meeting of Elementary

Principals enrolled in the Michigan State University Extern Program, elementary principals sections X and Y. Principals will also be asked to complete a short "Biographical Instrument."

2. The sample will be selected by determining the total number of changes indicated by each principal. An attempt will be made to include an equal number of principals having high scores and an equal number of principals having low scores.

3. Each participating principal will be mailed "Principals Perceptions of Innovative Practices" instrument to be completed and returned prior to being interviewed at the participant's school.

4. Each participating school will be visited by the writer. Personal interviews will be conducted with all principals. The interview will be patterned by the raising of questions and having the respondents discuss the innovations listed.

5. "Principal Role Behavior Opinionnaire" along with "Organizational Climate Description Questionnaire" will be administered to teaching staffs of the buildings included in the study. Teachers will also be requested to complete short "Biographical Information" forms at this time.

### Treatment of the Data

The data will be programmed and processed by the computer at Michigan State University.

1. Pearson Product Moment Correlation Coefficients and Point Biserial Correlations will be obtained to show relationships between variables indicated in hypotheses one through four.

2. One Way Analysis of Variance tests will be used to compare innovative and non-innovative schools on their leadership style scores.

3. Chi-square tables will be developed to look at relationships between specific items as they pertain to innovative and non-innovative relationships.

### Overview of the Study

A reference point for the entire study is contained in Chapter I. It includes a statement of the need and purposes of the study. Important terms have been identified and defined. General assumptions are made as well as a statement of the hypotheses to be tested. Research methods, limitations, and objectives of the study are listed. The means of analyzing the data are also presented.

Chapter II contains a review of the literature related to the involvement of the elementary principal in the innovative process. Research findings which are basic to an understanding of the over-all innovation activity are included. Also included are findings related to innovation as a change process.

A description of the research design and procedures are included in Chapter III. Information relating to the sample, the instruments, the administration, the collection of data, and the analysis procedures are covered.

Chapter IV presents an analysis of the data. Descriptive statistics are presented for each of the hypotheses listed in the study.

Significant findings, conclusions, and implications are summarized in Chapter V. This final chapter includes suggestions for any future studies.

## CHAPTER II

### REVIEW OF THE LITERATURE

The literature and research studies reviewed in this chapter will attempt to provide background and other information necessary to understand the principal's role as leader of an organization in a dynamic, rapidly changing social system. Interwoven in this chapter the following general areas are reviewed: (1) studies related to background knowledge which is basic to an understanding of the overall innovation activity, (2) studies concerning the elementary principal in the innovation process, and (3) studies related to innovation as a change process.

The studies that have been conducted through the years concerning the role of the elementary principal in innovation have been few in number. There is a very obvious neglect of the role the elementary school principal plays in research and innovation. Studies have been concerned with the role of the superintendent in bringing about educational change, and he has been found to be by far the most instrumental innovator. Elementary school principals have undoubtedly contributed significantly to

the accomplishments credited to the superintendent, but this is for the most part opinion and not substantiated.

Although the role of the elementary principal in educational innovation is the focal point of the investigation, it must be realized that this is only a part of an extremely complex process. Therefore, some of the studies to be reviewed will contribute background knowledge which is basic to an understanding of the over-all innovation activity.

Ebey studied the elementary schools of St. Louis and found the principal an important factor in the innovation process.<sup>1</sup> In an interpretation of the importance of the principal it was suggested that while "recency of the principal's training" denotes that recent professional training may be helpful, continuing contact with institutions of higher learning probably also is indicative of a principal's professional alertness. It was also pointed out that another important factor that contributed to the innovativeness of the principal was his educational opinion. If the principal favored innovation he would promote and encourage change.

Skogsberg, in his search for the emerging design of administration, interviewed superintendents in the most

---

<sup>1</sup>George W. Ebey, Adaptability Among the Elementary Schools of An American City (New York Bureau of Publications, Teachers College, Columbia University, 1940).

forward-looking systems he could reach.<sup>1</sup> In these people he found a searching for the better way to do things, an awareness of the advantage of team accomplishment, and the fact that ideas can come from every person involved in the undertaking. A high degree of professional training seems to be typical.

In the University of Florida leadership study Sugy found a significant relationship between working patterns of elementary principals and the readiness of their teachers for curriculum change (significant at the .01 level in favor of democratic schools).<sup>2</sup> He also concluded that democratic schools change more quickly, and use a wider variety of methods and procedures in accomplishing these changes, including the use of non-staff persons working on program changes. Women principals were found to rank significantly ahead of men as democratic principals. Program change in a school is not so much related to what the principal thinks about change or his readiness for change as it is to his general operational pattern. How the principal feels, what he thinks of educational theory, is less

---

<sup>1</sup>Alfred H. Skogsberg, "Administration Operational Patterns" (Ed.D. project, Teachers College, Columbia University, 1950).

<sup>2</sup>Woodrow B. Sugy, "A Study of the Relationship Between Program Development and Working Patterns of School Principals" (Ed.D. dissertation, University of Florida, 1955), p. 113.

important in promoting curriculum change than how he works with people, individually and as a group.<sup>1</sup>

Perry investigated the diffusion rates of fifteen innovations in Detroit elementary schools with the intention of determining aides and hinderances to innovation.<sup>2</sup> She assumed that adaptability is desirable, can be increased and can be improved. She found that a quarter of a century is the length of the average historical period in the case of the fifteen innovations studied and that Detroit is more hospitable to new practices than the Pennsylvania communities studied by Mort.

She found that 60% of the innovations studied were inspired by members of the administrative staff and concluded that the administrative staff might, therefore, be profitably trained to aid materially in the detection and evaluation of new ideas. This is especially important in view of the fact that the evidence indicates that educators do not investigate and employ the best practices as they arise.<sup>3</sup>

---

<sup>1</sup>Ibid., p. 114.

<sup>2</sup>Dorothy M. Perry, "Patterns of Selected Innovations in Detroit Elementary Schools, 1895-1945" (Ed.D. dissertation, College of Education, Graduate Division, Wayne State University, Detroit, Michigan, 1950).

<sup>3</sup>Ibid., pp. 256-258.

Griffiths takes the position that the principal is not truly an innovator nor can he be.

It is not the principal who initiates changes in the school system. Initiative for change must come from the top. On the basis of the data presented here, it appears that introducing change is an infrequent action of the principal. It seems that organizational change score (of principals) is not a measure of strong aggressive leadership; on the contrary, it is associated with actions in compliance with suggestions and in deference to superiors and outsiders. An understanding of the reason for the absence of strong personal direction rests with his place in the hierarchy of the organization - he is at least three steps down from the top even in a small school district. He works at some distance from the policy makers, and he must always be aware of his several superiors. It seems therefore, that if we are to have change in school systems, we cannot look to the principal to initiate it. The initiative for change must come from the top.<sup>1</sup>

In a different source Griffiths also claims that the more hierarchical the structure of an organization the less possibility of change. He says, too, that the number of innovations is inversely proportional to the tenure of the chief administrator.<sup>2</sup>

Kelly's research was concerned with the orientation of the principal toward innovation.<sup>3</sup> He determined

---

<sup>1</sup>Daniel Griffiths, "The Elementary School Principal and Change in the School System," Theory Into Practice (December, 1963), pp. 278-284.

<sup>2</sup>Matthew Miles, ed., Innovation in Education, (New York: Bureau of Publication, Teachers College, Columbia University, 1964), p. 434.

<sup>3</sup>Paul E. Kelly, "Factors Related to the School Principal's Orientation to Educational Innovation" (Ed.D. dissertation, Harvard University, Graduate School, 1961), p. 101.

relationships between this orientation to innovation and a number of selected factors, using data from interviews of a nation-wide sample of principals. The following hypotheses were tested and were rejected. (1) Female principals will tend to have a less positive orientation toward educational innovation than male principals. (2) Younger principals will tend to have a more positive orientation toward educational innovation than older principals. (3) Principals of long experience will tend to have a less positive orientation toward innovation than principals having only a few years of experience.

Although there was no significant difference, Kelly concluded there was a slight tendency to accept the following hypotheses: (1) Principals with the greater amount of formal training will tend to have a more positive orientation toward innovation than those having a lesser amount. (2) The lower the socio-economic level of a principal's school the more positive his orientation toward innovation will tend to be. (3) Principals of larger schools will tend to have a more positive orientation toward innovation than principals of smaller schools.

Only one hypothesis tested by Kelly proved to be highly significant. Principals who evaluate their superiors more positively on criteria relating to the subordinates' views toward innovative behavior will tend to be more

positively orientated toward innovation than principals who evaluate their superiors less positively on these criteria.<sup>1</sup>

Hemphill's findings relative to the professional preparation of the principal are less encouraging even than Kelly's. He says, "There is no evidence suggesting that the principal with the lengthier preparation does a more effective job of school administration from any point of view from which one may examine the data."<sup>2</sup>

A study by Von Brock of the expectations held for the administrative role by school superintendents and principals was dichotomized along four dimensions: (1) status (success versus equality), (2) authority (dependence versus independence), (3) institutional (institutional obligations), and (4) means-ends (completing the job versus the process of achievement). Significant differences were found between superintendents and principals for both roles regarding each dimension except the institutional. Expectations for both roles were found to be different as it related to size of school district.<sup>3</sup>

---

<sup>1</sup>Ibid., p. 131.

<sup>2</sup>John Hemphill, Daniel Griffiths, and Norman Frederiksen, Administrative Performance and Personality; A Study of the Principal in a Simulated Elementary School (New York: Bureau of Publications, Teachers College, Columbia University, 1962), p. 341.

<sup>3</sup>Robert Carl Von Brock, "A Study of the Role Perceptions of Superintendents and Principals in the State of Illinois" (Ed.D. dissertation, Northwestern University, 1962).

The role of the educational administrator as perceived by undergraduates was studied by Willower. He discovered that the administrator was perceived as (1) an authority figure who was conservative and dignified and, to lesser extents, friendly and intelligent; (2) much less close to students than to teachers; (3) participating widely in community affairs; and (4) receiving less pay than other professionals.<sup>1</sup>

The role functions of the elementary school principal were analyzed by Ranniger and Frey. They identified trends as being: (1) from disjunctive detail toward emphasis upon the integrated entity of the principalship, (2) from a limited number to a greater variety of duties, (3) from dictatorial direction toward democratic involvement of staff, and (4) from lack of agreement to relative agreement on the major functional areas of the principal's job.<sup>2</sup>

In reviewing innovation as a change process one must look at early studies of innovativeness in schools. In the late 1930's studies conducted by Mort and Cornell

---

<sup>1</sup>Donald J. Willower, "Education Students' Perceptions of School Administrators," School Review LXX (Autumn, 1962), pp. 332-344.

<sup>2</sup>Billy Jay Ranniger, "A Summary Study of the Job Responsibilities of the Elementary School Principal" (Ed.D. dissertation, University of Oregon, 1962); Barbara Ruth Frey, "An Analysis of the Functions of the Elementary School Principal, 1921-1961" (Ed.D. dissertation, Indiana University, 1963).

referred to innovativeness as "adaptability." Through their efforts and those of many graduate students working in the Institute of Administrative Research, information was gained on the diffusion rate of educational innovations.<sup>1</sup> These studies indicated that change in the American Schools was surprisingly slow and leisurely. Mort explained that between insight into a need and the introduction of a way of meeting the need there is a typical half-century lapse.<sup>2</sup>

Once a way had been devised to meet an underlying need another fifty years was needed for complete diffusion of the successful innovation. Basic to Mort's findings was that a surprisingly positive relationship existed between the speed of adopting innovation and the financial support given by the community.<sup>3</sup>

Perry reported that the diffusion time for a practice is shortened as it ceases to depend on financial support. When the school board supports an innovation it diffuses rapidly, and innovations affecting personnel

---

<sup>1</sup>Paul R. Mort and F. G. Cornell, American Schools in Transition (New York: Teachers College, Columbia, 1941).

<sup>2</sup>Mort, "Studies in Educational Innovation," in Innovation in Education, ed. Miles, (New York: Bureau of Publications, Teachers College, Columbia University, 1964), p. 318.

<sup>3</sup>Ibid.

have the shortest life while those dealing with curriculum tend to last much longer.<sup>1</sup>

The lag in accepting educational ideas prompted a U.S. congressional subcommittee to hold hearings on the subject. Anderson reports the major findings of the committee and notes that "Less than 1 per cent of the annual outlay of the education industry in the country is devoted to research and development." Concern was also expressed as to why innovation in medicine requires only two years to be accepted universally while in education it requires thirty years for widespread adoption.<sup>2</sup>

The success of any innovation, according to Guba, rests heavily on the diffusion agent or "diffuser." He must plan a course of action which includes specific techniques. These modes are telling, showing, helping, involving, training, and self-involvement. Other strategies involve the adopter who can be either convinced with a hard sell, trained to do the specific innovation, persuaded, compensated or deprived, influenced, compelled, or be made to feel professionally obligated.<sup>3</sup>

---

<sup>1</sup>Dorothy M. Perry, "Patterns of Selected Innovations in Detroit Elementary Schools 1895-1945" (Ed.D. dissertation, Wayne State University, 1959).

<sup>2</sup>Ernest G. Anderson, Jr., "Estimated Time for Accepting Educational Ideas: 30 Years," Nation's Schools LXXXVIII (December, 1966), p. 50.

<sup>3</sup>Egon E. Guba, "Diffusion of Innovations," Educational Leadership XXV (January, 1968), p. 293.

The study of innovative persons in educational organizations has almost exclusively examined the superintendent as being the person responsible for a school district's rate of innovation. This focus is based on the belief that in a hierarchical structure of a formal organization, the top authority figure makes decisions allocating resources and personnel and is responsible for all functions of the organization. These decisions are therefore assumed to be critical in the degree to which innovations are introduced and encouraged.

Support for innovations, especially those requiring financial backing do depend on the superintendent. But many of the organizational and curriculum changes are being instigated and implemented at the building level. The controlling influence of the central office varies widely. The autonomy of building principals is evident in the great diversity of programs offered in schools in the same school district. The attitude of the superintendent toward innovations is important but that factor alone does not guarantee the presence or absence of innovative practices occurring in a school district. When one views the school as the organization rather than the traditional school district, a new perspective emerges as to the role of the principal in planned change.

The present bureaucratic structure of school systems could be one of the more basic, fundamental barriers

to innovations. Likert's model is one of several proposed to change the basic bureaucratic model. This new model would demand an increased degree of trust, inter-personal competence, and problem-solving skill, over that required in the traditional bureaucratic model.<sup>1</sup> It thus becomes quite clear that an innovative person and the bureaucratic organization may not be compatible.

Woods writes that, "Schools must become creative and adoptive, and this implies a loosening of the structure of the system."<sup>2</sup> He also sees new emphasis on the principal by saying:

The traditional role of the principal and superintendent has been to administer and preserve the "status quo" rather than to stimulate change. In the past the principal has been only a manager of the educational enterprise, and not necessarily the educational leader. Hopefully, this situation or emphasis will change in the future because schools will not change unless the principal wants them to change. Dynamic, growing schools have far-sighted energetic principals who provide the impetus for change.<sup>3</sup>

Miles writes, ". . . it seems very clear that administrators, as authority figures, are crucial in introducing innovations, particularly those which involve structural change." Miles goes on to say, ". . . that since

---

<sup>1</sup>R. Likert, New Patterns of Management (New York: McGraw-Hill, 1961).

<sup>2</sup>Thomas E. Woods, The Administration of Educational Innovations (Eugene, Oregon: Bureau of Educational Research, University of Oregon, 1967), p. 37.

<sup>3</sup>Ibid., p. 40-41.

institutions are hierarchically ordered, administrators can handle problems associated with innovations more effectively than others."<sup>1</sup>

Perhaps the key concept, which studies in the field of agriculture offer the principal, is that the diffusion and adoption of new ideas take place within the dynamics of complex interacting social systems. Rural sociologists have described empirically how the conceptual elements of the system fit into a conceptualization of the change process. Thus the particular climate that a social system manifests (i.e., closedness, openness) will affect the adoption of new ideas.<sup>2</sup>

Lippitt and colleagues have found through informal suggestions and research findings that the principal is crucial in supporting innovations with teachers.<sup>3</sup> They also state that, "Teachers who perceive a principal as supporting innovations do in fact innovate more often."<sup>4</sup>

The Michigan Cooperative Project in Educational Development reports similar findings. A significant

---

<sup>1</sup>Matthew B. Miles, ed., Innovations in Education (New York: Bureau of Publications, Teachers College, Columbia University, 1964), p. 641.

