ABSTRACT
          This research investigated the interrelationships of
educational decision making with the organizational climate and
innovativeness in public schools. The data used in the study were
gathered from 1,250 professional staff members in 49 public schools
in Oregon, Washington, Nevada, Idaho, and Utah. The participating
schools were classified into innovative and organizational-climate
levels through use of questionnaire instruments. Another instrument
determined whether the decision-making structure in each school was
centralized or decentralized. The findings indicate that the
educational decision-making structure does not measurably influence
decisions of professional staff members to adopt innovative
practices. However, more innovation was indicated in schools with
greater openness of organizational climate. It is concluded that
factors such as personality characteristics of the administrator, his
willingness to adopt innovative ideas, his leadership style, and the
diffuseness of the communication network may have more influence on
decisions to adopt innovative ideas than the structure of decision
making. (LN)

BR 8-H-015
PA 24
OE/BR

FINAL REPORT
Project No. 8-H-015
Grant No. OEG 8-8-080015-2005 (057)

THE INTERRELATIONSHIPS BETWEEN THE DECISION-MAKING

PROCESS AND THE INNOVATIVENESS OF PUBLIC

SCHOOLS

Roger L. Reynoldson
Department of Educational Administration
Utah State University
Logan, Utah

November 1969

U. S. DEPARTMENT OF
HEALTH, EDUCATION AND WELFARE

Office of Education
Bureau of Research

i/ii

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

ABSTRACT

The Interrelationships Between

The Decision-making Process and

The Innovativeness of Public Schools

by

Roger L. Reynoldson, Doctor of Education

Utah State Univeristy, 1969

Major Professor: Dr. Oral L. Ballam
Department: Educational Administration

Purpose

The purpose of this study was to investigate the interrelation-
ships of educational decision making with the organizational climate
and the innovativeness of public schools.

Procedure

The subjects of the study were 50 public schools located in the
states of Oregon, Washington, Nevada, Idaho and Utah. They had been
identified on the basis of their innovativeness by Marcum (U.S.O.E.
Grant No. (OEG 4-7-078119-2901) in a study of organizational climate
and the adoption of educational innovation. The innovativeness of
the schools was determined from responses to an educational innovation
checklist and assistance from state department of education personnel
in each of the five states. Forty-nine of the schools agreed to
participate in the study.

Marcum used only the 15 most innovative and the 15 least innova-
tive of the 50 schools in his research. The current research included
the most innovative schools, the least innovative schools and the 20
schools in the middle group considered to be intermediate in innovativeness

All professional staff members were requested to complete the Decision Point Analysis. From responses to this instrument, educational decision-making mean scores were computed for each school. Higher mean scores were considered to be characteristic of decentralized structures for decision making. Lower mean scores were considered to be characteristic of centralized structures for decision making.

Responses of professional staff members to the Organizational Climate Description Questionnaire were used to compute organizational climate mean scores. Mean climate scores for the intermediate schools were obtained in the current research. Mean climate scores for the most innovative and least innovative schools were taken from Marcum's research. Higher mean scores were considered to be representative of open organizational climates. Lower mean scores were considered to be representative of closed organizational climates.

The Pearson Product Moment r was used to investigate the relationship between: (a) educational decision making and innovativeness; (b) educational decision making and organizational climate; and (c) organizational climate and innovativeness.

Analysis of variance was used to test for differences between: (a) innovativeness for schools with decentralized structures for educational decision making and for schools with centralized structures for decision making; (b) innovativeness for schools with open climates and for schools with closed climates; and (c) the difference in innovativeness for all possible combinations of educational decision making and organizational climate.

Findings and conclusions

    1. There was no significant relationship between educational

decision making and innovation scores. No consistent relationship appeared to exist between educational decision-making structures and innovativeness.

2. There was a significant negative relationship between educational decision making and organizational climate scores. The structures for educational decision making appeared to be inversely related to organizational climate.

3. There was a significant positive relationship between organizational climate and innovation scores. Schools with more open climates appeared to be more innovative than schools with closed climates.

4. There was no significant difference between innovation scores for schools with decentralized structures for decision making and for schools with centralized structures for decision making. It was assumed that schools with decentralized structures for decision making and schools with centralized structures for decision making were as likely to be innovative as they were to be noninnovative.

5. There was a significant difference between innovation scores for schools with open climates and for schools with closed climates. This finding confirmed the results of the correlational analysis. Schools with the more open climates appear to be more innovative.

6. There was no significant difference in innovativeness for all possible combinations of educational decision making and organizational climate.

(72 pages)

CHAPTER I

NATURE AND BACKGROUND OF THE STUDY

Need for the Study

Change in our society is a continual process. In the past, change has been gradual and evolutionary. Present technological and recent social trends, however, have created the need for more planned change.

Society is placing increased emphasis on education as the discipline to provide knowledge and to prepare individuals to understand and initiate change. The slowness that characterizes educational change has created concern in both public and private sectors of our society. Increased expenditures for educational research, revision of professional training programs for educational personnel, the development of new curriculums, and a more concentrated effort to individualize instruction reflect the magnitude of societal concern. The role of education as viewed by business and industry is expressed in a policy statement prepared by the Committee for Economic Development (12, p. 17).

> Innovation in education, whether it involves the use of new curriculum materials or new educational technology, has become essential if the schools are to be genuinely effective in achieving their aims and goals. Continuing assessment of the product is also necessary. This means the development of principles and techniques for critically judging the worth of whatever the schools teach and the effectiveness and efficiency of their methods of instruction. To attain these goals we suggest the establishment of prototype model systems that can exhibit new learning materials and new methods and techniques of learning to both the profession and the public.

According to Howsam (25, p. 65), most of the recent research in educational change has been concentrated on organizational patterns for

instruction, educational technology, and subject matter content. Much less attention has been given to the study of behavioral relationships and their impact on the change process.

Because the decisions to make changes in school programs affect a large number of persons simultaneously, preparation for making wise decisions is an important factor. The study of decision-making structures in schools with varying levels of innovativeness should provide information which may be valuable in designing strategies to more effectively initiate change.

Background information

The discussion of educational and societal change is becoming a moot point. According to Bebell (1, p. 2), "All agree on this fact of change. Indeed perhaps it is the fact of change alone which is not subject to further alteration."

Resistance to change in education has been attributed to various sources. Miller (31) suggests three inhibiting factors; (a) traditionalism, (b) laziness on the part of professional staffs, and (c) fear and insecurity associated with possible failure of innovative programs. Carlson (8) cites two additional sources of resistance: the absence of a change agent and a weak knowledge base. The Committee for Economic Development (12, p. 14) views education's conservatism as a natural societal expectation:

> The future of the schools depends in large part on whether they can overcome in educational practice what is frequently an extreme conservatism and a strong resistance to change. This depends on whether they can develop a genuine openness to experiment and innovation. This is difficult because the conservatism of the schools has been a natural response to society's expectation that they perform an essentially conservative function.

The lack of financial resources has also been considered a
hinderance to change in public schools. Mort (32) and Ross (36)
have concluded that the level of financial support contributes
heavily to the implementation of educational improvement and the adop-
tion of new ideas. Conversely, Carlson (9), in more recent research,
found that the level of financial support is not always a significant
factor in educational change. Studies of the amount of money spent
per child and the adoption of innovative ideas in Pennsylvania and West
Virginia yielded negative, insignificant correlations. Marcum (28)
discovered a significant difference in per pupil expenditures between
more innovative and less innovative schools. He concluded that schools
which expend more funds for maintenance and operation are likely to
be more innovative. Most studies indicate a high relationship between
the amount of money spent per child and innovativeness. According to
Rogers (35, p. 60), innovative schools are ordinarily located in wealthy
communities.

Brandes, cited in Bhola (5, p. 52), considers economic necessity to
be a facilitating factor in educational change. Brandes' thesis is
". . . that public education is heading for an economic crisis, and the
current efforts to increase the efficiency of education through innova-
tiveness is perhaps the most helpful means of avoiding the crisis." Other
economic influences are related to material progress. The Committee for
Economic Development (12, p. 22) states that advancements in education
is one of the chief contributing factors to the economic growth of the
United States. They report:

> From 1929 to 1957, it is estimated that 21 per cent of the
> growth of real national income per person was attributable to
> the greater education of the labor force, while another 36 per
> cent was attributable to the "advance of knowledge."

It is the opinion of The Committee for Economic Development that the rapidity and effectiveness of planned educational change will continue to play an important role in economic growth.

The principles of the change process have been categorized in a number of ways. According to Rubin (37, p. 156-157), four basic phases are generally involved. They are (a) the research phase, (b) the development phase, (c) the dissemination phase, and (d) the installation phase. The research phase is characterized by the "invention of new things or ideas out of the fresh insight or new combinations of old ingredients." In the development phase, the products of research are "tested, modified, and generally made ready for dissemination." During the dissemination phase new programs "are popularized through a number of activities." In the installation phase "the innovation is introduced into the school program and nurtured until it becomes self-sustaining."

