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Participatory leadership: Leadership characteristics of secondary school principals and their relationship to perceived subordinate participation in the decision-making process

by

Donald Herman Gress

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CHAPTER I. INTRODUCTION

In an educational organization both teachers and school principals play key roles in the educational process. The principal-teacher relationship seems, therefore, to be a central factor in the effective management of a school. The school building principal is considered by the superintendent as the designated leader in his school. By virtue of his position in the school system, he influences subordinates toward the goals of the school system. The authority of the principal usually is limited only by state law and school district policy. Teachers, as classroom directors, are in a position to insist upon certain rules, to assert themselves, and to display some degree of power. The principal-teacher role relationship is a key factor in fulfilling the educational philosophy of the school system as set forth by the school board.

Behavioral scientists have long been interested in the study of leadership. Leadership has relevance to many of the problems of our society. The effective functioning of our social system, from the local boy scout organization to the presidency of the United States, is assumed to be dependent on the quality of leadership provided. There is a tendency in our society to blame the basketball coach for a losing season and to credit an admiral for a military victory at sea.

Decision-making is a key function of leaders. Participation involves followers in the decision-making act. This phenomenon is sometimes called participatory leadership. Behavioral scientists have recommended additional study of participatory leadership (Vroom and Yetton, 1973).

Research concerning participatory leadership has received considerable attention in the literature. There have been numerous reports and exhortations. Various research findings indicate that, like other similar issues, participatory leadership is a complex phenomenon, whose value and worth to management have been neither proved nor disproved. Generally, research efforts have been directed at one single variable, e.g., only leadership or only decision-making.

One factor relevant to organizational effectiveness is the decisions made by the organization. A leader will make decisions on matters within his area of responsibility. He will issue certain orders and directives to his subordinates. After issuing the orders, he will monitor them to insure compliance. A persistent and controversial issue in the study of leadership is that of participation in decision-making by subordinates.

Understanding the process of participatory leadership within an organization requires more than having access to the rules and regulations of the organization. It necessitates a knowledge of the individuals involved in the organization and how they interact. Participatory leadership as a strategy is intended to make people feel more useful and important to the organization.

Today, leadership styles advocated by psychologists and behavioral scientists call for greater participation by subordinates in the problem-solving and decision-making process. There has been some evidence which supports the leadership procedure of participative management. A field study (Vroom, 1960) indicates a positive relationship between individual performance and the amount of influence supervisors

afford their subordinates in decisions that affect them. If teacher satisfaction and effectiveness are to be maintained and increased, it would appear desirable that teacher participation in the decision-making process be increased (Dettre, 1970).

The effectiveness of an organization in meeting the needs of the employees will be enhanced if the persons who will be affected by decisions are involved in the making of these decisions (McGregor, 1960). There is a close association between the amount of control the employee has over his work and positive job performance. Studies indicate if a subordinate is allowed to participate in the decision-making process, he will perform better (Katz, Maccoby, and Morse, 1950 and Katz, Maccoby, Gurin, and Floor, 1951).

This investigation deals with the manner in which the leadership behavior of a principal relates to the degree of decision-making participation by teachers. Decision-making involves the selection of a course of action or a choice among several alternatives. The leadership processes that regulate, control, and select these decisions are central to the comprehension and prediction of human behavior. An understanding of this decision-making process is vital to the explanation of individual behavior and to the behavior of an organization.

In our school systems principals vary widely in academic background, interests, and experience as managers. This disparity precludes utilization of a standard procedure by all principals which might increase the effectiveness of leadership and decision-making. Some principals who utilize a mode of participative management may use it as a lubricant

to oil away resistance to formal authority. Others utilize participative management to reach better decisions.

Teachers appear to be exhibiting a proclivity for increased participation in the development of policy that directly affects their work. Teacher participation in decision-making is a process whereby each member (teacher) of an organization (school) may contribute to or participate in a joint activity, with a purpose or procedure (Sears, 1950). However, teachers may express resentment toward excessive committee work and being consulted on decisions they feel the principals are required to make. Teachers do have a "zone of indifference" within which the principal's decisions will be accepted as indisputable. For the principal to seek involvement within the zone of indifference is to invite resentment, opposition, and ill will (Bridges, 1967).

The desire of teachers for greater involvement in contemporary educational practices has been demonstrated by an increase in the number of states passing mandatory negotiation laws. Recent years have seen the emergence of a national trend which has been widely termed teacher "militancy". Teachers are utilizing overt behavior in the form of strikes and other sanctions.

In years past, administrators and school boards have made decisions for teachers with the expectation that teachers would appreciate the service rendered. Many younger teachers consider this a kind of paternalistic benevolence. Teachers believe that they have had training which should allow them to participate in educational decisions. Furthermore, they consider it just that they should help make decisions which

directly affect them (Bridges, 1964).

Educational administrators must be decision-makers or at least decision formulators. Their effectiveness as leaders is largely reflected in their "track record" in making the "right" decision. These "right" decisions in turn largely depend on whether the manager has utilized the right person or persons in the right ways in helping him to solve the problem.

Statement of the Problem

This study was designed to investigate and examine relationships among four factors: teachers' perceived participation in decision-making; secondary school principals' perception of their subordinates' participation in the decision-making process; leadership behavior of secondary school principals; and teachers' perception of the type of leadership exhibited by the principals. The study sought to determine the leadership behavior of secondary school principals in order to ascertain how they behave as participatory leaders.

It seems highly likely that the leadership behavior of a superior will determine the amount of participation of a subordinate. It would appear that a democratic type leadership style would have greater involvement of subordinates. We would understand a traditional-directive type of leadership style as being more concerned with specific tasks than with personnel. We would expect an individual employed in this type of an organization to experience a lesser amount of participation. It seems reasonable to predict that a positive relationship could exist

between the democratic or nonauthoritarian personality of a principal and participation as perceived by teachers (Likert, 1967 and Owens, 1970).

Specifically, it was the intent of this study to determine how the principals compared to each other in their leadership behavior as perceived by the teachers and principals and measured by the Leadership Behavior Description Questionnaire - Form XII. Additionally, it was the problem of this study to determine how the principals compared in their involvement of their teachers in the decision-making process as measured by the Decision Involvement Index. This investigation did not intend to evaluate the effectiveness of the principal as a leader, but to examine participatory leadership as perceived by the following role categories:

1. The leader behavior descriptions of the secondary school principals as perceived by their respective teachers.
2. The leader behavior descriptions of secondary school principals as perceived by themselves.
3. The decision-making involvement of the secondary school teachers as perceived by their respective principals.
4. The decision-making involvement of the secondary school teachers as perceived by themselves.

More specifically the problem was to test the following hypotheses:

H_1 There is no significant relationship between teacher participation in decision-making and the principal leadership characteristic of representation.

H_2 There is no significant relationship between teacher participation in decision-making and the principal leadership characteristic of demand reconciliation.

H_3 There is no significant relationship between teacher participation in decision-making and the principal leadership characteristic of tolerance of uncertainty.

H_4 There is no significant relationship between teacher participation in decision-making and the principal leadership characteristic of persuasiveness.

H_5 There is no significant relationship between teacher participation in decision-making and the principal leadership characteristic of initiation of structure.

H_6 There is no significant relationship between teacher participation in decision-making and the principal leadership characteristic of tolerance of freedom.

H_7 There is no significant relationship between teacher participation in decision-making and the principal leadership characteristic of role assumption.

H_8 There is no significant relationship between teacher participation in decision-making and the principal leadership characteristic of consideration.

H_9 There is no significant relationship between teacher participation in decision-making and the principal leadership characteristic of production emphasis.

H_{10} There is no significant relationship between teacher participation in decision-making and the principal leadership characteristic of predictive accuracy.

H_{11} There is no significant relationship between teacher participation in decision-making and the principal leadership characteristic of integration.

H_{12} There is no significant relationship between teacher participation in decision-making and the principal leadership characteristic of superior orientation.

Sub hypotheses include the following:

There is no significant relationship between background characteristics of the teachers and principals and their perceived perception of the leadership behavior of the principal and the teachers' perceived participation in decision-making.

In addition to the data collected to examine the major hypotheses, additional data concerning the principals and teachers were gathered by means of background questionnaires.

In order to compare the leadership styles of the principals, A School Principal's Thinking survey was administered. These data concerning the principal provided information as to the leadership style of the principal. The instrument A School Principal's Thinking provided two classifications of leadership style, the traditional-directive and the democratic-participative. Traditional leadership style tends to minimize the degree of involvement of groups and individuals in the organization with decisions made unilaterally. Democratic leadership style emphasizes maximum group and individual participation in the decision-making process with a climate of understanding built upon a foundation of honesty and trust (Haimann and Scott, 1970).

Objectives and Procedures

The purpose of this study was to explore the ways in which leadership is reflected in the social processes utilized to improve the theory and practice of secondary school principals' leadership styles and participative management. This study attempted to determine the relationship between the characteristics of the secondary school principal and his leadership behavior and teacher participation in the decision-making process. The leadership behavior of the principal was determined by the teachers' perception of his behavior. The decision-making involvement of the teachers was determined by their perception of this

involvement.

The objectives of this study are: 1) identify and describe the leadership behavior patterns of principals who had assistant principals in their school organizations, and those schools which did not employ assistant principals; 2) determine the relationship between the principal's self-perceptions of how he "actually" behaves and the teachers' perceptions of how their principal behaves; 3) determine if the principal's pattern of leader behavior differs from one dimension of leadership to another; 4) determine the extent of congruence between the principal's and teachers' perception of the present and desired organizational level which should be responsible for the making of certain decisions; and 5) determine the extent of agreement between the principal and the teachers in their perception of faculty involvement in making decisions and the perception of what teacher involvement in making certain decisions should be.

There may be an overlap between what an individual perceives to be participation in the decision-making process and actual participation. For the purpose of this study, "decision-making" was "that influence which an individual feels he has had in the decision-making process." The leadership behavior of the principal and teacher participation in the decision-making process are measured in terms of teacher perception. The teachers or principals were not required to make any actual decisions.

The final objective of this study was to analyze the participatory leadership patterns of selected secondary school principals in the state of Iowa. The subjects for this study were Iowa secondary school

principals as listed in the 1973-74 Iowa High School Athletic Association Directory. Secondary school principals who had assistant vice principals were selected at random from the directory. The secondary school principals without vice principals were randomly selected from the 1970-71 Data on Iowa Schools, School Year 1970-71, Part 2, Professional People. Schools selected to participate did not have a subordinate population of less than 12. If a school had a subordinate population of 12 or less, it was dropped and a replacement was randomly selected. The principal and 10 secondary teachers from each school were selected to participate in the study.

Data were obtained from the principals by the administration of the Leader Behavior Description Questionnaire - Form XII Self (LBDQ-XII), Background Data - Administrator, A School Principal's Thinking, and the Decision Involvement Index (DII). Data were obtained from the teachers by the administration of the Leader Behavior Description Questionnaire - Form XII (Teacher Description of School Principal), Background Data - Teachers, and the Decision Involvement Index. All questionnaires were hand delivered or mailed to all participating schools.

A School Principal's Thinking was designed to obtain a determination of participatory leadership. The items are constructed to provide a series of steps from an autocratic approach to management, to a more group-oriented, democratic approach.

The Leader Behavior Description Questionnaire - XII was designed to obtain descriptions of a leader by various subordinates and by the leader himself. The scores derived from the 12 dimensions describe how the

leader behaves, but do not judge the effectiveness of an individual as a leader.

The Decision Involvement Index was developed to measure the perception of participation in educational decisions by the teachers and by the principals. The questionnaire consists of 20 decision items. The respondents were requested to answer the following four questions pertaining to each decision item: 1) Which organizational level contains the person or persons having primary responsibility for making this decision? 2) Which organizational level contains the person or persons you believe should have primary responsibility for making this decision? 3) What is the present nature of faculty involvement in making this decision? and 4) What do you believe should be the nature of faculty involvement in making this decision?

The teacher respondents were asked to provide additional background data including: 1) age, 2) sex, 3) highest level of professional preparation, 4) major discipline taught, 5) number of years in present position, 6) number of years in present school building, and 7) total number of years in teaching.

The principal respondents were asked to provide additional background data concerning: 1) age, 2) highest level of professional preparation, 3) number of professional staff in the school, 4) number of students in the school, 5) number of years in present school system, 6) number of years in present position, 7) total years of administrative or supervisory experience, and 8) total number of years in secondary education including teaching and administration.

Definition of Terms

In order to give clarity and meaning to this study, the following operational definitions of terms were used:

1. Decision Involvement Index - DII: An instrument which was developed by the Department of Educational Administration, University of Wisconsin in order to ascertain school faculty involvement in the decision-making process (Eye, Gregg, Lipham, Netzer, and Grancke, 1966 and Wendlandt, 1970).
2. Decision-making process: The different phases of action from the recognition of a particular issue or problem to implementation of a solution.
3. Leader: The individual in a group who, on the basis of his office or official status in an organization, is given the task of directing and coordinating task-relevant group activities in order for that group to achieve its goals. In this study, the leader was identified as the secondary school principal.
4. Leader behavior: The actions taken by a leader or in which he engages to influence the activities of an organization. This term was used synonymously with leadership. In this study, the organization is identified as the secondary school.
5. Leadership Behavior Description Questionnaire - Form XII: An instrument which was developed by the Bureau of Business Research, College of Commerce and Administration of Ohio State University in order to measure leadership behavior (Stogdill,

1963). Throughout the remainder of this study this instrument will be referred to as the LBDQ-XII. Definitions of the 12 subscales are listed below:

Representation: The perceived degree to which an individual speaks and acts as the representative of the group.

Demand reconciliation: The perceived degree to which an individual reconciles conflicting demands and reduces disorder to system.

Tolerance of uncertainty: The perceived degree to which an individual is able to tolerate uncertainty and postponement without anxiety or upset.

Persuasiveness: The perceived degree to which an individual uses persuasion and argument effectively; exhibits strong convictions.

Initiation of structure: The perceived degree to which an individual clearly defines his own role, and lets followers know what is expected.

Tolerance of freedom: The perceived degree to which an individual allows followers scope for initiative, decision and action.

Role assumption: The perceived degree to which an individual actively exercises the leadership role rather than surrendering leadership to others.

Consideration: The perceived degree to which an individual regards the comfort, well-being, status, and contributions of

followers.

Production emphasis: The perceived degree to which an individual applies pressure for productive output.

Predictive accuracy: The perceived degree to which an individual exhibits foresight and ability to predict outcomes accurately.

Integration: The perceived degree to which an individual maintains a closely knit organization; resolves inter-member conflicts.

Superior orientation: The perceived degree to which an individual maintains cordial relations with superiors; has influence with them; is striving for higher status.

6. Participation: That influence which an individual feels or perceives he has had in the decision-making process.
7. Secondary school principal: The administrative head and professional leader of a division of a school or unit, such as the high school. An individual who is highly specialized and a full-time administrative officer of a school unit, which contains any combination of grades 7 through 12 (Good, 1973).
8. Teacher participation in decision-making: A process whereby each member (teacher) of an organization (school) may contribute to or participate in a joint activity with a planned purpose and procedure (Sears, 1950). Objective participation is the teachers' psychological involvement in the school environment. Teacher participation, for the purpose of this study, has been

identified as ranging from actually making the decision to not being involved in the decision-making process.

Delimitations of the Study

The scope of this study was delimited to participatory leadership of secondary school principals in the state of Iowa. The state of Iowa was chosen to limit the study to a specific area and one where a state law requiring collective negotiations was not yet in effect.

Only secondary school principals were chosen because the types of decision situations they face often differ from those of elementary principals. The secondary schools were subdivided into those where the principal had an assistant assigned and those where no assistant principal was assigned. There could be a difference between the organizational structure of a school with an assistant principal or principals and that of a school which has none.

The individuals contingent to the success of this study were the secondary school principals and teachers. Teachers and principals were selected from the same secondary school and had spent at least one year in their respective positions. Even though the students, parents, and the community are very important components for involvement in decisions that may affect the operation of a school, they were not considered.

The employment of an administrative team in high schools offers some identifiable administrative strengths and possibly more options to administrators who desire to cope with the ever growing list of demands upon and expectations of education. This concept of administration,

which involves a more subtle style and a higher degree of sophistication and coordination, was not considered in this study.

This study is concerned with the leadership characteristics of the principals as they relate to teacher involvement in the decision-making process. Other processes that may be considered as participatory practices were not covered in this study.

CHAPTER II. REVIEW OF LITERATURE AND RELATED RESEARCH

The study of participatory leadership in our secondary schools is today in a very fruitful period. In recent years there has been keen interest in the decision-making and leadership processes. Management theories which have been developed and practiced in industry are now being utilized in our school systems.

Research evidence is supportive of the participative model. Participatory leadership which attempts to maximize the initiative of an individual or to increase self-generated motivation is more likely to be effective in meeting objectives than leadership which imposes control of an individual in an authoritarian fashion (McGregor, 1960 and Heller, 1969). The effectiveness of an organization in meeting the needs of its members will be enhanced if the persons who will be affected by decisions are involved in the making of these decisions (Likert, 1967). Because some leaders or persons in authority fail to understand how participatory leadership can be applied, they utilize the more authoritarian approaches (Miles, 1965). Other leaders permit colleagues and subordinates to participate, not so much as a favor to the participants but as a favor to the manager (Brown, 1966).

Miner (1973) states that "not a single major firm in the United States has applied the participative approach in its totality on a truly large scale, although a number of companies have utilized aspects of the approach or introduced it in certain locations." Miner further indicates that companies utilizing participatory approaches are those with a high

proportion of professional employees.