<sup>2</sup>Kimbrough, Administering Elementary Schools, p. 115.

<sup>3</sup>Ronald Lippitt and Colleagues, "The Teacher as Innovator, Seeker, and Sharer of New Practices," in Perspectives on Educational Change, ed. Miller, (Appleton-Croft Publishing Co.), p. 320.

<sup>4</sup>Ibid, p. 321.

correlation was found between the amount of staff inventiveness, and the staff's perception of the principal's support for innovative teaching. They further found that an indirect role of the principal is the development of a climate that encourages the entire staff to support innovations.<sup>1</sup>

Bricknell's New York study reports that instructional programs are introduced by administrators and are rearranged "almost exclusively" upon administrative initiative.<sup>2</sup> He also states that:

The administrator may promote or prevent innovation. He cannot stand aside, or be ignored. . . Authority is a critical element in innovation, because proposed changes generate mixed reactions which can prevent consensus among peers and result in stagnation.<sup>3</sup>

Mackenzie concludes that many forces outside the school setting greatly influence the rate change. These include: foundation, academicians, business and industry, and national government.<sup>4</sup>

---

<sup>1</sup>Robert Fox, Charles Jung, and Ronald Lippitt, Report on the Cooperative Project on Educational Development, (COPED), (Ann Arbor: University of Michigan, 1965).

<sup>2</sup>Brickell, "State Organizations for Educational Change," p. 503.

<sup>3</sup>Ibid.

<sup>4</sup>Gordon N. Mackenzie, "Curricular Change: Participants, Power, and Processes," in Innovation in Education, ed. Miles, (Columbia University Press), p. 413-414.

Pellegrin identified ten sources of educational innovations. They are: (1) the classroom teacher, (2) the administrator (superintendent and principal), (3) the school board, (4) the lay public, (5) the state department of education, (6) education faculties in colleges and universities, (7) professional associations, (8) the United States Office of Education and other federal government agencies, (9) textbook publishers and, (10) scientists, technical specialists, and other experts.<sup>1</sup> This study reported that the greatest stimuli to changes originated from sources external to the field.<sup>2</sup>

Other researchers have also found the rate of accepting innovations to be quickening. Ross reports the rapid spread of driver education after the promotional efforts of car dealers.<sup>3</sup>

Perry also found that of the innovations covered in her study spanning fifty years in the Detroit Public Schools that:

. . . 60 per cent were inspired by administrators, 13 per cent by state regulations, 13 per cent by research

---

<sup>1</sup>Roland J. Pellegrin, An Analysis of Sources and Processes of Innovation in Education (Eugene, Oregon: Center for the Advanced Study of Educational Administration, 1966), pp. 6-14.

<sup>2</sup>Ibid., p. 15.

<sup>3</sup>Donald R. Ross, Administration for Adaptability (New York: Metropolitan School Study Council, 1958).

publications, 6.5 per cent by observation of other experiments, 6.5 per cent a result of national pressure.<sup>1</sup>

Rogers elaborated on the role of innovations when he said:

Innovators are venturesome individuals. . . . They are generally young. . . . They are cosmopolite, even breaking considerable geographical distance barriers to form groups. . . . They spread new ideas as their gospel. . . . They are likely to be viewed as deviants by their peers. . . . They are in step with a different drummer from their peers. . . . They march to different music.<sup>2</sup>

Educational studies could not be found that grouped administrators into innovative adopter categories. The number of truly innovative school leaders would be small. As Rogers describes, more persons would be in the early adopter category and the majority in the early and late majority category.

Glines sees that changes are occurring that will enable schools to progress faster in meeting the needs of society.

Fortunately a new breed of school administrators is being developed. Sometimes they are relatively silent; sometimes they are rather noisy - but always they are on the move; they realize that their schools mirror them. They seek promising new opportunities and the challenges of exciting educational developments.<sup>3</sup>

---

<sup>1</sup>Perry, "Patterns of Innovations in Detroit," pp. 252-260.

<sup>2</sup>Everett Rogers, "What are Innovators Like?" in Change Process in the Public Schools ed. by Richard O. Carlson, et al, (Eugene, Oregon: Center for the Advanced Study of Educational Administration, 1965), pp. 55-61.

<sup>3</sup>Glines, "Planning and Effecting Change in Schools," p. 166.

Adoption rates of educational innovations, while having accelerated considerably during the past few years, still lag appreciably behind those of agriculture, medicine, and industry.

Miller cites three general inhibiting factors in the individual's reluctance to depart from the known. The first is "traditionalism," which is related to stability and in some situations can support needed continuity. The second factor is "laziness." Innovations require hard work. Closely related to laziness would be indifference and rationalization. The last general factor is "fear and insecurity." Other factors more directly related to schools are: administrative reticence, educational bureaucracy, insufficient finances, community indifference and resistance, inadequate knowledge about the process of change, and inadequate teacher education programs.<sup>1</sup>

Trump lists several traditions that are held in high esteem and make it difficult to start new practices in education:

Twenty-five to thirty students in a class is the optimum size for effective instruction.

Instruction is best when one teacher does all of the teaching for a given group of students.

---

<sup>1</sup>Richard I. Miller, "An Overview of Educational Change," in Perspectives on Educational Change, ed. Miller, pp. 8-19.

The physically present voices of teachers and students, plus the printed page, are the only respectable avenues to learning for students.

Higher salaries insure quality teaching.<sup>1</sup>

Carlson suggests three barriers to change: (1) the lack of officials who perform as change agents, (2) the weak base of professional knowledge, and (3) the domesticated nature of the school organization.<sup>2</sup>

Gallup points out that the conservative nature of a school's personnel often incorrectly assesses the attitude of the parents. He states:

It appears now that parents approve of more needed educational innovations than might be anticipated by any educator. In fact, a greater number of parents favor such innovations than the percentage of their schools carrying them out. As far as the parents are concerned, they are ready for more new practices than the schools are giving them.<sup>3</sup>

Evidence on the role of the administrator as a change agent is now always clear. Brickell found that such innovations as had occurred in New York State had been initiated by the administrators.<sup>4</sup>

---

<sup>1</sup>Lloyd J. Trump, "Influencing Change at the Secondary Level," in Perspectives on Educational Change, ed. Miller, (Appleton-Croft), pp. 58-59.

<sup>2</sup>Richard O. Carlson, et al. Change Processes in the Public School (Eugene, Oregon; Center for the Advanced Study of Educational Administration, 1965.)

<sup>3</sup>Gallup Poll, "Parents are Ready," The Instructor, LXXVI (October, 1966), p. 154.

<sup>4</sup>Henry M. Brickell, Organizing New York State for Educational Change (Albany, New York: State Education Department, 1961).

Skepticism over the ability of school administrators to accept responsibility for the advocate role in the change process is expressed by Gallaher. He sees the administrator as being "the man in the middle," balancing demands from interest groups and other professionals.<sup>1</sup>

### Summary

This chapter reviewed research related to the nature of innovation and the role of the elementary school principal in the innovation process.

Although some studies showed the principal to be an important agent in innovation, it was found that many groups and individuals are responsible for initiating change. Since research on the role of the superintendent has been more extensive, studies showed the superintendent to be most instrumental in innovation.

There has been a great deal of concern over the rate of innovation and the minimal amount of money spent on research and innovation in this country.

The main reasons why it is so difficult to initiate new changes in education are traditionalism, laziness, fear and insecurity.

---

<sup>1</sup>Art Gallaher, J., "Directed Change in Formal Organizations: The School System," in Change Processes in the Public Schools, ed., Carlson, et al., (University of Oregon).

Studies show that innovation is found to occur more often in low socio-economic areas than in high socio-economic areas; more in large schools than small schools; more in supportive communities than in non-supportive communities; and faster in smaller communities than larger communities.

The nature of the innovation and the attitude of the superiors toward change has also been found to have a great affect on acceptance of innovation, but principals are the crucial factors because they must encourage and support innovation with the teachers.

## CHAPTER III

### DESIGN AND PROCEDURES OF THE STUDY

The purpose of this investigation was to determine relationships existent between elementary school principals and those innovational practices occurring within their jurisdiction. The question was asked, "To what extent does the principal account for the divergence of educational programs between schools?" It has been stated that the principal, as leader of the school, largely determines the type of education offered and either advances or retards the cause of change. To gather information on this problem, principal and teacher perceptions were studied and facts related to the school and innovation gathered. This chapter sets forth the procedures followed in collecting data necessary to reach conclusions regarding the above variables.

#### Source of Data

An opportunity to secure a diversified sample of elementary schools became available through the Michigan State University Extern Program, elementary principals sections X and Y during the 1974-75 school year. There

were 25 principals enrolled in section X and 27 principals enrolled in section Y. These principals and their related schools became the population from which the sample was drawn.

Access to these groups was gained through permission of Dr. Vandel Johnson and Dr. Edward Keller, Michigan State University.

### Sample Selection

Principals and their staffs were chosen by the same procedures from each extern section. All participants who wanted to be considered for this research project were asked to complete a biographical form and from a list of innovative practices indicate which ones were occurring in their respective schools. A representative sample was desired of schools indicating many innovative changes as well as schools indicating few innovative changes. Upon examination of the returns it was found that both objectives were obtained.

A sample consisting of principals and teachers from twelve to sixteen schools was determined to be adequate for purposes of this study. The following criteria were established as parameters in selecting the sample:

1. Schools should, if possible, consist of an equal number of high innovative and low innovative scores.
2. Teachers should, if possible, consist of equal numbers of high innovative and low innovative scores.

3. Organizational patterns should not include grade combinations exceeding grade six.
4. Size of building staffs would be considered. Representatives of small as well as large teaching staffs were desired.
5. Principals must be full time and not new to the principalship or school. A minimum of one year tenure as principal was required for inclusion.
6. Teachers must not be new to the school and have been in their present position for a minimum of one year to be included in the study.
7. As many different locations and sites of school districts would be selected as possible. Not more than two principals from any one district would be included.

Additional criteria were established for selection of the sample. Distance and time required to collect the data were included. These limitations, for practical purposes, would become a factor only after the previous mentioned criteria were met.

Based on the criteria mentioned for the selection of the sample, sixteen principals together with their staffs were invited to take part in the research. Letters sent briefly outlined the purpose of the study and the degree to which they would become involved and included a Principal's Perception of Innovative Practices form.<sup>1</sup>

Three elementary principals responded by phone requesting that they not be included in the study. They were thanked for their interest and not included in the final sample selected.

---

<sup>1</sup>All letters sent are listed in Appendix A.

Final selection consisted of 13 elementary schools and their respective staffs, seven of which contained 118 teachers representing low innovative scores and six schools contained 112 teachers representing high innovative scores. Table 1 reviews the steps in selecting the schools and principals.

TABLE 1.--Population of Elementary School Principals from which Final Selection was Drawn.

| Principals | Extern<br>Enroll-<br>ment | Responded<br>to<br>Question-<br>naire | Invited | Accepted | Inter-<br>viewed | Number<br>of<br>Staff |
|------------|---------------------------|---------------------------------------|---------|----------|------------------|-----------------------|
| Section X  | 25                        | 16                                    | 8       | 7        | 7                | 118                   |
| Section Y  | 27                        | 15                                    | 8       | 6        | 6                | 113                   |
| TOTAL      | 52                        | 31                                    | 16      | 13       | 13               | 231                   |

One hundred and eighty-eight teacher questionnaires were returned or 81 per cent of total possible sample. Individual building variations ranged from a low of 45 per cent to a high of 100 per cent. When first-year teachers and incomplete questionnaires were eliminated the final usable count included in the study was 164 teachers, or 71 percent of the total respondents. Table 2 consists of a complete analysis of teacher responses.

TABLE 2.--Teacher Response to Questionnaires.

| School Number | Total Staff | Questionnaires Returned | Included | Not Included | Total Per Cent Returned |
|---------------|-------------|-------------------------|----------|--------------|-------------------------|
| 1.            | 17          | 13                      | 12       | 1            | 76                      |
| 2.            | 8           | 8                       | 8        | -            | 100                     |
| 3.            | 17          | 11                      | 10       | 1            | 65                      |
| 4.            | 17          | 17                      | 17       | -            | 100                     |
| 5.            | 30          | 15                      | 14       | 1            | 50                      |
| 6.            | 10          | 10                      | 8        | 2            | 100                     |
| 7.            | 20          | 9                       | 8        | 1            | 45                      |
| 8.            | 12          | 10                      | 9        | 1            | 83                      |
| 9.            | 12          | 11                      | 10       | 1            | 92                      |
| 10.           | 18          | 12                      | 9        | 3            | 67                      |
| 11.           | 22          | 20                      | 16       | 4            | 91                      |
| 12.           | 16          | 14                      | 12       | 2            | 88                      |
| 13.           | 32          | 28                      | 21       | 7            | 88                      |
| TOTAL         | 231         | 188                     | 164      | 24           | 71                      |

#### Instruments Employed

Instruments used to collect the data were classified into four categories: (1) general background information, (2) innovations, (3) principal characteristics, and (4) school climate.<sup>1</sup>

<sup>1</sup>All instruments are listed in Appendix B.

### General Background Information

Instruments were designed for the purpose of securing information pertaining to principals, teachers, and general school background. A total of seven items for teachers and eight items for principals were selected that provided biographical and school information. All items were to be considered as variables that related to the problem and would prove to be significant in the study.

### Check List of Innovations

This check list was developed to serve three purposes: (1) its return indicated a willingness of the principal to take part in the study; (2) information supplied was used in the selection process; and (3) to arrive at an innovation score for each school in the study.

The check list was derived from an initial list of thirty innovations as identified by Von Haden and revised and reduced to fifteen innovative practices relevant to elementary schools.<sup>1</sup>

### Interview Schedule

A second form was constructed using the format and content of the previously designed Check List of Innovations. The interviewer recorded on the form responses to specific questions about previously reported innovations.

---

<sup>1</sup>Herbert I. Von Haden and Jean Marie King, Innovations in Education: Their Pros and Cons, (Worthington, Ohio: Charles A. Jones Publishing Co., 1971).

Goals of the personal interview were: (1) to insure consistency and precision of terminology in recording of innovative practices among sample schools, (2) provide a second measure for determining a school's innovative score, and (3) collect additional information on specific innovations previously reported.

Information concerning adoption and implementation of innovative practices being used was accomplished through the following three questions: (1) Who was the person(s) responsible for the impetus of the innovation? (2) If impetus originated from the principal, where did he acquire the information responsible for its initiation? (3) If the principal did not provide the beginning impetus, what role, if any, did he play?

#### Principal Role Behavior

Principal Role Behavior Opinionnaire yields information concerning perception of leadership style of the principalship. These styles were determined as either nomothetic or idiographic. The nomothetic person is one who emphasizes the demands of the institution rather than the individual. He would be task orientated and fit the "administrator" role versus the "leader" role. Idiographic persons would be more concerned with individuals than with accomplishing the role of the institution. This is not just the "nice guy" role; rather, the desired goals pursued are accomplished through an emphasis of working with

people. Guba and Bidwell describe in more detail the nomothetic and idiographic roles.

Nomothetic - The nomothetic leader stresses the requirements of the institution and the conformity of role behavior to expectations at the expense of the individual personality and the satisfaction of needs. He perceives authority to be vested in his office, and he maintains the scope of his inter-actions with his subordinates in as diffuse a manner as possible. He places heavy emphasis on the rules and procedures, and he imposes extrinsic sanctions whenever feasible. Effectiveness is his major standard of follower excellence.