The development of strategies for change has involved scholars from various disciplines. Chin (11) has attempted to classify them into three major types; (a) the empirical-rational type (the fundamental process is based upon reason and utilitarianism), (b) the normative-reeducative type (the fundamental process is based on attitude changing), and (c) the power-oriented type (the fundamental process is based on three types of power; coercive, remunerative, and normative). A similar classification has been developed by Bennis (4).

The rationale for changing an educational program is generally to improve the quality of the present program or to introduce a new program which is presumed to be more effective. Experiments conducted at The Center for Coordinated Education, as reported by Rubin (37, p. 158), indicate that schools may change programs for one of three reasons; "(a)

the program is clearly better than the one it replaces, (b) the program is sufficiently popular that its absence is regarded as a sign of decadence, rigidity, or both, or (c) the program will enhance the school's image as a progressive institution."

Ineffective educational change is generally the result of poor planning. Factors either neglected or improperly considered include; (a) inadequate research and development of innovations, (b) little or no staff involvement, (c) poor evaluative procedures for the change strategy and/or the innovations, (d) too many innovations attempted at the same time, (e) lack of sufficient resources to implement the innovations, or (f) all innovations are introduced in the same manner.

In the final analysis, planned change is dependent upon decisions made by organization members acting as individuals. Individual attitudes and needs are reflected in the decisions. Innovative ideas are more likely to be accepted and effectively implemented if they meet individual criteria. Parker and McGuire (33, p. 61) state this position as follows:

> Knowledge, concepts, ideas, facts, and actions become most significant to the individual when (a) he can become involved emotionally as well as intellectually, (b) when it is seen as a basis for appropriate (to him) action, and (c) when a solution is demanded by the exigencies of the situation as he sees them.

If the decision to change is not genuine, Howsam (25, p. 66) indicates that individuals will tend to ". . . subvert the intention of the innovator by twisting the expected new behaviors into old and more comfortable ways."

Decision making

Theories of decision making used in education are based primarily

on ideas borrowed from government and industry. Little basic research
on decision making has originated in public school or college organiza-
tions (13).

The decision-making structure of an organization influences the
members' attitudes and the degree of participation in organizational
goals. According to Simon (41, p. 3):

> Insight into the structure of an organization can best
> be gained by analyzing the manner in which decisions and
> behavior of such employees are influenced within and by the
> organization.

Boss and Leavitt (6, p. 584) in a study of planning and implementing
tasks in business found that:

> . . . performance was somewhat better and attitudes more
> positive when subjects were acting out plans they had
> developed for themselves. . . Productivity was lower and
> attitudes less positive when Ss were acting out plans developed
> for them by others.

A study of personality determinants of the effects of participation in
decision making by Vroom (43) yielded similar results. Increased
participation in decision making resulted in more positive effects on
job attitudes and motivation.

Lewin and his associates, cited in Dill (14, p. 213), discovered
in experiments and field studies that, "many groups (such as teachers)
. . . want more change to participate in making decisions that affect
their activities and opportunities." By giving groups more opportunity
to participate, more cooperation, and a better quality of decision
resulted. Similar results are cited by Goldhammer (18) in a study of
administrative issues and problems.

The influence of communication on educational decision making is
reported in research by Lippett (27). In a study of innovation and
diffusion, Lippett identified two types of school structure, diffuse and

heirarchial. The diffuse structure was characterized by a broad communication network among faculty members. The opposite was true of the heirarchial structure. It was observed that teachers in the diffuse structure "innovated and shared more often than did teachers in the heirarchial structure." However, teachers in the heirarchial structure "adopted more often than did teachers in the diffuse structure." It was assumed that the open communication structure created a climate for promoting innovativeness. It was believed that the heirarchial structure created a climate more conducive to follower-type activities.

Two basic types of organizational structures for decision making may be identified (2), the traditional (centralized or pyramidal organization structure) and the modern (decentralized or flat organizational structure). The traditional structure emphasizes the role of management in decision making. The modern structure emphasizes human relations. Shepard (40, p. 261) has identified five key differences between the two structures;

> . . . (a) wide participation in decision making rather than centralized decision making; (b) the face to face group rather than the individual as the basic unit of organization; (c) mutual confidence rather than authority as the integrative force in the organization; (d) the supervisor as the agent for maintaining the intra-group and inter-group communication rather than the agent of higher authority; (e) growth of members of the organization to greater responsibility rather than external control of the members' performance of their tasks.

It appears to be generally agreed that the decentralized type of organizational structure for decision making is more conducive to the initiation and adoption of innovation as the result of greater participation by organization members in the decision-making process (16, 3, and 42). The major strength of the decentralized structure appears to be the utilization of expertise in the organization. Decisions

are made by personnel close to the problem who have the knowledge and who have been given the responsibility to make the decision (4, 13 and 19).

Organizational decision making involves a number of different roles and personalities. The interaction of these variables will in large part determine the direction of decision making. The roles of personnel in organizations are perceived differently by each individual member. Environmental setting, organizational guidelines, his own unique personality characteristics, and the perception of his role as he interacts with other staff members determine an individual's behavior in a given position. A major administrative problem is to coordinate the needs of the individual with those of the organization to obtained desired goals.

Role change is a difficult process. A well-established role tends to become self-perpetuating and resistant to change. Rogers (34), Bennis and Schein (3) consider perceptual modification of individual roles as a major inhibiting factor to change. They suggest the use of basic encounter (T-groups) programs to facilitate individual change. Rogers (34) advocates the use of basic encounter groups with both vertical and horizontal levels of the organization on a continuing basis. He considers this to be an effective plan for maintaining an atmosphere of openness to change.

The role of the executive in decision making is considered by Griffiths (21, p. 89) to be one of facilitating the process. Griffiths contends that the executive should be called upon to make a decision only when the organization fails to make its own decision. He further states that:

> The effectiveness of a chief executive is inversely pro-
> portional to the number of decisions which he must personally
> make concerning the affairs of the organization. It is his
> function to monitor the decision-making process to make certain
> that it performs at the optimum level.

Similar views are expressed by Rogers (34) and Myers (29). They feel

that the administrator should serve as a catalyst for releasing the

capacity of others to make decisions.

Bennis and Chase predict an increase in the movement of organiza-

tions from closed to more open systems for decision making. Chase (10,

p. 4) suggests that educational administrators must continue to learn

to ". . . play a facilitating role in education decision-making. . ."

and ". . . function as participants. . ." rather than act as controllers

of the process. Bennis (4) also contends that the trend in planned

change programs will continue to be ". . . less bureaucratic and more

participative. . ."

The effects of personality characteristics in decision making

were considered in research by Vroom (43, p. 35). In a study of per-

sonality determinants of the effects of participation in decision making,

he found:

> . . . attitudes toward the job of low authoritarian persons
> with high independence needs are favorably affected by oppor-
> tunities to participate in making decisions. . . attitudes of
> highly authoritarian individuals and of individuals with low
> independence needs are relatively unaffected. . .

Relationships between personality characteristics to superintendents

and innovation were explored by Johnson, Carnie, and Lawrence (26).

They discovered significant correlations between personality character-

istics of principals and the implementation of innovation. Other research

findings also indicate the importance of administrative support for

decisions to initiate and adopt innovation. According to Lippett (27, p. 321):

> Teachers who perceive a principal as supporting innova-
> tion do in fact innovate more often. . . There is a clear trend
> suggesting that the teachers who see the principal as always or
> almost always making constructive suggestions are more likely
> to innovate.

Halpin and Croft (23) have assumed that organizational climate has

an effect upon leadership and organizational change. They assume that

an "open" climate allows leadership acts to be more easily initiated

by designated leaders or faculty members in public schools. In

addition, a more harmonious relationship presumably exists among staff

members and there is more likely to be mutual agreement concerning

procedures to be used in achieving organizational goals. The opposite

is presumed to be true of a "closed" organizational climate.

The relationships between organizational climate and innovativeness

were studied by Marcum (28). He observed that the more innovative schools

possess open climates and the least innovative schools possess more closed

climates.

From the review of literature, it appears as if the following

assumptions can be made concerning decision making, climate, and

innovativeness in organizations: (a) that decentralized organizational

decision-making structures may provide a more receptive environment

for the initiation and adoption of innovation than do centralized

decision-making structures; (b) that the degree of centralization-decentraliza-

tion of the decision-making structure may vary together with the "openness"

of climate in organizations; (c) that a decentralized organizational

decision-making structure and an "open" organizational climate may be

related to innovativeness in an organization; and (d) that a centralized

organizational decision-making structure and a "closed" organizational

climate may be related to non-innovativeness in an organization.

Statement of the Problem

If professional staff members in public schools are to more effectively design strategies for educational change, a better understanding of the setting in which change takes place is needed. The lack of knowledge regarding the interrelationships of educational decision making with organizational climate and innovativeness may limit attempts by professional staff members to introduce innovative practices.

The problem, then, is to identify and describe the interrelationships of educational decision making with the organizational climate and the innovativeness of public schools. From such a study, data of value in helping school districts to more effectively initiate change may be gained.

CHAPTER II

METHOD OF THE STUDY

Hypotheses

The present research will investigate the interrelationships of decision making with organizational climate and innovativeness. The following null hypotheses will be tested:

1. There is no significant relationship between educational decision-making scores and innovation scores in the public schools selected for study.