Organizations of varying sizes provide the setting for an individual to function as a follower or as a leader. Although many investigations speak of the leader as the manager or administrator, as in a formal business setting, the concepts or principles are applicable in other contexts. If based on a sound foundation, research which was conducted in one organization may have direct application to another type of organization. Many of the principles generated by behavioral scientists in business organizations have important implications for political or tax-supported organizations. The principles of this research are based on the psychological and social characteristics of the human being, rather than the particular environmental circumstance in which a man labors.

The literature concerning leadership and decision-making encompasses a voluminous amount of material. This chapter is categorized into six subdivisions. A review of leadership and decision-making in general is provided, but the main emphasis is on participatory leadership including the principal's behavior as a leader and the manifestation of participation by teachers in the decision-making process. This review of literature is not encyclopedic, but all relevant areas are represented.

Leadership

Concern for and interest in leadership date back thousands of years. It is one of the most interesting and complicated subjects in the field of behavioral science. Such interest has not been restricted to the twentieth century, but has attracted the attention of rulers and

philosophers since the beginning of time. Men have wondered about the ways in which leaders differ from followers. Leadership is a matter which concerns all members of our society. Research concerning leadership has focused either on the individual in the position of leadership, or on the social structure in which the leader works or with which he is associated. There have been numerous ways of defining leadership and many procedures for identifying leaders.

Katz and Kahn (1966) describe leadership as going beyond required performance. They consider organizational leadership "to be the influential increment over and above mechanical compliance with the routine directives of the organization."

Fiedler (1965) defines leadership as "a personal relationship in which one person directs, coordinates and supervises others in the performance of a common task." Haimann and Scott (1970) concurred, terming leadership "a process by which people are directed, guided, and influenced in choosing and achieving goals."

Jacobs (1970) states that leadership is one of the most difficult concepts to define. According to Jacobs, leadership is taken as "an interaction between persons in which one presents information of a sort and in such a manner that the other becomes convinced that his outcomes (benefits/costs ratio) will be improved if he behaves in the manner suggested or desired."

Leadership is a relationship. A study by Sanford (1952) indicates that in groups where the goal is not very important or visible, a preference for leaders who will meet the psychological needs of the

group is evident. These needs may be relatively independent of the immediate situation, e.g., the need for approval. In organizations such as fraternities, clubs, church organizations, etc., we find preferred leaders who can give psychological structure and satisfaction to individuals. The nice guy type of leader may be passed over when the group is confronted with a challenging job. Who will become the leader in a social organization depends on the needs of the followers, as well as the style, needs, and abilities of the leader.

The preceding definitions of leadership are more than acceptable. These men who formulated them have recognized the importance of helping others, of being concerned with behavior to achieve group goals, and of effectiveness in creating an atmosphere to bring about group activity.

Exhaustive reviews of the literature related to leadership yield hundreds of studies. Torabi (1971) indicates that between 1965 and 1971, approximately 1362 studies were completed concerning leadership. Many of these, of course, do not relate to the purpose of this study. For this study, leadership is divided into three categories: leadership in general, leadership as related to public schools, and participatory leadership.

Some confusion in the literature stems from the failure to distinguish between "leader" as a person, and "leadership" as a technique (Jacobs, 1970). It can be assumed that leadership is a transaction and is distinct from leader behavior. Leadership is utilized in order to obtain specific results and is the effort of one member to change or alter the behavior or motivation of other members (Bass, 1971 and Brown,

1967). The criterion for leadership is what the leader does to help the group achieve its objectives, help the group define its goals, and maintain the cohesiveness of the group (Knezevich, 1969). The leader will be followed if the subordinates believe that he can best provide the satisfaction for which they strive, within the limits of time, place, and the subordinates' abilities (Koontz and O'Donnell, 1972).

Fiedler (1967) defines the leader as "the individual in the group given the task of directing and coordinating task-relevant group activities or who, in the absence of a designated leader, carries the primary responsibility for performing these functions in the group." Gibb (1969) defines leaders as "those persons in a group who are perceived most frequently to perform those roles or functions which initiate and control behavior of others towards the achievement of group goals or sub-goals." Haimann and Scott (1970) indicate that a leader is an individual who "mediates between the organization and the individual so that the degree of satisfaction to both is maximized."

Fiedler (1967) demonstrates that a leader who is effective in one situation will not always be successful in another situation. His study indicates the personality of a leader is not the only determining factor of the performance of a group. A military leader would be more successful in directing a Naval engagement than an accountant, who had no military experience.

Yukl (1967) examined the relationship between personality and situational variables and the behavior of the formal leader. His work suggests that situational variables are stronger determinants of leadership

effectiveness than personality variables, i.e., leader behavior correlated better with the situational variables than with the leader personality variables. All of the situational variables correlated with some aspect of leader behavior. Yukl's study supports the thesis that leader behavior is a more effective measure of leadership than personality variables..

The effectiveness of an individual as a leader may be determined by his leadership style. Graen, Alvares, Oris, and Martella (1970) define leadership style as "the underlying need structure of the individual that motivates his behavior in various leadership situations." A relationship-oriented leader's worth is contingent upon his acceptance and approval by the group. He is primarily concerned with this relationship. A task-oriented leader's worth depends upon the performance of his group and his primary concern is with the production and output of his group.

O'Brien and Ilgen (1968) studied the effects of leadership style and the relationship of organizational structure and member compatibility with group creativity. Their study supports the point that leadership style and member compatibility have less influence upon group creativity than task organization.

The superordinate in an organization is responsible for more work than one individual can accomplish. The successful accomplishment of work by the superordinate depends on his ability to obtain help from his subordinates in getting the job completed. At any level of management, the means by which the superordinate gets the job done is through people

and not through production. The manager is responsible for production, but he can only accomplish it through the management of people. Therefore, we find the successful manager has the ability to work through people (Haire, 1964). The superordinate needs the support of his subordinates.

Research from business organizations (Marrow, Bowers, and Seashore, 1967) and modern organization theory (Likert, 1967) supports the thesis that there is a significant relationship between organizational productivity and leader behavior. Likert's (1961) research indicates that in an organization which is highly productive, leader behavior is a variable for both high productivity and organizational behavior. This is consistent with Argyris' (1964) and McGregor's (1960) organizational theories of an ideal organization.

Haythorn (1958) conducted a laboratory study in which he investigated the relationship between behavior in small groups and leader and follower personalities. The groups he studied consisted of members who were high or low in authoritarianism. He concluded that homogeneous conditions were most desirable. Additional findings indicated it is important to match the personality of the leader with the personality of the subordinate, especially if one is to have satisfied personnel, high morale, and lower conflict levels in a group.

Different patterns of leadership may affect the performance of groups. Anderson and Fiedler (1964) indicate that the quantity of output tends to be higher under a participative form of leadership, while the quality of output was superior under a supervisory form of leadership. Shaw and

Blum (1966) report that a directive leader is more effective than a non-directive leader when the task is highly standardized. Quality of output is associated with close supervision, while the quantity is associated with loose supervision (Jacobs, 1970). Halpin's (1956) studies suggest that administrators who receive high markings on both consideration and initiating structure are more effective than those who rate high on only one of the scales. According to Morse (1953) employee satisfaction is higher under general supervision than under close supervision. There would appear to be no single effective leadership style for every situation. In certain situations an authoritarian leader may be most effective, while in others effectiveness may result from a democratic style of leadership.

Katz, Maccoby, and Morse (1950) investigated productivity and its relationship to participation by employees in setting goals and making decisions. The subjects were office workers of the Prudential Insurance Company. The study was designed to investigate the conditions which create variables in productivity and satisfaction of individuals in groups organized to achieve given objectives. This investigation concluded there was a positive relationship between the amount of influence supervisors afford their subordinates and decisions that affect their groups' performance. Additionally their findings indicate:

> The heads of the high-producing sections were significantly more likely to:
>
> 1. receive general rather than close supervision from their superiors.

2. like the amount of authority and responsibility they have in their jobs.
3. spend more time in supervision.
4. give general rather than close supervision to their employees.
5. be employee-oriented rather than production-oriented.

Katz, Maccoby, Gurin, and Floor (1951) studied leadership style as related to productivity. This study utilized railroad workers. They concluded that productivity increased where leadership facilitated meaningful interpersonal interaction and job satisfaction. A study by Herzberg, Mausner, and Snyderman (1959) supports the view that interpersonal climate is related to job satisfaction. However, the 1951 study by Katz et al., came close to contradicting one of the important conclusions of the 1950 study carried out by a similar group (Katz, Maccoby, and Morse, 1950). The 1950 study of clerical workers found a relationship between efficiency and general rather than close supervision. The 1951 investigation of railroad workers failed to find this relationship. It would therefore appear that the relationship between supervision and production may vary depending upon the type of task the workers are performing.

Herzberg (1968) disagrees with the studies just cited which indicated that participation is a key to increased production. He contends that challenging work is more important than participation. His concern is shown by the following:

> The absence of such "hygiene" factors as good supervisor-employee relations and liberal fringe benefits can make a worker unhappy, but their presence will not make him want to work harder. Essentially meaningless changes in the tasks that workers are assigned to do have not accomplished the desired objectives either. The only way to motivate the employee is to give him challenging work in which he can assume responsibility.

In recent years, social scientists and behavioral scientists have been greatly concerned with the many dimensions of leadership. Leadership studies conducted at the Survey Research Center of the University of Michigan and at the Ohio State Leadership Center demonstrate that people in authority who use democratic styles of leadership are likely to have higher morale as well as higher production. Coch and French (1948) studied the level of employee participation in making decisions concerning technological changes. They found that increased participation led to higher production, greater job satisfaction, and a closer relationship between the supervisor and the people under his direction. Vroom's (1960) studies showed that the effects of participation may depend upon additional conditioning variables. The most pertinent findings from his studies confirmed that participation by workers is associated with favorable attitudes toward the job, and employees with a high need for independence perform at higher levels, but those with a low need for independence do not.

Haythorn, Couch, Haefner, Langham, and Carter (1965) in a study of leader behavior, reported that nonauthoritarian leaders received higher ratings from their subordinates on leadership behavior when dealing with opinions and making suggestions, i.e., participation in decision-making. The authoritarian type leader finds it difficult to adapt to the democratic process, but the nonauthoritarian welcomes participation. Haythorn et al., contends that working with an authoritarian leader finds less latitude for involvement in the decision-making process. From this rationale, it is reasonable to predict that a positive relationship could

exist between the nonauthoritarian leader and participation in decision-making as perceived by a subordinate.

Fiedler (1967) studied task-oriented and human relations-oriented leaders. He studied productivity of such groups as tank crews, basketball teams, surveying teams, and bomber crews. His studies indicate that groups which are led by task-oriented individuals are more successful. He also studied groups where the tasks were unstructured. Fiedler reasons that an unstructured task provides the leader with less effective power than if the task is highly structured. Fiedler's studies indicate that groups which perform unstructured tasks are more successful if their leader is human relations-oriented. Thus we can see from Fiedler's studies, the task was a factor in determining the best type of leadership style and the one which proved most effective.

Teacher statements describing the leadership behavior of their principal are excellent sources from which to draw inferences relative to the nature of the leadership which exists in the school. The nature of leadership in any school will be revealed in the transactions between the behavior of the leader and the perceptions of those whom he leads. Feitler's (1972) research in school organizations showed that there is a significant relationship between organizational processes and the leader behavior of the principal.

Evenson (1959) studied the leadership behavior of high school principals and selected staff members in the state of Illinois. He utilized the LBDQ to measure the behavior of the school principal in a cross section of 40 large and small high schools. Mean scores were reported for

the principals' behavior in initiating structure and consideration in the ten largest and the ten smallest high schools. Analysis suggested no relationship between the two leadership dimensions and the size of the school. Unfortunately this study was conducted prior to the development of the LBDQ-XII, which expanded the original subscales from two to 12. Stogdill (1963), who originated the different subscales, does not believe that the two original subscales could account for all the observed variance in leader behavior.

Faculty consensus in a school centers around the acts, attitudes, and policies of the principal or the school system as symbolized by his leadership. Brown and Anderson (1967) examined consensus within a school faculty. Faculty members were found to be satisfied with all aspects of teaching in schools where the principals exhibited person-oriented rather than system-oriented leader behavior. Additionally, the faculty considered the principal to be much more effective in schools were he exhibited leader behavior with a high frequency as opposed to low or moderate frequency.

Feitler and Long (1971) compared the relationship between leadership and organizational behavior in schools. They utilized the LBDQ-XII to examine the following questions: "(a) are organizational processes of school organizations related to the leader behavior of principals?, and (b) what is the strength of the relationship between specific organizational dimensions and particular leader behaviors?" Their findings indicated a significant relationship between organizational characteristics and perception of leader behavior. A look at individual leader

behavior suggests there are certain types of behaviors related to getting the job done, in contrast to the types of behavioral leadership which meet the needs of the individual teachers.

Gott (1966) utilized the LBDQ Real and Ideal to examine perceptions and expectations among the following personnel: superintendents, principals, and subordinates. He found that: 1. Faculties and superintendents agreed on their perception of actual leader behavior of principals. 2. The faculties and superintendents agreed on their expectations of the ideal consideration leader behavior of principals but disagreed on initiating structure. 3. There were significant differences between perceptions of the "real" leader behavior dimension and expectations of the "ideal" behavior dimension for each of the reporting groups.

Brown (1967) utilized the LBDQ-XII to survey teachers regarding their principals' leadership behavior and its relationship to administrative outputs. In his examination, administrative outputs were interpreted in terms of:

1) teacher satisfaction,

2) confidence in the principal,

3) school performance estimate.

The findings indicate that:

> (1) teacher satisfaction and (2) confidence in the principal are sensitive to the perceived leadership of the school, but (3) teachers' estimates of the school's performance is not. It was further evident that output criteria are most sensitive to variations in those leadership subscales that cluster about the middle of the system-person continuum. In general, these refer to activities that respond to the need for an effective transaction between the institution and the person, e.g., integration, demand reconciliation, predictive accuracy, and superior orientation.

Background data gathered by Brown included the size and type of school, social class of neighborhood, staff age, sex, training, experience, and longevity at that school. None of the background profiles considered individually or in combination indicated any significant relationship with the subscales on the LBDQ-XII. Information from this study would indicate that the LBDQ-XII subscales and background profiles are relatively insensitive under multiple linear regression analysis. Fiedler (1971) indicates while a relationship appears to exist between considerate behavior and member satisfaction, it must be kept in mind that satisfied employees are more likely than unsatisfied employees to describe their supervisor as considerate.

Jacobs (1965) used the LBDQ-XII to investigate the relationship between the leader behavior of junior high principals and the number of curricular innovations which had occurred in their administrations during a two year period. Of the 16 schools selected, eight had reported the largest number of innovations and eight had reported the fewest. An analysis of the data indicated that the principals in schools with larger numbers of innovations displayed a significantly different type of leadership behavior than the other principals on six of the 12 dimensions. The six dimensions for which the innovative principals received higher ratings were: initiating structure, predictive accuracy, representation, integration, persuasion, and consideration. It would appear from this investigation that the LBDQ-XII measures leader behavior and that one of the important factors in instituting educational change is the leadership behavior of the principal.

Fultineer (1971) investigated the interpersonal needs of school principals and the relationships to their measures of leader behavior. This study indicated that a school principal's interpersonal needs control and affection interchange behavior were not highly associated with leader behavior ideology or perceived leader behavior.

Chung (1970) conducted a study of teacher-centered management as a style of leadership behavior for school administrators. The purpose of this style of leadership is to reduce the gap between the social/psychological needs of the teachers and the monocratic/bureaucratic patterns that are apparent in some educational organizations. Chung defined teacher-centered management as, "(1) much sharing in decision-making, (2) less close teacher supervision, (3) high administrative support of teachers' professional growth, (4) strong personal relationships, and (5) accessible relationships." His conclusions indicated there is a significant relationship between a highly teacher-centered style of management and high job satisfaction of teachers.

Feitler (1972) in his study of school principals, hypothesized that schools with a participative-group organizational style (Likert, 1961) would be administered by principals whose leadership characteristics would be more interpersonal than in schools where the principal's behavior approached the authoritative organizational type. He measured the leadership characteristics of the school principals by administering the LBDQ-XII. Of the 12 behavior items measured by the LBDQ-XII, four were significantly higher for schools which approached the participative group end of the management spectrum than for schools which approached

the authoritative end. The four items which were significantly higher for the participative type were: tolerance of freedom, integration, consideration, and tolerance of uncertainty. Feitler's study suggests a significant relationship between leader behavior as measured by the LBDQ-XII and organizational processes as measured by the profile of a school. This study supports the use of the LBDQ-XII as an instrument to measure the behavior of a leader.

Doyle and Ahlbrand (1974) analyzed elementary teachers and administrators and how they worked together in solving problems. The instrument utilized for the study was Fiedler's (1967) Assumed Similarity Between Opposites (ASo).[1] The individual who receives a low ASo score is task-oriented, while a high ASo score indicates a person is concerned with good interpersonal relations. This study indicated that principals who were human relations-oriented were more supportive of their teachers' ideas, while principals who were task-oriented were more critical of their teachers' ideas. Additionally, it was shown that if a principal utilized the ideas generated by the teachers, they generated many more new ideas than teachers who were criticized by the principal. Teachers may generate new ideas but according to Goodlad (1971) the ideas, concepts, and processes generated by the teachers are not being incorporated

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[1]A high Assumed Similarity Between Opposites, or ASo, score shows that the individual perceived his most and least preferred coworkers as similar. A low ASo score showed that he perceived them as relatively dissimilar. It should be emphasized that ASo scores were obtained in most studies by asking the individual to think of all people with whom he had ever worked, not merely those with whom he worked at the time of rating. For a more detailed discussion see Fred E. Fiedler (1967, pp. 36-60).

into the schools by the principals.