Idiographic - The idiographic leader, in contrast, stresses the demands of the individuals personality, his need structure, and need-motivated behavior. Here organizational requirements tend to be minimized. This leader views his authority as delegated, and he tends to maintain highly specific inter-actions with his subordinates. His relationships to others are, in general, particularistic, tailored to each individual's personality, and he places major reliance upon intrinsic sanctions. Efficiency is his major standard of follower excellence.<sup>1</sup>

Each question is answered on a six point scale:

- (1) usually, (2) often, (3) sometimes, (4) occasionally, (5) rarely, and (6) never.

#### Organization Climate Description Questionnaire

The organizational climate of an elementary school can be measured using the Organizational Climate Description Questionnaire designed by Halpin and Croft. This questionnaire is based on a theory of interaction between individuals in an organization and their ability to

---

<sup>1</sup>Egon G. Guba and Charles E. Bidwell, Administrative Relationships - Teacher Effectiveness, Teacher Satisfaction, and Administrative Behavior (Chicago: The Midwest Administration Center, University of Chicago, 1947), pp. 23-24.

accurately perceive each other's behavior within a particular organizational setting. Behavioral theorists question one's ability to "tell it like it is." Halpin found through Leader Behavior Description Questionnaire studies and those of the OCDQ that people were consistent in their perception of what was "out there." Halpin and Croft were "satisfied to take the position that the faculty's consensus in its perception of the school's climate can be used as a dependable index of what is out there."<sup>1</sup>

Halpin and Croft assigned the 64 OCDQ items into eight subtests. Four of these subtests described characteristics of teachers as a group, and the other four, leader characteristics of the principal.

The pattern formed from these subtests can be used to determine the climate of a school. Climate profiles are arranged on a continuum from "open" to "closed" as follows:

1. The Open Climate describes an energetic, lively organization which is moving towards its goals, and which provides satisfaction for the group members' social needs. Leadership acts emerge easily and appropriately from both the group and the leader.
2. The Autonomous Climate is described as one in which leadership acts emerge primarily from the group. The leader exerts little control over the group members. Satisfaction from task achievement is also present, but to a lesser degree.

---

<sup>1</sup>Halpin, Administrative Theory in Education, (Chicago: Midwest Administration Center, University of Chicago, 1958), p. 147.

3. The Controlled Climate is characterized best as impersonal and highly task-oriented. The group's behavior is directed primarily toward task accomplishment, while little attention is given to behavior oriented or social-needs satisfaction.
4. The Familiar Climate is highly personal, but under-controlled. The members of this organization satisfy their social needs, but pay relatively little attention to social control in respect to task accomplishment.
5. The Paternal Climate is characterized best as one in which the principal constrains the emergence of leadership acts from the group and attempts to initiate most of these acts himself. Little satisfaction is obtained in respect to either achievement or social needs.
6. The Closed Climate is characterized by a high degree of apathy on the part of all members of the organization. The organization is not "moving." The members' behavior can be construed as "in-authentic;" indeed, the organization seems to be stagnant.<sup>1</sup>

#### Scoring Procedure

Upon receipt of principal and teacher questionnaires, all instruments were separated and coded with a school number to protect anonymity. Screening was necessary since teachers in their first year, like principals, were excluded from the sample. Participation was at all times voluntary.

This is a relationship study and requires that variables be identified for proper analysis. All instruments were scored and tabulated, becoming variables that would possibly identify significant relationships.

---

<sup>1</sup>Ibid., pp. 2-3.

Pre-coding of all instruments was accomplished through consulting with the Michigan State University Research Consultation Center.

### Background Information

All biographical and school information in rank-interval form became variables. A numerical value was assigned each possible response. Teachers' variables were then tabulated and became mean building scores. Other information including that of innovative practices not in rank-interval form was analyzed through frequency distribution, percentages, and observation.

### Principal Characteristics

Principal Role Behavior score described the type of leadership role exhibited by the principal. From raw data, a score was determined by assigning a weighted value to each of the six responses. All answers to odd numbered statements were weighted from six to one in descending order beginning with response "usually," while all even numbered statements were weighted from one to six in ascending order beginning with response "usually." This procedure resulted in all nomothetic responses being scored high and all idiographic responses being scored low. Respondents with a higher score than others would be judged less-democratic. Provisions for missing responses were made by computing the mean weighted score and assigning this value to each missing answer.

Principal Role Behavior score for each school was the result of totalling all teachers' score and computing the means.

### School Climate

Scoring of the Organizational Climate Description Questionnaire was accomplished by summing all eight subtest scores for each individual. From these scores, mean subtest scores for each school were computed and placed on a continuum.

Climate scores for the schools in this study were reported using this continuum scale of mean standard scores. Highest resulting scores represent open climate schools and lowest scores represent the schools with closed climate.

### Data Collection

Data were collected at three distinct times spanning a period of four months. In September, 1974 principals were asked to list the innovative practices taking place in their respective buildings and complete the General Background Information Questionnaire. Six weeks later, principals again contributed data when they returned a Principals' Perception Practices Form in response to the request inviting participation in this study. These two instances of receiving data were preliminary to the final selection of the sample. Information received at these times was important and became a necessary part of the total data.

Thirteen principals were contacted by telephone and an appointment for a personal interview with each scheduled. This interview achieved several objectives:

1. A sealed packet of questionnaires for each full time, regular, K - 6 teacher on the staff was delivered. Written instructions were reviewed with the principal and questions clarified to insure uniformity of administration between sample schools. A self-addressed, stamped envelope was enclosed and complete anonymity was stressed. Unmarked instruments for each teacher included: (1) Biographical Information, (2) Principal Role Behavior Opinionnaire, and (3) Organizational Climate Description Questionnaire. The option as to how these would be administered, either as a group or individually, was left to the discretion of each principal. Flexibility in building procedures was recognized as being necessary to accommodate the various master contracts and the principal's "modus operandi."

2. Additional information was recorded relating to innovative practices and to standardize between schools a more consistent definition and understanding of innovative practices.

Principal interviews commenced on October 9, 1974 and terminated November 4, 1974.

Co-operation from all participants was excellent throughout the entire process. Each visit lasted from one to two hours.

Instruments were returned by U.S. mail over a two month period. All data completed by principals were usable and after screening out first-year teachers and incomplete instruments, 164 of 231 teacher returns were processed.

#### Procedure for Analyzing Data

Data for this study were of two types: that collected through various instruments completed by principals and teachers to be used as variables, and information recorded during a personal interview with each principal to be treated statistically but not employing statistical inference.

In these types of data, instruments requiring hand scoring were: Principal Role Behavior Opinionnaire, Organizational Climate Description Questionnaire, and the Check List of Innovations. These scores together with an additional innovation score acquired from the Interview Schedule, and biographical and school information, were recorded on a master chart by school number. Scores from these instruments, including both single principal and school scores, plus group mean scores from teachers in each school generated the necessary variables required for the purpose of examining desired relationships. Scores were punched and verified on IBM cards and processed by the computer center at Michigan State University.

### Summary

Thirteen principals and their 154 teachers were subjects in this study to help determine if the leadership qualities of a principal are related to the innovative practices in the school.

Both innovative and non-innovative schools were represented with staffs varying in size from 8 to 32 teachers.

The principals checked on a list the innovative practices taking place in their schools. Afterwards a personal interview was conducted to verify these innovative practices.

Teachers responded to questionnaires relating to school climate and the principal role behavior characteristics as they perceived them. All participants, principals and teachers also completed a general background questionnaire.

Descriptive statistics were generated by the use of the CDC 6500 computer at Michigan State University.

## CHAPTER IV

### ANALYSIS OF THE DATA

This chapter reports the findings received from 154 teachers and 13 elementary principals extracted from instruments and personal interviews described in Chapter III. Data collected from instruments completed by principals and teachers will be discussed. Findings obtained from principal interviews on innovative practices will also be analyzed.

#### Findings from Instruments

This section presents the data that relate specifically to the primary purpose of this study; namely, to determine if relationships exist among the leadership styles of principals, school climate, and innovative practices. Other characteristics of principals, teachers and schools will also be reported if they have importance. Each hypothesis will be reviewed by analyzing data pertinent to each.

#### Innovative Practices

Importance of the Innovation Scores completed for each school was recognized by employing two different methods in its determination. The check list produced

the first innovation score; a personal interview conducted five to nine weeks later, resulted in a second score.

Table 3 indicates the scores obtained from the Innovation Check List and Interview Schedule.

TABLE 3.--Innovation Scores for Participating Schools Using the Innovation Check List and Interview Schedule.

| School Number | Innovation Scores     |                    |
|---------------|-----------------------|--------------------|
|               | Innovative Check List | Interview Schedule |
| 1             | 2                     | 1                  |
| 2             | 3                     | 2                  |
| 3             | 4                     | 1                  |
| 4             | 4                     | 3                  |
| 5             | 4                     | 2                  |
| 6             | 5                     | 4                  |
| 7             | 5                     | 3                  |
| 8             | 10                    | 9                  |
| 9             | 11                    | 9                  |
| 10            | 9                     | 8                  |
| 11            | 8                     | 5                  |
| 12            | 12                    | 8                  |
| 13            | 9                     | 7                  |
| Mean Score    | 6.6                   | 4.9                |

#### Principal Leadership Style

The Principal Role Behavior Opinionnaire was used to determine the leadership style of the principal.

Table 4 shows the score based on the teachers' responses. A low score represents a more idiographic style of leadership while a higher score indicates a more nomothetic style.

TABLE 4.--Scores of Principal Leadership Style as Perceived by Teachers and Measured by the Principal Role Behavior Opinionnaire

| School Number<br>Non-Innovative<br>School | Principal Role Behavior Score <sup>a</sup> |
|-------------------------------------------|--------------------------------------------|
| 1                                         | 115                                        |
| 2                                         | 116                                        |
| 3                                         | 119                                        |
| 4                                         | 116                                        |
| 5                                         | 117                                        |
| 6                                         | 115                                        |
| 7                                         | 117                                        |
| Innovative<br>Schools                     |                                            |
| 8                                         | 108                                        |
| 9                                         | 106                                        |
| 10                                        | 106                                        |
| 11                                        | 106                                        |
| 12                                        | 102                                        |
| 13                                        | 107                                        |

<sup>a</sup>Represents building mean scores.

Principals of innovative schools were judged to have a more idiographic style of leadership as the scores ranged from 102 to 108. Principals of non-innovative schools were judged to be more nomothetic as their scores ranged from 115 to 119.

Organizational Climate of Schools

The organizational climate of schools (OCDQ) as perceived by teachers resulted from the administration of the OCDQ. Two methods of reporting school climate are reviewed in Table 5 and 6. Table 7 summarizes the perceptions of teachers on the various types of climate reported in Table 6.

TABLE 5.--Organizational Climate Description Questionnaire Scores as Measured by Teachers.

| School<br>Numbers | Organizational Climate Mean Score |
|-------------------|-----------------------------------|
|                   | Teachers' Score                   |
| 1                 | 159                               |
| 2                 | 138                               |
| 3                 | 146                               |
| 4                 | 151                               |
| 5                 | 139                               |
| 6                 | 125                               |
| 7                 | 141                               |
| 8                 | 156                               |
| 9                 | 156                               |
| 10                | 158                               |
| 11                | 162                               |
| 12                | 149                               |
| 13                | 159                               |

The need for a single climate score for the purpose of treating school climate is a variable and resulted in this score being computed by summing all subtest scores. Each of the 13 schools was ranked on a continuum from the most closed climate school having the lowest score to the least closed climate school having the highest score.

TABLE 6.--Type of Organizational Climate as Determined by Scores from Organizational Climate Description Questionnaire.

| School Number | Organizational Climate |
|---------------|------------------------|
| 1             | Open                   |
| 2             | Familiar               |
| 3             | Controlled             |
| 4             | Autonomous             |
| 5             | Familiar               |
| 6             | Closed                 |
| 7             | Familiar               |
| 8             | Open                   |
| 9             | Open                   |
| 10            | Open                   |
| 11            | Open                   |
| 12            | Controlled             |
| 13            | Open                   |

TABLE 7.--Number and Percentage of Various School Climates as Perceived by Teachers.

| School Climate | Number of Schools | Percentage |
|----------------|-------------------|------------|
| Open           | 6                 | 46.2       |
| Autonomous     | 1                 | 7.7        |
| Controlled     | 2                 | 15.4       |
| Familiar       | 3                 | 23.0       |
| Paternal       | 0                 | 0          |
| Closed         | 1                 | 7.7        |

#### Biographical and School Characteristics

Of secondary importance to the basic purpose of the study was that of principal, teacher, and school characteristics--variables 6-14. These factors of significance will be discussed in the following section treating the relationship between variables.

### Relationship Among the Variables

The variables submitted for correlation analysis sought answers to hypotheses 1-5 as presented in Chapter I. Table 8 provides a key to the variables and numbers. Variables 3-5 will be examined in detail and variables 6-14 will be selectively reported as they relate and have importance to the study.

TABLE 8.--Key to 14 Variables.

| Variable<br>Number | Variable                               |
|--------------------|----------------------------------------|
| 1                  | Innovation Check List Score            |
| 2                  | Interview - Innovation Score           |
| 3                  | Principal Role Behavior                |
| 4                  | School Climate                         |
| 5                  | OCDQ Score                             |
| 6                  | Sex                                    |
| 7                  | Age Range                              |
| 8                  | Years Experience in Education          |
| 9                  | Years in Present School                |
| 10                 | Major Barrier to Education             |
| 11                 | Socio-Economic Status                  |
| 12                 | Consider School to be Innova-<br>tive? |
| 13                 | Average Yearly Expenditure             |
| 14                 | Enrollment                             |

### Hypotheses

#### Hypothesis I

There is no Significant Relationship Between the Teachers' Perception of the Principal Leadership Style and Innovative Practices as Determined by the Principal.

A Pearson product - moment correlation value of  $r = .87$  was obtained when the variables of Teachers' Perception of Principals' Leadership Style was related to the variable innovative practices as determined by the principal (Table 9). A t score was obtained to test the significance of r. This was found to be  $t = -5.85$ . With 11 degrees of freedom, a t value larger than  $\pm 2.201$  is significant at the .05 level when a two-tailed test is used.

The results of testing Hypothesis 1 indicate there is a significant difference in teachers' perception of leadership style as related to innovative practices as determined by the principal. As indicated in Table 4 principals were judged to be more idiographic in their leadership style in schools that had a high number of innovative practices as determined by principals.

TABLE 9.--Statistical Relationship Between Variables 1 and 3.

| Pearson Product -<br>Moment Correlation<br>Value | Computed<br>t value | d.f. | Level of<br>Significance<br>Value* |
|--------------------------------------------------|---------------------|------|------------------------------------|
| $r = -.87$                                       | $t = -5.85$         | 11   | $\pm 2.201$                        |

\* .05 level of significance

The null hypothesis is therefore rejected and the alternate hypothesis is accepted for hypothesis I as there is a significant relationship.

### Hypothesis II

There is no Significant Relationship Between Teachers' Perception of Principals' Leadership Style and School Climate as Determined by the Teachers.

A Pearson product--moment correlation value of  $r = -.235$  was obtained from a comparison of Principal Leadership Style and School Climate. Since  $n > 30$  a critical-ratio Z test was computed to test whether  $r$  was significantly different from 0. A value of  $-2.85$  was computed. Hypothesis II is rejected because the computed Z value is less than  $\pm 1.96$ . This indicates a significant relationship between the variables of principal leadership style and school climate (Table 10).

TABLE 10.--Statistical Relationship Between Variables 3 and 4.

| Pearson Product -<br>Moment Correlation<br>Value | Computed<br>Z Value | N   | Level of<br>Significant<br>Value* |
|--------------------------------------------------|---------------------|-----|-----------------------------------|
| $r = -.235$                                      | $-2.85$             | 153 | $\pm 1.96$                        |

\* .05 level of significance

The null hypothesis is therefore rejected as there is a relationship between the variables and the alternate hypothesis is accepted.

### Hypothesis III

There is no Significant Relationship Between Biographical and School Characteristics, as

reported by Principals and Teachers; and Innovative Practices as Determined by the Principal.

This hypothesis was divided into areas of age, years of experience in education, years in present school, major barrier to educational change, socio-economic status and the consideration of whether or not the school is considered innovative. Each of the characteristics were individually examined and reported separately.