2. There is no significant relationship between educational decision-making scores and organizational climate scores in the public schools selected for study.

3. There is no significant relationship between organizational climate scores and innovation scores in the public schools selected for study.

4. There is no significant difference between the mean innovation scores for public schools with centralized and decentralized decision making.

5. There is no significant difference between the mean innovation scores for public schools with open and closed organizational climates.

6. There is no significant difference among mean innovation scores for all possible combinations of levels of organizational climate and decision making in public schools.

The Pearson Product Moment r will be used to test hypothesis one, the relationship between decision making and innovativeness, hypothesis two, the relationship between decision making and climate, and hypothesis three, the relationship between organizational climate and innovativeness. Coefficients of correlation will be accepted as significant at the .05 level.

Analysis of variance will be used to determine if significant differences exist between mean innovation scores for decentralized and centralized decision making and between the mean innovation scores for open and closed organizational climates. F-ratios will be computed with .05 as the level of significance.

Interaction effect between the means of innovation scores and all possible combinations of levels of organizational climate and decision making will also be tested by analysis of variance. F-ratios of .05 will be accepted as significant.

Subjects of the Study

Fifty-two schools in Oregon, Idaho, Washington, Utah, and Nevada were selected for study. The schools had been identified on the basis of their innovativeness by Marcum (28).

Innovativeness was determined by the use of an educational innovation checklist and by assistance from state department of education personnel in each of the five states. State department of education personnel were asked to submit names of schools which they determined to be most innovative and least innovative. The names of the eighty-six schools were submitted to Marcum. Seventy of the schools indicated willingness to complete the checklist. Principals from these schools responded to the innovation checklist. These responses were used to

rank the schools according to their innovativeness. Due to duplication of checklist scores, fifty-two schools ranging along a continuum from those considered to be highly innovative to those considered to be non-innovative were identified. Marcum selected the fifteen most innovative and the fifteen least innovative schools for his study of organizational climate and innovativeness. The twenty-two schools comprising the middle range were considered to be intermediate in innovativeness.

The present study includes the most innovative schools, the least innovative schools and twenty of the schools in the intermediate range. The extra two schools in the intermediate range were included in the event that two of the schools in the intermediate range failed to respond.

Principals of schools agreeing to participate in the study were contacted by phone, correspondence, and personal visitation concerning administration of the questionnaires. Principals or their representatives were requested to administer the questionnaires to full-time professional staff members. They were to instruct participants to follow directions exactly as printed on both the questionnaires and the accompanying special instruction sheet.

The innovative checklist and the questionnaires were mailed to the school principal. The innovative checklist was to be completed by the principal and returned with the questionnaires. All professional staff members in each of the schools were requested to complete the Decision Point Analysis. Professional staff members in the intermediate schools were also requested to complete the Organizational Climate Description Questionnaire. The results of the administration of the Organizational Climate Description Questionnaire to professional staff

members in the most innovative and the least innovative schools were
taken from Marcum's (28) research.

The innovative checklist was readministered to determine if signi-
ficant changes had occurred in the innovativeness of the schools since
the first administration of the checklist in 1967 by Marcum.

Instrumentation

The Educational Innovation Checklist

The Checklist of Educational Innovation was developed by Hinman
(24) as part of her doctoral dissertation at Utah State Univeristy
(Appendix A). The checklist is based on procedures used by Brickell
(7) to survey innovative practices in the State of New York and upon
innovations implemented in the Clark County School District (Las Vegas,
Nevada) from 1962-65. Six structural elements are included in the
checklist: scheduling (time), staff utilization (teachers), procedures
(methods), organization (students), curriculum (subjects), and facilities
(places). In developing the checklist, Hinman limited the structural
elements to those over which the principal had decision-making power.

One additional response category was added to the checklist for
the present research. The category was "4--innovation has been dis-
continued." None of the schools reported the discontinuance of any
innovation.

The scoring procedure for the checklist is designed to reflect
the degree of innovativeness. The higher the mean score the more
innovative the school. The converse is true of lower mean scores.

The Organizational Climate Description Questionnaire

The Organizational Climate Description Questionnaire was developed

by Halpin and Croft (23) at the University of Chicago. The purpose
of the instrument is to describe the organizational climate of schools
as perceived by the professional staff members.

Halpin (22) defines organizational climate as the "personality"
of the school. He suggests that climate is to the school what
personality is to the individual. The major reason given for assessing
this group personality is to attempt to gain information which may
help in planning activities to better achieve organizational goals.

In constructing the Organizational Climate Description Questionniare,
items were prepared which might describe schools in terms of their
"personality." A bank of 1000 items was used. Three forms were used
to screen and test the items. The major analysis was done with Form
III. Form III contained 80 items. After administering Form III to
1151 respondents in 71 elementary schools, the analysis resulted in
the reduction of the items to 64. The final version, Form IV, includes
the 64 items plus five buffer items which were added solely to fill
out space on IBM cards. A Likert-type scale is used for responding
to the items. A complete list of the items used in the questionnaire
is reported in Appendix B.

Items in the Organizational Climate Description Questionnaire
are grouped into eight subtests. The first four subtests (disengage-
ment, hindrance, esprit, and intimacy) refer to teacher behavior.
The other subtests (aloofness, production emphasis, thrust, and considera-
tion) apply to the principal's behavior. A complete description of
the subtests is included in Appendix C. From these eight subtests,
open and closed organizational climates may be derived.

Marcum (28) in a telephone conversation with Don Croft found the

scoring procedure for the OCDQ to be as follows:

> A mean score for a school is computed by adding the scores
> on subtest #3 (esprit) to #7 (thrust) and subtracting the mean
> scores of subtest #1 (disengagement). The highest resulting
> scores represent the open climate schools and the lowest scores
> the schools with the closed climates.

The Decision Point Analysis

The development of the Decision Point Analysis began at the
University of Wisconsin in 1957 (15). Researchers were attempting
to identify administrative or supervisory tasks that were essential
to the development and support of school instructional programs.
Approximately 400 task items were selected. Selections were based
on the rational judgments of researchers.

A pilot instrument containing 30 items was developed. The items
were carefully reviewed and tested before inclusion in a working draft
of the instrument. The pilot instrument also contained 17 positions
considered to be possible loci of decision points in public schools.
The instrument was then administered in a pilot system. The pilot
system was about average for the 100 to 700 teacher systems included
in a study of planned and implemented curricular change (15). Data
from the pilot system were used for further refinement of the instrument.

The final draft of the instrument includes 25 decision items which
are equally among five functional administrative areas; pupil personnel,
staff personnel, curriculum, business management, and school-community
relatons (Appendix D). Ten decision point positions are included in
the instrument. The positions are: business manager, principal, vice-
principal, department head, special subject supervisor, superintendent,
guidance coordinator, board of education, and teacher.

The determination of consistency of measurement for the Decision Point Analysis could not be obtained by conventional measures since the instrument does not provide a value score. Consistency of measurement was determined through a comparison of test-retest response patterns of schools in a study by Eye (15). Indices of Consistency obtained from the comparison were considered to be significantly higher than would be achieved by chance assignment.

The basic format of the Decision Point Analysis includes an introductory page stating the general purpose of the study, a background data page, and a backing sheet (Appendix E). The general directions and the ten decision positions are printed on the backing sheet. The decision items are attached to the backing sheet. Each decision item is printed on a separate two and one-half by eight and three-eights inch tab. The 25 items and a sample question are stapled to the backing sheet. As the respondent completes an item, he folds it over the top of the backing sheet, then answers the next item. Each decision item tab contains two response areas. In response area I, questions A and B are answered. In response area II, question C is answered.

Respondents are to answer three questions in completing the questionnaire.

A. Who makes the decision?

B. What others participate in making the decision?

C. What is the nature of your participation in making the decision?

The ten decision point positions are used for answering questions A and B. Four possible responses may be selected for answering question C:

1. Make the decision.

2. Recommend the preferred decision.

3. Provide information only.

4. None

The responses to question C, "What is the nature of your partici-pation in making this decision?" were used to determine the degree of centralization or decentralization of the decision-making structure. It is assumed that the more involved the respondents perceive their role to be in making decisions, the more decentralized will be the actual decision-making structure of the school. Conversely, the less involved the respondents perceive their role to be in making decisions, the more centralized the decision-making structure. A similar scoring procedure was used by Sasse (38) in studying teacher and administrator participation in decision making and curriculum development.

Scoring procedures for the Decision Point Analysis were based on the following point system:

1. Make the decision . . . . 4 points

2. Recommend the preferred decision . . . . . 3 points

3. Provide information only . . . . 2 points

4. None . . . . 1 point

Schools with the highest composite mean scores are considered to have the most decentralized decision-making structures. Schools with the lowest composite mean scores are considered to possess the more centralized decision-making structures.

CHAPTER III

ANALYSIS OF THE DATA

Descriptive Data

The subjects of the study were 49 public schools located in the states of Oregon, Washington, Nevada, Idaho and Utah. Fifty schools were originally selected for study. Forty-nine of the schools agreed to participate.