Even though the findings of Doyle and Ahlbrand (1974) are in basic agreement with Fiedler, it is questionable whether the ASo instrument should have been utilized. Fiedler (1967) has stated that the ASo and Least Preferred Coworker (LPC) scores can be interchanged, but they are different. In recent years the ASo has been replaced by The Contingency Model utilizing the LPC score (Fiedler, 1971, 1972, 1973, and Csoka and Fiedler, 1971).

The studies surveyed represent a fair sampling of the more recent research concerning leadership. The results of the numerous studies investigated suggest that leadership does not occur in a vacuum, but rather the behavior of the leader may be influenced by a particular set of circumstances at a particular time and place. Leaders accomplish their work through other people and the success of leaders depends upon the ability of the leader to enlist and maintain follower commitment and support for the attainment of organizational or group goals (Haire, 1964). Different patterns of leadership may affect the performance of groups (Anderson and Fiedler, 1964). Yukl's (1967) study supports the thesis that leader behavior is a more effective measure of leadership than personality variable. The effectiveness of an individual as a leader may be determined by his leadership style (Vroom and Yetton, 1973).

In summary, it can be stated that this review of research studies documents the extensive use of the leader behavior approach in studying school administration. In recent years the direction taken by leadership research and theory has emphasis on the observation of behavior

within groups. The shift from the study of personality traits to the study of leader behavior, utilizing the various revisions of the LBDQ, constituted a move to a precise field of study (Jacobs, 1970). The Ohio State Leadership Center has been instrumental in development of the LBDQ. Stogdill (1963) did not believe that the two original subscales could account for all the observed variance in leader behavior. He expanded the original subscales from two to 12. The LBDQ has been used to study various aspects of leadership in our school systems. Brown (1967) summarizes the use of the LBDQ-XII as follows:

> Users of the LBDQ-XII . . . assume that how the leader really behaves is less important than how the teachers perceive that he behaves; it is their perception of his behavior--if anything--that influences their own actions and thus determines what we call leadership.

Gott's (1966) findings showed that faculty and superintendents agreed on their perception of actual leader behavior of principals. Brown's investigation conducted in 1967 indicated a relationship between teacher satisfaction and confidence in the principal's leadership performance in administering the school. Feitler and Long (1971) in their school study found a significant relationship between organizational characteristics and perception of leader behavior. Feitler's (1972) study suggests a significant relationship between leader behavior and organizational processes as measured by the profile of a school. These studies support the use of the LBDQ as an instrument to measure the behavior of a leader.

Participatory Leadership

Participatory leadership is a phrase utilized in management circles today to describe one phase of modern management theory. Participatory leadership means that managers should give subordinates an opportunity to participate in those organizational decisions which affect them. While much has been written concerning the advantages of participative leadership, many managers do not have sufficient knowledge of the approach to use it effectively (Argyris, 1955).

The participative democratic theory of management is derived from the work of Douglas McGregor, Rensis Likert, Cliff Argyris, and Warren Bennis, among others. Heller (1971) states these writers base their assumptions on the following:

1. That managers and workers are motivated to share influence with decision-makers;
2. that they are capable of contributing usefully to the decision process;
3. that in general this willingness and capability is not used; and
4. that the three antecedent circumstances are invariant with respect to most normal working conditions.

Participation will occur when individuals have an opportunity to take part in the decisons of the organization which affect them. The environment for participation is created by the leader, who shares the responsibilities with those subordinates who work for him (Likert, 1961). Davis (1957) defines participation as "the mental and emotional involvement of a person in a group situation which encourages him to contribute

to group goals and share responsibility in them."

Argyris (1957) states that the consequences of participation result in:

1. Greater feelings of cohesiveness.
2. Greater productivity whether the leader is present or not.
3. Increased job satisfaction and morale.
4. Relatively broader time perspective.
5. Greater flexibility in behavior.

The principle advantages of participation according to Davis (1957) are that it utilizes the creative potential of all employees, encourages personnel to accept responsibility, may create better decisions, improves team work and morale, creates higher motivation, and restores human dignity and mutual interest.

Participation may take place at all levels of supervision--between the president of a corporation and his staff, between a school superintendent and his central office staff, or between a school principal and his teachers. The amount and kind of participation which occur will depend on the organization, the leader, and the type of decisions made. (McGregor, 1960).

Participatory leadership has been found to be related to such variables as productivity, turnover, morale, and job satisfaction. The pioneering study of the relationship between the amount of participation in decision-making and the democratic-authoritarian dimension of leadership was carried out by Lewin, Lippitt, and White (1939). They investigated the effects of different styles of leadership on the behavior of

groups of children. The democratic style of leadership produced greater group unity than any other style.

Examination by several writers of the participation of subordinates in the planning process points out improvements in the performance of the individual (McGregor, 1960, Maier, 1958, and Likert, 1959). A study by French, Kay, and Meyer (1966) showed that higher participation was associated with greater occupational self-actualization, and psychological participation produced improvements in man-manager relations. Additionally, they found that "the formulation of criticisms of past performance into specific goals for future improvement had a very substantial effect on performance improvement" (French, Kay, and Meyer, 1966). An article of this type has merit. However, it is noted that increases in participation tend to produce improvements in the relation of a subordinate to his manager, but decreases in participation did not have undesirable effects. The article failed to consider that the effect of changes in participation on subsequent performance may depend upon fear of or supportiveness from the individual's superior.

Participative leadership was studied by Katz and Kahn (1966) at the Institute for Social Research and the Research Center for Group Dynamics of the University of Michigan. These studies centered around the concepts of employee orientation and production orientation. Katz and Kahn concluded there were two types of leadership style. Employee-oriented management described the behavior or the attitude of the supervisor and his consideration of the human relations side of people. This type of a supervisor took a special interest in the motives of people. The

production-oriented management stressed the technical aspects of the worker's job and getting the work completed.

Likert (1961) puts special emphasis on influences upward and downward in an organization. For instance, sharing influence with others in the decision-making process is one important aspect of the concept of participatory leadership. Likert also stresses that good leadership calls for the sharing of available information.

Baumgartel (1956) studied laboratory chiefs in scientific organizations. He placed the different styles of leadership into directive, participative, and laissez-faire classes. Groups that were directed by participative leadership had more positive attitudes toward the leader and were more highly motivated than under either of the other two styles of leadership.

The policies of sharing information and departmental problems with subordinates is in line with the concept from the human relations movement that subordinates need to be made to feel as part of the organization. Early writers appear to have viewed participation as a means to elicit cooperation and increase enthusiasm in order to improve overall productivity (Bendix, 1956). In place of considering subordinates as untapped talent, they viewed participation as a means of improving morale. Today the policy of allowing subordinates to set their own goals and modify job performance goes beyond the human relations theory and is associated with some of the more recent theories of participation. Today the intent of participation is to use that talent to make better decisions and to increase productivity.

The participative theory of leadership is based on the assumption that we need to have a leadership policy which expands subordinates' influence and self-control in order to make full use of their individual abilities. Miles (1964) studied 350 managers in four West Coast firms to determine subordinate participation in leadership. His findings suggest that managers may doubt the subordinates' ability to provide self-direction, but consider them dependable, efficient, and loyal. Surprisingly, these managers accepted participation as desirable and useful, but did not consider their subordinates good leaders.

Participation gives the individual a chance to be part of a process and the chance to expand and develop as a participant. It is an opportunity for the individual to contribute to the final outcome. Participation is a very useful leadership technique when employed properly. It must not be a sham but actual and real participation. Many superiors will invite participation after they decide on the "answers" based on the idea that it would be good for the individual to have a feeling of participation by talking about the "questions." A subordinate is apt to become dissatisfied if he finds that his participation was not taken seriously and the participation was not real (Haire, 1964). A superordinate who invites participation must take it seriously and must be ready to consider areas of interest among personnel in his organization which he had not anticipated. Evidence from industry indicates that real participation can pay dividends. A company that gives lip service to participation may find it more of a liability than an asset (Bennis, 1966).

On paper, a typical manager broadly endorses participatory leadership and rejects the typical, autocratic concepts of leadership. While managers appear to have faith in participatory policies, they do not have a strong feeling for the capabilities of their subordinates. Miles (1965) indicated that managers are not consistent in their acceptance of participation. He believes that the typical manager has accepted two different theories of participation rather than a single concept for his organization. There is one model he develops for himself and one which he feels subordinates should follow.

This lack of confidence in subordinates is supported by the investigations conducted at Berkeley, California by Haire, Ghiselli, and Porter (1966). They found in their international study that managers in general lacked confidence in others and did not believe that subordinates had the capacity for leadership.

Siegel and Ruh (1973) studied participative management and job involvement, commitment, and identification with the organization. The study covered all employees in 22 separate units of six manufacturing organizations in the Midwest. The results of this study are consistent with claims of participative leadership advocates such as Argyris, McGregor, and Likert that participative management is a determinant of job attitude and motivation. The correlation between participative decision-making and job involvement was significantly more positive for the individuals with higher education than those individuals with lower education. These results are consistent with the work of Schein (1971). He suggests that education influences an individual's expectations and

desire to participate in the making of decisions which may affect him.

Morgan (1973) suggests that for participation to be effective, the psychological climate of the organization must be conducive to encouraging and providing the means whereby an employee can participate. Two-way communication must exist between the superior and the subordinate. When all communication is from the top downward, no exchange of ideas between management and employee can take place. The organizational attitude toward employees can have a bearing on whether employees are authorized to participate. Theory X[2] management philosophy has a tendency to stifle participation, while the Theory Y[3] approach has a tendency to stimulate it (McGregor, 1960).

While the different authorities cited agree that participatory leadership is necessary, none indicate how much participation is best or

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[2]Theory X embraces the following theses:

1. The average human being has an inherent dislike for work and will avoid it if he can.
2. Because of this characteristic of dislike for work, most people must be coerced, controlled, directed, and threatened with punishment so that they will work toward the organization's goals.
3. The average human being prefers to be directed, prefers security, and wishes to avoid responsibility.

[3]Theory Y postulates some very different perceptions:

1. Expenditure of physical and mental effort in work is as natural as play, if it is satisfying.
2. Man will exercise self-direction and self-control toward an organization's goals if he is committed to them.
3. Commitment to objectives is a function of the rewards associated with their achievement.
4. The average person can learn to accept and seek responsibility.
5. Creativity, ingenuity, and imagination are widespread among people and do not occur only in a select few.
6. The intellectual potentialities of the average human being are only partially realized.

For a more detailed discussion see Douglas M. McGregor (1960, pp. 33-57).

whether participation will make an employee want to work harder (Herzberg, 1968). Tannenbaum and Schmidt (1963) indicate that a successful leader is acutely aware of the atmosphere around him and is able to detect the readiness of his subordinates to participate and grow. If direction is required, the leader will provide this direction, but if participative freedom is called for, he will provide the necessary release.

Participative leadership rests on the theoretical assumptions of Theory Y management. It will motivate the individual toward organizational objectives and will satisfy individual needs. It is used by managers to allow members to participate in the activities of the organization (McGregor, 1960). Doris (1974) has interestingly pointed out that participatory leadership is not necessary for all personnel. His position is stated as follows:

> However, though a people oriented theory of management works best, it does so in a pragmatic way. That some people suffer a regressive, crippling effect to this type of leadership is readily apparent. The fact is that a certain proportion of the population cannot take responsibility well and are frightened by freedom.

The majority of the investigations reviewed place special emphasis on the involvement and participation of subordinates. In spite of the psychological, moral, and practical advantages certain problems recur in participating groups. Mansbridge (1973) examined three of these problems: "the greater length of time involved in decision making, the greater emotional intensity of the interaction, and the persistence of ingrained inequalities of influence."

Generally participatory group decisions take longer to make. Mansbridge (1973) explains this as follows:

> In a group, each member must speak his piece; emotions must often be dealt with; and the process itself can go no faster than the pace of the slowest. Time thus becomes a crucial variable. The great amount of time needed for participatory decision making can make quick decisions in emergencies almost impossible, can lead to frustration and boredom among the members, and can cause divisions between those who see their time as more or less valuable.

The issues may become personalized when groups gather to make a decision. In face-to-face groups, emotions may cause people to make decisions based on feelings rather than on rational grounds. Mansbridge explained this phenomenon as follows:

> In face-to-face groups, a person's ideas become heavily entwined with his emotional and psychological self. Once someone has presented an idea, it is often harder for him to stop identifying with it or for others to stop identifying him with it than in more impersonal situations. Each person takes criticism of his ideas as criticism of himself and evaluates others' ideas as extensions of themselves.

In addition to the problems of time and emotion, participatory groups must become aware of and learn how to deal with the actual inequalities within the group. Mansbridge's concern is indicated by the following:

> In groups committed to the ideal that all members have an equal influence on decision, continuing inequalities can be disastrous. Yet each individual brings to the group different levels of expertise, personal attractiveness, verbal skill, self-confidence, access to information, and interest in the task. Therefore each group must (a) reduce inequalities that can be reduced and (b) understand and find ways to deal with inequalities that cannot be reduced.

The studies surveyed suggest that participatory leadership is much too complex to be explained simply as democratic leadership practices. Under certain conditions participative leadership may be most effective, while under other conditions a more directive leadership may be

required. The personality characteristics and expectations of subordinates will influence the types of leadership style that are most effective. The subordinates will participate more favorably if they have a relatively high need for independence, the necessary knowledge to deal with problems, a readiness to assume responsibility, and an identity with the goals of the organization (Spotts, 1971).

Decision-Making

There has been some conjecture that good decision-makers are born and not made. This myth permeated past history, when only the elite or those with certain blood lines could rule. It was believed that certain individuals came into the world with a degree of prowess and skill. It is true that every individual born into the world does possess a certain amount of natural endowment. However, skills involved in decision-making, including selection of design and choosing activities, are as learnable and teachable as the skills required for driving an automobile (Vroom and Yetton, 1973).

The American Heritage Dictionary gives the following definition of a decision: "the passing of judgment on an issue under consideration; the act of reaching a conclusion or making up one's mind; a conclusion or judgment reached or pronounced." Lipham (1974) defines decision-making as "a process wherein an awareness of a problematic state of a system, influenced by information and values, is reduced to competing alternatives, among which a choice is made, based upon estimated outcome states of the system."

Decision-making is one of the most important functions of a school administration. Griffiths (1959) indicated the importance of decision-making when he stated:

> It is not only central in the sense that it is more important than other functions, as some writers have indicated; it is also central in that all other functions of administration can best be interpreted in terms of the decision-making process. Decision-making is becoming generally recognized as the heart of organization and the process of administration.

An administrator's success may depend upon the quality and the quantity of decisions he makes. Not making decisions is often as important as making them. Also, an administrator may lose his job if he continually makes inappropriate decisions. Decision-making is fundamental to successful completion of the other sequential steps in the administrative process. Decision-making should receive as much attention as leadership.

Today, more than ever before in our democratic way of life, every individual needs some type of system whereby he can participate in the decisions that affect him. A conclusion of Bridges (1967) indicates that teachers who are involved in certain decisions are greater producers and have higher morale. Teachers also develop a zone of indifference, i.e., these are areas in the decision-making process in which teachers believe only the administrators should be involved and not the teachers, e.g., school bus scheduling and food services.

The value of a decision is determined by the amount of success achieved by the decision. A rational decision should be made in the light of certain goals. If the goals are attained, then there is a degree of success in the decision.

Livingston (1949) used decision-making as the basis for managerial action and stated:

> If we expand the concept of decision-making to include, on the one hand, the process by which the decision is arrived at, and on the other hand, to include the process by which we implement or make the decision "work", and if we further recognize that this is a continuing, dynamic process rather than an occasional event, then decisioning means something quite different than heretofore and becomes the basis of all managerial action.

One of the most important functions in management is the decision-making process. It may be the core process of management. Some authors such as Simon (1960) take certain liberties with the English language and treat decision-making as a synonym for managing. Decision-making is not the sole responsibility of the administrator or one individual. The key is to decide which individuals should be involved and when. If people at the lower level in the decision-making process are not involved, they may become dissatisfied. Without involvement people may feel powerless, normless, and useless.

In the last two decades writers have focused on the task of improving the decision-making process. It has been pointed out (Simon, 1958) that all individuals in an organization (such as a school) make decisions, but each makes a different type of decision. Owens (1970) specifies that the classroom teacher makes decisions that may be based on those of the school principal, but they are different in nature. The teacher's decisions may have a greater impact on the student than those of the principal. The principal is in a position in the organization where he will spend more time than the classroom teacher in the decision-making

process.

The making of decisions is a complex process. Dettre (1970) expressed concern about teacher's involvement in the decision-making process when he specified:

> If the making of decisions by a teacher could be conducted in a pure environment, decision making might prove to be relatively simple, since the only variables with which one need contend in any given situation would be those proven critical to the decision making process. Decision making for the teacher, however, is anything but pure. The variables involved in any situation emerge from a variety of sources, and many of them cannot be regulated by the decision maker. He simply must live with them and operate within the total complex of decision making as he finds it.

The process employed by a school administrator to reach a decision is not new, but word usage has changed through the years. The stages in problem solving described by Dewey (1910) included the following questions:

1. What is the problem?
2. What are the alternatives?
3. Which alternative is best?

The stages set forth by Dewey for problem solving have been expanded by Griffiths, Simon, Hemphill, and others for utilization in decision-making.