Age.--A distribution of ages of teachers is presented in Table 11. A chi-square value of 2.64 was generated with 4 degrees of freedom. A tabled value of 9.49 would be necessary to reject the hypothesis.

The largest number of teachers in each group were found to be in the 20-29 age range. There were no significant differences in actual frequency and theoretical frequency for innovative and non-innovative schools in any cell.

Years Experience in Education.--The distribution of teachers by years of experience in education will be found in Table 12. A computed value of 8.38 with 4 degrees of freedom was generated by comparing total years of experience within innovative and non-innovative schools. A tabled value of 9.49 would be required to produce a significant difference. No significant differences were found in comparing years of experience in education.

A total of 42 per cent of the teachers from innovative schools had been teaching from 5-9 years. A total

TABLE 11.--Contingency Table for Age Range.

|                  | Innovative<br>Schools | Non-Innovative<br>Schools | Total |
|------------------|-----------------------|---------------------------|-------|
| <u>20 - 29</u>   |                       |                           |       |
| Observed No.:    | 35                    | 33                        | 68    |
| Percentage:      | 45                    | 43                        | 44    |
| Expected No.:    | 34                    | 34                        | --    |
| X <sup>2</sup> : | .03                   | .03                       | --    |
| <u>30 - 39</u>   |                       |                           |       |
| Observed No.:    | 20                    | 17                        | 37    |
| Percentage:      | 26                    | 22                        | 24    |
| Expected No.:    | 18.5                  | 18.5                      | --    |
| X <sup>2</sup>   | .12                   | .12                       | --    |
| <u>40 - 49</u>   |                       |                           |       |
| Observed No.:    | 7                     | 11                        | 18    |
| Percentage:      | 9                     | 14                        | 12    |
| Expected No.:    | 9                     | 9                         | --    |
| X <sup>2</sup>   | .44                   | .44                       | --    |
| <u>50 - 59</u>   |                       |                           |       |
| Observed No.:    | 13                    | 11                        | 24    |
| Percentage:      | 17                    | 14                        | 16    |
| Expected No.:    | 12                    | 12                        | --    |
| X <sup>2</sup>   | .08                   | .08                       | --    |
| <u>Over 60</u>   |                       |                           |       |
| Observed No.:    | 2                     | 5                         | 7     |
| Percentage:      | 3                     | 6                         | 6     |
| Expected No.:    | 3.5                   | 3.5                       | --    |
| X <sup>2</sup>   | .64                   | .64                       | --    |

Computed Chi-square value = 2.643  
 Theoretical Chi-square value = 9.49  
 Conclusion accept  $H_0$

of 40 per cent of teachers from non-innovative schools had less experience (2-4 years) than teachers in innovative schools.

TABLE 12.--Contingency Table for Years Experience in Education.

|                         | Innovative<br>Schools | Non-Innovative<br>Schools | Total |
|-------------------------|-----------------------|---------------------------|-------|
| <u>2-4 Years</u>        |                       |                           |       |
| Observed No.:           | 17                    | 31                        | 48    |
| Percentage:             | 22                    | 40                        | 31    |
| Expected No.:           | 24                    | 24                        | --    |
| $\chi^2$                | 2.04                  | 2.04                      | --    |
| <u>5-9 Years</u>        |                       |                           |       |
| Observed No.:           | 32                    | 19                        | 51    |
| Percentage:             | 42                    | 25                        | 33    |
| Expected No.:           | 25.5                  | 25.5                      | --    |
| $\chi^2$                | 1.66                  | 1.6                       | --    |
| <u>10-19 Years</u>      |                       |                           |       |
| Observed No.:           | 18                    | 17                        | 35    |
| Percentage:             | 23                    | 22                        | 22.7  |
| Expected No.:           | 17.5                  | 17.5                      | --    |
| $\chi^2$                | .01                   | .01                       | --    |
| <u>20-29 Years</u>      |                       |                           |       |
| Observed No.:           | 6                     | 8                         | 14    |
| Percentage:             | 8                     | 10                        | 9     |
| Expected No.:           | 7                     | 7                         | --    |
| $\chi^2$                | .14                   | .14                       | --    |
| <u>30 Years or More</u> |                       |                           |       |
| Observed No.:           | 4                     | 2                         | 6     |
| Percentage:             | 5                     | 3                         | 4     |
| Expected No.:           | 3                     | 3                         | --    |
| $\chi^2$                | .33                   | .33                       | --    |

Computed Chi-square value = 8.378

Theoretical Chi-square value = 9.49

Conclusion accept  $H_0$

Years in Present School.--A distribution of teaching experience in their present school is found in Table 13. A chi-square value of 10.86 was generated from the data with 4 degrees of freedom. A tabled value of 9.49 was necessary in order for the variable to be significant.

The variable of experience within the building proved to be significant. A total of 44 per cent of all teachers from innovative schools were in their present building between 5 and 9 years. Sixty per cent of all teachers from non-innovative schools were found to be in their present building only from 2-4 years.

Major Barrier to Educational Change.--A distribution of the major barriers to educational change will be found in Table 14. A chi-square value of 11.22 was generated with a degree of freedom of 6. A tabled value of 12.60 was necessary in order for the value to be significant.

Teachers from schools designated as being innovative indicated two major barriers to educational change. Twenty-six per cent reported the school board and 39 per cent reported a lack of funds as being hinderances to change. Fifty-eight per cent of teachers from schools designated as being non-innovative reported that a lack of funds was the major barrier to educational change.

Socio-economic Status.--A distribution of socio-economic status of the community as perceived by teachers

TABLE 13.--Contingency Table for Years Experience in Present School.

|                         | Innovative<br>Schools | Non-Innovative<br>Schools | Total |
|-------------------------|-----------------------|---------------------------|-------|
| <u>2-4 Years</u>        |                       |                           |       |
| Observed No.:           | 29                    | 46                        | 75    |
| Percentage:             | 38                    | 60                        | 49    |
| Expected No.:           | 37.5                  | 37.5                      | --    |
| X <sup>2</sup>          | 1.93                  | 1.93                      | --    |
| <u>5-9 Years</u>        |                       |                           |       |
| Observed No.:           | 34                    | 18                        | 52    |
| Percentage:             | 44                    | 23                        | 34    |
| Expected No.:           | 26                    | 26                        | --    |
| X <sup>2</sup>          | 2.46                  | 2.46                      | --    |
| <u>10-19 Years</u>      |                       |                           |       |
| Observed No.:           | 6                     | 8                         | 14    |
| Percentage:             | 8                     | 10                        | 9     |
| Expected No.:           | 7                     | 7                         | --    |
| X <sup>2</sup>          | .14                   | .14                       | --    |
| <u>20 Years or More</u> |                       |                           |       |
| Observed No.:           | 4                     | 1                         | 5     |
| Percentage:             | 5                     | 1                         | 3     |
| Expected No.:           | 2.5                   | 2.5                       | --    |
| X <sup>2</sup>          | .9                    | .9                        | --    |

Computed chi-square value = 10.862

Theoretical chi-square value = 9.49

Conclusion - reject  $H_0$  and accept  $H_1$  as a significant difference resulted.

can be found in Table 15. A chi-square value was generated of 33.49 with 4 degrees of freedom. A Tabled value of 9.49 was necessary for significance to occur.

TABLE 14.--Contingency Table for Major Barrier to Educational Change.

|                       | Innovative<br>Schools | Non-Innovative<br>Schools | Total |
|-----------------------|-----------------------|---------------------------|-------|
| <u>Superintendent</u> |                       |                           |       |
| Observed No.:         | 7                     | 4                         | 11    |
| Percentage:           | 9                     | 5                         | 7     |
| Expected No.:         | 5.5                   | 5.5                       | --    |
| X <sup>2</sup>        | .41                   | .41                       | --    |
| <u>Principal</u>      |                       |                           |       |
| Observed No.:         | 3                     | 3                         | 6     |
| Percentage:           | 4                     | 4                         | 4     |
| Expected No.:         | 3                     | 3                         | --    |
| X <sup>2</sup>        | .0                    | .0                        | --    |
| <u>Teachers</u>       |                       |                           |       |
| Observed No.:         | 6                     | 2                         | 8     |
| Percentage:           | 8                     | 3                         | 5     |
| Expected No.:         | 4                     | 4                         | --    |
| X <sup>2</sup>        | 1                     | 1                         | --    |
| <u>School Board</u>   |                       |                           |       |
| Observed No.:         | 20                    | 9                         | 29    |
| Percentage:           | 26                    | 12                        | 19    |
| Expected No.:         | 14.5                  | 14.5                      | --    |
| X <sup>2</sup>        | 2.09                  | 2.09                      | --    |
| <u>Parents</u>        |                       |                           |       |
| Observed No.:         | 5                     | 9                         | 14    |
| Percentage:           | 6                     | 12                        | 9     |
| Expected No.:         | 7                     | 7                         | --    |
| X <sup>2</sup>        | .57                   | .57                       | --    |
| <u>Professors</u>     |                       |                           |       |
| Observed No.:         | 0                     | 0                         | 0     |
| Percentage:           | 0                     | 0                         | 0     |
| Expected No.:         | 0                     | 0                         | --    |
| X <sup>2</sup>        | 0                     | 0                         | --    |

TABLE 14.--Continued.

|                   | Innovative<br>Schools | Non-Innovative<br>Schools | Total |
|-------------------|-----------------------|---------------------------|-------|
| <u>S.D.E.</u>     |                       |                           |       |
| Observed No.:     | 6                     | 5                         | 11    |
| Percentage:       | 8                     | 6                         | 7     |
| Expected No.:     | 5.5                   | 5.5                       | --    |
| X <sup>2</sup>    | .05                   | .05                       | --    |
| <u>Lack Funds</u> |                       |                           |       |
| Observed No.:     | 30                    | 45                        | 75    |
| Percentage:       | 39                    | 58                        | 49    |
| Expected No.:     | 37.5                  | 37.5                      | --    |
| X <sup>2</sup>    | 1.50                  | 1.50                      | --    |

Computed Chi-Square Value = 11.22

Theoretical Chi-Square Value = 12.60

Conclusion Accept  $H_0$

The variable of socio-economic status proved to be the most significant variable tested. A total of 84 per cent of all responses from innovative schools was obtained by combining the individual cells of middle class and middle lower class.

Do You Consider this School to be Innovative?--A distribution of teacher perceptions concerning whether or not they consider their school to be innovative can be found in Table 16. A chi-square value of .86 was obtained with one degree of freedom. A tabled value of 3.84 was necessary in order for a significant difference to occur.

TABLE 15.--Contingency Table for Socio-Economic Status of Community.

|                     | Innovative<br>Schools | Non-Innovative<br>Schools | Total |
|---------------------|-----------------------|---------------------------|-------|
| <u>Upper-Class</u>  |                       |                           |       |
| Observed No.:       | 0                     | 1                         | 1     |
| Percentage:         | 0                     | 1                         | .65   |
| Expected No.:       | .5                    | .5                        | --    |
| $\chi^2$            | .5                    | .5                        | --    |
| <u>Upper-Middle</u> |                       |                           |       |
| Observed No.:       | 4                     | 14                        | 18    |
| Percentage:         | 5                     | 18                        | 12    |
| Expected No.:       | 9                     | 9                         | --    |
| $\chi^2$            | 2.78                  | 2.78                      | --    |
| <u>Middle-Class</u> |                       |                           |       |
| Observed No.:       | 17                    | 40                        | 57    |
| Percentage:         | 22                    | 52                        | 37    |
| Expected No.:       | 28.5                  | 28.5                      | --    |
| $\chi^2$            | 4.64                  | 4.64                      | --    |
| <u>Middle-Lower</u> |                       |                           |       |
| Observed No.:       | 48                    | 22                        | 70    |
| Percentage:         | 62                    | 29                        | 45    |
| Expected No.:       | 35                    | 35                        | --    |
| $\chi^2$            | 4.83                  | 4.83                      | --    |
| <u>Lower-Class</u>  |                       |                           |       |
| Observed No.:       | 8                     | 0                         | 8     |
| Percentage:         | 10                    | 0                         | 5     |
| Expected No.:       | 4                     | 4                         | --    |
| $\chi^2$            | 4                     | 4                         | --    |

Computed chi-square value = 33.49

Theoretical chi-square value = 9.49

Conclusion - reject  $H_0$  and accept  $H_1$  as a significant difference resulted.

It is interesting to note that teachers from both innovative and non-innovative schools considered their building to be innovative. There was a 71 per cent response from innovative schools and a 78 per cent response from non-innovative schools. No significant difference was obtained as both groups were similar in response.

TABLE 16.--Contingency Table for Innovative School.

|                | Innovative<br>Schools | Non-Innovative<br>Schools | Total |
|----------------|-----------------------|---------------------------|-------|
| <u>Yes</u>     |                       |                           |       |
| Observed No.:  | 55                    | 60                        | 115   |
| Percentage:    | 71                    | 78                        | 75    |
| Expected No.:  | 57.5                  | 57.5                      | --    |
| X <sup>2</sup> | .11                   | .11                       | --    |
| <u>No</u>      |                       |                           |       |
| Observed No.:  | 22                    | 17                        | 39    |
| Percentage:    | 29                    | 22                        | 25    |
| Expected No.:  | 19.5                  | 19.5                      | --    |
| X <sup>2</sup> | .32                   | .32                       | --    |

Computed chi-square value = .86

Theoretical chi-square value = 3.84

Conclusion - accept  $H_0$

See Table 17 for a summary of the chi-square analysis.

#### Hypothesis IV

There is No Significant Relationship Between School Climate as Determined by the Teacher and Innovative Practices as Determined by the Principal.

TABLE 17.--SUMMARY OF CHI-SQUARE ANALYSIS  
Biographical and School Characteristics.

| Variable                   | Chi-Square<br>Score Obtained | Degree of<br>Freedom | Tabled<br>Value | Significance    |
|----------------------------|------------------------------|----------------------|-----------------|-----------------|
| Age                        | 2.64                         | 4                    | 9.49            | Not Significant |
| Experience in<br>Education | 3.38                         | 4                    | 9.49            | Not Significant |
| Years in<br>School         | 10.86                        | 4                    | 9.49            | Significant     |
| Barrier to<br>Education    | 11.22                        | 6                    | 12.60           | Not Significant |
| Socio-economic<br>Status   | 33.49                        | 4                    | 9.49            | Significant     |
| Innovative<br>School       | .86                          | 1                    | 3.84            | Not Significant |

A Pearson Product moment correlation value of  $r = .5$  was obtained from comparing school climate and innovative practices. A  $t$  score was obtained to test the significance of  $r$ . This was found to be 1.91. With 11 degrees of freedom, a  $t$  value larger than  $\pm 2.201$  is significant at the .05 level when a two-tailed test is used (Table 18).

No significant differences were indicated by a comparison of the variables of school climate as determined by the teacher and innovative practices as determined by the principals.

TABLE 18.--Statistical Relationship Between Variables  
5 and 1.

| Pearson Product -<br>moment correlation<br>value | Computed<br>t value | d.f. | Level of<br>Significance<br>Value* |
|--------------------------------------------------|---------------------|------|------------------------------------|
| $r = .5$                                         | $t = 1.91$          | 11   | $\pm 2.201$                        |

\* .05 level of significance.

The null hypothesis is accepted as no significant differences occur.

#### Hypothesis V

There is No Significant Relationship Between the Principals' Perception of Innovations and Innovations Observed.

A Pearson product moment correlation value of  $r = .96$  was obtained from testing the relationship of innovation indicated by principal and observations observed when principals were interviewed by this writer. A t score was obtained to test the significance of r. This was found to be  $t = 11.25$  with one degree of freedom. A tabled t value of  $\pm 2.201$  is significant at the .05 level (Table 19).

In no case did principals' indication of innovations taking place correspond to the number of innovations observed when the writer visited the schools (see Table 3).

TABLE 19.--Statistical Relationship Between Variables  
1 and 2.

| Pearson Product -<br>moment correlation<br>value | Computed<br>t value | d.f. | Level of<br>Significance<br>Value* |
|--------------------------------------------------|---------------------|------|------------------------------------|
| $r = .96$                                        | $t = 11.25$         | 1    | $\pm 2.201$                        |

\* .05 level of significance.