The 49 schools included 19 secondary schools, 9 junior high schools, 17 elementary schools, 3 junior-senior high schools, and 1 school containing kindergarten through grade twelve. A total of 1501 professional staff members were employed in the schools. Faculty size ranged from five professional staff members to 104. The number of students ranged from approximately 80 to approximately 2600. Schools were located in both rural and urban areas.

Principals of the schools utilized in this study responded to the checklist of Educational Innovation (Appendix A). From these responses Marcum (28) determined the innovativeness of each school. The 15 schools with the highest scores were designated as the most innovative; the 15 schools with the lowest scores were considered to be least innovative, and the 20 schools in the middle group were determined to be intermediate in innovativeness. Participation of schools by state and innovative category is presented in Table 1.

The school failing to respond in the current study was in the least innovative category. Two reasons were cited for nonparticipation (a) the school staff was too busy, and (b) the administration felt the study

of decision making and innovativeness was of questionable value.

Table 1. Participation of schools by state and innovative category

Innovative Category	Oregon	Washington	Nevada	Idaho	Utah	Total
Most Innovative	3	3	4	2	3	15
Intermediate	5	5	2	5	3	20
Least Innovative	1	1	2	8	2	14
Total	9	9	8	15	8	49

The Checklist of Educational Innovation was readministered to determine if schools had maintained their relative positions in innovativeness. A comparison of the two sets of scores is reported in Figure 1. A product moment correlation of .96 was computed between the two sets of scores. According to Garrett (17, p. 338), a retest coefficient may be considered to be a close estimate of the stability of scores.

When the innovation scores are analyzed by categories, mean increases are noted for the least innovative schools and for the schools considered to be intermediate in innovativeness. A mean decrease was found for the most innovative schools. A comparison of the mean score is shown in Table 2.

All professional staff members in each of the 49 schools were requested to complete the Decision Point Analysis. Faculties in the schools

Frequency of Schools
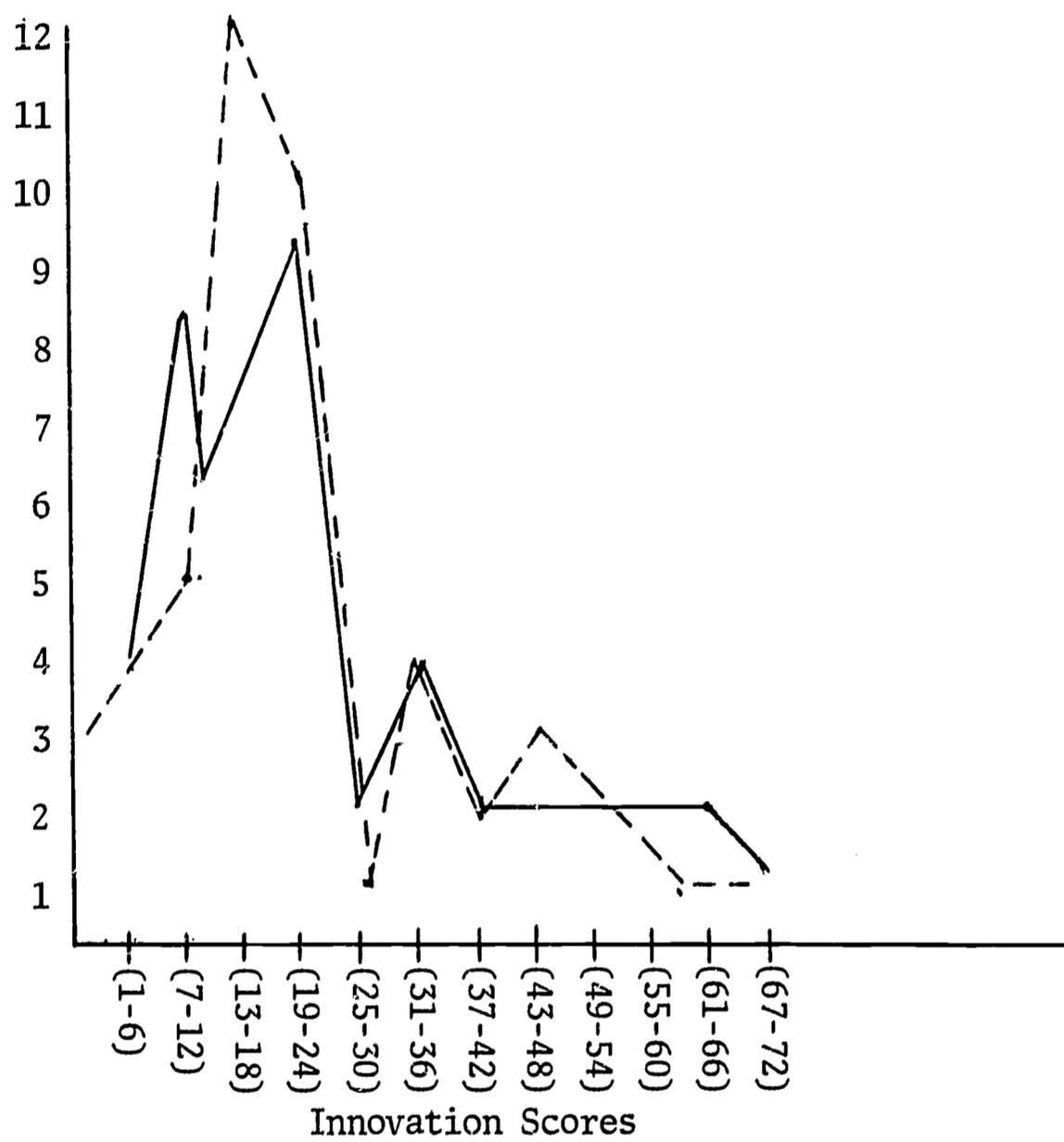
Marcum

Current Research -------------------

Figure 1. A comparison of innovation scores obtained by Marcum and in the current research.

considered to be intermediate in innovativeness were also asked to complete the Organizational Climate Description Questionnaire. Climate scores for the most innovative and the least innovative schools were taken from Marcum's (28) study. Twelve hundred and fifty of the 1501 professional staff members completed and returned the Decision Point Analysis . Four hundred thirteen of 491 professional staff members in the intermediate category completed the Organizational Climate Description Questionnaire. In Table 3 the percentage return by state and innovative category is reported.

Table 2. Comparison of composite mean innovation scores by innovative category between Marcum's research and the current research

Category	Mean (M)	Mean (R)	Difference
Most innovative schools	48.73	47.68	-.87
Intermediate schools	22.85	23.75	.90
Least innovative schools	8.50	11.21	2.71
Total	26.42	27.55	1.13

(M) Marcum's research   (R) current research

The scoring procedures recommended to Marcum (28) by Croft and reported in Chapter II were used to obtain climate scores. Climate scores for the intermediate schools were pooled with the scores reported by Marcum (28) for the most and least innovative schools.

Table 3. Participation of professional staff members listed according to state and innovative category

24

State	Most Innovative			Intermediate in Innovativeness			Least Innovative			Total		
	Selected	Responded	%	Selected	Responded	%	Selected	Responded	%	Selected	Responded	%
Oregon	190	161	85	127	102	80	18	17	94	335	280	84
Washington	136	113	83	114	107	94	33	29	85	280	249	89
Nevada	228	169	74	89	75	84	35	34	97	352	278	82
Idaho	25	24	96	102	76	74	140	122	87	267	222	83
Utah	148	120	81	61	53	87	55	48	87	264	221	84
TOTAL	727	587	81	493	413	84	281	250	89	1,501	1,250	83

The higher mean scores were considered to be representative of more open organizational climates and the lower mean scores were considered to be representative of more closed climates.

It is interesting to note that the range of climate scores for the most innovative schools is from 36 to 77 and the range for the intermediate schools is from 53 to 71. A comparison of climate scores by innovative category is shown in Table 4.

Responses obtained from the Decision Point Analysis were used to obtain education decision-making mean scores for each of the schools. The higher mean scores were considered to be characteristics of more decentralized decision-making structures. The lower mean scores were considered to be characteristic of more centralized decision-making structures.

Testing of Hypotheses and Analysis of Data

Hypothesis no. 1--decision making and innovativeness

"There is no significant difference between educational decision-making scores and innovation scores in the public schools selected for study."

To test this hypothesis, mean decision-making scores were correlated with mean innovation scores. With 47 degrees of freedom, a correlation of .28 is required for significance at the .05 level.

The Pearson product moment r was used to test the relationship between decision making and innovation mean scores. The analysis revealed an insignificant correlation of -.07. The null hypothesis is accepted and it may be concluded that no significant relationship exists between educational decision-making scores and innovation scores in the schools selected for study. A comparison of decision making and innovation mean scores are reported in Table 5.