Even though decision-making may be a choice among alternatives, a specific process is generally followed to arrive at a decision. Decision-making (Simon, 1960) is comprised of three principal phases: "finding occasions for making a decision; finding possible courses of action; and choosing among courses of action." The time devoted to these individual phases by different persons will vary. The principal will spend a large

amount of his time considering and developing possible courses of action based on the information he has available. The amount of time he may utilize in choosing among alternatives may be very small. The teacher may find less occasion for making decisions and find that she devotes her time to those decisions which affect classroom procedures.

Stages of decision-making exist which lead to taking action (Hemphill, Griffiths, and Frederiksen, 1962), viz.:

1. Recognizing a problem and the need to prepare to make a decision.
2. Preparing for clarification of the problem.
3. Initiating work in preparation.
4. Organizing and judging facts, opinions, and situations.
5. Selecting alternatives.
6. Deciding and acting.

Hemphill et al., developed these stages after completing the landmark Whitman School Simulation Project.

The above steps are abstract properties of administration. It is a guide that school administrators may use in arriving at some course of action. It is not necessary for an individual to proceed through the above stages in a sequential manner in order to arrive at the conclusion. It is also likely that some of the stages may be eliminated or omitted. A school administrator may decide upon a decision and act on the problem without specific evidence that he progressed through any one of these stages.

As indicated previously, a principle of decision-making is to choose among alternatives. When a person is choosing among certain alternatives,

the more clearly an individual can recognize those factors that will assist in attaining his goal, the more effective he can be in choosing.

When an administrator makes a decision, he may wonder if his goals will be attained. Goals are not static but are continuously changing. If an individual narrows his goal, he may make an incorrect decision since it is difficult to consider every aspect. In making a decision, Barnard (1938) considered it important to give attention to the strategic factors in choosing among alternatives. By considering the strategic factors, an individual will select the most favorable alternative. He pointed out the following:

> The analysis required for decision is in effect a search for the "strategic factors". . . . The theory of the strategic factor is necessary to an appreciation of the process of decision, and therefore to the understanding of organization and the executive functions as well as, perhaps, individual purposive conduct. As generally as I can state it, this theory is as follows:
>
> If we take any system, or set of conditions, or conglomeration of circumstances existing at a given time, we recognize that it consists of elements, or parts, or factors, which together make up the whole system, set of conditions, or circumstances. Now if we approach this system or set of circumstances with a view to the accomplishment of a purpose, and only when we so approach it, the elements or parts become distinguished into two classes: those which if absent or changed would accomplish the desired purpose, provided the others remain unchanged, and these others. The first kind are called limiting factors, and the second, complementary factors.

March and Simon (1958) utilized the concept of a bounded rationality or the cognitive limits of rationality, and have written about the realities of organizational decision-making. There are always limitations on the amount of information available concerning alternative courses of action, on the relative utility of these alternatives, and on

the consequences of these courses of action. March and Simon examining alternative courses of action in the decision-making process contend:

> The organization and social environment in which the decision maker finds himself determines what consequences he will anticipate, what ones he will not; what alternatives he will consider, what ones he will ignore. In a theory of organization these variables cannot be treated as unexplained independent factors, but must themselves be determined and predicted by the theory . . . choice is always exercised with respect to a limited, approximate, simplified "model" of the real situation . . . the chooser's . . . definition of the situation.

Decision-making and leadership are recognized by some authors as the very nucleus of the management system. McCamy (1947) puts it this way: "The making of decisions is at the very center of the process of administration, and the discussion of administration will be more systematic if we accept a framework for the analysis of decision-making." Simon (1958) makes the point concisely: "A general theory of administration must include principles of organization that will insure correct decision-making, just as it must include principles that will insure effective action."

The study of decision-making is difficult. One of the major problems in assessing decision-making is that it cannot be observed. The preparation for and effects of a decision may be observed and assessed, but the process must be inferred.

Decision-making is closely related to action. A decision may change the present course of action or alter the the course of action to some degree. Additionally, it may correct the present procedure, or simply permit the present action to continue. Likewise, the process of seeing

that decisions are implemented is again decision-making activity. In a similar manner Biel (1974) states, "most people do not realize that not to make a decision is itself a decision."

Decision-making in school administration may not develop into neat patterns of alternate courses of action. Two school principals given similar facts may not arrive at the same decision. When we consider value conflict, the possible courses of action are endless. Generally speaking, when confronted with the incomplete data for decision-making, the principal falls back on his value system, viz., will it be good for kids; raise the tax levy; get me a better paid superintendency; etc.? Choices may not consist of selecting or rejecting, but of gradually compiling a definite course of action out of all the indefinite possibilities. The composition of one course of action need not imply the rejection of other courses of action. It may be a compromise course which lies between two or more alternatives.

Historically the American school organization (with vertical management) has been considered an efficient tool for decision-making. The general policy making is concentrated in the central office, policy specification is carried out at the building level, and the actual work is performed by the teachers. The two decades from 1954 to 1974 have seen this pattern of school organization in some metropolitan areas severely strained and, in instances, shattered by events and socio-economic burdens, i.e., events and burdens which proved insolvable by existing organizations and leaders.

Participative Decision-Making

Lowin (1968) has defined participative decision-making as "a mode of organizational operations in which decisions as to activities are arrived at by the very persons who are to execute those decisions."

When an individual first enters a job, he is dependent upon his superiors for satisfaction of certain needs. Superiors have control over the essential things he must have. For all practical purposes they control the amount of pay, the physical conditions under which he works, the continuance of employment, the social needs of group membership and relations with others, and the need satisfaction that an individual finds on the job, i.e., recognition for accomplishment, participation in decision-making, chance for advancement, and being necessary to the organization (Maslow, 1954).

The advocates of participative management generally view the conditions of modern industrial life as frustrating the needs of most employees. An integral part of job satisfaction is the participation of the employee in decisions that will affect him. White and Ruh (1973) in their analysis of participation state the following:

> Eliminating this frustration by increasing employee participation in decision-making is seen as providing the organization with previously untapped energy or perhaps redirected energy, which had previously been directed against the organization. Furthermore, high levels of participation in decision-making are assumed to contribute to favorable responses for all, or at least most, employees.

McGregor (1960) and Brown (1966) have devoted attention to the fact that an important part of employee contentment is the participation that

an individual has in the decision-making process. Participation is a general principle utilized by managers in an organization. Likert (1961) indicates the favorable reaction of personnel to participation in the following:

> Studies show that subordinates react favorably to experiences which they feel are supportive and contribute to their sense of importance and personal worth. Similarly, persons react unfavorably to experiences which are threatening and decrease or minimize their sense of dignity and personal worth. . . . Each of us wants appreciation, recognition, influence, a feeling of accomplishment, and a feeling that people who are important to us believe in us and respect us. We want to feel that we have a place in the world.

Tannenbaum (1968) investigated the relationships between decision-making autonomy, satisfaction, and organizational effectiveness. He concluded that persons in the lower level of an organization are more satisfied and committed when they have relatively more control. Tannenbaum also suggested that an organization is much more effective if it has satisfied members.

Vroom (1960, 1962) indicated that the effects of participation in decision-making may vary in accordance with the differences in individual personality and in need fulfillment. He concluded that when one looks at personality variables, there are differences between those with weak and strong personalities. Those with authoritarian type personalities as well as persons with weak independence needs apparently respond much differently to participation in decision-making.

Blankenship and Miles (1968) examined the self-reported decision-making behavior of managers in industry. The study related the decision behavior of the manager to the size of the respective organization, the

span of control, and the manager's position in the organization. In general, the findings indicate that behavior in decision-making is related to the position of the individual in the hierarchy. The decision interaction of the manager at the top was different from what it was for a lower-level manager. The managers at upper-levels showed a stronger pattern of reliance on their subordinates. They tended to involve their subordinates in the decision-making process to a greater degree than the managers in lower-level positions. The pattern in this research would suggest that organizations which want lower-level managers to put participative-management concepts into practice must treat these managers as if they were upper-level members of the organization. The authors failed to reach a definitive conclusion as desired and recommended further study in this area.

A study by White and Ruh (1973) was designed to explore the moderating effects of individual values on the relationships between participation in decision-making and attitudes toward the job. The values of ambition, capability, imagination, sense of accomplishment, equality, freedom, independence, responsibility, self-control, and participation were utilized. It was hypothesized that individuals who placed high importance on these ten values would react more positively toward participation in decision-making and job involvement. The results were consistent with the participative management position that participation in decision-making was consistently positively related to job involvement, motivation, and identification with the organization. However, values did not consistently moderate the relationship between participation and job

attitude. It would appear from this study that more evidence is needed before a general conclusion can be made that values exert any systematic influence on the relationship between participation in decision-making and attitudes toward the job.

The human relations theory of participatory decision-making (Miles, 1965) is utilized by certain managers who believe in involvement for involvement's sake. This type of manager argues that if an employee perceives that he is being consulted, he will be satisfied and more cooperative.

The amount of participation will vary in accordance with the manager's attitude toward his subordinates. Subordinates who lack the capability to participate in a meaningful manner may be involved in routine or peripheral issues. A manager may consult with his subordinates in order to increase involvement without really utilizing the ideas put forth (Miles, 1964 and Brown, 1966).

People who work in the lower echelons may receive a degree of satisfaction if they are involved in the decision-making process. People may feel alienated and demand participation in the decision-making process when they are not included. Denhardt (1971), in a study conducted in New Orleans, demonstrated that through participation the employer may develop not only happy workers, but also persons with a greater commitment to the work establishment. Denhardt contends that participation and involvement of personnel in decision-making may be present without the transfer of real power.

Klein and Maher (1970) conducted a study which centered around the

attitude of individuals toward their jobs. The purpose of the research was to test hypotheses that decision-making autonomy is directly related to perceptions of conflict and, that the relationship is modified by the degree of congruence between the individual's perception of his own autonomy and the amount of autonomy he feels he should legitimately have. The results indicated that decision-making autonomy itself was a critical factor in minimizing perceived conflict. The relationship between lack of decision-making autonomy and conflict strongly underscored the importance of autonomy to managers in carrying out their assigned duties. One must view this analysis in the context that the entire sample was composed entirely of first level managers.

Lowin (1968) conducted a study of participatory decision-making including an examination of the research that had been completed. He concluded that participative decision-making can be broken down into major and minor experimental research. The minor studies may be reasonably well defined according to Lowin, but their methodology is imperfect and the data provided is inconclusive. The major studies come closer to the prescription for participative decision-making but are more suggestive than conclusive. He concludes that a complex organization cannot operate with a purely participative decision structure, but neither can it segregate the decision functions from the other management activities.

Finally school principals must remember that participation does not relieve him of his responsibility for making decisions. Although the opinions and suggestions of the teachers need to be taken into account, the final decision must rest with the principal. The principal must

remember that he has a dual responsibility. He is responsible to the teachers employed in his school building and to the school district organization. The desires and wishes of the teachers must be measured against the goals and objectives of the school district. The principal must consider the views of his teachers, but when a conflict arises, he is obligated to support the goals of the organization (Bogue, 1969).

Since the present study was concerned with teacher participation in the decision-making process, further evidence was required relative to the primacy of the teacher's role in the decision-making process.

Teacher Participation

It is very fundamental to our democratic way of life that every individual have some opportunity whereby he can participate in decisions that will affect him. People easily realize this in private life where they make personal decisions which affect their own well-being. It would therefore appear that this should carry over into one's working environment. A successful organization not only satisfies the goals of the organization but likewise satisfies the needs of the organization members. Involvement or participation in the decision-making process may be considered as one method of satisfying individual worker needs.

Allport (1954) indicated that attitudes are determined by the need-satisfying properties of objects toward which attitudes are held. An individual's response to all objects and situations to which he relates has an influence on the attitude one possesses. Argyris' (1957) theory of self-actualization asserts that a member in an organization desires to

move upward from a state of dependence to independence and to eventually occupy a superordinate position. Strauss (1963) conceptualizes participation as a form of power equalization which gives subordinates greater freedom to set goals and/or to determine how to work for them. The finding that high participation leads to more positive attitudes among teachers toward their principal provides an empirical link among the theories of Allport on attitude formation, Argyris on self-actualization, and Strauss on participation as a form of power equalization. The studies conducted by Bridges (1964) indicated that teachers expressed more favorable attitudes toward principals who behaved in a manner which minimized and reduced the power and status differences between principals and teachers.

How much involvement should teachers have in the making of decisions? Caldwell (1971) may have voiced one extreme when he succinctly stated:

> Lead teachers should be colleagues with the principal. They, as a group, should meet with the principal to make all decisions concerning school policy. He should have no veto power. He is their chairman and the implementor of policy. He is a generalist who orchestrates the efforts of specialists. He administers the decisions of the group.

In the past, involvement of the classroom teacher in the general decision-making process was absent. In recent years we have seen teacher militancy emerge as a national trend. The goals of this movement transcend bread-and-butter unionism, i.e., wages, hours, and conditions of work. Many teachers feel they have been limited in or eliminated from participation in the decision-making process in their schools (Muth, 1972 and Dettre, 1970).

Various studies indicate that teachers who report opportunity to participate regularly and actively in making policies are much more

likely to be enthusiastic about their school systems than those who report limited opportunity to participate (Dettre, 1970).

In a study of factors affecting teacher morale, Chase (1952) interviewed 400 teachers in five selected school systems, and received questionnaires from 1,800 teachers in 216 systems in 43 states. The relationship between satisfaction with the system and participation by the teachers in making policies for grouping, promotion, and control of pupils indicated over 65 percent of the teachers were enthusiastic and less than five percent were dissatisfied when they were involved regularly, as contrasted with less than 30 percent who were enthusiastic and 18 percent who were dissatisfied when they experienced no involvement. Chase exhibited his concern about excessive teacher participation when he wrote:

> Teachers resent service on committees which seem to serve no useful purpose and lead to no modification of policy. They resent also being pressed into service to assist in making policies in which they feel no personal interest. Even in systems where great enthusiasm was expressed for participation in planning, several teachers commented that meetings and committee assignments took up too much time.

Sharma (1955) studied the views of teachers concerning involvement in decision-making in relation to satisfaction in teaching. Additionally he wanted to determine who should make certain decisions. His study of over 500 teachers throughout United States indicated that teachers feel they should have responsibility for all activities involving instruction. Teachers reported a significant difference between what they desire as their involvement in making decisions and actual practice.

In recent years fair employment legislation has been passed at the state and federal level. This legislation has added to the success of

teachers in having their demands heard. The strikes in our school systems may be related to the lack of involvement of teachers in the decision-making process (Berg, 1973).

Teachers are able to display certain authority in their position in the classroom. They also desire the support of the administration in the decisions they make in the classroom. Characteristically, administrators and the school boards have made decisions for the teachers with the expectation that the teachers would appreciate the work done for them. Teachers are demanding changes and are actively involved in breaking the traditional chain of teacher-administrator relations (Perry and Wildman, 1966).

If a school organization is to sustain itself, it must be concerned with the attraction and retention of teachers. Likewise, teachers need to be concerned about their faithful performance in carrying out their roles. If teachers are going to reach the status of being professionals, they need to practice professionalism (Griffiths, 1974). Since school organizations are concerned with the satisfaction of their personnel, they need to create the right atmosphere.

Bridges (1964) selected 28 elementary principals from one large school system in the Midwest to study teacher participation in decision-making. Of the 28 principals selected, 14 were considered open-minded and 14 close-minded. Based on Rokeach's work (1960), it was felt that principals with open belief systems would involve teachers more significantly in participation in the decision-making process than those principals who had closed belief systems. The study indicated that open-minded

principals did not involve teachers in the decision-making process to a much greater extent than close-minded principals. Bridges found that the level of participation was related to the age and experience of the principal. He described his rationale for this phenomenon when he stated:

> That older, experienced principals are the ones who encouraged the greatest teacher participation is not surprising, for they are the principals who are most likely to be secure in their positions, to be less eligible for promotion, and to have the patience to use the admittedly slow participation process. On the other hand, their participative behavior may reflect the older, experienced principals' desire to maintain a stable situation through increasing the teacher's voice in matters of central concern to the teacher.

Editors of the University of Chicago Administrator's Notebook (1955) indicated rather clearly that the teachers participating in the study wanted to assume professional responsibility for all activities concerning instruction. They believed that the public should not be involved in decision-making areas that concern professional matters. The report concluded that there was a significant difference between what the teachers desired and then-current practices in decision-making insofar as participation by groups of teachers, the principal, the board of education, and the superintendent was concerned.

Are our present teachers competent in the role as decision-makers? Hill and Martin (1971) conducted in-service training for 70 secondary teachers to gather information on decision-making by utilizing pre- and post-test instruments. A model was developed to test the decision-making process by employing materials from the Northwest Regional Educational Laboratory and the Office of Laboratory Experiences, University of Maryland. Hill and Martin determined that training sessions made the

participants more aware of the steps in the decision-making process and enabled them to express this awareness in their response to a certain situation.

Eye, Gregg, Lipham, Netzer, and Grancke (1966) under a project financed by the U.S. Office of Education, attempted to answer the question: "To what extent do administrators and teachers in a given school system tend to agree or disagree in their perceptions of decision-making roles and responsibilities?" One of the most significant findings was that consideration is a more valuable behavior for the superintendent to exhibit than initiating structure behavior, if curriculum change is the goal.

A study by Lopossa (1971) compared the quality of decisions and the decision-making behavior of teaching teams and individual teachers. The results showed that the quality of the decisions reached by the teaching teams did not differ markedly from those reached by the individual teachers. The members of a team were however, much harsher than individuals in the evaluation of teacher behavior.