The null hypothesis is rejected and the alternate hypothesis is accepted as there is a significant difference computed.

Other Significant Relationships  
Among Selected Variable

Upon completion of analyzing the correlation necessary to answer the questions posed by the study, several significant correlations remained. Those that were deemed to be related and provided additional meaning will be presented in this section.

Findings from Principal Data

TABLE 20.--Sex.

|                           | Male | Female | Total |
|---------------------------|------|--------|-------|
| Innovative Principals     | 5    | 1      | 6     |
| Non-Innovative Principals | 6    | 1      | 7     |
| Total                     | 11   | 2      | 13    |

The majority of principals from each group were male. (Each group had only one female principal.)

TABLE 21.--Age Range.

|             | Innovative<br>Schools | Non-Innovative<br>Schools | Total |
|-------------|-----------------------|---------------------------|-------|
| 20-29       | 0                     | 0                         | 0     |
| 30-39       | 5                     | 6                         | 11    |
| 40-49       | 1                     | 1                         | 2     |
| 50-59       | 0                     | 0                         | 0     |
| 60 and over | 0                     | 0                         | 0     |

Age range showed similarity with 11 of 13 principals in the 30-39 age range. One principal from each group was in the 40-49 age range.

TABLE 22.--Years Experience in Education.

|             | Innovative<br>Schools | Non-Innovative<br>Schools | Total |
|-------------|-----------------------|---------------------------|-------|
| 2-4 Years   | 0                     | 0                         | 0     |
| 5-9 Years   | 4                     | 2                         | 6     |
| 10-19 Years | 2                     | 4                         | 6     |
| 20-29 Years | 0                     | 1                         | 1     |
| 30 and over | 0                     | 0                         | 0     |

Innovative principals had less total experience in education than non-innovative principals. A majority, five out of seven, non-innovative principals were in education almost twice as long as principals from the innovative group.

TABLE 23.--Years in Present School.

|                  | Innovative<br>Schools | Non-Innovative<br>Schools | Total |
|------------------|-----------------------|---------------------------|-------|
| 2-4 Years        | 4                     | 6                         | 10    |
| 5-9 Years        | 2                     | 1                         | 3     |
| 10-19 Years      | 0                     | 0                         | 0     |
| 20 Years or More | 0                     | 0                         | 0     |

Conversely there were more principals from non-innovative schools in the two-four year experience bracket than principals from innovative schools. There was not a single principal with more than nine years experience in the sample.

Principals from innovative schools felt the major barrier to education was a lack of funds. It was interesting to note that even though principals from non-innovative schools agreed they also felt teachers were also a major barrier to educational change.

TABLE 24.--Major Barrier to Educational Change.

|                | Innovative<br>Schools | Non-Innovative<br>Schools | Total |
|----------------|-----------------------|---------------------------|-------|
| Superintendent | 1                     | 0                         | 1     |
| Principal      | 0                     | 0                         | 0     |
| Teacher        | 0                     | 3                         | 3     |
| School Board   | 1                     | 0                         | 1     |
| Parent         | 0                     | 1                         | 1     |
| Professor      | 0                     | 0                         | 0     |
| S.D.E.         | 1                     | 0                         | 1     |
| Lack Funds     | 3                     | 3                         | 6     |

TABLE 25.--Socio-Economic Status.

|              | Innovative<br>Schools | Non-Innovative<br>Schools | Total |
|--------------|-----------------------|---------------------------|-------|
| Upper-Class  | 0                     | 0                         | 0     |
| Upper-Middle | 1                     | 3                         | 4     |
| Middle       | 0                     | 1                         | 1     |
| Middle-Lower | 4                     | 3                         | 7     |
| Lower        | 1                     | 0                         | 1     |

Teachers and principals agreed in respect to socio-economic status. As the table indicates, low socio-economic areas were represented in innovative as well as non-innovative districts. However, more non-innovative schools were represented by upper-middle status districts.

TABLE 26.--Average Yearly Expenditures.

|             | Innovative | Non-Innovative | Total |
|-------------|------------|----------------|-------|
| Less - 299  | 0          | 0              | 0     |
| 300 - 349   | 0          | 0              | 0     |
| 350 - 399   | 0          | 0              | 0     |
| 400 - 449   | 0          | 0              | 0     |
| 450 - 499   | 0          | 0              | 0     |
| 500 - 549   | 0          | 1              | 1     |
| 550 - 599   | 0          | 0              | 0     |
| 600 - 649   | 1          | 2              | 3     |
| 650 - 699   | 0          | 1              | 1     |
| 700 or More | 5          | 3              | 8     |

There was agreement among all principals as to average yearly expenditures. The average was higher for schools designated as innovative. Five of the six innovative principals came from schools with yearly expenditures of over \$700.

TABLE 27.--Enrollment.

|            | Innovative | Non-Innovative | Total |
|------------|------------|----------------|-------|
| 300 - less | 2          | 1              | 3     |
| 301 - 400  | 1          | 3              | 4     |
| 401 - 500  | 1          | 2              | 3     |
| 501 - 600  | 0          | 0              | 0     |
| 601 - 700  | 0          | 0              | 0     |
| 701 - 800  | 2          | 0              | 2     |
| 801 - 900  | 0          | 1              | 1     |
| 901 +      | 0          | 0              | 0     |

The majority of schools, ten of 13, had enrollments of 500 or fewer students. As the table indicates there was no relationship between school enrollment and innovations.

### Findings from Interviews

A secondary purpose of this project was to explore innovative practices reported by each principal and determine the extent and importance of the principal's role. This was accomplished by posing three questions to each principal. Questions included the following: (1) Who were the person(s) responsible for the beginning impetus of each innovation reported? (2) For innovations initiated by the principal, where was the source of information for the idea? and (3) For innovations not initiated by the principal, was there a supporting role played?

### Responsibility for Beginning Impetus of Innovations by Categories

Table 28 shows the response of principals indicating who was responsible for the beginning impetus of the innovations occurring in their buildings. The greatest number was 42 or 42 per cent by principals; 30 or 30 per cent came from teachers; 19 or 19 per cent came from district administration or other administrative staff within the district. Following in decreasing number were 6 or 6 per cent from the superintendents; 2 or 2 per cent from governmental agencies, and the least number came from the community, 1 or 1 per cent.

TABLE 28.--Number and Percentage of Innovations for Beginning Impetus as Reported by Principals.

| Innovations                                                                                                                                                              |                             |   |   |   |  |  |  |  |  |  |  |  |  |  |  |        |         |      |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|---|---|---|--|--|--|--|--|--|--|--|--|--|--|--------|---------|------|
| Beginning<br>Impetus of<br>Innovation                                                                                                                                    |                             |   |   |   |  |  |  |  |  |  |  |  |  |  |  | TOTAL  |         |      |
|                                                                                                                                                                          |                             |   |   |   |  |  |  |  |  |  |  |  |  |  |  | Number | Percent |      |
| Superintendent<br>Principal<br>Teachers<br>District Admin.<br>and Supervisory<br>Staff<br>School Board<br>Community<br>S.D.E. & U.S.O.E.<br>Textbook Publishers<br>Total | Individualized Instruction  | 1 | 5 | 7 |  |  |  |  |  |  |  |  |  |  |  |        | 6       | 6.0  |
|                                                                                                                                                                          | Multi-Media Center          |   | 6 | 2 |  |  |  |  |  |  |  |  |  |  |  |        | 42      | 42.0 |
|                                                                                                                                                                          | Nongraded School            |   | 2 | 2 |  |  |  |  |  |  |  |  |  |  |  |        | 30      | 30.0 |
|                                                                                                                                                                          | Programmed Learning         |   |   |   |  |  |  |  |  |  |  |  |  |  |  |        |         |      |
|                                                                                                                                                                          | Parent-Teacher Conference   |   |   |   |  |  |  |  |  |  |  |  |  |  |  |        |         |      |
|                                                                                                                                                                          | Behavioral Objective        |   |   |   |  |  |  |  |  |  |  |  |  |  |  |        |         |      |
|                                                                                                                                                                          | Performance Contracting     |   |   |   |  |  |  |  |  |  |  |  |  |  |  |        |         |      |
|                                                                                                                                                                          | Outdoor Education           |   |   |   |  |  |  |  |  |  |  |  |  |  |  |        |         |      |
|                                                                                                                                                                          | Sex Education               |   |   |   |  |  |  |  |  |  |  |  |  |  |  |        |         |      |
|                                                                                                                                                                          | Perceptual - Motor Learning |   |   |   |  |  |  |  |  |  |  |  |  |  |  |        |         |      |
|                                                                                                                                                                          | Preschool Education         |   |   |   |  |  |  |  |  |  |  |  |  |  |  |        |         |      |
|                                                                                                                                                                          | Extended School Year        |   |   |   |  |  |  |  |  |  |  |  |  |  |  |        |         |      |
|                                                                                                                                                                          | Differentiated Staffing     |   |   |   |  |  |  |  |  |  |  |  |  |  |  |        |         |      |
|                                                                                                                                                                          | Team Teaching               |   |   |   |  |  |  |  |  |  |  |  |  |  |  |        |         |      |
| Teacher Aides                                                                                                                                                            |                             |   |   |   |  |  |  |  |  |  |  |  |  |  |  |        |         |      |
|                                                                                                                                                                          |                             |   |   |   |  |  |  |  |  |  |  |  |  |  |  |        |         |      |
|                                                                                                                                                                          |                             |   |   |   |  |  |  |  |  |  |  |  |  |  |  |        |         |      |
|                                                                                                                                                                          |                             |   |   |   |  |  |  |  |  |  |  |  |  |  |  |        |         |      |
|                                                                                                                                                                          |                             |   |   |   |  |  |  |  |  |  |  |  |  |  |  |        |         |      |
|                                                                                                                                                                          |                             |   |   |   |  |  |  |  |  |  |  |  |  |  |  |        |         |      |
|                                                                                                                                                                          |                             |   |   |   |  |  |  |  |  |  |  |  |  |  |  |        |         |      |
|                                                                                                                                                                          |                             |   |   |   |  |  |  |  |  |  |  |  |  |  |  |        |         |      |
|                                                                                                                                                                          |                             |   |   |   |  |  |  |  |  |  |  |  |  |  |  |        |         |      |
|                                                                                                                                                                          |                             |   |   |   |  |  |  |  |  |  |  |  |  |  |  |        |         |      |
|                                                                                                                                                                          |                             |   |   |   |  |  |  |  |  |  |  |  |  |  |  |        |         |      |
|                                                                                                                                                                          |                             |   |   |   |  |  |  |  |  |  |  |  |  |  |  |        |         |      |
|                                                                                                                                                                          |                             |   |   |   |  |  |  |  |  |  |  |  |  |  |  |        |         |      |
|                                                                                                                                                                          |                             |   |   |   |  |  |  |  |  |  |  |  |  |  |  |        |         |      |
|                                                                                                                                                                          |                             |   |   |   |  |  |  |  |  |  |  |  |  |  |  |        |         |      |
|                                                                                                                                                                          |                             |   |   |   |  |  |  |  |  |  |  |  |  |  |  |        |         |      |
|                                                                                                                                                                          |                             |   |   |   |  |  |  |  |  |  |  |  |  |  |  |        |         |      |
|                                                                                                                                                                          |                             |   |   |   |  |  |  |  |  |  |  |  |  |  |  |        |         |      |
|                                                                                                                                                                          |                             |   |   |   |  |  |  |  |  |  |  |  |  |  |  |        |         |      |
|                                                                                                                                                                          |                             |   |   |   |  |  |  |  |  |  |  |  |  |  |  |        |         |      |
|                                                                                                                                                                          |                             |   |   |   |  |  |  |  |  |  |  |  |  |  |  |        |         |      |
|                                                                                                                                                                          |                             |   |   |   |  |  |  |  |  |  |  |  |  |  |  |        |         |      |
|                                                                                                                                                                          |                             |   |   |   |  |  |  |  |  |  |  |  |  |  |  |        |         |      |
|                                                                                                                                                                          |                             |   |   |   |  |  |  |  |  |  |  |  |  |  |  |        |         |      |
|                                                                                                                                                                          |                             |   |   |   |  |  |  |  |  |  |  |  |  |  |  |        |         |      |
|                                                                                                                                                                          |                             |   |   |   |  |  |  |  |  |  |  |  |  |  |  |        |         |      |
|                                                                                                                                                                          |                             |   |   |   |  |  |  |  |  |  |  |  |  |  |  |        |         |      |
|                                                                                                                                                                          |                             |   |   |   |  |  |  |  |  |  |  |  |  |  |  |        |         |      |
|                                                                                                                                                                          |                             |   |   |   |  |  |  |  |  |  |  |  |  |  |  |        |         |      |
|                                                                                                                                                                          |                             |   |   |   |  |  |  |  |  |  |  |  |  |  |  |        |         |      |
|                                                                                                                                                                          |                             |   |   |   |  |  |  |  |  |  |  |  |  |  |  |        |         |      |
|                                                                                                                                                                          |                             |   |   |   |  |  |  |  |  |  |  |  |  |  |  |        |         |      |
|                                                                                                                                                                          |                             |   |   |   |  |  |  |  |  |  |  |  |  |  |  |        |         |      |
|                                                                                                                                                                          |                             |   |   |   |  |  |  |  |  |  |  |  |  |  |  |        |         |      |
|                                                                                                                                                                          |                             |   |   |   |  |  |  |  |  |  |  |  |  |  |  |        |         |      |
|                                                                                                                                                                          |                             |   |   |   |  |  |  |  |  |  |  |  |  |  |  |        |         |      |
|                                                                                                                                                                          |                             |   |   |   |  |  |  |  |  |  |  |  |  |  |  |        |         |      |
|                                                                                                                                                                          |                             |   |   |   |  |  |  |  |  |  |  |  |  |  |  |        |         |      |
|                                                                                                                                                                          |                             |   |   |   |  |  |  |  |  |  |  |  |  |  |  |        |         |      |
|                                                                                                                                                                          |                             |   |   |   |  |  |  |  |  |  |  |  |  |  |  |        |         |      |
|                                                                                                                                                                          |                             |   |   |   |  |  |  |  |  |  |  |  |  |  |  |        |         |      |
|                                                                                                                                                                          |                             |   |   |   |  |  |  |  |  |  |  |  |  |  |  |        |         |      |
|                                                                                                                                                                          |                             |   |   |   |  |  |  |  |  |  |  |  |  |  |  |        |         |      |
|                                                                                                                                                                          |                             |   |   |   |  |  |  |  |  |  |  |  |  |  |  |        |         |      |
|                                                                                                                                                                          |                             |   |   |   |  |  |  |  |  |  |  |  |  |  |  |        |         |      |
|                                                                                                                                                                          |                             |   |   |   |  |  |  |  |  |  |  |  |  |  |  |        |         |      |
|                                                                                                                                                                          |                             |   |   |   |  |  |  |  |  |  |  |  |  |  |  |        |         |      |
|                                                                                                                                                                          |                             |   |   |   |  |  |  |  |  |  |  |  |  |  |  |        |         |      |
|                                                                                                                                                                          |                             |   |   |   |  |  |  |  |  |  |  |  |  |  |  |        |         |      |
|                                                                                                                                                                          |                             |   |   |   |  |  |  |  |  |  |  |  |  |  |  |        |         |      |
|                                                                                                                                                                          |                             |   |   |   |  |  |  |  |  |  |  |  |  |  |  |        |         |      |
|                                                                                                                                                                          |                             |   |   |   |  |  |  |  |  |  |  |  |  |  |  |        |         |      |
|                                                                                                                                                                          |                             |   |   |   |  |  |  |  |  |  |  |  |  |  |  |        |         |      |
|                                                                                                                                                                          |                             |   |   |   |  |  |  |  |  |  |  |  |  |  |  |        |         |      |
|                                                                                                                                                                          |                             |   |   |   |  |  |  |  |  |  |  |  |  |  |  |        |         |      |
|                                                                                                                                                                          |                             |   |   |   |  |  |  |  |  |  |  |  |  |  |  |        |         |      |
|                                                                                                                                                                          |                             |   |   |   |  |  |  |  |  |  |  |  |  |  |  |        |         |      |
|                                                                                                                                                                          |                             |   |   |   |  |  |  |  |  |  |  |  |  |  |  |        |         |      |
|                                                                                                                                                                          |                             |   |   |   |  |  |  |  |  |  |  |  |  |  |  |        |         |      |

Information Source of Innovations  
Initiated by Principal

The purpose of this question was to identify the source of ideas that resulted in the innovation being initiated by the principal and whether this source originated from within or without the local school district.