Table 4. Comparison of organizational climate mean scores by innovative category

Most Innovative Schools		Schools Intermediate in Innovativeness		Least Innovative Schools	
School #	OCDQ Score	School #	OCDQ Score	School #	OCDQ Score
5	77	1	71	26	60
17	72	14	69	35	39
9	72	27	68	18	38
38	71	33	68	4	37
19	71	11	68	41	37
2	59	12	66	39	37
34	55	24	65	36	37
16	55	46	65	28	36
40	53	49	63	30	36
25	51	23	61	42	36
8	49	13	60	37	35
7	49	22	59	48	35
15	47	21	59	3	34
29	36	44	58	43	33
32	36	45	57		
		20	56		
		31	56		
		6	55		
		10	55		
		47	53		

Table 5. Comparison of innovation and decision-making mean scores

School	Innovation Score	Decision-Making Score	School	Innovation Score	Decision-Making Score
1	26	2.22	26	17	2.95
2	46	2.61	27	28	2.53
3	4	2.91	28	17	2.61
4	12	2.81	29	38	2.79
5	51	2.43	30	19	2.97
6	27	3.13	31	18	3.02
7	66	2.95	32	28	3.07
8	68	3.22	32	23	2.74
9	54	2.71	34	60	2.80
10	24	3.02	35	13	3.06
11	23	2.68	36	2	3.14
12	20	2.90	37	15	2.72
13	20	2.86	38	42	2.93
14	25	3.06	39	10	3.35
15	45	2.76	40	53	2.93
16	60	3.13	41	11	2.90
17	40	3.09	42	9	3.16
18	15	3.06	43	7	2.84
19	36	2.57	44	26	2.53
20	28	2.53	45	27	3.08
21	20	2.72	46	24	2.76
22	24	2.86	47	19	3.22
23	19	2.94	48	6	2.64
24	27	2.96	49	27	3.11
25	41	3.15			

Hypothesis no. 2--Decision making and organizational climate

"There is no significant relationship between educational decision-
making scores and organizational climate scores in the public schools
selected for study."

Mean decision-making scores were correlated with mean climate
scores obtained from the Organizational Climate Description Questionnaire
to test this hypothesis.

A correlation of -.32 was obtained between the names of decision
making and organizational climate. With 47 degrees of freedom, a correla-
tion of .28 was needed for significance at the .05 level. The null hypo-
thesis is therefore rejected. The result of the analysis indicates that
a significant negative correlation exists between educational decision
making and organizational climate mean scores. From this analysis, it
is therefore assumed that an inverse relationship may exist between
educational decision making and organizational climate. Mean scores for
educational decision making and organization climate are shown in Table 6.

Hypothesis no. 3--Organization climate and innovativeness

"There is no significant relationship between organizational climate
scores and innovation scores in the public schools selected for study."

To test this hypothesis, mean climate scores were correlated with
mean innovation scores . Using 47 degrees of freedom, a product moment
r of .28 was required for significance at the .05 level.

The analysis of the data yielded a correlation of .42. The correla-
tion is significant at the .01 level. At the .01 level, an r of .36
was required for significance. The null hypothesis is rejected. It
may be assumed that a significant positive relationship exists between
organizational climate and innovativeness.

Table 6. Comparison of organizational climate and decision-making mean scores

School	Decision-Making Scores	OCDQ Scores	School	Decision-Making Scores	OCDQ Scores
1	2.22	71	26	2.95	60
2	2.61	59	27	2.53	68
3	2.91	34	28	2.61	36
4	2.81	37	29	2.79	36
5	2.43	77	30	2.97	36
6	3.13	55	31	3.02	56
7	2.95	49	32	3.07	36
8	3.22	49	33	2.74	68
9	2.71	72	34	2.80	55
10	3.02	55	35	3.06	39
11	2.68	68	36	3.14	37
12	2.90	66	37	2.72	35
13	2.86	60	38	2.93	71
14	3.06	69	39	3.35	37
15	3.76	47	40	2.93	53
16	3.13	55	41	2.90	37
17	3.09	72	42	3.16	36
18	3.06	38	43	2.84	33
19	2.57	71	44	2.53	58
20	2.53	56	45	3.08	57
21	2.72	59	46	2.76	65
22	2.86	59	47	3.22	53
23	2.94	61	48	2.64	35
24	2.96	65	49	3.11	63
25	3.15	51			

A comparison of organizational climate and innovation mean scores is reported in Table 7.

Hypothesis no. 4--Decision making and innovativeness

"There is no significant difference between the mean innovation scores for public schools with decentralized and centralized decision making."

A dichotomy was established between the schools to test this hypothesis. The 16 schools with the highest mean decision-making scores were considered to possess the most decentralized educational decision-making structures. The 16 schools with the lowest mean scores were considered to have the most centralized decision-making structures.

The mean innovation score for schools with decentralized decision making was 27. A mean innovation score of 29 was computed for schools with centralized decision making. The analysis of the data revealed an F-ratio of .18. To be significant at the .05 level, an F-ratio of 4.17 was required. The null hypothesis is accepted. It is concluded that no significant difference exists in innovativeness for schools with decentralized decision-making structures and for schools with centralized decision-making structures. A summary of the analysis is reported in Table 8.

Hypothesis no. 5--Organizational climate and innovation

"There is no significant difference between the mean innovation scores for public schools with open and closed organizational climates."

Organizational climate scores were dichotomized to establish open and closed climates. The 16 schools with the highest mean climate scores were considered to have the most open climates. The 16 schools with the lowest mean climate scores were considered to have the most

Table 7. Comparison of organizational climate and innovation mean scores

School	Innovation Score	OCDQ Score	School	Innovation Score	OCDQ Score
1	26	71	26	17	60
2	46	59	27	28	68
3	4	34	28	17	36
4	12	37	29	38	36
5	51	77	30	19	36
6	27	55	31	18	56
7	66	49	32	28	36
8	68	49	33	23	68
9	54	72	34	60	55
10	24	55	35	13	39
11	23	68	36	2	37
12	20	66	37	15	35
13	20	60	38	42	71
14	25	69	39	10	37
15	45	47	40	53	53
16	60	55	41	11	37
17	40	72	42	9	36
18	15	38	43	7	33
19	36	71	44	26	58
20	28	56	45	27	57
21	20	59	46	24	65
22	24	59	47	19	53
23	19	61	48	6	35
24	27	65	49	27	63
25	41	51			

Table 8. Comparison of mean innovation scores for schools with centralized decision making and with decentralized decision making

Decentralized Decision Making		Centralized Decision Making	
School #	Innovation Score	School #	Innovation Score
8	68	9	54
16	60	5	51
25	41	2	46
17	40	15	45
32	28	19	36
6	27	27	28
49	27	20	28
45	27	1	26
14	25	44	26
47	19	46	24
31	18	11	23
18	15	33	23
35	13	21	20
39	10	28	17
42	9	37	15
36	2	48	6

M = 27   M = 29

F Ratio = .18   df = 1/30

* Alpha = .05   ** Alpha = .01   *** Alpha = .001

R:F ≙ 4.17   R:F ≙ 7.56   R:F ≙ 13.29

closed climates.

The mean innovation score for the open climate schools was 30. For the closed climate schools, the mean was 16. The application of the analysis of variance technique produced an F-ratio of 12.44 which was significant at the .01 level. The null hypothesis is therefore rejected and it may be concluded that a significant difference exists in innovativeness for schools with open climates and for schools with closed climates. A comparison of mean innovation scores for open and closed climate schools is shown in Table 9.

Hypothesis no. 6--Innovation, decision making, and organizational climate

"There is no significant difference among mean innovation scores for all possible combinations of levels of educational decision making and organization climate."

To test this hypothesis, four combinations of educational decision making and organizational climate were published. They are illusted in the following diagram:

Decentralized decision making and Open climate	Centralized decision making and Open climate
Decentralized decision making and Closed climate	Centralized decision making and Closed climate

No significant interaction was discovered among the combinations. An F-ratio of 4.17 was needed for significance at the .05 level. The analysis yielded an F-ratio of .23. The null hypothesis, that a significant difference does not exist among innovation scores for all possible combinations of educational decision making and organizational

Table 9. Comparison of mean innovation scores between schools with open climates and schools with closed climates

School #	Open Climate Innovation Score	School #	Closed Climate Innovation Score
1	71	15	45
9	54	29	38
5	51	32	28
38	42	30	19
17	40	28	17
19	36	18	15
27	28	37	15
24	27	35	13
49	27	4	12
14	25	41	11
46	24	39	10
11	23	42	9
33	23	43	7
12	20	48	6
23	19	3	4
26	17	36	2

M = 30 M = 16

F Ratio = 12.44 df = 1/30

* Alpha = .05 ** Alpha = .01 *** Alpha = .001

R:F $\geq$ 4.17 R:F $\geq$ 7.56 R:F $\geq$ 13.29

climate,is accepted. The summary of the analysis is presented in Table 10 and Table 11.

Table 10. Two-way table of means: organizational climate and educational decision-making interaction analysis

		Decision Making		
		Decentralized	Centralized	Row Means
Organiza-	Open	M = 30.67 (3)	M = 33.13 (8)	31.90
tional Climate	Closed	M = 12.83 (6)	M = 20.75 (4)	16.79

Column means =

( ) = Number of Schools

Table 11. Analysis of interaction effect for open-closed organizational climates and decentralized-centralized educational decision making

Source of Variation	Degrees of Freedom	Mean Square	F Test Value
Decision making	1	123.02	.83
Organizational climate	1	1042.91	7.12*
Interaction	1	34.05	.23
Within Groups	17	146.42	

df = 1/17

* Alpha = .05   ** Alpha = .01   *** Alpha = .001

R:F ≧ 4.45   R:F ≧ 8.40   R:F ≧ 15.72

CHAPTER IV

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

The problem

The problem of this research was to study selected variables
which may influence the initiation and adoption of innovative prac-
tices in the public schools. Specifically, the interrelationships
of educational decision making with the organizational climate and
the innovativeness of public schools were investigated.