Belasco and Alutto (1972) indicate in a study that decisional climate is a major factor influencing teacher satisfaction levels. Apparently those teachers who are most willing to leave their present place of employment possess the highest level of decisional deprivation. Such teachers also believe that the real authority and influence rest in the central office. It appeared the younger, male teachers teaching in the secondary schools considered themselves the most deprived in the decision-making process. Older, female teachers in the elementary schools tended to be more satisfied or believed that they may have been saturated with

decisions. Those teachers who were the most satisfied also were considered the least militant.

Wendlandt (1970) investigated the relationship between the number of years school district personnel had been involved in collective negotiations and the extent of faculty involvement in the decision-making process. Additionally, this study attempted to ascertain whether a difference existed between teachers' and superintendents' perceptions regarding the role of faculty members in decision-making. The Decision Involvement Index (DII) instrument was utilized to determine faculty perceptions regarding their involvement in the decision-making process. The following conclusions were drawn from Wendlandt's findings:

1. There appears to be a significant difference between superintendents' perceptions and teachers' perceptions regarding the role of faculty members in the decision-making process.
2. Superintendents appear to perceive faculty members to be involved in decision-making to a greater extent than teachers perceive their own involvement.
3. Teachers appear to desire to be involved in decision-making to a greater extent than superintendents desire to have faculty members involved.
4. There appears to be little desire on the part of superintendents and teachers to have negotiating teams be primarily responsible for making decisions.
5. When teachers are involved in the decision-making process, they appear to be primarily involved by recommending a decision.

Wendlant's study supports the involvement of teachers in the decision-making process. School administrators should realize that teachers are demanding increased involvement in decision-making, and should, therefore, admit to the fact that teachers appear to be dissatisfied with their present role in participation.

Studies are not conclusive, but it appears that certain teachers who desire greater participation in the decision-making process have lower levels of satisfaction. Others desire less participation than they are currently receiving and report higher levels of satisfaction. Those teachers who reported the lowest levels of satisfaction also reported the most militant attitudes toward such aggressive actions as joining unions and striking. Thus, low levels of satisfaction may pose serious potential problems for educational organizations in their efforts to secure and retain the necessary human resources (Moyer, 1955).

Blumberg and Amidon (1963) found that the opportunity for teachers to participate in decisions that will affect them was the most important factor in job satisfaction. Also, in a study of the effects of teacher participation on policy decisions, Moskowitz (1950) in a study of New York City teachers found that over 50 percent of the teachers he sampled desired participation in budget preparation and planning of staff meetings.

The majority of the studies reviewed urge the involvement of teachers in the decision-making process. Unfortunately, some principals fail to realize that some teachers do not want to become involved every time the principal is faced with a decision. Both Chase (1952) and Bridges (1964) noted this in their studies of participation. Teachers may express resentment toward excessive committee work and being consulted on decisions they feel the principals are required to make. For the principal to seek involvement of teachers within the "zone of indifference" is to invite opposition, resentment, and ill will.

Judging from the survey of research, from the increasing tempo of

"bargaining" in the public sector, and from the enactment of new laws, change will continue to be the order of the day in relationships between public school teachers and their supervisors. Evidence was given which indicated teachers desire participation in the decision-making process. Teacher productivity, satisfaction, and attitude may be enhanced by increasing their participative power. Teachers are seeking recognition and more powerful roles in policy formulation and administrative decision-making.

The Role of the School Principal

The school building principal is considered the designated leader in his school. By virtue of his position in the school system he influences subordinates toward the goals of the school system. Goldhammer, Suttle, and Aldridge (1967) suggest there is a need to emphasize training of administrators and their relationship to the behavioral science and the problems of educational administration. The context of the social system has to be considered in this training. The principal has to consider the needs, the demands, and the aspirations of the teachers as professionals. This is becoming more and more important as in recent years organized teacher groups challenge the traditional authority power structure.

The role of the principal in decision-making and leadership has changed dramatically during the past half century. He needs to do more than count the gate receipts, be the head teacher, discipline the students, and perform clerical work (Keller, 1974).

A principal's work does not consist of making one decision, after which his job is completed. Rather, it consists of a continuous series

of interrelated decisions. After completing one choice and negotiating the appropriate path, another corner is reached and another selection is required. Once a task or project has been completed, it is often possible to determine which choices might have been easier (Lipham, 1974).

Today the principal is not a loner. He must work with many others in sharing aspects of decision-making, authority, and responsibility. He has shifted from being an administrator for his own convenience to becoming a leader (McKague, 1971). He is breaking away from tradition to become an innovator. He is expected to be a human relations expert in dealing with his teachers, students, community, and the central office. The role of the principal is also changing due to the complexity and size of our schools.

The leadership role of the principal in a secondary school environment is different than his role in an elementary school. Fiedler (1972) expressed the difference as follows:

> In elementary schools, principals have high position power as well as high task structure, since running a small elementary school is a comparatively structured and routine problem. This is, therefore, a relatively favorable situation.
>
> In the secondary schools, the principal's position power is again high, but his task is considerably less structured. He must administer a larger school of 30-40 teachers who are assigned to various departments, and he must deal with teenagers who are, at best, difficult to handle. This situation can, therefore, be considered intermediate in favorableness.

The principal holds a strategic position between the faculty and the school board. He is the communication link between the central office and the faculty. Some teachers feel they do not receive the correct information in the chain of command after a decision has been made. As a member of the hierarchy, the principal needs to interpret the decisions

of the board which will affect his teachers, and then support this policy. As the teacher's representative, he should support them and relay their position when a decision is pending. If the teachers feel they are not properly represented, they will bypass the principal and utilize their own representatives. Teachers' views need to be considered in developing curriculum, in determining student advancement, in selection of instructional aids, etc. Teachers need to participate, and they will, one way or another, until they are satisfied (Ambrosie and Heller, 1972).

Generalizations about the behavior of a school principal should be made in the context of the school and the community as a social system. There are many environmental influences within a local system which tend to mold the principal's behavior. The school principal is influenced by the social makeup of his district, the expectations of the school, and the role of the school. Likewise, Fiorello (1974) contends the principal brings to the school a certain personal style of leadership. The success of a principal is dependent upon the successful adaptation of his leadership characteristics to the existing organization. Wiggins (1970) indicates that the concept of the principal's role as essentially an administrative leader and instructional leader is questionable under close research scrutiny. He contends that modern school systems need principals who can contribute expertise to the total system and not merely to accept the present traditional status.

Panttaja's (1966) findings indicated a wide difference between individual perceptions of the educational administrator. He found that subordinates rarely perceived decision-making as a terminal process, but as

a general process. Additionally, he found that the style of decision-making overrode the effect of the type of decisions employed by the administrator.

Bridges (1967) accepted the premise that principals should share decision-making with their teachers. He dealt with the "zone of indifference" and related this to a teacher's acceptance of the principal's decisions. He believed teachers should be involved in the general decision-making process. He found that teachers prefer principals who involve them in decision-making. He also found certain teachers who desired independence from making decisions. Surprisingly these teachers expressed less favorable attitudes toward a principal who involved them in the decision-making process. Teacher's attitudes were also influenced by the support which a principal gave to teachers through displayed leadership.

Gorton (1971) conducted a study to investigate the relationships among several factors associated with the role of the principal in regard to teacher participation in school decision-making. He indicated that the principal's personal role and what he expected from his faculty were significantly related to his behavior in encouraging teacher participation in school decision-making.

Fogarty and Gregg (1966) conducted a study to determine the degree of centralization of decision-making in school districts. They found the degree of centralization varied with functional areas of administration. Decision-making was most centralized in community relations and least centralized in pupil personnel. There did not appear to be any relationship between the superintendent's personality and those items determined

to merit centralization of decision-making.

The line of authority from the business world has been applied to our educational organizations. Some people criticize the present organization of our schools because they contend there is unreliable accountability of supervisors and teachers. Hamilton (1972) examined the line of authority and accountability in the informal organization, the lack of accountability of the hierarchy to those lower in the group, and the restriction of communication. His model sets forth a procedure whereby persons in authority are accountable to the people they supervise. His study indicates the need for goals agreed upon by the individuals concerned. The subordinate needs to be held accountable for goal achievement to the extent that he received support from his supervisor.

The school principal is sometimes referred to as the man in the middle. As a leader, he may be torn between his loyalty to support the central administration and loyalty to the teachers in his school. As the man in the middle, he may be required to delegate authority but cannot delegate responsibility. Flower (1971) suggests ways to assist the administrator. He recommends that the administrator beware of easy answers to complex problems. He contends the principal can turn to theory to explain what is happening and use it as a guide to action. Additionally, as a leader and decision-maker one needs to act boldly and firmly and not just react.

In an investigation conducted in Western Canada, Tronc (1970) found that school personnel at the administrative level who strongly desired promotion placed a significantly higher emphasis on their role perception

(the organization-oriented dimension of leader behavior) and a significantly lower emphasis upon the person-oriented aspect of leader behavior than those who possessed low levels of promotional aspiration. He suggested that if these people gained advancement, it appeared likely that the type of administrative climate which they would induce would lead to conflict and dysfunctional effects for the educational organization. Since some of the new concepts of change, i.e., team teaching, consensual decision-making, differentiated staffing, etc., require greater consideration of people, a more person-oriented leader is required for the programs to be a success.

According to Boyan (1966), the principal in his leadership role no longer has an expertise differential over the teacher. Many of the teachers of today are better prepared to teach than the principal. Today's teachers know their subject matter, they understand pupil behavior and motivation, and they know how to teach. Many of these teachers know more about their jobs than their principal (Ball, 1968). As a result the teachers have become more militant and less receptive to the principal's desire for exercising instructional leadership (Corwin, 1968). This type of attitude among teachers is characteristic of the problems with which a principal must cope if he is to exercise his leadership role among professionals.

The school principal has traditionally been expected to provide the leadership for curriculum change, community participation, selection of teaching materials, improvement in teaching procedures, and numerous other educational activities. As teacher organizations and unions gain strength,

principals have found their decision-making and leadership powers reduced. Lutz and Evans (1968) compared union contract restrictions as perceived by teachers and school principals. Principals thought contracts had weakened their authority to act in areas that had been traditionally their sphere. Teachers believed the contract did not hamper the leadership role of the principal, rather it assured equitable treatment of teachers.

Stout (1968) studied the perception of leadership as viewed by teachers. He found the organizational structure of the school does not make a difference in the preference of leadership style. In the superordinate leadership style, teachers prefer the principal to be a different type of leader than the superintendent. Teachers did agree that there are certain behavioral descriptions of leadership which would best fit the principal or superintendent.

Within his leadership role, decisions by a principal need to be made without impeding the flow of good ideas into the schools. The principal has the authority and the responsibility to insure good ideas are transferred into the school curriculum. Goodlad visited some 17 major population centers to determine the extent to which some widely recommended educational ideas, concepts, and processes were being incorporated in the schools. Many of the innovations were talked about by teachers and principals, but rarely were being practiced. Goodlad (1971) indicates most schools possess more authority than they think they have. He contends that if we hold the principals accountable, then they must possess the authority necessary to make unencumbered decisions. If necessary, we need to provide opportunity for those persons to learn decision-making.

The principal must have certain strengths and talent in order to be a leader. Henshel (1971) states that a leader possessing certain qualities and knowledge may show more foresight than other members in the organization. By using his knowledge he will make certain decisions that may appear impetuous, radical, and dangerous to his subordinates. Henshel believes that if a person in authority capitulates to the less inspired consensus of his subordinates, he may be discounting his own values and betraying those persons who have entrusted him with power and responsibility. A person needs to stick by decisions based on his expertise and better judgment.

The principal no longer works in isolation. In carrying out his administrative functions, he needs to work with many people. Wiggins (1970) states that in our present environment, our schools are a very complex social system. He believes we need new administrative training programs in order for schools to meet the new complex demands placed upon them. Thurman (1969) agrees with Wiggins in his contention that the present program of training school administrators is unsatisfactory since many programs fail to include curriculum planning, innovation development, and experimentation. He questions the present educational procedure of preparing principals for managerial tasks rather than providing them with leadership training in instruction and curriculum development. Thurman describes the present system in the following manner:

> An examination of requirements for principals as described in university catalogs shows that programs in general include courses such as introduction to administration, school law, school plant, the principalship, finance, supervision, personnel problems plus some required study in a cognate area such as

> sociology, and some electives which can be but are not required to be in learning, human development, curriculum, or social foundations. As can be seen, the stress is on administrative procedures and technical knowledge.

With some exceptions, it is questionable whether students are provided adequate leadership training at the college level. The editors of Time (1974) magazine indicated rather clearly their concern pertaining to the lack of leadership training in the United States as follows:

> Americans have had little patience with formal leadership training outside the military academies and some business-management courses, where the emphasis is often on case studies and field work.

Rubin (1970) suggests that leadership roles of school principals need to be redefined due to the present changing requirements of school systems. He specified that new approaches to management by industry, involving lay people in educational policymaking, and the increase in the desired powers of teachers, give impetus for change. He indicates that the functions of the principal are becoming more disparate. The principal is to provide leadership, be the administrator, and supervise curriculum and instruction. Rubin states that even though the literature indicates that principals perceive their function to be that of decision-maker and innovative leader of instructional policy, they suffer from their inability to fulfill these role expectations.

Bailey (1966) attempted to identify those types of leader behavior in a school system which affect certain selected processes in educational administration. In utilizing the LBDQ-XII he concluded there were differences in the handling of administrative processes between the administrators, who score high on the consideration scale and those who score high

on the initiating structure scale. Principals who scored high on consideration were consistent in their approach. They called more faculty meetings to seek information, to receive teachers' opinions, and to discuss topics related to change. Principals scoring high on initiating structure called faculty meetings to announce changes and to discuss the necessary implementing procedures. Teachers were more open and supportive of the decisions of high consideration principals.

In order to gain insight into the nature of the interaction between the principal and his professional staff, Watkins (1969) conducted a study focusing upon the leadership position of the school principal in racially segregated Southern schools. He investigated the relationship between the psychological distance of the school principal, measured by the Assumed Similarity of Opposites (ASo) scores as developed by Fiedler, and the organizational effectiveness of the school. This study found a negative relationship between the concept of psychological distance of the school principals and the openness of the organizational climate of the schools, the morale of the professional staffs, and the behavior of the school principal.

Horowitz, Anderson, and Richardson (1969) attempted to define and to compare the roles of principals in elementary and secondary schools. Subjects included superintendents, principals, and teachers at both elementary and secondary levels. This study indicates that the role of the principal is viewed differently by teachers than by superintendents and principals themselves. For example, principals placed a great deal of importance on contacts with the home and on supervision and control

of teachers, but considered the need to give unconditional support to teachers of little importance. Teachers reversed the importance of these items. This study made no attempt to ascertain the expectations held by other reference groups. For instance, as compared to teachers, the principals placed more emphasis on the need to involve the parents in the education of their children. It is a moot point whether parents would agree with the priority which principals claim they place on this function.

Principals generally believe that their professional behavior is controlled by the superintendent and the board of education. Rubin (1970) suggests that there is no great restriction placed on principals by superintendents as to how they spend their time. Wrenn (1974) agrees and contends that autonomy is, in large measure, a state of mind and she states:

> Lack of autonomy is often held up as a constraint on principals, but I believe that most of us have more autonomy than we assume. Some principals operate on the assumption that unless their superiors give them the definite authority to move independently, they cannot make certain decisions themselves.

The degree of success which may be achieved by the teachers and pupils of any school system is determined in part by the teacher-principal relationship. Most principals know what they expect of their teachers in the classroom and in professional dealings. Likewise, teachers are able to point out what they consider desirable in their area of influence. Campbell (1959) investigated the relationship between teacher satisfaction and effectiveness and the principal's leadership. He determined that the effectiveness and satisfaction of the teacher were not related in a

significant manner to any one particular leadership style. He also concluded that you cannot separate administrative theory from administrative practice.

An examination of the findings summarized above indicates rather clearly that the principal will continue to share with others aspects of decision-making, authority, and responsibility. McKague (1971) contends that the principal of the future will be given more opportunity to develop the uniqueness of his school and the style it will display. He maintains that the principal is going to have to justify what he is doing in education and, in some cases, his very existence. The initiative and leadership displayed will determine his role in restructuring his school and increasing professionalism among teachers.

Summary

Concern for leadership is as old as our history. It has been studied down through the ages, but at an accelerated pace during the last 50 years. Those persons who affect one's life because of their position or control over it are more than just a passing interest. In recent years social scientists and behavioral scientists have been greatly concerned with the many dimensions of leadership.

Leadership is a relation. The effectiveness of an individual as a leader may be determined by his leadership style. A relationship-oriented leader is primarily concerned with his employees as people. A task-oriented leader is primarily concerned with the production and output of his group. Research from business supports the thesis that there

is a significant relationship between organizational productivity and leader behavior.

On the basis of the research surveyed in this chapter, it appears clear that leaders accomplish their work through other people. In order for these leaders to accomplish their organizational goals, it is necessary to have the collaboration and commitment of their followers (White and Ruh, 1973).

Participatory leadership is a phrase utilized in management circles today to describe modern management theory. Participatory leadership means that managers give subordinates an opportunity to participate in those organizational decisions which affect them. It is an opportunity for the individual to contribute to the final outcome (Miles, 1965).

America needs leadership in all of its social institutions, but especially where the young are gathered together to learn how to live harmoniously in a nation committed to the democratic way of life. Today, more than ever before, there is a continuing need for trained, capable, and dedicated leaders. This is particularly relevant to the field of education where competent leadership is vital to keep education abreast of societal and technological changes. Education has taken the lead from industry and business in its attempt to develop more efficient methods of managing its schools.