Table 29 shows that the principals' best source for innovations to be meetings, conferences and workshops held outside of the district, 28 or 34.2 per cent. Conferences, meetings, workshops held in the district was next with 14 responses or 17.1 per cent. It was interesting to note that fellow administrators both in and out of the district did not play a large role for the initiation of innovation, a total of 13 or 16 per cent.

Principal's Role for Innovation Initiated  
by Others

Table 30 records the responses of principals concerning innovations which were not initiated by themselves but were ongoing in their buildings. Thirty-six or 38.7 per cent indicated innovations were being maintained through their efforts and interests. Another 20 or 21.5 per cent indicated they contributed greatly to the adoption of the innovation while 16 or 17.2 per cent responded the innovation was being carried on successfully due to their influence. Finally 21 or 22.5 per cent indicated they shared little or no responsibility for the innovation.

TABLE 29.--Number and Percentages of Innovations for those Initiated by Principals.

| Source of<br>Information<br>By Principal             | Innovations                |                    |                  |                     |                           |                      |                         |                   |               |                           |                     |                      |                         |               | TOTAL         |        |            |
|------------------------------------------------------|----------------------------|--------------------|------------------|---------------------|---------------------------|----------------------|-------------------------|-------------------|---------------|---------------------------|---------------------|----------------------|-------------------------|---------------|---------------|--------|------------|
|                                                      | Individualized Instruction | Multi-Media Center | Nongraded School | Programmed Learning | Parent-Teacher Conference | Behavioral Objective | Performance Contracting | Outdoor Education | Sex Education | Perceptual-Motor Learning | Preschool Education | Extended School Year | Differentiated Staffing | Team Teaching | Teacher Aides | Number | Percentage |
|                                                      |                            |                    |                  |                     |                           |                      |                         |                   |               |                           |                     |                      |                         |               |               |        |            |
| Fellow Principal<br>in district                      |                            | 1                  |                  |                     | 2                         | 1                    | 1                       |                   |               |                           |                     |                      |                         |               | 1             | 6      | 7.4        |
| Fellow Principal<br>out of district                  |                            | 1                  | 1                |                     | 1                         |                      |                         |                   | 1             |                           | 1                   |                      | 1                       |               | 1             | 7      | 8.6        |
| Professional friends<br>in district                  | 1                          | 1                  |                  |                     | 1                         |                      |                         | 1                 |               | 1                         | 1                   |                      |                         |               | 1             | 7      | 8.6        |
| Professional friends<br>out of district              | 1                          |                    |                  |                     | 1                         |                      |                         |                   |               | 1                         |                     |                      |                         | 2             | 2             | 7      | 8.6        |
| Meetings, conferences ,<br>workshops in district     | 1                          | 2                  |                  | 1                   | 1                         | 3                    |                         | 1                 | 1             |                           |                     |                      |                         | 2             | 2             | 14     | 17.1       |
| Meetings, conferences,work-<br>shops out of district | 5                          | 2                  | 1                | 1                   | 4                         | 2                    |                         | 1                 | 1             | 2                         | 1                   |                      | 1                       | 4             | 3             | 28     | 34.2       |
| Professional Journals                                | 1                          |                    | 1                |                     | 2                         |                      |                         |                   |               | 2                         |                     |                      |                         |               | 1             | 7      | 7.3        |
| University Classes                                   | 1                          | 1                  |                  |                     |                           | 1                    |                         |                   |               |                           |                     |                      |                         |               |               | 3      | 3.7        |
| Other                                                |                            |                    |                  |                     |                           | 1                    |                         |                   |               |                           |                     |                      |                         | 1             | 1             | 3      | 3.7        |
| TOTAL                                                | 10                         | 8                  | 3                | 2                   | 12                        | 8                    | 1                       | 3                 | 3             | 6                         | 3                   |                      | 2                       | 9             | 12            | 82     | 99.3       |

TABLE 30.--Number and Percentages of Innovations for those not Initiated by Principals.

| Innovations                                 |                            |                     |                  |                     |                            |                       |                         |                   |               |                           |                     |                      |                         |
|---------------------------------------------|----------------------------|---------------------|------------------|---------------------|----------------------------|-----------------------|-------------------------|-------------------|---------------|---------------------------|---------------------|----------------------|-------------------------|
| Source of Information Not by Principal      |                            |                     |                  |                     |                            |                       |                         |                   |               |                           |                     |                      |                         |
|                                             | Individualized Instruction | Multi-Media Centers | Nongraded School | Programmed Learning | Parent-Teacher Conferences | Behavioral Objectives | Performance Contracting | Outdoor Education | Sex Education | Perceptual-Motor Learning | Preschool Education | Extended School Year | Differentiated Staffing |
| Contributed greatly to its adoption         | 1                          | 2                   | 2                |                     | 2                          | 1                     |                         | 1                 | 1             | 2                         | 2                   |                      | 2                       |
|                                             | 20                         | 21.5                |                  |                     |                            |                       |                         |                   |               |                           |                     |                      |                         |
| Success due in large part to my influence   | 1                          | 2                   |                  | 1                   | 1                          | 2                     |                         |                   | 2             | 2                         |                     |                      | 1                       |
|                                             | 16                         | 17.2                |                  |                     |                            |                       |                         |                   |               |                           |                     |                      |                         |
| Maintained through my efforts and interests | 6                          | 3                   | 1                | 2                   | 6                          | 5                     | 1                       | 1                 | 3             | 3                         | 2                   |                      | 1                       |
|                                             | 36                         | 38.7                |                  |                     |                            |                       |                         |                   |               |                           |                     |                      |                         |
| Shared little or no responsibility          | 2                          | 2                   |                  | 1                   | 3                          | 2                     |                         | 2                 |               | 1                         | 1                   |                      | 4                       |
|                                             | 21                         | 22.5                |                  |                     |                            |                       |                         |                   |               |                           |                     |                      |                         |
| Total                                       | 10                         | 9                   | 3                | 4                   | 12                         | 10                    | 1                       | 4                 | 6             | 8                         | 5                   | 0                    | 2                       |
|                                             | 93                         | 99.9                |                  |                     |                            |                       |                         |                   |               |                           |                     |                      |                         |
| TOTAL                                       |                            |                     |                  |                     |                            |                       |                         |                   |               |                           |                     |                      |                         |
| Number                                      |                            |                     |                  |                     |                            |                       |                         |                   |               |                           |                     |                      | Percentage              |
|                                             |                            |                     |                  |                     |                            |                       |                         |                   |               |                           |                     |                      |                         |

### Summary

All data collected while pursuing the objectives of this study have been presented and analyzed in this chapter. Various techniques of data comparison were used including correlation coefficients calculated for variables submitted to statistical analysis. All hypotheses were tested at the .05 level for appropriateness of significance and the following conclusions made:

#### Hypothesis I

There is no Significant Relationship Between the Teachers' Perception of the Principal Leadership Style and Innovative Practices as Determined by the Principal.

The null hypothesis was rejected and the alternate hypothesis was accepted as a significant relationship was found.

#### Hypothesis II

There is no Significant Relationship Between Teachers' Perception of Principals' Leadership Style and School Climate as Determined by the Teachers.

The null hypothesis was rejected as a relationship was found to exist between the variables and the alternate hypothesis was accepted.

#### Hypothesis III

There is no Significant Relationship Between Biographical and School Characteristics, as Reported by Principals and Teachers; and Innovative Practices as Determined by the Principal.

This hypothesis was divided in areas of age, years experience in education, years in present school, major barrier to educational change, socio-economic status, and the consideration of whether or not the school is considered innovative. The variables of age, years experience in education, major barrier to change and whether or not the school was considered to be innovative were accepted as no significant differences were found. The variables of years experience in present school and socio-economic status were rejected as significant differences were found to exist.

#### Hypothesis IV

There is no Significant Relationship Between School Climate as Determined by the Teacher and Innovative Practices as Determined by the Principal.

The null hypothesis was accepted and the alternate hypothesis was rejected as no significant differences were found.

#### Hypothesis V

There is no Significant Relationship Between the Principals' Perception of Innovations and Innovations Observed.

The null hypothesis was rejected and the alternate hypothesis was accepted as a significant difference was found.

## CHAPTER V

### SUMMARY AND CONCLUSIONS

#### Summary

This study proposed to examine the principalship as a key element in determining the extent of innovative practices occurring within an elementary school. Relationships were sought between the principal's leadership style, the school's organizational climate, other selected biographical and school characteristics and innovativeness. Through these factors connecting the principal to innovation, answers were sought explaining the variance and wide divergence in schools' ability to reflect the changing needs of today.

A sample of thirteen public elementary schools were selected for the study. Principals were requested to complete a Checklist of Innovations survey and furnish biographical and school information data. The 154 teachers furnished data by completing the Organizational Climate Description Questionnaire, Principal Role Behavior Opinionnaire, and biographical and school information. Additional principal involvement included an interview by this writer to determine what innovations were actually occurring.

Data obtained were of two types. Scores that were derived from the various instruments and other nonstatistical

information were recorded. Instrument scores from each of the buildings became school scores plus mean sample scores for the complete sample. Individual school scores plus mean sample scores became the variables to be examined. Interview information was reported separately and not submitted to statistical analysis.

To determine whether or not a relationship existed between variables, data were submitted to the Michigan State University computer center. The product-moment correlation coefficient and chi-square values were generated to test the variables. The t distribution was used to establish the range of significance at the .05 level.

Those questions answered through statistical inference became the operational hypotheses and were tested by being cast into null hypotheses as follows:

1. There is no significant relationship between the teachers' perceptions of the principal leadership style and innovative practices as determined by the principal.
2. There is no significant relationship between teachers' perception of principals leadership style and school climate as determined by the teachers.
3. There is no significant relationship between biographical and school characteristics as reported by principals and teachers and innovative practices as determined by the principal.

4. There is no significant relationship between school climate as determined by the teacher and innovative practices as determined by the principal.

5. There is no significant relationship between the principal's perception of innovations and innovations observed.

### Conclusions Related to the Variables

#### Hypothecated Question

1. The principals' leadership style as measured on a nomothetic-idiographic continuum, did show a significant relationship to innovative practices measured for each school.

2. The data strongly indicated a relationship between the principals' leadership style and the organizational climate of the schools. Principals who were more idiographic in their leadership style were also in schools having a more open organizational climate. The data seemed to suggest that where a low leadership score was produced there would also exist a high climate score.

3. The innovative score computed for each building did relate to certain biographical and school characteristics. The factors most likely to predict the degree of innovative practices were those of years of experience in present school and the socio-economic status of the community.

4. School climate, greatly reflecting the morale of the staff, did not appear to be a determining factor in school innovation. Innovative schools were not more open in their climate than schools with a more closed climate.

5. In all cases the principals' total number of innovations did not agree with the number of innovations observed by the writer.

#### Other Variables

6. The age range of principals showed that 11 of 13 principals were in the 30-39 age bracket. Only one principal from innovative and one principal from non-innovative schools were over 40 years of age. Therefore age of the principal had no relationship to the degree of innovativeness.

7. Innovative principals had fewer total years of experience in education than non-innovative principals. A majority of non-innovative principals have been in education twice as long as principals from innovative schools. It seems that the more experience a principal has the less innovative he tends to be.

8. Principals from innovative schools felt the major barrier to education was a lack of funds. Principals from non-innovative schools concurred but felt teachers were also a major barrier to educational change.

9. Principals agreed with teachers in that they felt the socio-economic status of the district to be an important variable in the innovative process.

10. Average yearly expenditures were greater for schools designated as being innovative. Principals and teachers both indicated lack of funds to be a major barrier to educational change.

11. Schools with a more open climate came from those designated as being innovative. This indicates teachers view the school as being innovative where the principal is more idiographic in leadership style.

#### Conclusions Related to Innovative Practices

1. As one might expect, principals were responsible for the majority of the innovations occurring within their schools. Teachers were close behind in being the impetus of educational change within the school.

2. Major sources of information for new ideas leading to innovations originated outside the local school district.

3. Principals had little or no involvement with the initiating, encouraging, or helping in 22.5 per cent of all innovations reported. Of the innovations reported 38.7 per cent of principals felt the innovations to be maintained through their effort and interest.

### Implications

Since the statistical technique used in this study shows relationship only, cause and effect has to be inferred from a theoretical base.

1. The failure of this study to identify a specific style of leadership with innovative practices supports the theory that leader behavior of the principal is derived simultaneously from the interaction between demands of the institutions and needs of the individuals. Innovations consisted of material acquisition and program development. Principal leadership style consisted of both nomothetic and idiographic dimensions. As innovations become more content and process oriented, requiring basic changes in the instructional program for implementation, a principal capable of being more idiographic in leadership style would seem necessary.

2. Indications are that teachers in their first five years of teaching should be exposed to extensive inservice experiences in innovative practices.

3. Principals might become more effective as educational leaders if they could more accurately perceive their relationships with teachers. Incongruence of perception seems to indicate a lack of working cooperatively together in planning and implementing the educational program. Principals need to recognize that their leadership style may not be viewed by teachers as they would like. Verbal and nonverbal communication should be improved.

4. School systems must examine their policies and procedures as they contribute to a principal's inability to create a climate conducive to high morale and staff reception to change. Continual feedback must be provided for proper evaluation. Productivity increases if people know how they are doing, otherwise apathy sets in.

5. Increased need and demand for involvement in the decision making and implementation process for both principals and teachers is needed.

6. Working alone as generalists, capable of being all things to all people, is an outmoded concept for both teachers and principals. Important educational decisions must be the result of cooperative teaming effort, not the prerogative of individuals. Shared responsibility for the total program would result in a redefinition of roles.

7. Greater opportunities are needed for educators to share ideas, observe new programs, discuss and debate the issues of education. Attendance should be encouraged and supported to county, regional, state, and national meetings and workshops where new methods, processes, techniques, and materials are seen and demonstrated.

8. Since the innovations that principals perceived in their schools did not always exist, it appears that principals need to have a clearer conception of what constitutes an innovation. It would necessitate that principals do the following: adequate research, visit schools,

attend conferences, and consult experts to evaluate the particular innovation under consideration.

#### Recommendations for Further Study

1. Research should be conducted on educational innovation as an acceptance of ideas rather than as generally accepted adoption of objects. The profession needs to develop a means of measuring one's ability to be flexible, receptive to new ideas, and experimental in nature.
2. Studies should be undertaken to identify the criteria on which to base the identification of innovative practices. This is not to imply that uniform standards should be established, but rather the provision of steps or degrees along a continuum giving direction and assistance in helping to evaluate programs and provide a type of feedback.
3. While the findings of this study did not statistically indicate significance between the school climate and innovative practices, sufficient indications were revealed to warrant continued research on the relationship of the organizational climate of the school to that of innovativeness.
4. More definitive research should be undertaken establishing the underlying causes contributing to a school's climate being closed. Experimental studies should investigate the effect of variables other than the principal.

5. A replication of this study might be made comparing school districts of various sizes with various degrees of bureaucratic structure.

6. In order to bring into sharper focus leadership style and other variables, a larger sample should be selected to include only those schools clearly on one end of the innovative continuum.

7. A research project might be considered to explore relationships between professional staffs' attitude toward change, the degree of responsibility given the school administrator, the organizational climate of the central administration staff, and innovative practices in schools.

8. The five to nine year experience group showed greater innovativeness than the one to four year experience group. It is recommended that a study be conducted which would include teaching experience greater than nine years to determine whether or not the degree of innovativeness would continue to grow.

## APPENDICES

APPENDIX A

COVER LETTERS

LETTER SENT TO PRINCIPAL

October 2, 1974

Dear

Your willingness to take part in this study examining the principals' leadership style and the personality of the school is greatly appreciated.