Procedures

The data used in the study were gathered from 1250 professional
staff members in 49 public schools located in Oregon, Washington,
Nevada, Idaho and Utah.

The schools who participated in the study were selected on the
basis of their innovativeness. The criteria for determining innova-
tiveness was based on scores obtained from responses to a checklist
of educational innovation (Appendix A) and assistance from state depart-
ment of educational personnel in each of the five states. The level
of organizational climate in each school was established by using the
Organizational Climate Description Questionniare (Appendix B). The
decentralization and centralization of educational decision making was
determined by using the Decision Point Analysis (Appendixes D and E).

Linear relationships were explored by using the Pearson product
moment r. Analysis of variance was used to investigate differences.

Findings

Six hypotheses were formulated for the purpose of investigating the problem. From the analysis of the data, it was determined that three of the hypotheses could be accepted and three could be rejected.

The first null hypothesis that there was no significant relationship between educational decision making and the innovativeness of public school was accepted. The correlation between mean scores for educational decision making and innovativeness was low and negative. It was determined that no consistent relationship exists between educational decision-making structures and innovativeness.

The second null hypothesis that there was no significant relationship between educational decision making and the organizational climate of public schools was rejected. Educational decision making and organizational climate were found to be negatively related. The correlation between the means of the two variables was significant at the .05 level. Assuming a functional relationship, schools with more decentralized structures for decision making appear to have more closed climates. Schools with centralized structures for decision making appear to have more open climates.

The third null hypothesis that there is no significant relationship between organizational climate and the innovativeness of public schools was rejected. Organizational climate covaried with innovativeness. Schools with open climates were more likely to be innovative than were schools with closed climates.

The fourth null hypothesis that there was no significant difference between mean innovation scores for public schools with decentralized and centralized educational decision making was accepted. Schools with

the most decentralized structures for decision making as well as schools with the most centralized structures for decision making were as likely to be innovative as they were to be non-innovative.

The fifth null hypothesis that there is no significant difference between mean innovation scores for public schools with open and closed organizational climates was rejected. The difference was significant at the .01 level. It was determined that schools with the most open climates were more innovative than were schools with the most closed climates.

The sixth hypothesis that there was no significant difference among innovation scores for all possible combinations of educational decision making and organizational climate was accepted. Significant differences in the degree of innovativeness were not obtained for schools when categorized according to the type of decision-making structure and the openness of climate. Schools with decentralized structures for decision making and open climates as well as schools with centralized structures for decision making and open climates were as likely to be innovative as they were to be non-innovative. The same was true for schools with decentralized structures for decision making and closed climates and for schools with centralized structures and closed climates. However, when considering only the main effect of organizational climate, a difference significant at the .05 level was obtained. Schools with more open climates were more innovative. The converse was true of schools with closed climates. This finding sub-stantiates the results reported for hypothesis number three and for hypothesis number five.

Conclusions

From the analysis of the findings, it is concluded that the type of educational decision-making structure in public schools does not measureably influence decisions of professional staff members to adopt innovative practices. Both decentralized and centralized structures were found in the more innovative and the less innovative schools. No consistent pattern of relationships could be established.

Both the organizational climate and the innovativeness of public schools were found to be negatively related to educational decision making. Schools with more decentralized structures for decision making may tend to possess more closed climates and be less innovative. Schools with more centralized structures for decision making may tend to have more open climates and be more innovative. However, correlations obtained between educational decision making and innovativeness and between educational decision making and organizational climate were low. Their use for inferring functional relationships is quite limited.

The organizational climate and the innovativeness of public schools were positively related. The more innovative school possessed a higher degree of open climates and the less innovative schools possess a higher degree of closed climates. The openness of organizational climate appears to be an important variable to consider in attempting to establish an environment conducive to the adoption of educational innovations.

No combinations of types of educational decision making and organizational climate were found to be significantly higher in public schools of varying degrees of innovativeness. Schools with decentralized decision-making structures and open climates were no different in innovativeness from schools with centralized decision-making structures

with open climates. The same was found to be true of schools when decision-making structures were combined with closed climates.

In summary, it is concluded that factors which operate within the overall educational decision-making structure may have more relevance to the adoption of innovative practices than does the decision-making structure when considered in its entirety. Such factors as the personality characteristics of the administrator and his willingness to adopt innovative ideas (26), the leadership style of the administrator, and the diffuseness of the communication network (27) may have more influence on individual and group decisions to adopt innovative ideas than does the structure for decision making.

Speculations

The basis for speculation has been derived from the review of pertinent literature and from the analysis of the data in the current study.

In Chapter I it was assumed that more innovative schools may possess more open climates and more decentralized structures for educational decision making. The converse was assumed to be true of less innovative schools. The assumptions were only partially corroborated by the findings.

On the basis of the statistical analysis, the decision-making structures of more innovative and less innovative schools do not appear to be different. It is suggested that circumstances such as the following may have influenced the outcome of the analysis. Although wider participation in educational decision making may be encouraged by administrators, teachers may not perceive this expanded responsibility as a legitimate function of their role. In the past, many teachers have not

been provided with the opportunity for wide participation in decision
making. They have primarily relied upon administrators to make the
decisions affecting educational goals. Therefore, teachers may be
unwilling to accept leadership roles that they may still believe
the administrator should perform (30).

It is also possible that educational decision making might more
realistically be viewed as operating on a continuum from decentraliza-
tion to centralization rather than as being either decentralized or
centralized. The effect of the administrator's leadership style, the
interaction of the personalities of professional staff members, the
types of decisions associated with the various educational problems
and programs and other variables may produce such a fluid structure for
decision making that a directional trend cannot be characteristically
defined. It may be more feasible to investigate decisions as they
relate to a particular innovation or program rather than to consider
the overall decision-making structure of a school as being a definitive
type.

None of the speculation was statistically verified in the current
research. It is offered as a plausible explanation of factors which
may have influenced the results of the study.

Recommendations

On the basis of the results of the statistical analysis and the
conclusions drawn from that analysis, the following recommendations
are made:

1. It is recommended that further study of the interrelationships
between educational decision making and innovativeness in schools be
conducted in a smaller number of schools, but in more depth. By limiting

the number of schools, a longitudinal study of the factors which influence decisions to initiate and adopt innovative ideas could be carefully observed and recorded. From the analysis of the decision-making structure in action on a continuing basis, more precise data concerning the effect of educational decision-making structures on the innovativeness of schools could be obtained.

2. Other criteria for determining the innovativeness of schools should be used in combination with the Organizational Climate Description Questionnaire to further substantiate or refute the relationships which appear to exist between the organizational climate and the innovativeness of schools. If the findings of the current research and those reported by Marcum (29) are upheld, the Organizational Climate Description Questionnaire may prove to be a valuable tool for aiding the administrator in evaluating the climate in his school prior to the attempt to introduce innovative practices.

3. The study of the interrelationships among educational decision making, innovativeness, and other variables seems warranted. Variables from within the school and from within the community that supports the school should be considered. For example, studies such as the following may provide data of value to administrators and boards of education in designing programs for educational change: (a) the exploration of possible differences between the personality characteristics of professional staff members and the types of personal and group decisions they deem necessary to establish an environment conducive to the adoption of innovative practices; (b) the study of the attitudes, the support, and the opposition of informal leaders within schools concerning the adoption of innovative practices; (c) the differences between the attitudes of community power structures and the professional staff members in schools concerning

decisions to adopt innovations, and (d) the differences in community involvement in the development of educational programs between more innovative and less innovative schools.

4. In future research, it is recommended that the innovativeness of schools be determined by involving all professional staff members rather than just the principal. From such an approach, a more complete description of the innovativeness of the school might be gained.

LITERATURE CITED

1. Bebell, Clifford F. S. Societal changes and education. In Edgar Morphet and Charles O. Ryan (Eds.) Emerging Designs for Education: Designing Education for the Future: An Eight-State Project. Publishers Press, Inc., Denver, Colorado. 1968. 240 p.

2. Bennis, Warren G. Leadership theory and administrative behavior: The problems of authority. Administrative Science Quarterly 4:259-301. June. 1959.

3. Bennis, Warren G. Changing Organizations. McGraw-Hill Book Co., Inc., New York. 1965. 223 p.

4. Bennis, Warren G. Theory and method in applying behavioral science to planned organizational change. Journal of Applied Behavioral Science 1(4):337-360. 1965.

5. Bhola, Harbons. Innovation Research and Theory. School of Education, Ohio State University, Columbus, Ohio. 1965. 126 p.

6. Boss, Bernard M., and Harold J. Leavitt. Some experiments in planning. Management Science 9:574-585. July. 1963.

7. Brickell, Henry M. Organizing New York State for Educational Change. Fund for the Advancement of Education of the Ford Foundation, New York State Department, New York. 1961.

8. Carlson, Richard O. Adoption of Educational Innovations. The Center for the Advanced Study of Educational Administration, University of Oregon, Eugene, Oregon. 1965. 84 p.