The role of the school principal in decision-making and leadership has changed dramatically during the past half century. The principal is in a very strategic position as a link between the central office and his school staff (Flower, 1971). The principal must remember that he

has a dual responsibility--to his teachers for their satisfaction and well-being, and also to the school district for the accomplishment of certain goals and objectives. The secondary school principal as the designated leader in his school may utilize different styles of leadership, but the successful principal will adapt his leadership style to the existing situation. Studies indicate that a principal who involves his teachers in the decision-making process will have a more productive group.

One ideal of our democratic way of life requires that every person have some systematic procedure through which he can participate in the decisions which may affect him. Generally, people realize this ideal to some extent in private life. It would therefore seem logical that it should carry over and prevail in a person's working environment. The success of an organization depends upon satisfying the needs of the employees. Participatory leadership may be viewed as one method of meeting individual workers' needs.

Findings of industry give specific instances showing the relationship between worker satisfaction and production. Since all decisions imply change, or some type of action, the need to be concerned about employee perceptions of decisions is quite apparent. The industrial studies described indicate clearly the relationship between the individual's perception of his role in the organization, his satisfaction with the institution, and his willingness to act on decisions made within the institution.

Generally, research related to decision-making has been related to

participation and the morale of the individuals studied. Findings suggest that there is an association between job satisfaction and participation in the decision-making process. Findings also seem to indicate a difference between desired participation and perceived participation. Evidence was given to indicate that morale is higher if teachers feel they have some participation in decisions, regardless of whether they actually participate (Dettre, 1970).

In many studies the perceptions of the individual played a very important part. Perception is the way teachers or other employees feel about their involvement or their responsibilities. The perceptions of an individual determine what is reality for him. Dealing with perceptions is a very difficult task because each individual differs in the way he perceives a situation. The literature describing studies in education points out the connection between the individual's perception of his relationship with the interactive processes of the institution or an individual leader and his satisfaction with the situation.

In the past, involvement of the classroom teacher in the general decision-making process has been absent. In recent years, we have seen more teacher militancy emerge as a national trend. Many teachers feel that they have been limited in or eliminated from participation in the decision-making process in their schools.

Participatory leadership can be viewed as an organizational process. Teachers should be involved. Evidence indicates that teachers strongly desire to participate in the decision-making process. Various studies showed that teachers who report opportunity to participate regularly and

actively in making policies are more likely to be enthusiastic about their school system than those who report limited opportunity to participate (Belasco and Alutto, 1972). By increasing the participative power of teachers, their attitudes, satisfaction, and productivity may be positively enhanced.

Evidence suggests that we can determine leadership styles through the study of behavioral characteristics of individuals. There is a relationship between the style of leadership of an individual and the involvement of subordinates in decision-making. In the study of leadership and decision-making it is more important to study perceived behavior than actual behavior, since this is what actually influences the action of subordinates.

Leadership studies have demonstrated that people in authority who use participatory styles of leadership are likely to have higher morale among followers, as well as higher production (McGregor, 1960). Directive leadership has been found to lead to equally high production but often results in a lower commitment to work.

The literature on participation and decision-making is very extensive, and only part of it is reviewed in this investigation. Attention has been focused on the narrower subject of participation by teachers and the role of the principal in the organizational setting of secondary schools.

CHAPTER III. METHODS AND PROCEDURES

The purpose of this study was to examine participatory leadership as employed by selected Iowa secondary school principals. The focus of the study was the investigation and examination of relationships among four factors: teachers' perceived participation in decision-making; secondary school principals' perception of their subordinates' participation in the decision-making process; leadership behavior of secondary school principals; and teachers' perception of the type of leadership exhibited by the principals.

The public secondary schools of Iowa were subdivided into two groups: those schools where a vice principal was assigned and those without a vice principal. It was judged there could be a difference between the operational procedures of a school with an assistant principal or principals and that of a school which has none. Additionally, the decision was made to study two sample schools in greater detail, utilizing all of the teachers. From the original sample, Richard P. Manatt of the Department of Professional Studies at Iowa State University selected two schools which employ vice principals. An attempt was made to choose one school whose principal was basically authoritarian in leadership style and one with a democratic orientation based on their reputation among educators familiar with their school operation and professional careers.

This chapter describes the methods and procedures that were used to gather and analyze the data required for the study. The chapter is divided into four parts:

1. Selection of the Sample

2. Description of Instruments
3. Methods of Collecting Data
4. Treatment of the Data

Selection of the Sample

The population for this study consisted of all secondary school principals and teachers employed full-time in the state of Iowa. The secondary schools were subdivided into two groups: those schools where the principal had a vice principal or principals assigned and those where no vice principal was assigned. Most likely a difference exists in the organizational structure of a school with an assistant principal or principals and a school which has none.

Subjects for this study were selected from Iowa secondary schools as listed in the 1973-74 Iowa High School Athletic Association Directory and the 1970-71 Data on School Year 1970-1971, Part 2, Professional People. From the 1973-74 Iowa High School Athletic Association Directory a list was compiled of all secondary schools having a vice principal or principals. The 1970-71 Data on School Year 1970-1971, Part 2, Professional People does not designate the schools with vice principals. A sample of 25 schools with vice principals was desired, however, 32 secondary schools were chosen to account for attrition. The schools were selected at random using Roscoe's (1969) Table of Random Numbers. The 32 secondary school principals without vice principals were randomly selected from the 1970-71 Data on School Year 1970-1971, Part 2, Professional People. If any school had a subordinate population of 12 or less, it was

dropped and a replacement was randomly selected. The principal and 10 secondary teachers from each school were desired as participants in this study. The size of this group meets Stogdill's (1963) standard for the number of respondents for the LBDQ-XII. Teachers participating in this study were selected by the participating principals from their faculty. The two schools selected for in-depth study provided an exception to this selection procedure. In these two schools all faculty members participated.

Description of Instruments

Several instruments were utilized to gather data for this study. The LBDQ-XII was completed by the teachers to measure the leader behavior of their school principal. The principal completed the LBDQ-XII Self as a self-evaluation of his own leader behavior. The data covering present and desired involvement of the teachers in decision-making were gathered through the use of the DII. Both teachers and principals completed the DII. As an additional measurement of leadership style, all principals completed A School Principal's Thinking. Biographical data were gathered from all respondents through the use of a Background Data sheet.

Leader Behavior Description Questionnaire - XII

The Leader Behavior Description Questionnaire - XII, referred to in this study as the LBDQ-XII, was developed for use in obtaining descriptions of superiors from the group members under their supervision. According to Stogdill (1963), its developer, the LBDQ-XII:

> Can be used to describe the behavior of . . . leaders in any type of group or organization, provided the followers have had an opportunity to observe the leader in action as a leader of their group.

With appropriate modification, the instrument can also be used by a leader to describe his own behavior (Stogdill, 1963). The instrument was an outgrowth of the Ohio State Leadership Studies initiated in 1945. The instrument has evolved through several stages from its initial inception in 1949 to the present LBDQ-XII.

The Ohio State University Leadership Studies developed a list of approximately 1,800 items describing different aspects of leader behavior. This list was reduced to 150 items on nine subscales of leader behavior, from which the first LBDQ was developed (Stogdill, 1974). The original LBDQ was later refined to actually represent two aspects of leader behavior, i.e., consideration and initiation of structure. This LBDQ with two subscales consisted of 40 questions with 15 items to measure consideration, 15 items to measure initiation of structure, and 10 buffer items (Halpin, 1957).

Stogdill (1963), however, contended that it was unreasonable to expect only two factors to account for all of the observed variance in leader behavior. Additionally, Stogdill (1974) states "results of research and experimentation tend to support the theoretical formulation" of the LBDQ-XII. As a result, the number of items in the LBDQ which measured initiating structure and consideration were reduced and 10 new subscales were added. The 12 subscales gave rise to the multidimensional LBDQ-XII.

The LBDQ-XII consists of 100 items describing leader behavior. Each

item is answered by 1 of 5 possible responses: always, often, occasionally, seldom, and never. Each item is scored on a 1 to 5 or 5 to 1 scale. The score for each subscale is determined by summing up the total items for that subscale.

Each subscale is composed of either 5 or 10 items. A subscale represents a rather complex pattern of leader behavior. The following 12 dimensions of leader behavior are defined in the LBDQ-XII:

1. Representation - speaks and acts as the representative of the group. (5 items)
2. Demand Reconciliation - reconciles conflicting organizational demands and reduces disorder to system. (5 items)
3. Tolerance of Uncertainty - is able to tolerate uncertainty and postponement without anxiety or upset. (10 items)
4. Persuasiveness - uses persuasion and argument effectively; exhibits strong convictions. (10 items)
5. Initiation of Structure - clearly defines own role, and lets followers know what is expected. (10 items)
6. Tolerance of Freedom - allows followers scope for initiative, decision, and action. (10 items)
7. Role Assumption - actively exercises the leadership role rather than surrendering leadership to others. (10 items)
8. Consideration - regards the comfort, well-being, status, and contributions of followers. (10 items)
9. Production Emphasis - applies pressure for productive output. (10 items)

PLEASE NOTE:

Pages 87-92, "Decision Involvement Index" not microfilmed at request of author. Available for consultation at Iowa State University Library.

UNIVERSITY MICROFILMS.

Background Data - Administrator

A biographical data sheet, developed to collect personal information, was sent to each principal. Questions to be answered concerned age, formal education, number of staff, number of students, number of years in present school system, number of years in present position, total years of administrative experience, and total number of years in secondary education (Appendix C).

Background Data - Teachers

A biographical data sheet, developed to collect personal information, was provided for each teacher. The data sheet contained questions concerning age, sex, formal education, discipline presently taught, number of years in present school system, number of years in present position, and total years in teaching (Appendix G).

Methods of Collecting Data

Upon completion of the random selection of the sample, the names of the secondary school principals were taken from the 1973-74 Iowa Educational Directory. A letter (Appendix A) was sent to each of the secondary school principals explaining the project, stating the requirements for the school, and soliciting their participation. A postcard was included with each letter for the convenience of the principal in replying.

Each principal responding favorably to the initial inquiry received a packet containing the instruments for the principal and ten teachers. Forty-two of the packets were personally delivered to participating

principals. A conference was held with each principal to explain in detail the questionnaire, to discuss the delimitations of this study, to recommend a random sampling procedure for the selection of teachers, and to thank him personally for his cooperation. The remaining 14 packets were sent by mail. Teachers participating in the study were selected from the faculty by the participating principals. The principal's packet contained a covering letter (Appendix B) providing necessary instructions, Background Data - Administrator (Appendix C), A School Principal's Thinking (Appendix D), Leader Behavior Description Questionnaire - Form XII Self (Appendix E), Decision Involvement Index (Appendix H), and a self-addressed stamped envelope.

Each principal, except in the two schools selected for in-depth study, was provided with ten teacher packets. The teacher packets contained a set of Teacher Instructions (Appendix F), Background Data - Teachers (Appendix G), Decision Involvement Index (Appendix H), and Leader Behavior Description Questionnaire - Form XII (Appendix J). In order to provide complete confidentiality, each teacher was provided an envelope in which to seal the completed forms. Upon completion of the instruments, the teachers sealed them in the envelopes provided and returned them to the principal or his designated representative for return mailing.

All participants were advised that information received would be held in the strictest confidence and that no school would be identified by name in this study. Telephone calls were made and postcards were sent to those participants who had failed to return the completed questionnaires. This procedure enabled the researcher to obtain returns from

98 percent of the participating schools. The teacher responses to this study represented a return of 91.2 percent.

Treatment of the Data

Prior to the return of the data, a review was conducted to determine the best procedure for coding A School Principal's Thinking. This instrument consisted of eight questions on a five-item scale ranging from strongly agree to strongly disagree. It was decided to utilize a 1 to 7 point scale instead of the 1 to 5 point scale, which is generally utilized for this type of instrument.

Warren, Klonglan, and Sabri (1969) explain the rationale for this improved procedure as follows:

> The certainty method of scoring assigns larger values to the end points of the continuum. Intuitively the certainty method assumes that there is a greater difference between a respondent or judge who disagrees with an item with certainty of 5 and a respondent or judge who disagrees with certainty of 4 than there is between two respondents, one of whom said disagree with a certainty of 1 and the other who said disagree with a certainty of 2. In other words, extreme values are given higher scores than an equal appearing interval scale would allow.

Based upon empirical evidence (Warren et al., 1969; and Wolins and Dickinson, 1973), a 1 to 7 point scale is utilized for the five categories.

After the completed questionnaires were received, the data contained were coded and prepared for transfer to key punched cards for computer analysis. Statistical treatment of the data was performed by the IBM 360 computer at the Iowa State University Computation Center using the computer program packages--Statistical Analysis System (SAS) (Barr and Goodnight, 1972) and Statistical Package for the Social Sciences (SPSS)

(Nie, Bent, and Hull, 1970).

The Pearson product-moment correlation was selected to determine statistical significance. Borg and Gall (1971) indicate that the correlational approach is highly useful in studying problems in education and has several advantages over other statistical procedures. They state the following:

> Its principal advantage is that it permits one to measure a great number of variables and their interrelationships simultaneously. . . . The correlation approach . . . permits the studying of behavior in a far more realistic setting. . . . Another advantage of the correlational approach is that it provides us with information concerning the degree of relationship between the variables being studied.

The product-moment procedure establishes the magnitude of relationship, either positive or negative, or the absence of any relationship among various factors as stated in the hypotheses (Best, 1970).

Barr and Goodnight (1972) list the formula for the Pearson product-moment correlation as follows:

$$r = \frac{N\Sigma XY - (\Sigma X)(\Sigma Y)}{\sqrt{[N\Sigma X^2 - (\Sigma X)^2][N\Sigma Y^2 - (\Sigma Y)^2]}}$$

when N = the number of paired scores

ΣXY = sum of the products of the paired scores

ΣX = sum of the scores on one variable

ΣY = sum of the scores on the other variable

ΣX^2 = sum of the squared scores on the X variable

ΣY^2 = sum of the squared scores on the Y variable

The magnitude of the Pearson product-moment correlation coefficient indicates whether there is a relationship between the variables under consideration. If the coefficient is not statistically equal to zero, there is evidence of a relationship and the null hypothesis can be rejected. If the coefficient is not significant, there is no evidence of a relationship and the null hypothesis cannot be rejected.

Each of the 12 hypotheses in this study was tested by using the Pearson product-moment correlation coefficient. The hypotheses were stated in the null form, i.e., no relationship between the variables under analysis. The correlation coefficients indicated whether there were significant differences among the principal's leadership behavior as measured by the 12 subscales on the LBDQ-XII and teacher participation in decision-making as measured by the DII. Additionally, the Pearson product-moment correlation coefficient was utilized to test if there was any significant relationship among the following characteristics:

1. Teacher and principal perception of the leader behavior of the principal and biographical data of participants.
2. School organization and biographical data of secondary school teachers.
3. School organization and biographical data of secondary school teachers and teachers' participation in decision-making.
4. School organization and biographical data of secondary school teachers and the leader behavior of the principal.
5. School organization and biographical data of principals.
6. School organization and biographical data of principals and

teachers' participation in decision-making.

7. School organization and biographical data of principals and the leader behavior of the principal.

The t-test is utilized to determine how large the difference between two means must be in order for it to be significant, i.e., a difference that is significant enough to happen more often than by chance. The larger the t-value, the greater the likelihood that a statistically significant difference may exist between the means of the two groups being tested (Popham and Sirotnik, 1973). Utilizing leadership style scores of principals, a t-test was conducted to determine if a significant difference existed between the means of principals with vice principals and those without vice principals.

The problem of selecting a significance level is very important since it determines the probability of making Type I errors. Roscoe (1969) explains this importance as follows:

> The rejection of a true hypothesis is known as a Type I error. It can only occur when both of these conditions are met: (1) the hypothesis is rejected, and (2) the hypothesis is true. The probability of a Type I error is equal to the level of significance. It is controlled by the investigator; he may set it as high or as low as he wishes. The selection of the .05 level of significance, for example, indicates that there is one chance in 20 of a Type I error--one chance in 20 that the investigator will reject a true hypothesis.

All hypotheses were tested in the null form and the confidence level for determining significance was established at the .05 level. Additionally, the .01 level of significance was reported.

CHAPTER IV. FINDINGS

This chapter reports and describes the major findings related to the relationship between the leader behavior characteristics of secondary school principals and their teachers' participation in the decision-making process. This chapter provides descriptive data for the sample of teachers and secondary principals who participated in the study. Reliability tests were completed and reported for the LBDQ-XII and the DII. Included in the presentation is a summary of descriptive data related to the data collection instruments. Analyses of the data related to the hypotheses which were stated in Chapter I are also given. The final section presents a comparison of the two schools in which the entire faculty participated, plus comments concerning other selected schools.

The desired sample of schools for this study was 50 schools divided into two categories--those with vice principals and those without vice principals. In order to account for attrition, as explained in Chapter III, more than 50 schools were randomly selected. From this selection, 56 schools agreed to participate in the study and returns were received from 55 schools. The 55 responses included 27 schools with vice principals and 28 schools without vice principals. A 100 percent response rate was achieved among the 55 principals with all questionnaires fully completed. As can be seen in Table 32 (Appendix N), of the 623 teachers sampled, returns were received from 568 or 91.2 percent. All completed questionnaires were utilized in this study.