Data will be collected by teachers responding to a frequently used questionnaire that measures the "personality" of the school (Organizational Climate Description Questionnaire) and an instrument called the "Principals' Role Behavior Opinionnaire." As your part you have already completed a survey sheet. I would also appreciate you completing the enclosed "Principals Perception of Innovative Practices" form enclosed with this letter.

I will be contacting you within the next several weeks to arrange a personal interview dealing with the changes in your school.

Both your involvement and your staff's involvement should not take over forty-five minutes in time.

Sincerely yours,

A. Arthur Behrmann

INSTRUCTION LETTER SENT  
TO PRINCIPAL

October 4, 1974

Dear

Enclosed in the attached envelope are the materials that your staff should complete as their part in the study being conducted at Michigan State University dealing with the principal's role and innovations.

Please follow the instructions listed below. Consistency between schools is important for valid research to be conducted.

1. This envelope should be opened in the presence of the faculty at the date and time agreed upon for completing the materials enclosed.
2. Pencils should be used, enabling more accuracy of scoring in the event of corrections or changes.
3. Teachers should begin immediately, starting with "Biographical Information" and continuing through all pages. Specific instructions are on each instrument.
4. When all pages have been completed, the instruments should be placed in the enclosed self-addressed, stamped envelope, along with any unused materials, sealed and mailed by the school secretary or teacher representative.

Thank you for your time and cooperation and that of your staff.

Sincerely,

A. Arthur Behrmann

Enclosure

LETTER SENT TO TEACHERS

October 4, 1974

Dear Teachers,

Your willingness to take part in this study, conducted at Michigan State University, examining the principal's leadership style and the personality of the school, is greatly appreciated.

As your part, you will be asked to complete a biographical data sheet, the Organizational Climate Description Questionnaire and the Principal Role Behavior Opinionnaire. These instruments should not require more than thirty to forty minutes of your time. Specific directions for completing the forms will be found on the instruments themselves.

Complete anonymity will be maintained at all times. All data will be compiled by school number only, no names please. The completed instruments will be placed in a large envelope, sealed and mailed by a teacher representative or the school secretary the afternoon after completion by you.

There will be no possible way to later identify respondents, therefore complete, frank answers to all questions is requested.

A most sincere "thank you" for your help in making this research project possible.

Sincerely,

A. Arthur Behrmann

FOLLOW-UP LETTER SENT  
TO PRINCIPALS

October 25, 1974

Dear

Thank you so much for the time spent with me several weeks ago. I realize how busy you and your staffs are and how valuable your time is. It sometimes seems a chore to fill out another survey but it is really important to me.

If you have not been able to return the completed opinionnaires as yet and have any questions please feel free to call me collect at 517-694-0752.

Once again please extend my thanks to your staff and accept my personal thanks for your cooperation and support.

Many thanks,

A. Arthur Behrmann

APPENDIX B

INSTRUMENTS

Check List of Changes

Name \_\_\_\_\_ Years Principal in Present Building \_\_\_\_\_  
 School \_\_\_\_\_ District \_\_\_\_\_  
 School Address \_\_\_\_\_ Phone \_\_\_\_\_  
 Grades in School \_\_\_\_\_ School Enrollment \_\_\_\_\_ Full Time Staff \_\_\_\_\_  
 -----

Directions: Opposite each change place an X in column 1 and 2 when applicable, leave blank if not. If you X column 1 or 2, then complete column 3 when possible.

|                                                                       | 1                                 | 2                               | 3                                |
|-----------------------------------------------------------------------|-----------------------------------|---------------------------------|----------------------------------|
| Changes <sup>1</sup>                                                  | Currently in use or being Planned | Planned for 1974-75 School Year | Involvement Grade No. Level Cla. |
| 1. Individualized Instruction                                         |                                   |                                 |                                  |
| 2. Multi-Media Centers                                                |                                   |                                 |                                  |
| 3. The Nongraded School                                               |                                   |                                 |                                  |
| 4. Programmed Learning:<br>Particularly Computer Assisted Instruction |                                   |                                 |                                  |
| 5. Parent-Teacher Conferences                                         |                                   |                                 |                                  |
| 6. Behavioral Objectives                                              |                                   |                                 |                                  |
| 7. Performance Contracting                                            |                                   |                                 |                                  |
| 8. Outdoor Education                                                  |                                   |                                 |                                  |
| 9. Sex Education                                                      |                                   |                                 |                                  |
| 10. Perceptual-Motor Learning                                         |                                   |                                 |                                  |
| 11. Preschool Education                                               |                                   |                                 |                                  |
| 12. Extended School Year                                              |                                   |                                 |                                  |
| 13. Differentiated Staffing                                           |                                   |                                 |                                  |
| 14. Team Teaching                                                     |                                   |                                 |                                  |
| 15. Teacher Aides                                                     |                                   |                                 |                                  |

<sup>1</sup>Herbert Von Haden and Jean Marie King, Innovations in Education: Their Pros and Cons, Charles A. Jones Publishing Co., Worthington, Ohio.

BIOGRAPHICAL INFORMATION

Please place a check indicating the appropriate category for each statement. For all categories requesting years as a response, count the current school year.

## 1. Sex:

(1) \_\_\_\_\_ Male

(2) \_\_\_\_\_ Female

## 2. Age Range:

(1) \_\_\_\_\_ 20-29

(4) \_\_\_\_\_ 50-59

(2) \_\_\_\_\_ 30-39

(5) \_\_\_\_\_ 60-over

(3) \_\_\_\_\_ 40-49

## 3. Years experience in education:

(1) \_\_\_\_\_ 1st year

(4) \_\_\_\_\_ 10-19 years

(2) \_\_\_\_\_ 2-4 years

(5) \_\_\_\_\_ 20-29 years

(3) \_\_\_\_\_ 5-9 years

(6) \_\_\_\_\_ 30 years or more

## 4. Years in present school:

(1) \_\_\_\_\_ 1st year

(4) \_\_\_\_\_ 10-19 years

(2) \_\_\_\_\_ 2-4 years

(5) \_\_\_\_\_ 20 years or  
more

(3) \_\_\_\_\_ 5-9 years

5. What do you consider to be the major barrier to educational change? (Mark only one.)

(1) \_\_\_\_\_ Superintendent

(5) \_\_\_\_\_ Parents

(2) \_\_\_\_\_ Principal

(6) \_\_\_\_\_ College Prof.

(3) \_\_\_\_\_ Teachers

(7) \_\_\_\_\_ State Dept. of  
Education

(4) \_\_\_\_\_ School Board

(8) \_\_\_\_\_ Lack of funds

## 6. Socio-economic status of your community:

- |                        |                        |
|------------------------|------------------------|
| (1) _____ Upper Class  | (4) _____ Middle-Lower |
| (2) _____ Upper-Middle | (5) _____ Lower Class  |
| (3) _____ Middle Class |                        |

7. Do you consider this school to be innovative?  
(Teachers only)

- |               |              |
|---------------|--------------|
| (1) _____ Yes | (2) _____ No |
|---------------|--------------|

## 8. Average yearly expenditure per child: (Principals only)

- |                         |                         |
|-------------------------|-------------------------|
| (0) _____ \$299 or less | (5) _____ \$500-\$549   |
| (1) _____ \$300-\$349   | (6) _____ \$550-\$599   |
| (2) _____ \$350-\$399   | (7) _____ \$600-\$649   |
| (3) _____ \$400-\$449   | (8) _____ \$650-\$699   |
| (4) _____ \$450-\$499   | (9) _____ \$700 or more |

## 9. Enrollment: (Principals only)

- |                       |                       |
|-----------------------|-----------------------|
| (1) _____ 300 or less | (5) _____ 601-700     |
| (2) _____ 301-400     | (6) _____ 701-800     |
| (3) _____ 401-500     | (7) _____ 801-900     |
| (4) _____ 501-600     | (8) _____ 901 or more |

Principal's Perception  
of Innovative Practices

|                                                                       | School Number _____ |       |       |
|-----------------------------------------------------------------------|---------------------|-------|-------|
|                                                                       | A                   | B     | C     |
| 1. Individualized Instruction                                         | _____               | _____ | _____ |
| 2. Multi-Media Centers                                                | _____               | _____ | _____ |
| 3. The Nongraded School                                               | _____               | _____ | _____ |
| 4. Programmed Learning:<br>Particularly Computer Assisted Instruction | _____               | _____ | _____ |
| 5. Parent-Teacher Conferences                                         | _____               | _____ | _____ |
| 6. Behavioral Objectives                                              | _____               | _____ | _____ |
| 7. Performance Contracting                                            | _____               | _____ | _____ |
| 8. Outdoor Education                                                  | _____               | _____ | _____ |
| 9. Sex Education                                                      | _____               | _____ | _____ |
| 10. Perceptual-Motor Learning                                         | _____               | _____ | _____ |
| 11. Preschool Education                                               | _____               | _____ | _____ |
| 12. Extended School Year                                              | _____               | _____ | _____ |
| 13. Differentiated Staffing                                           | _____               | _____ | _____ |
| 14. Team Teaching                                                     | _____               | _____ | _____ |
| 15. Teacher Aides                                                     | _____               | _____ | _____ |

## Key to Principal Interview Schedule

## A. Person(s) responsible for the beginning impetus of each innovation.

- |                                                  |                                                        |
|--------------------------------------------------|--------------------------------------------------------|
| 1. Superintendent                                | 6. Community                                           |
| 2. Principal                                     | 7. State Department of Education                       |
| 3. Teachers                                      | 8. U.S. Office of Education and other Federal Agencies |
| 4. District Administrative and Supervisory Staff | 9. Textbook Publishers                                 |
| 5. School Board                                  | 10. Other _____                                        |

## B. What was your source of information for innovations initiated by you?

1. Fellow principals in district
2. Fellow principals out of district
3. Professional friends in district
4. Professional friends out of district
5. Meetings, conferences, workshops, in district
6. Meetings, conferences, workshops, out of district
7. Professional journals and publications
8. University classes
9. Other \_\_\_\_\_

## C. Even though you did not initiate these innovations, the following applies:

1. I contributed greatly to its adoption.
2. Success due in large part to my influence.
3. Innovation is being maintained through my efforts and interest.
4. I shared little or no responsibility.

Principal Role Behavior<sup>1</sup>

People have different ideas about what school principals do. Read through the items in the Principal Role Behavior opinionnaire and think about the extent to which you would say your principal carries out the task in the manner described in each item.

INSTRUCTIONS:

Indicate your responses to each item by circling the number that best represents how often you think your principal does carry out the task in the manner described.

Each number in each column refers to the frequency to which your principal does carry out the task in the manner described.

All answers are to be recorded on the answer sheet which is the last page of this instrument. -NOTE- Items are arranged in a left to right manner, like reading.

|         |       |           |              |        |       |
|---------|-------|-----------|--------------|--------|-------|
| 1       | 2     | 3         | 4            | 5      | 6     |
| Usually | Often | Sometimes | Occasionally | Rarely | Never |

SAMPLE

Item - Evaluates teacher effectiveness on the basis of how much they follow school policies and procedures and carry out the planned program.

1 (2) 3 4 5 6

The response to this statement would indicate that the teacher views the principal as often evaluating teacher effectiveness on the basis of how much they follow school policies and procedures.

TURN THE PAGE AND INDICATE YOUR RESPONSES ON THE ANSWER SHEET

---

<sup>1</sup>Unpublished Ed.D. dissertation, Milton Fuhr, Wayne State University, 1970.

## Principal Role Behavior

Statements

My principal does it - - -

|     | 1                                                                                                                                                                                                                                  | 2     | 3         | 4            | 5      | 6     |
|-----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-----------|--------------|--------|-------|
|     | Usually                                                                                                                                                                                                                            | Often | Sometimes | Occasionally | Rarely | Never |
| 1.  | Discovers changes that need to be made in the curriculum by keeping posted on new developments in teaching methods and in subject matter recommended by curriculum experts.                                                        |       |           |              |        |       |
| 2.  | When planning how to improve the curriculum, checks to see if the present program is making the best use of the interests and abilities of each teacher.                                                                           |       |           |              |        |       |
| 3.  | Has teachers make only those changes in the school's instructional program that have been adopted on a system wide basis.                                                                                                          |       |           |              |        |       |
| 4.  | Decides if a new instructional method should be introduced, by encouraging teachers to try it out and see if they think it is better than current methods, since each teacher knows best what methods are appropriate to students. |       |           |              |        |       |
| 5.  | Makes changes in the instructional program by pointing out that the change has been officially adopted and that everyone should make the necessary changes in his work.                                                            |       |           |              |        |       |
| 6.  | Helps bring about curriculum changes by giving some free time to teachers who are trying out new ideas in their classes.                                                                                                           |       |           |              |        |       |
| 7.  | Evaluates the effectiveness of the curriculum and of teaching according to how many teachers like what is going on, and then attempts changes in line with teachers' suggestions.                                                  |       |           |              |        |       |
| 8.  | Evaluates the effectiveness of the curriculum and teaching according to how well they meet established program objectives and makes use of available instructional supplies and equipment.                                         |       |           |              |        |       |
| 9.  | Works individually with each teacher to help him identify possible ways for improving his classroom instruction.                                                                                                                   |       |           |              |        |       |
| 10. | Discovers the professional weakness of teachers by visiting classes on a regular basis to see how well teachers are using recommended methods and procedures.                                                                      |       |           |              |        |       |
| 11. | Tries to keep those teachers on the school staff who are willing to learn about some of the "new ideas" in education and like to try out their own ideas in the classroom.                                                         |       |           |              |        |       |

My principal does it - - -

| 1       | 2                                                                                                                                                                                                                                  | 3         | 4            | 5      | 6     |
|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|--------------|--------|-------|
| Usually | Often                                                                                                                                                                                                                              | Sometimes | Occasionally | Rarely | Never |
| 12.     | Improves an obvious weakness in the abilities of teachers by setting up an in-service program found to be successful in other schools, even though some teachers feel the program imposes things on them contrary to their wishes. |           |              |        |       |
| 13.     | Get teachers to upgrade their performance by urging them to display independence in carrying out their assigned job, using others' suggestions only when they can be integrated with their own goals and abilities.                |           |              |        |       |
| 14.     | Insists that a teacher participates in an in-service program favored by a majority of teachers, even if the teacher has disagreed with it, since no exceptions can be allowed in carrying out a group decision.                    |           |              |        |       |
| 15.     | Evaluates teachers effectiveness on the basis of how much they follow school policies and procedures and carry out the planned program.                                                                                            |           |              |        |       |
| 16.     | Evaluates teachers in the school on the basis of their ability to work cooperatively with other teachers.                                                                                                                          |           |              |        |       |
| 17.     | Calls attention to the need for favorable school-community relationships by pointing out that schools depend upon the financial support of citizens.                                                                               |           |              |        |       |
| 18.     | Finds out how school-community relationships should be improved by asking teachers to list aspects of their lives in the local community that are personally the most irritating and frustrating.                                  |           |              |        |       |
| 19.     | "Backs up" the teacher in any public controversy between a teacher and a parent or between a teacher and a pupil.                                                                                                                  |           |              |        |       |
| 20.     | Refers all important problems with parents to superiors, since they are the best qualified by legal position and training to handle such critical issues.                                                                          |           |              |        |       |
| 21.     | Shows extreme firmness in the control of the information and material given to parents and citizens, since it is important that citizens gain a favorable impression of our school program.                                        |           |              |        |       |
| 22.     | Keeps in close touch with parents and teachers about school problems, pointing out that the best solution to school-community differences are usually achieved when everyone is encouraged to voice his own opinion.               |           |              |        |       |

My principal does it - - -

| 1       | 2                                                                                                                                                                                                                              | 3         | 4            | 5      | 6     |
|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|--------------|--------|-------|
| Usually | Often                                                                                                                                                                                                                          | Sometimes | Occasionally | Rarely | Never |
| 23.     | Evaluates school-community relationships by finding out if teachers feel they have enough freedom in their personal lives in the community.                                                                                    |           |              |        |       |
| 24.     | Decides how desirable our relationships are with local citizens by finding out what parents like and don't like about our program, because lack of accurate information might interfere with carrying out the planned program. |           |              |        |       |
| 25.     | Before making a change in what instructional supplies and equipment are purchased, discovers if teachers feel that it is easy to adapt present materials to the various interests and abilities of students.                   |           |              |        |       |
| 26.     | Finds out if the administration of activity funds and instructional facilities needs to be improved by seeing how long it takes to cut through "red tape" when fast action is needed.                                          |           |              |        |       |
| 27.     | Adopts a system of records and reports only if it has been found to be satisfactory in other schools and school systems in the state.                                                                                          |           |              |        |       |
| 28.     | Selects a system of requesting instructional materials and equipment that allows each teacher enough flexibility to select those he can adapt to his own particular work.                                                      |           |              |        |       |
| 29.     | Tries to improve the use of the guidance information we have on students by having several interested teachers study the problem and develop a series of suggestions that teachers may use as a guide.                         |           |              |        |       |
| 30.     | Keeps track of the use of school activity funds by setting up a central system of booking and periodic reports from teachers so any mismanagement can be checked before it gets out of hand.                                   |           |              |        |       |
| 31.     | Finds out if present methods of administering funds and instructional facilities provide sufficient information to the school board so that they can make meaningful decisions regarding the school program.                   |           |              |        |       |
| 32.     | Judges a procedure for managing school materials and equipment according to how many teachers think it helps them carry out tasks and responsibilities they feel are important.                                                |           |              |        |       |

## ORGANIZATIONAL CLIMATE DESCRIPTION QUESTIONNAIRE

A. W. Halpin and D. C. Croft

The items in this questionnaire describe typical behaviors or conditions that occur within an elementary school organization. Please indicate to what extent each of these descriptions characterizes your school. Please do not evaluate the items in terms of "good" or "bad" behavior, but read each item carefully and respond in terms of how well the statement describes your school.