9. Carlson, Richard O. Barriers to change in public schools. In Richard O. Carlson and Keith Goldhammer (Eds.) Change Processes in the Public Schools. The Center for the Advanced Study of Educational Administration, University of Oregon, Eugene, Oregon. 1965. 92 p.

10. Chase, Francis S. We look before and after--A perspective on educational administration. Administrators' Notebook, Midwest Administration Center, The University of Chicago, Chicago, Illinois. 27(9):1-4.

11. Chin, Robert. Basic strategies and procedures for effecting change. In Edgar L. Morphet and Charles O. Ryan (Eds.) Planning and Effecting Needed Changes in Education: Designing Education for the Future: An Eight-State Project. Publishers Press, Inc., Denver, Colorado. 1967. 317 p.

12. Committee for Economic Development. Innovation in Education: New Directions for the American School. Committee for Economic Development. 1968. 75 p.

13. Dale, Ernest. Management: Theory and Practice. McGraw-Hill Book Co. Inc., New York. 1965. 743 p.

14. Dill, William R. Decision making. In Daniel E. Griffiths (Ed.) Behavioral Science and Educational Administration, National Society for the Study of Education. University of Chicago Press, Chicago. 1965.

15. Eye, Glen G., James M. Lipham, Russel T. Gregg, Lanore A. Netzer, and Donald C. Francke. Relationship between instructional change and the extent to which school administrators and teachers agree on the location of responsibility for administrative decisions. U.S.O.E. Cooperative Research Project No. 5-0443(1913) University of Wisconsin, Madison, Wisconsin. 1966.

16. Gallaher, Art. Directed change in formal organizations. In Richard O. Carlson and Keith Goldhammer (Eds.) Change Processes in the Public Schools. The Center for the Advanced Study of Educational Administration, University of Oregon, Eugene, Oregon. 1965. 92 p.

17. Garrett, Henry E. Statistics in Psychology and Education. David McKay Company, Inc., New York. 1958. 478 p.

18. Goldhammer, Keith, John E. Suttle, William D. Aldridge, and Gerald L. Becker. Issues and Problems in Contemporary Educational Administration. The Center for the Advanced Study of Educational Administration, University of Oregon, Eugene, Oregon. 1967. 177 p.

19. Goodlad, John I. Innovation in education. The Education Forum 31(4);275-284. March. 1967.

20. Goodlad, John I. Foreward. In Jerrold Novotney (Ed.) The Principal and the Challenge of Change. Institute for Development of Educational Activities, Melbourne, Florida. 1968. 72 p.

21. Griffiths, Daniel E. Administrative Theory. Appleton-Century-Crofts, Inc., New York. 1959. 123 p.

22. Halpin, Andrew W. Theory and Research in Administration. The MacMillan Co., New York. 1966. 352 p.

23. Halpin, Andrew W., and Don B. Croft. The organizational climate of schools. Administrators Notebook 11(7):1-4. March. 1963.

2. Hinman, Edna F. Personality characteristics of school principals who implement innovation in public schools. Unpublished Doctoral Dissertation, Utah State University, Logan, Utah 1966. 76 p.

25. Howsam, Robert B. Effecting needed changes in education. In Edgar L. Morphet and Charles O. Ryan (Eds.) Planning and Effecting Needed Changes in Education: Designing Education for the Future: An Eight-State Project. Publishers Press, Inc., Denver, Colorado. 1967. 317 p.

26. Johnson, Homer M., George M. Carnie, and Clifford J. Lawrence.
    Personality characteristics of school superintendents in relation
    to their willingness to accept innovation in education. U.S.O.E.
    Grant No. OEG 3-6-68273-1387. Utah State University, Logan, Utah.
    1967.

27. Lippett, Ronald. The teacher as innovator, seeker, and sharer of
    new practices. In Richard I. Miller (Ed.) Perspectives on Educational
    Change. Appleton-Century-Crofts, New York. 1967. 392 p.

28. Marcum, R. LaVerne. Organizational climate and the adoption of
    educational innovations. U.S.O.E. Grant No. OEG 4-7-078119-2901.
    Utah State University, Logan, Utah. 1968. 100 p.

29. Meyers, Donald A. The art of decision making. In Jerrold M. Novotney
    (Ed.) The principal and the challenge of change. Institute for
    the Development of Educational Activities, Inc., Melbourne, Florida.
    1968. 72 p.

30. Michael, Donald N. The Next Generation. Random House, Inc., New
    York. 1965. 207 p.

31. Miller, Richard I. An overview of educational change. In Richard
    I. Miller (Ed.) Perspectives on Educational Change. Appleton-
    Century-Crofts, New York. 1967. 392 p.

32. Mort, Paul R. Principles of School Administration. McGraw-Hill Book
    Co., Inc., New York. 1946. 569 p.

33. Parker, J. C., and R. A. McGuire. The educational program. In
    Edgar L. Morphet and Charles O. Ryan (Eds.) Emerging Designs for
    Education: Designing Education for the Future: An Eight-State
    Project. Publishers Press, Inc., Denver, Colorado. 1968. 240 p.

34. Rogers, Carl. Freedom to Learn. Charles E. Merrill Publishing Co.,
    Columbus, Ohio. 1969. 358 p.

35. Rogers, Everrett. What are innovators like? In Richard O. Carlson
    and Keith Goldhammer (Eds.) Change Processes in the Public Schools.
    The Center for the Advanced Study of Educational Administration,
    University of Oregon, Eugene, Oregon. 1965. 92 p.

36. Ross, Donald H. Administration for Adaptability. Rev. Ed. Metro-
    politan School Study Council, New York. 1958. 643 p.

37. Rubin, Louis J. Installing an innovation. In Richard R. Goulet
    (Ed.) Educational Change, the Results and the Promise. Citation
    Press, New York. 1968. 286 p.

38. Sasse, Edward Benjamin. Teacher and administrator participation in
    decision making and curricular development. Ph.D. dissertation,
    The University of Wisconsin, Madison, Wisconsin. 1966. 194 p.
    (Original not seen; abstracted in Dissertation Abstracts 28(3):1A-1150A.
    September, 1967).

39. Schein, Edgar H., and Warren G. Bennis. Personal and Organizational Change Through Group Methods. John Wiley and Sons, Inc., New York. 1965. 376 p.

40. Shepard, H. Superiors and subordinates in research. Journal of Business 29(4):261-267. 1956.

41. Simon, Herbert A. Administrative Behavior. The Free Press, New York. 1957. 259 p.

42. Thompson, Victor A. Bureaucracy and innovation. Administrative Science Quarterly 10(1):1-20. June. 1965.

43. Vroom, Victor H. Some Personality Determinants of the Effects of Participation. Prentice-Hall, Inc., Englewood Cliffs, New Jersey. 1960. 91 p.

APPENDIXES

Appendix A

Educational Innovation Checklist

A. <u>Introduction to the Checklist of Educational Innovation</u>. In making an inventory of innovations for the state of New York, Brickell identified six structural elements of schools: teachers, students, methods, subjects, times, and places. He indicated that innovation at the school level often requires major shifts in one of these structural elements. The checklist of Educational Innovation follows Brickell's pattern.

B. <u>Directions for Use of the Checklist of Educational Innovation</u>. Different checklists are provided for elementary and secondary levels. Complete the checklist applicable to your level of administration. Principals of schools are asked to indicate those innovations which have been <u>implemented</u> or <u>discontinued</u> during the period of <u>September 1, 1967</u> to <u>May 31, 1968</u>. Only those innovations which can be verified by the principal should be checked. The degree of involvement* should be indicated by scoring as indicated below.

> 0--Innovation has not been implemented
> 1--Less than 25 per cent involvement
> 2--25 per cent to 75 per cent involvement
> 3--More than 75 per cent involvement
> 4--Innovation has been discontinued

* The degree of involvement of students in numbers and time.