In examining the tables, it will be observed that the number of

teacher responses varies from table to table. This is due to the fact that not all questions were answered by all respondents. Each table reports the number of responses received for that particular item. The tables and text use the term secondary school teacher synonymously with teacher, and secondary school principal synonymously with principal.

Background Data

In order to facilitate the understanding of the findings of this study, data concerning the characteristics of the schools and participants are presented first. The descriptive data were obtained from the Background Data information sheet completed by each respondent. The tables in the Appendix and supporting text are designed to yield some insight into certain background data which describe the respondents and the schools surveyed.

To compare the background data from this sample with the latest national averages, assistance was requested from the Educational Research Services through the National Association of Secondary School Principals (Appendix K). Educational Research Services provided the most recent research information available on secondary principals (Hemphill, Richards and Peterson, 1965) and public school teachers (National Education Assotion, 1972). Furthermore, they reported, "We know of no data that have been classified according to the categories of schools with vice principals and schools without vice principals" (Appendix L).

Principals

The average age of all principals was in the 36-40 year group. Table 17 which reveals the number of principals by age group appears in Appendix M. (In all tables appearing throughout this dissertation, the abbreviation "with V.P." indicates principals in schools with vice principals and "without V.P." indicates principals in schools without vice principals.) Three-fourths of the principals were 45 years old or less which is approximately 25 percent above the national average presented in Hemphill's study, which indicated 50 percent of the high school principals were below 45 years of age.

All of the principals sampled had formal education beyond a master's degree (Table 18). Since regional accreditation requirements mandate additional credits for secondary principal certification, this was not unexpected. The educational attainment of the principals surveyed was above the mean of the last national study, which indicated that 10 percent of the secondary principals had only a bachelor's degree.

The average tenure of principals in a current position in schools with vice principals was six and one-half years (Table 19), while in schools without vice principals the average experience was slightly over four years. Iowa principals tend to have less experience (67 percent with five years or less) in their present position than the respondents in the Hemphill study (60 percent with five years or less). The difference is probably in part due to the accession to the principalship at an earlier age in Iowa, since an individual could normally complete the requirements for certification as a principal in four years.

The average experience as a principal in present position was over five years and the average period of association with the present school system was over six years (Table 20). Generally, the principals had spent approximately one year in their present school system in a position other than the principalship now held.

The principals in schools without vice principals had, on the average, eight years of administrative experience, while the principals in schools with vice principals had 12.5 years of administrative experience (Table 21). As Table 22 indicates, principals in schools with vice principals had, on the average, six more years of total educational experience than principals presently employed in school systems without vice principals. This disparity may be due to the fact that for career advancement, the principals moved to larger school districts. Generally, better principalships for career administrators are in larger towns, pay higher salaries, and often provide one or more assistants.

Teachers

The data in Table 23 (Appendix M) indicate that the average and median age of the teachers sampled was in the 31-35 year range. This is comparable to the national median of 32 years as determined by the National Education Association (1972).

Males were dominant in the sample, as depicted in Table 24, with over 60 percent of the total sample males. Research by the National Education Association (1972) indicated that 40.6 percent of teachers in the United States were male while 59.4 percent were female. This study focused on

secondary teachers, thus this disparity may be due to a large number of female elementary teachers included in the national survey.

The data in Table 25 reveal that all of the teachers had earned a bachelor's degree, 36 percent held a master's degree, and .7 percent held a doctoral degree. The teachers sampled generally had more education than the national average in 1972, when 29.6 percent of the teachers held a master's degree or above and only .1 percent had a doctoral degree (National Education Association, 1972).

The distribution of secondary teachers by subjects taught, presented in Table 26, illustrates that over 62 percent of the sample primarily taught in five discipline areas: business education, English and language arts, mathematics, science, and social studies. This is in agreement with national figures except for business education, where the national average is 5.5 percent (National Education Association, 1972).

The average experience of teachers in their present positions was seven and one-half years in schools with vice principals, while in schools without vice principals the average experience was slightly over six years (Table 27). The average among all teachers was about seven years. As revealed in Table 28, the average time spent by the teachers in their present school system is over seven years. The median of 5.4 years is below the national median of seven years (National Education Association, 1972). In total years devoted to education, the mean for the teachers with vice principals was close to 12 years and the average experience for teachers without vice principals was nine years (Table 29).

Schools

Wide variation existed in the size of staffs in the schools in the sample. As summarized in Table 30, schools with vice principals tended to have much larger professional staffs than the schools without vice principals. This is due to size distribution of secondary schools in Iowa, viz., smaller secondary schools without a vice principal and with a smaller staff predominate. The average for the schools without vice principals was 25 staff members, while the schools with vice principals had a mean of 56. The overall average of 40 for the sample is below the national average of 61 for secondary schools (National Education Association, 1972).

Table 31 illustrates the wide variance in enrollment figures for the schools in the sample. It is evident that the schools with vice principals had a much larger enrollment (mean = 966) than those schools without vice principals (mean = 312). The enrollments for the schools with vice principals are comparable to the national average of 487 pupils per principal and assistant principal combined (NEA Research Bulletin, 1971).

Reliability

Reliability coefficients were computed for both the LBDQ-XII (Table 1) and the DII (Table 2). Reliability of an instrument is important when comparing two or more individuals. However, in this research the LBDQ-XII was used by several teachers in each school to describe only one individual, their principal. Consequently, the standard error of the mean is a more suitable statistic to examine. If the standard error of the mean is of

small magnitude, the teachers generally agreed on the principal's leadership behavior. Inspection of the standard deviations contained in Table 14 reveals standard error of the means which ranged from .34 to 1.1. It appears that teachers of some schools did not closely agree on the ratings of their principals and this scatter may have produced the low correlations between perceptions of leadership behavior and desired and actual participation in decision-making.

Table 1. Reliability coefficients of Leader Behavior Description Questionnaire (Coefficient Alpha) (N=617)

Subscale	Coefficient
1. Representation	.72
2. Demand reconciliation	.32
3. Tolerance uncertainty	.82
4. Persuasiveness	.89
5. Initiating structure	.82
6. Tolerance freedom	.85
7. Role assumption	.89
8. Consideration	.85
9. Production emphasis	.78
10. Predictive accuracy	.85
11. Integration	.86
12. Superior orientation	.68

Reliability of the DII was computed by utilizing the split-half technique with the odd-even approach. As illustrated in Table 2, the range of the reliability coefficients was from .74 to .90, which supports the tests of Wendlandt (1970). The coefficients indicate that the instrument has internal consistency.

Table 2. Reliability coefficients of Decision Involvement Index questionnaire (split-half)

Subscale	Coefficient
Teachers (N=566)	
1. Teachers' present participation in decision-making as perceived by teachers	.90
2. Teachers' desired participation in decision-making as perceived by teachers	.86
Principals (N=55)	
1. Teachers' present participation in decision-making as perceived by principals	.85
2. What should be the nature of teachers' participation in decision-making as perceived by principals	.74

Description of Data

The means and standard deviations for the total sample on each subscale of the LBDQ-XII are presented in Table 3. The means for the total sample of the principals' leader behavior characteristics for this study ranged from a low score of 17.5 on the integration subscale to a high of 39.8 on the tolerance of freedom subscale. The minimum obtainable score for subscales 1, 2, 10, and 11 is five, and for all other subscales 10.

The maximum attainable score for subscales 1, 2, 10, and 11 is 25, and for all other subscales 50.

Table 3. Leader Behavior Description Questionnaire means and standard deviations (teachers and principals combined) (N=621)

Leader behavior subscales	Mean	Standard deviation
1. Representation	18.81	2.87
2. Demand reconciliation	18.54	3.35
3. Tolerance of uncertainty	34.70	5.33
4. Persuasiveness	35.76	6.09
5. Initiating structure	38.23	5.30
6. Tolerance of freedom	39.82	4.72
7. Role assumption	37.49	6.80
8. Consideration	37.48	5.68
9. Production emphasis	32.46	5.14
10. Predictive accuracy	18.02	2.74
11. Integration	17.50	3.56
12. Superior orientation	36.68	4.32

The LBDQ-XII has been utilized to study leader behavior in the military, industry, education, and government. Stogdill (1963) compared means and standard deviations of nine different leader behavior studies. Comparing this study with Stogdill's studies, the means of the principals'

leader behavior characteristics are below the means of the studies completed by Stogdill except for four subscales--tolerance of uncertainty, initiating structure, tolerance of freedom, and predictive accuracy. On ability to predict outcomes accurately, the principals' mean score parallels the other studies. The principals' mean score for tolerance of freedom stands above Stogdill's studies.

Table 4 illustrates the comparison between the teachers' and principals' means, standard deviations and range of scores for each of the subscales on the LBDQ-XII. While the range of scores, which describe the leader behavior of the principal, is much wider among teachers than among principals, the mean scores given by the principals and the teachers closely parallel one another. On the average, the teachers perceived that principals displayed the leader behavior characteristic of postponement without anxiety or upset and ability to tolerate uncertainty to a greater extent than the principals attributed these characteristics to themselves. Additionally, the principals considered themselves to be more considerate toward their teachers in regard to their comfort, well-being, and status than the teachers considered the principals to be.

The means, standard deviations, ranges, and t-value for A School Principal's Thinking appear in Table 5. Since the certainty method was utilized for scoring this instrument, the range of scores could vary from a low of eight to a high of 56. On this instrument, the mean score for principals without vice principals was lower than for principals with vice principals. The lower score indicates that, on the average, principals without vice principals were more autocratic in their leadership style.

Table 4. Leader Behavior Description Questionnaire means, standard deviations, and ranges (principals and teachers separate)

Leader behavior subscales	Principals (N=55)			Teachers (N=566)		
	Mean	Std. dev.	Range	Mean	Std. dev.	Range
1. Representation	17.96	2.05	11-22	18.89	2.92	7-25
2. Demand reconciliation	18.16	1.89	15-24	18.57	3.46	6-25
3. Tolerance uncertainty	32.42	3.88	20-39	34.92	5.40	16-50
4. Persuasiveness	35.44	3.94	25-45	35.79	6.26	14-50
5. Initiating structure	38.44	3.24	32-47	38.21	5.46	17-50
6. Tolerance freedom	39.78	2.99	31-47	39.83	4.86	18-50
7. Role assumption	37.06	3.04	31-45	37.54	7.06	15-50
8. Consideration	39.16	2.88	33-46	37.32	5.85	17-50
9. Production emphasis	33.66	4.08	26-45	32.34	5.22	16-49
10. Predictive accuracy	18.18	1.79	11-21	18.00	2.82	7-24
11. Integration	18.80	1.93	14-24	17.37	3.66	6-25
12. Superior orientation	37.73	3.26	27-45	36.58	4.39	23-49

Principals with a higher score are more democratic in their leadership approach. A t-test was conducted to determine if a significant difference existed between the mean leadership style scores of the two groups. There was a highly significant difference between the two means. The computed t-ratio of 2.87 was greater than the critical ratio required; therefore, a significant difference existed between the two groups.

Table 5. A School Principal's Thinking questionnaire means, standard deviations, ranges, and t-value of principals' leadership style

Principals	Mean	Std. dev.	Range	Principals with V.P. vs principals without V.P.
All principals (N=55)	37.53	3.63	28-46	
Principals with vice principals (N=27)	38.85	3.05	32-46	
Principals without vice principals (N=28)	36.25	3.74	28-43	
t ratio				2.87**
t for significance at .05 level				2.02
t for significance at .01 level				2.70

The means and standard deviations for each of the 20 decision items appearing on the DII are presented in Table 33 in Appendix O. These means and standard deviations are the present and desired nature of teachers' participation in decision-making as perceived by the teachers and principals. Also appearing in Table 33 is a tabulation of responses by school organization. The range of scores on this instrument can vary from one to five with a score of one indicating that the faculty is not involved and a score of five indicating that the faculty makes the decision.

For each of the 55 schools, the means, standard deviations, and ranges for the Decision Involvement Index are displayed in Table 34 in Appendix O. Since there was only one principal score for each school the standard deviation is zero.

Analysis of the Data Related to the Hypotheses

The 12 hypotheses which guided this study were tested by comparing the derived Pearson product-moment correlation coefficients with values necessary for statistical significance. All hypotheses were written in the null form and tested at the .05 level of confidence. The correlations of the variables are shown in Table 6.

The 12 major hypotheses posited relationships between the leader behavior of the principal as measured by the 12 subscales on the LBDQ-XII and the teachers' perceived participation in decision-making. The teachers' perceived participation in decision-making was divided into two parts as set forth on the DII. The two categories were "present teacher involvement" and "desired teacher involvement" in decision-making. If the

coefficient of correlation produced by comparing either of the categories to the principals' behavior is significant, a relationship between the leader behavior of the principal and teacher participation in decision-making has been substantiated and the null hypothesis can be rejected.

Table 6. Summary of the Pearson product-moment coefficients of correlation of the subscales of the principals' leader behavior and teachers' present and desired participation in decision-making[a]

Principals' leader behavior	Teachers' participation in decision-making	
	Present	Desired
1. Representation	.0410	-.0842
2. Demand reconciliation	-.2293*	-.1494
3. Tolerance uncertainty	-.0626	.0584
4. Persuasiveness	-.0002	-.0093
5. Initiating structure	.0596	-.2538*
6. Tolerance freedom	.2490*	.0076
7. Role assumption	-.0771	.0109
8. Consideration	.1939	.1261
9. Production emphasis	.1612	.0406
10. Predictive accuracy	.0216	-.1763
11. Integration	.1227	.0540
12. Superior orientation	.0545	-.1213

Throughout this dissertation a double asterisk (**) indicates a significance at the .01 level for all tables. A single asterisk (*) signifies significance at the .05 level.

[a]Fifty-five principals' scores are correlated with mean score of teachers for the 55 schools.

Hypothesis 1 stated that there is no significant relationship between teacher participation in decision-making and the principal leadership characteristic of representation. The correlations of .0410 for present teacher participation in decision-making and -.0842 for teachers' desired participation in decision-making indicate that there is no relationship between these items and the principals' leader behavior characteristic of representation. Therefore, there does not appear to be any association between principals who speak and act as representatives of their schools (as measured by their representation scores) and the teachers' perception of their involvement in decision-making. Hypothesis 1 *cannot be rejected.*

Hypothesis 2 stated that there is no significant relationship between teacher participation in decision-making and the principal leadership characteristic of demand reconciliation. The correlation of -.2293 for present teacher participation in decision-making is significant at the .05 level, but the correlation of -.1494 for teachers' desired participation in decision-making is not significant. Therefore, hypothesis 2 can be rejected. Teachers felt that they were involved in the making of decisions in schools where conflicts were reconciled and the school business was conducted in an orderly fashion by the principal. The negative correlation suggests that in schools where principals placed more stress on reduction of disorder (as measured by their demand reconciliation scores), the teachers perceived less involvement in making decisions.

Hypothesis 3 stated that there is no significant relationship

between teacher participation in decision-making and the principal leadership characteristic of tolerance of uncertainty. The correlations of -.0626 for present teacher participation in decision-making and .0584 for teachers' desired participation in decision-making indicate that there is no relationship between these items and the principals' leader behavior characteristic of tolerance of uncertainty. The nonsignificant correlations indicate no relationship between principals who are able to tolerate uncertainty and postponement without anxiety or upset in their schools (as measured by their tolerance of uncertainty scores) and the teachers' perception of their participation in decision-making. Thus, hypothesis 3 cannot be rejected.

Hypothesis 4 stated that there is no significant relationship between teacher participation in decision-making and the principal leadership characteristic of persuasiveness. The correlations of -.0002 for present teacher participation in decision-making and -.0093 for teachers' desired participation in decision-making fail to reach significance. Hypothesis 4 cannot be rejected. There does not appear to be any relationship between principals who exhibit strong convictions and use persuasion effectively in their schools (as measured by their persuasiveness scores) and the teachers' perception of their participation in decision-making.

Hypothesis 5 stated that there is no significant relationship between teacher participation in decision-making and the principal leadership characteristic of initiation of structure. The correlation of .0596

for present teacher participation in decision-making is not significant, but the correlation of -.2538 for teachers' desired participation in decision-making is significant at the .05 level. Thus, hypothesis 5 can be rejected. The negative correlation suggests that where the principal is more structured in his role, the teachers in his school perceive less participation in decision-making. Therefore, there is an inverse relationship between the teachers' desired participation in making decisions and a principal's leader behavior of initiation of structure (as measured by the subscale on the LBDQ-XII).

Hypothesis 6 stated that there is no significant relationship between teacher participation in decision-making and the principal leadership characteristic of tolerance of freedom. The correlation of .2490 for present teacher participation in decision-making is significant at the .05 level, but the correlation of .0076 for teachers' desired participation in decision-making is not significant. Hypothesis 6 can be rejected. Where teachers perceive that they are presently involved in the making of decisions and where principals have allowed freedom for initiative, decisions, and action, the principals have tended to stress a tolerance of freedom style of leader behavior. There is a direct positive relationship between teachers' perceived present participation in decision-making and their freedom of action. Where principals have authorized greater freedom of action in their schools (as measured by their tolerance of freedom scores), the teachers perceive greater participation in the making of decisions.

Hypothesis 7 stated that there is no significant relationship between teacher participation in decision-making and the principal leadership characteristic of role assumption. The correlations of -.0771 for present teacher participation in decision-making and .0109 for teachers' desired participation in decision-making indicate no relationship between teachers' perceived participation in decision-making and the principals' leader behavior of actively exercising the leadership role rather than surrender leadership to others in their schools (as measured by their role assumption scores). Thus, hypothesis 7 cannot be rejected.