The descriptive scale on which to rate the items is printed at the top of each page. Please read the instructions which describe how you should mark your answers.

The purpose of this questionnaire is to secure a description of the different ways in which teachers behave and of the various conditions under which they must work. After you have answered the questionnaire we will examine the behaviors or conditions that have been described as typical by the majority of the teachers in your school, and we will construct from this description, a portrait of the Organizational Climate of your school.

### Marking Instructions

Printed below is an example of a typical item found in the Organizational Climate Description Questionnaire:

- 1 Rarely occurs
- 2 Sometimes occurs
- 3 Often occurs
- 4 Very Frequently occurs

### Example

Teachers call each other by their first names.

1   2   **3**   4

In this example the respondent marked alternative 3 to show that the interpersonal relationship described by this item "often occurs" at his school. Of course, any of the other alternatives could have been selected, depending upon how often the behavior described by the item does, indeed, occur in your school.

Mark your response clearly, as in the example. PLEASE BE SURE THAT YOU MARK EVERY ITEM!

- 1 Rarely occurs  
 2 Sometimes occurs  
 3 Often occurs  
 4 Very Frequently occurs

- |     |                                                                              |   |   |   |   |
|-----|------------------------------------------------------------------------------|---|---|---|---|
| 1.  | Teachers' closest friends are other faculty members at this school.          | 1 | 2 | 3 | 4 |
| 2.  | The mannerisms of teachers at this school are annoying.                      | 1 | 2 | 3 | 4 |
| 3.  | Teachers spend time after school with students who have individual problems. | 1 | 2 | 3 | 4 |
| 4.  | Instructions for the operation of teaching aids are available.               | 1 | 2 | 3 | 4 |
| 5.  | Teachers invite other faculty members to visit them at home.                 | 1 | 2 | 3 | 4 |
| 6.  | There is a minority group of teachers who always oppose the majority.        | 1 | 2 | 3 | 4 |
| 7.  | Extra books are available for classroom use.                                 | 1 | 2 | 3 | 4 |
| 8.  | Sufficient time is given to prepare administrative reports.                  | 1 | 2 | 3 | 4 |
| 9.  | Teachers know the family background of other faculty members.                | 1 | 2 | 3 | 4 |
| 10. | Teachers exert group pressure on non-conforming faculty members.             | 1 | 2 | 3 | 4 |
| 11. | In faculty meetings, there is the feeling of "let's get things done."        | 1 | 2 | 3 | 4 |
| 12. | Administrative paper work is burdensome at this school.                      | 1 | 2 | 3 | 4 |
| 13. | Teachers talk about their personal life to other faculty members.            | 1 | 2 | 3 | 4 |
| 14. | Teachers seek special favors from the principal.                             | 1 | 2 | 3 | 4 |
| 15. | School supplies are readily available for use in classwork.                  | 1 | 2 | 3 | 4 |
| 16. | Student progress reports require too much work.                              | 1 | 2 | 3 | 4 |

- 1 Rarely occurs  
 2 Sometimes occurs  
 3 Often occurs  
 4 Very Frequently occurs

- |                                                                                 |   |   |   |   |
|---------------------------------------------------------------------------------|---|---|---|---|
| 17. Teachers have fun socializing together during school time.                  | 1 | 2 | 3 | 4 |
| 18. Teachers interrupt other faculty members who are talking in staff meetings. | 1 | 2 | 3 | 4 |
| 19. Most of the teachers here accept the faults of their colleagues.            | 1 | 2 | 3 | 4 |
| 20. Teachers have too many committee requirements.                              | 1 | 2 | 3 | 4 |
| 21. There is considerable laughter when teachers gather informally.             | 1 | 2 | 3 | 4 |
| 22. Teachers ask nonsensical questions in faculty meetings.                     | 1 | 2 | 3 | 4 |
| 23. Custodial service is available when needed.                                 | 1 | 2 | 3 | 4 |
| 24. Routine duties interfere with the job of teaching.                          | 1 | 2 | 3 | 4 |
| 25. Teachers prepare administrative reports by themselves.                      | 1 | 2 | 3 | 4 |
| 26. Teachers ramble when they talk in faculty meetings.                         | 1 | 2 | 3 | 4 |
| 27. Teachers at this school show much school spirit.                            | 1 | 2 | 3 | 4 |
| 28. The principal goes out of his way to help teachers.                         | 1 | 2 | 3 | 4 |
| 29. The principal helps teachers solve personal problems.                       | 1 | 2 | 3 | 4 |
| 30. Teachers at this school stay by themselves.                                 | 1 | 2 | 3 | 4 |
| 31. The teachers accomplish their work with great vim, vigor, and pleasure.     | 1 | 2 | 3 | 4 |
| 32. The principal sets an example by working hard himself.                      | 1 | 2 | 3 | 4 |
| 33. The principal does personal favors for teachers.                            | 1 | 2 | 3 | 4 |

- 1 Rarely occurs
- 2 Sometimes occurs
- 3 Often occurs
- 4 Very Frequently occurs

|     |                                                                      |   |   |   |   |
|-----|----------------------------------------------------------------------|---|---|---|---|
| 34. | Teachers eat lunch by themselves in their own classrooms.            | 1 | 2 | 3 | 4 |
| 35. | The morale of the teachers is high.                                  | 1 | 2 | 3 | 4 |
| 36. | The principal uses constructive criticism.                           | 1 | 2 | 3 | 4 |
| 37. | The principal stays after school to help teachers finish their work. | 1 | 2 | 3 | 4 |
| 38. | Teachers socialize together in small select groups.                  | 1 | 2 | 3 | 4 |
| 39. | The principal makes all class-scheduling decisions.                  | 1 | 2 | 3 | 4 |
| 40. | Teachers are contacted by the principal each day.                    | 1 | 2 | 3 | 4 |
| 41. | The principal is well prepared when he speaks at school functions.   | 1 | 2 | 3 | 4 |
| 42. | The principal helps staff members settle minor differences.          | 1 | 2 | 3 | 4 |
| 43. | The principal schedules the work for the teachers.                   | 1 | 2 | 3 | 4 |
| 44. | Teachers leave the grounds during the school day.                    | 1 | 2 | 3 | 4 |
| 45. | The principal criticizes a specific act rather than a staff member.  | 1 | 2 | 3 | 4 |
| 46. | Teachers help select which courses will be taught.                   | 1 | 2 | 3 | 4 |
| 47. | The principal corrects teachers' mistakes.                           | 1 | 2 | 3 | 4 |
| 48. | The principal talks a great deal.                                    | 1 | 2 | 3 | 4 |
| 49. | The principal explains his reasons for criticism to teachers.        | 1 | 2 | 3 | 4 |
| 50. | The principal tries to get better salaries for teachers.             | 1 | 2 | 3 | 4 |
| 51. | Extra duty for teachers is posted conspicuously.                     | 1 | 2 | 3 | 4 |

- 1 Rarely occurs
- 2 Sometimes occurs
- 3 Often occurs
- 4 Very Frequently occurs

|     |                                                                    |   |   |   |   |
|-----|--------------------------------------------------------------------|---|---|---|---|
| 52. | The rules set by the principal are never questioned.               | 1 | 2 | 3 | 4 |
| 53. | The principal looks out for the personal welfare of teachers.      | 1 | 2 | 3 | 4 |
| 54. | School secretarial service is available for teachers' use.         | 1 | 2 | 3 | 4 |
| 55. | The principal runs the faculty meeting like a business conference. | 1 | 2 | 3 | 4 |
| 56. | The principal is in the building before teachers arrive.           | 1 | 2 | 3 | 4 |
| 57. | Teachers work together preparing administrative reports.           | 1 | 2 | 3 | 4 |
| 58. | Faculty meetings are organized according to a tight agenda.        | 1 | 2 | 3 | 4 |
| 59. | Faculty meetings are mainly principal-report meetings.             | 1 | 2 | 3 | 4 |
| 60. | The principal tells teachers of new ideas he has run across.       | 1 | 2 | 3 | 4 |
| 61. | Teachers talk about leaving the school system.                     | 1 | 2 | 3 | 4 |
| 62. | The principal checks the subject-matter ability of teachers.       | 1 | 2 | 3 | 4 |
| 63. | The principal is easy to understand.                               | 1 | 2 | 3 | 4 |
| 64. | Teachers are informed of the results of a supervisor's visit.      | 1 | 2 | 3 | 4 |
| 65. | Grading practices are standardized at this school.                 | 1 | 2 | 3 | 4 |
| 66. | The principal insures that teachers work to their full capacity.   | 1 | 2 | 3 | 4 |
| 67. | Teachers leave the building as soon as possible at day's end.      | 1 | 2 | 3 | 4 |
| 68. | The principal clarifies wrong ideas a teacher may have.            | 1 | 2 | 3 | 4 |
| 69. | Schedule changes are posted conspicuously at this school.          | 1 | 2 | 3 | 4 |

## BIBLIOGRAPHY

## BIBLIOGRAPHY

### Books

- Brickell, Henry M. Organizing New York State for Educational Change. Albany, New York: State Education Department, 1961.
- Carlson, Richard O. Adoption of Educational Innovations, Eugene, Oregon: Center for the Advanced Study of Educational Administration, University of Oregon, 1965.
- . Change Processes in the Public Schools. Eugene, Oregon: Center for the Advanced Study of Educational Administration, University of Oregon, 1965.
- Ebey, George W. Adaptability Among the Elementary Schools of An American City. New York Bureau of Publications, Teachers College, Columbia University, 1940.
- Gallaher, Art J. "Directed Change in Formal Organizations: The School System," in Change Processes in the Public Schools, ed. Carlson, et al., University of Oregon.
- Glines, Don E. "Planning and Effecting Needed Change in Individual Schools." Designing Education for the Future. Edited by Edgar L. Morphet and Charles O. Ryan. New York: Citation Press, 1967.
- Guba, Egon G. and Bidwell, Charles E. Administrative Relationships - Teacher Effectiveness, Teacher Satisfaction, and Administrative Behavior. Chicago: The Midwest Administration Center, University of Chicago, 1957.
- Halpin, Andrew W. and Croft, Don B. The Organizational Climate of Schools. Cooperative Research Project No. 543. Washington: Office of Education, U.S. Department of Health, Education and Welfare, 1962.

- \_\_\_\_\_. Administrative Theory in Education. Chicago: Midwest Administration Center, University of Chicago, 1958.
- Kimbrough, Ralph B. Administrating Elementary Schools. New York: The Macmillan Company, 1968.
- Likert, R. New Patterns of Management. New York: McGraw-Hill Book Company, 1961.
- Lippitt, Ronald and Colleagues, "The Teacher as Innovator, Seeker, and Sharer of New Practices," in Perspectives on Educational Change, ed. Miller, Appleton-Croft Publishing Company.
- Mackenzie, Gordon N. "Curricular Change: Participants, Power, and Processes," in Innovation in Education, Columbia University Press.
- Miles, Matthew B., ed. Innovations in Education. New York: Bureau of Publications, Teachers College, Columbia University, 1964.
- Miller, Richard I., ed. Perspectives on Educational Change. New York: Appleton-Century-Crofts, 1967.
- Mort, Paul R., and Cornell, F. G. American Schools in Transition. New York: Teachers College, Columbia University, 1941.
- Pellegrin, Ronald J. An Analysis of Sources and Processes of Innovation in Education. Eugene, Oregon: Center for the Advanced Study of Educational Administration, 1966.
- Rogers, Everett. Diffusion of Innovations. New York: Free Press of Glencoe, 1962.
- Ross, Donald R. Administration for Adaptability. New York: Metropolitan School Study Council, 1958.
- Trump, Lloyd J. "Influencing Change at the Secondary Level," in Perspectives on Educational Change, ed. Miller, Appleton-Century-Crofts, 1967.
- Von Haden, Herbert I. and King, Jean Marie., Innovations in Education: Their Pros and Cons, Worthington, Ohio: Charles A. Jones Publishing Company, 1971.
- Woods, Thomas E. The Administration of Educational Innovation, Eugene, Oregon: Bureau of Educational Research, University of Oregon, 1967.

## Articles and Periodicals

- Anderson, Ernest G., Jr. "Estimated Time for Accepting Educational Ideas: 30 Years." Nation's Schools, LXXVIII (December, 1966), 50.
- Getzels, Jacob W., and Guba, E. G. "School Behavior and the Administrative Process." School Review, LXV (Winter, 1957), 423-441.
- Griffiths, Daniel, "The Elementary School Principal and Change in the School System," Theory Into Practice, (December, 1963), pp. 278-284.
- Guba, Egon E. "Diffusion of Innovations." Educational Leadership, XXV (January, 1968), 292-295.
- Willower, Donald J. "Leadership Styles and Leaders' Perception of Subordinates." Journal of Educational Sociology, XXXIV (October, 1960), 58-64.

## Bulletins, Monographs, Reports

- Fox, Robert., Jung, Charles, and Lippitt, Ronald, Report on the Cooperative Project on Educational Development, (Ann Arbor: University of Michigan, 1965).
- Hemphill, John., Griffiths, Daniel, and Frederiksen, Norman. Administrative Performance and Personality: A Study of the Principal in a Simulated Elementary School. New York: Bureau of Publications, Teachers College, Columbia University, 1962.

## Unpublished

- Fuhr, Milton. "Leadership Role of Principals Related to Innovative Practices in Selected Schools in Ohio," Ed.D. dissertation, Wayne State University, 1970.
- Goetz, Francis R. "Innovation and the Public Elementary School Principal." Ed.D. dissertation, Wayne State University, 1965.
- Kelly, Paul E. "Factors Related to the School Principal's Orientation to Educational Innovation." Ed.D. dissertation, Harvard University, Graduate School, 1961.

- Perry, Dorothy M. "Patterns of Selected Innovations in Detroit Elementary Schools 1895-1945." Ed.D. dissertation, Wayne State University, 1950.
- Ranniger, Billy Jay. "A Summary Study of the Job Responsibilities of the Elementary School Principal." Ed.D. dissertation, University of Oregon, 1962.
- Skogsberg, Alfred. H. "Administration Operational Patterns." Ed.D. Project, Teachers College, Columbia University, 1950.
- Sugy, Woodrow B. "A Study of the Relationship Between Development and Working Patterns of School Principals." Ed.D. dissertation, University of Florida, 1955.
- Von Brock, Robert Carl. "A Study of the Role Perceptions of Superintendent and Principals in the State of Illinois." Ed.D. dissertation, 1962.