Checklist of Educational Innovation

(Secondary)

Structural Element
I. Scheduling
   (Time)
   _____ 1. Individual--Day by Day, Week by Week
   _____ 2. Modular Scheduling
   _____ 3. Drop a Day
   _____ 4. Extended Day--Week or School Year
   _____ 5. Block
   _____ 6. Other_____
                        (Describe)

II. Staff Utilization
     (Teachers, etc.)
____ 1. Team or Cooperative Teaching.
____ 2. Team Supervision (Team members observe and critique one another)
____ 3. Research and Development Specialist
____ 4. Teacher Aids, Lay Readers, Student Aids, Volunteer Unpaid Aides
____ 5. Team, Department, or School Head
____ 6. Other_____
                        (Describe)

III. Procedures
     (Methods)
____ 1. Seminars, Problems, or Advanced Placement
____ 2. Independent Study, Programmed Learning
____ 3. Language Labs
____ 4. Testing for Credit
____ 5. Work Experience, Apprenticeships
____ 6. Other_____
                        (Describe)

IV. Organization
     (Students)
____ 1. Dual Progress, Multi-Track
____ 2. Ungraded, Multi-age, Phasing, Continuous progress
____ 3. Separate Schools or Houses
____ 4. Fluid Grouping within Teams, Flexible, Large, Small Groups,
         Seminar Discussion, Interest
____ 5. Tutorial
____ 6. Other_____
                        (Describe)

V.   Curriculum
     (Subjects)
____ 1. Modern Mathematics
____ 2. New Science (BSSC, PSSC, OHEM, etc.)
____ 3. Speed Reading Courses, Reading Labs, Remedial Reading, Reading
         Clinics
____ 4. Leisure Time Development (Golf, Tennis, Hobbies, etc.)
____ 5. Data Processing Courses, Technological Training
____ 6. Other_____
                        (Describe)

VI. Facilities
     (Places)
____ 1. School or Departmental Resource Centers, Teacher Work Rooms
____ 2. Electronically Equipped Study Carrells
____ 3. "School," Departmental, or Team Conference Centers
____ 4. Large and Small Group Instructional Centers, Individual
         Practice Rooms
____ 5. "Open Laboratories" Student Work Rooms
____ 6. Other_____
                        (Describe)

Checklist of Educational Innovation

(Elementary)

Structural Element
I. Scheduling
    (Time)
_____ 1. Individual--Day by Day, Week by Week, Fluid within group
_____ 2. Staggered Reading (one group comes early, one remains late)
_____ 3. Extended Day, Week or School Year
_____ 4. Master Schedule for Special Classes (Art, Music, P. E., Science, Math, etc.)
_____ 5. Special Classes (Talent Development, etc.)
_____ 6. Other _____
                    (Describe)

II. Staff Utilization
    (Teachers)
_____ 1. Team Teaching, Cooperative Teaching
_____ 2. Specialist, Elementary Art, Music, P. E., Math, Science, etc.
_____ 3. Teacher Aides, Student Aides, Volunteer Unpaid Aides
_____ 4. Resource Teachers (Non-teaching)
_____ 5. Elementary Guidance Counselor
_____ 6. Other _____
                    (Describe)

III. Procedures
     (Methods)
_____ 1. Programmed Learning, Independent Study, Reading, Social Studies or Science Labs
_____ 2. Inquiry Training, Critical Thinking, Study and Library Skills (as special courses)
_____ 3. Electronic Language Lab
_____ 4. Individualized Reading
_____ 5. Other _____
                    (Describe)

IV. Organization
    (Students)
_____ 1. Platoon, Dual Progress
_____ 2. Ungraded, Multi-Age, Multi-Grade
_____ 3. Fluid Grouping within Teams
_____ 4. Flexible, Large Groups, Small Groups
_____ 5. Departmental
_____ 6. Other _____
                    (Describe)

V. Curriculum
    (Subjects)
_____ 1. Foreign Language
_____ 2. Modern Mathematics
_____ 3. New Science (BSCS, etc.)
_____ 4. Creativity, Talent Development, Special Interest (as special course)
_____ 5. Other _____
                    (Describe)

VI. Facilities
(Places)
_____ 1. Science Laboratory
_____ 2. Electronically equipped Study Carrells
_____ 3. School, Team or Department Resource Centers
_____ 4. School, Team or Department Conference Cen
_____ 5. Large and Small Group Instruction Centers
_____ 6. Other_____
(Describe)

Appendix B

Organizational Climate Description Questionnaire

The items in this questionnaire describe typical behaviors or conditions that occur within a 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 Instruction which describes 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.

The Questionnaire

The Organizational Climate Description Questionnaire was developed by Andrew W. Halpin and Don B. Croft at the University of Chicago. The Questionnaire is used and reprinted for this study with permission of the MacMillan Company from "Theory and Research in Administration" by A. W. Halpin. Copyright, Andrew W. Halpin, 1966.

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

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 be selected, depending upon how often the behavior described by the item does, indeed, occur in your school.

Please 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 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 pressures on non-conforming faculty members.　　1 2 3 4

11. In faculty meetings, there is a 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

17. Teachers have fund 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

1. Rarely occurs
2. Sometimes occurs
3. Often occurs
4. Very frequently occurs

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 nonsensible 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

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

1. Rarely occurs
2. Sometimes occurs
3. Often occurs
4. Very frequently occurs

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 critism 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

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'   1 2 3 4
    use.

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

1. Rarely occurs
2. Sometimes occurs
3. Often occurs
4. Very frequently occurs

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

* Buffer items

Appendix C

The Eight Dimensions of Organizational Climate

Teachers' Behavior

1. Disengagement refers to the teachers' tendency to be "not with it." This dimension describes a group which is "going through the motions," a group that is "not in gear" with respect to the task at hand. It corresponds to the more general concept of anomie as first described by Durkheim. In short, this subtest focuses upon the teachers' behavior in a task-oriented situation.

2. Hindrance refers to the teachers' feeling that the principal burdens them with routine duties, committee demands, and other requirements which the teachers construe as unnecessary "busy-work." The teachers perceive that the principal is hindering rather than facilitating their work.

3. Esprit refers to morale. The teachers feel that their social needs are being satisfied, and that they are, at the same time, enjoying a sense of accomplishment in their job.

4. Intimacy refers to the teachers' enjoyment of friendly social relations with each other. This dimension describes a social-needs satisfaction which is not necessarily associated with task-accomplishment.

Principal's Behavior

5. Aloofness refers to behavior by the principal which is characterized as formal and impersonal. He "goes by the book" and prefers to be guided by rules and policies rather than to deal with the teachers in an informal, face-to-face situation. His behavior, in brief, is universalistic rather than particularistic; nomothetic rather than idiosyncratic. To maintain this style, he keeps himself--at least, "emotionally"--at a distance from his staff.

6. Production Emphasis refers to behavior by the principal which is characterized by close supervision of the staff. He is highly directive and plays the role of a "straw boss." His communication tends to go in only one direction, and he is not sensitive to feedback from the staff.

7. Thrust refers to behavior by the principal which is characterized by his evident effort in trying to "move the organization." Thrust behavior is marked not by close supervision, but by the principal's attempt to motivate the teachers through the example

which he personally sets. Apparently, because he does not
ask the teachers to give of themselves any more than he willingly
give of himself, his behavior, though starkly task-oriented, is
nonetheless viewed favorably by the teachers.

8. Consideration refers to behavior by the principal which is charac-
terized by an inclination to treat the teachers "humanly," to try
to do a little something extra for them in human terms.

Appendix D

Decision Point Analysis
(Decision Items Grouped by Subtest)

Non-Categorized Item (Sample): The decision on the practice of using workbooks in the instructional program.

Business Management:

3. The decision on the priority for the use of unscheduled rooms and multipurpose areas.

6. The decision for the educational specifications for a new or remodeled building.

7. The decision on the instructional aids to be included in the budget.

18. The decision on the procedure for obtaining instructional supplies.

23. The decision on who will participate in the formulation of the school budget.

Curriculum:

1. The decision on the selection of curriculum problems for study.

10. The decision on the selection of teachers for participation in experimental instructional programs.

14. The decision on the regulations concerning lesson plans.

17. The decision on the selection of textbooks.

19. The decision on how to evaluate the curriculum.

Pupil Personnel:

2. The decision on the ways to group pupils by classes.

9. The decision on the content of pupils' cumulative records.

12. The decision on the retention of pupils.

16. The decision on the rules governing pupil conduct.

21. The decision on the practices for assigning homework.

School-Community Relations:

8. The decision on the means for increasing community understanding of curriculum developments.

11. The decision on how to report pupil progress to parents.

15. The decision on which community drives and activities merit school participation.

24. The decision on the content of local news items to be released.

25. The decision on the use of citizens' committees.

Staff Personnel:

4. The decision on the orientation activities for new staff members.

5. The decision on the appointment of teachers to curriculum committees.

13. The decision on the adequacy of teacher performance.

20. The decision on the activities for inservice development of staff.

22. The decision on the assignment of teaching and non-teaching loads.

Appendix E

Decision Point Analysis

DIRECTIONS: This instrument contains 25 decision items. The column to the left is a list of positions of persons in your school system who may participate in making these decisions. In the column to the right there are three questions regarding each of the decision items. For each decision item, answer the three questions in the manner indicated.

POSITIONS: DECISION ITEMS: QUESTIONS:

DECISION ITEM (SAMPLE): The decision on the practice of using workbooks in the instructional program.

I   II

Positions
Business Manager
Principal
Vice Principal
Department Head
Special Subject Supervisor
Superin- tendent
Director of Instruction
Guidance Coordinator
Board of Education
Teacher

A. WHO MAKES THIS DECISION? Choose the one person in your school system who is primarily responsible for making this decision. Place the number one (1) in the box in Column I opposite the title of that person.

B. WHAT OTHER PERSONS PARTICIPATE IN MAKING THIS DECISION? Select at least two persons, other than the one already indicated in answering Question A, who participate in making this decision. Rank these persons 2, 3, -, -, according to the extent of which they participate. In Column I, place the number of the rank you give each participant opposite the title of that position.

C. WHAT IS THE NATURE OF YOUR PARTICIPATION IN MAKING THIS DECISION? Select one of the four following choices which best described your participation in making this decision and write the number of this choice in box provided in Column II.
1. Make the decision.
2. Recommend the preferred decision.
3. Provide information only.
4. None.