Hypothesis 8 stated that there is no significant relationship between teacher participation in decision-making and the principal leadership characteristic of consideration. The correlations were .1939 for present teacher participation in decision-making and .1261 for teachers' desired participation in decision-making. In terms of this investigation and considering the sample, the correlations were substantial, but not large enough to reach significance. Thus, hypothesis 8 cannot be rejected. The nonsignificant correlations indicate no relationship between teachers' perceived participation in decision-making and the principals' leader behavior characteristic of consideration. It is of interest to note that this investigation found no association between teachers' perceived participation in decision-making and principals who have a particular interest in the comfort, well-being, status, and contributions of teachers in their schools (as measured by their consideration scores).

Hypothesis 9 stated that there is no significant relationship

between teacher participation in decision-making and the principal leadership characteristic of production emphasis. The correlations of .1612 for teachers' present participation in decision-making and .0406 for teachers' desired participation in decision-making indicate no association between teachers' perceived participation in decision-making and the principals' leader behavior characteristic of production emphasis. Hypothesis 9 cannot be rejected.

Hypothesis 10 stated that there is no significant relationship between teacher participation in decision-making and the principal leadership characteristic of predictive accuracy. The correlations of .0216 for teachers' present participation in decision-making and -.1763 for teachers' desired participation in decision-making suggest no relationship between teachers' perceived participation in decision-making and the leader behavior of principals who exhibit foresight and ability to predict outcomes accurately in his school (as measured by their predictive accuracy scores). Although a negative correlation existed relative to desired participation, it was not large enough to be significant. Thus, hypothesis 10 cannot be rejected.

Hypothesis 11 stated that there is no significant relationship between teacher participation in decision-making and the principal leadership characteristic of integration. The correlations of .1227 for teachers' present participation in decision-making and .0540 for teachers' desired participation in decision-making indicate no relationship between these items and the principals' leader behavior characteristic of

integration. Hypothesis 11 cannot be rejected. There appears to be no relationship between teachers' perceived involvement in decision-making and principals' leader behavior of maintaining a close-knit administrative organization and resolving intermember conflicts in their school (as measured by their integration scores).

Hypothesis 12 stated that there is no significant relationship between teacher participation in decision-making and the principal leadership characteristic of superior orientation. The correlations of .0545 for teachers' present participation in decision-making and -.1213 for teachers' desired participation in decision-making indicate that there is no association between these factors and the principals' leader behavior characteristic of superior orientation. Hypothesis 12 cannot be rejected.

Analysis of Demographic Data

In addition to examining the statistical significance of 12 major hypotheses, intercorrelation matrices and summary tables were developed to present a number of findings relating to the subhypothesis. Data were provided by the Background Data sheet. The following subhypothesis was presented for the study: There is no significant relationship between selected background characteristics of the teachers and principals and their perception of the leadership behavior of the principal and the teachers' perceived participation in decision-making. The correlations of the demographic data for the secondary school teachers are presented in Tables 7, 8, and 9. For statistical analysis, teachers' sex was coded

with a one assigned to males and a two to females. The correlations of the demographic data of the secondary school principals are presented in Tables 10, 11, and 12. School organization indicates a subdivision of schools studied, i.e., schools where a vice principal was assigned and those without a vice principal. For statistical analysis, schools with vice principals were coded one and schools without vice principals were coded two. Due to the large number of significant variables, no discussion of the insignificant variables was included. Additionally, a discussion of obvious significant demographic relationships was omitted, e.g., age and number of years in present positions.

Teachers

The matrix in Table 7 illustrates the intercorrelation of teachers' demographic characteristics. The significant negative correlations with school organization indicate that the teachers in schools with vice principals tend to be older, have more years of formal education, have a greater length of time in their present position and school system, and have more years of total experience than teachers in schools without vice principals. All of these characteristics are generally true of large high schools in Iowa, which, for the most part, are the only schools employing vice principals.

Generally, male teachers in this sample have a higher level of education than female teachers. Additionally, teachers with more formal education have been employed in education longer than those teachers with a lower level of formal educational attainment.

Table 7. Intercorrelation matrix with school organization and demographic characteristics of teachers (N=556)

	1	2	3	4	5	6
1. School organization						
2. Age	-.1275**					
3. Sex	.0435	.1389**				
4. Formal education	-.2771**	.3901**	-.2314**			
5. Length of time in present position	-.1314**	.6513**	-.0332	.3491**		
6. Length of time in present school system	-.1199**	.6867**	-.0316	.3533**	.9490**	
7. Total years of experience	-.1773**	.8602**	.0154	.4748**	.7461**	.7870**

Table 8 presents a summary of the relationships of the type of school organization and demographic characteristics of teachers with the amount of participation in decision-making as perceived by themselves. Measures of present participation and desired participation were obtained. The present nature of the faculty involvement in decision-making has a significant negative relationship to the organizational structure of the school and the age of the teacher. This negative correlation suggests that in schools with older teachers, participation in making decisions was less. Additionally, a higher ratio of teachers in schools with vice principals perceived their present involvement in decision-making was greater than did teachers in schools without vice principals.

As can be seen in Table 8, there are significant negative relationships between the organizational structure of the school, age of the teacher and total years of experience, and the desired participation of teachers in the making of decisions. A higher proportion of older teachers and teachers with more total years of educational experience on the faculty associated with less desire for participation in the decision-making process. It is possible that as teachers become older and their years of experience increase, they become more accustomed to doing things as they have before and thus desire less involvement in the making of decisions. Additionally, the teachers employed in schools with vice principals desired greater participation in the making of decisions than did teachers in schools without vice principals.

The relationships of school organization and demographic characteristics of teachers with the subscales of the principals' leader behavior,

Table 8. Summary of the Pearson product-moment coefficients of correlation of type of school organization and demographic characteristics of teachers with teachers' present and desired participation in decision-making as perceived by the teachers (N=556)

School organization and demographic characteristics of teachers	Teachers' participation in decision-making	
	Present	Desired
School organization	-.2151**	-.1625**
Age	-.0874*	-.1010**
Sex	-.0216	-.0220
Formal education	-.0047	.0097
Length of time in present position	.0011	-.0243
Length of time in present school system	.0028	-.0401
Total years of experience	-.0531	-.0788*

as perceived by the teachers, are displayed in Table 9. Significant correlations existed between the amount of representation behavior of principals and the organizational structure of the school, sex of the teachers, length of time in present position, length of time in their present school system, and total years of experience. Representation behavior, as measured by the LBDQ-XII, meant that the principal spoke and acted as the representative of the teachers. Higher amounts of representation by the principal associated positively with the presence of a vice principal, teachers with long tenure, more experience and more

Table 9. Summary of the Pearson product-moment coefficients of correlation of school organization and demographic characteristics of teachers with the subscales of the principals' leader behavior as perceived by teachers (N=555)

School organization and demographic characteristics of teachers	1	2	3	4	5
School organization	-.0830*	.0902*	.1466**	-.0144	-.0206
Age	.0573	.0888*	.1014**	.1495**	.0998**
Sex	.0982**	.1270**	.1582**	.1015**	.0827*
Formal education	.0287	.0585	-.0653	.0322	.0102
Length of time in present position	.0757**	.0073	.0229	.1423**	.0862*
Length of time in present school system	.0765**	.0024	.0209	.1382**	.0769*
Total years of experience	.1014*	.0374	.0613	.1412**	.0995*

Key: 1. Representation
2. Demand reconciliation
3. Tolerance of uncertainty
4. Persuasiveness
5. Initiating structure
6. Tolerance of freedom

6	7	8	9	10	11	12
.0279	.0546	.0819*	-.0493	.0468	.0396	.0525
.1690**	.0274	.1444**	.0493	.0898*	.1358**	.1086**
.0888*	.0561	.0788*	.0123	.1244**	.0092	.0664
.0217	-.0268	.0009	.0445	-.0144	.0582	.0777
.1071**	.0107	.0678	.0867*	.0418	.1131**	.1260**
.1025**	.0056	.0767*	.0739*	.0310	.1138 **	.1128**
.1210**	.0162	.0886*	.0832*	.0437	.1347**	.1139**

7. Role assumption
8. Consideration
9. Production emphasis
10. Predictive accuracy
11. Integration
12. Superior orientation

education. A higher proportion of female teachers on the faculty also was significantly related to high representation by the principal.

The principals' leader behavior characteristic of demand reconciliation and the organizational structure of the school, teachers' age and sex were found to have a significant correlation. Demand reconciliation meant that a principal attempts to reconcile conflicting demands among his subordinates. A higher proportion of older teachers and female teachers on the faculty was positively associated with high levels of demand reconciliation. Additionally, in schools without vice principals, a higher ratio of teachers perceived that principals exhibited high amounts of demand reconciliation.

The principals' tolerance of uncertainty was found to correlate significantly with the organizational structure of the school, teachers' age and sex. Teachers with these characteristics (female, older, working in a school without a vice principal) more often perceived that their principal had a higher tolerance of uncertainty and postponement without anxiety.

As shown in Table 9, significant positive relationships also existed between the principals' leader behavior characteristic of persuasiveness and the teachers' age, sex, length of time in present position, length of time in present school system, and total years of educational experience. Among faculties with older teachers, teachers who had spent a greater length of time in the same school system, and teachers who had an increased amount of total educational experience, the principals' persuasiveness was perceived as higher. A high ratio of females on the faculty associated positively with the principals' leader behavior of

persuasiveness.

Other significant positive relationships existed between the principals' leader behavior characteristic of initiation of structure and the teachers' age, sex, length of time in present position, length of time in present school system, and total years of experience. Initiating structure, according to the LBDQ-XII, meant that the principal defined his own role and let the teachers know what was expected of them. This relationship suggests that with a higher proportion of older teachers on the faculty, teachers who had spent a greater length of time in the same school system and position, and teachers who had increased their educational experience, the perception of initiation of structure by the principal was greater. A higher ratio of females than males on the faculty also associated positively with the principals' leader behavior of initiation of structure.

Significant positive relationships existed between the principals' leader behavior characteristic of tolerance of freedom and the teachers' age, sex, length of time in present position, length of time in present school system, and total years of experience. Among faculties with older teachers, teachers who had spent a greater length of time in the same school and same position, and teachers who had increased their overall educational experience, the principals' leader behavior of allowing teachers opportunity for initiative, decisions, and action was significantly higher. A higher ratio of females on the faculty associated positively with the principals' leader behavior of tolerance of freedom.

The principals' leader behavior characteristic of consideration was

found to correlate significantly with teachers' age, sex, length of time in present school system, total years of experience, and the organizational structure of the school. Among faculties with older teachers, teachers who had spent a greater length of time in their present school system and enlarged their educational experience, the principals' leader behavior of exhibiting consideration for the teachers' comfort, well-being, status, and contributions was perceived as significantly higher. In schools without vice principals, the principals' leader behavior of consideration was perceived as being higher. Additionally, a higher proportion of females on the faculty associated positively with the principals' leader behavior of consideration.

Significant positive relationships existed between the principals' leader behavior characteristic of production emphasis and teachers' length of time in present position, length of time in present school system, and total years of experience. This relationship suggests that a higher proportion of the faculty members who had spent a greater length of time in present position, system, and overall educational experience, rated their principals high on applying pressure for greater teacher output.

As depicted in Table 9, significant positive relationships existed between the principals' leader behavior characteristic of predictive accuracy and teachers' age and sex. A higher ratio of older teachers and female teachers on the faculty were positively related to high principals' scores on the leader behavior characteristic of predictive accuracy.

Finally, significant positive relationships also existed between the

principals' leader behavior characteristic of integration and superior orientation and teachers' age, length of time in present position, length of time in present school system, and total years of experience. These statistics suggest that a higher proportion of older teachers on the faculty, teachers who had spent a greater length of time in the same school system and position, and teachers who increased their educational experience, perceived their principals to be highly integrative and oriented toward superiors.

Principals

The matrix in Table 10 presents the intercorrelations for principals' demographic data. The negative correlation of school organization with all other items reveals that schools with vice principals tended to have older principals with more formal years of education, a greater length of time in their present position and school system, more years of administrative experience, and more total educational experience.

These principal characteristics and the presence of a vice principal are to be expected in larger school districts which, at least in Iowa, provide better pay and more desirable assignments for those principals pursuing greater responsibility. The amount of formal education obtained by the principals had a significant negative correlation with the length of time the principals had been in the present school system. This negative relationship suggests that principals who had a higher level of educational attainment had spent a shorter period of time in their present school system. A principal who increases his level of education may desire

to move to a more demanding position--thus many principals with newly-earned doctorates change jobs.

Although Table 19 in Appendix M revealed that the length of time in their present position was 4.3 years for principals in schools without vice principals and 6.5 years for principals in schools with vice principals, a highly significant positive relationship existed between the principals' length of time in present school system and total years in administration and total years of educational experience.

Table 10. Intercorrelation matrix of school organization and demographic characteristics of principals (N=55)

	1	2	3	4	5	6
1. School organization						
2. Age	-.3638**					
3. Formal education	-.3026*	-.1134				
4. Length of time in present school system	-.2858*	.5290**	-.2451*			
5. Length of time in present position	-.2250*	.5794**	-.2674*	.7604**		
6. Total years in administration	-.3140**	.7313**	.0857	.3548**	.5822**	
7. Total years of teaching and administration	-.4714**	.8514**	-.0377	.5022**	.5781**	.7671**

A summary of the correlations of type of school organization and demographic characteristics of principals with principals' leadership style and teachers' present and desired participation in decision-making as perceived by the principals appears in Table 11. The table reveals a significant negative relationship between school organization and the principals' thinking. This negative correlation indicates that in schools with vice principals, the principals displayed a more democratic style of leadership in their relationship with others than did principals in schools without vice principals.

Table 11. Summary of the Pearson product-moment coefficients of correlation of type of school organization and demographic characteristics of principals with principals' leadership style and teachers' present and desired participation in decision-making as perceived by the principals (N=55)

School organization and demographic characteristics of principals	Principals' leadership style	Teachers' participation in decision-making	
		Present	Desired
School organization	-.3616**	-.4112**	-.0916
Age	-.0288	.0947	.0458
Formal education	.0841	.1958	.1299
Length of time in present school system	.0590	.0839	-.0010
Length of time in present position	.0773	.0188	.0960
Total years in administration	-.0532	.0851	.1435
Total years of teaching and administration	.0423	.0821	.0756

Principals' perceptions of the teachers' involvement in making decisions is a very important part of this study. This was measured by the principals' responses to the DII. As can be seen in Table 11, the perceived nature of present faculty involvement in decision-making was negatively related to school organization. The negative correlation indicates that in schools with vice principals the principal perceives that present faculty involvement in decision-making is greater.

Statistical relationships between the leader behavior of the principals and the demographic data of the principals are depicted in Table 12. Significant correlations exist between the principals' leader behavior characteristic of representation and the organizational structure of the school and formal education of the principals. Among schools without vice principals, a higher proportion of principals perceived their leader behavior characteristic of representation was high. Additionally, this relationship suggests that among principals with higher formal education, the principals' leader behavior of representation was significant.

There are also significant negative correlations between the principals' leader behavior characteristic of demand reconciliation and principals' age, total years in administration, and total years of teaching and administration. This relationship suggests that older principals, and principals who had a greater amount of experience in teaching and administration evidenced significantly less demand reconciliation, e.g., reconciling conflicting demands and having an orderly organizational system.

The principals' leader behavior characteristic of initiating structure was found to correlate significantly with their amount of formal

Table 12. Summary of the Pearson product-moment coefficients of correlation of school organization and demographic characteristics of principals with the subscales of the principals' leader behavior as perceived by principals (N=55)

School organization and demographic characteristics of principals	1	2	3	4	5
School organization	-.2319*	.0857	.0500	-.0860	.1563
Age	-.1491	-.2599*	-.0786	-.0890	-.1694
Formal education	.2662*	.0829	.0317	.1854	.2450*
Length of time in present school system	-.1132	-.1484	-.1587	.0316	-.1217
Length of time in present position	-.0608	-.1450	-.0258	-.1262	-.2515*
Total years in administration	-.1955	-.3135**	-.1859	-.1360	-.0375
Total years of teaching and administration	-.1125	-.3290**	-.2050	-.1151	-.2022

Key: 1. Representation
2. Demand reconciliation
3. Tolerance of uncertainty
4. Persuasiveness
5. Initiating structure
6. Tolerance of freedom

6	7	8	9	10	11	12
.0259	.1023	-.0329	.0600	-.0244	.0495	.0522
.0771	-.0322	-.0246	-.0210	.0391	.0128	-.0854
.3033*	.0614	.1576	.3462**	.1069	.1583	.2799*
-.0644	-.0582	-.1410	-.1624	-.0583	-.1495	-.2522*
.2422*	-.2273*	.1751	-.1045	-.0007	.0199	-.0378
.0089	-.0475	-.0305	.0651	-.0878	-.0590	-.0988
.0039	-.1749	-.0741	-.0156	-.1026	-.0976	-.1805

7. Role assumption
8. Consideration
9. Production emphasis
10. Predictive accuracy
11. Integration
12. Superior orientation

education and length of time in present position. This relationship suggests that principals with higher educational levels more often tended to rate high on initiating structure, that is, clearly defined their own roles and let their teachers know what was expected of them in their school. Additionally, the association of greater tenure in their present position and the principals' behavior of initiating structure was significant.

As revealed in Table 12, significant correlations existed between the principals' leader behavior characteristic of tolerance of freedom and the principals' formal education and length of time in present position. Among principals with increased formal education and principals who had spent a greater length of time in their present position, the principals' leader behavior of allowing teachers greater opportunities for initiative, decisions, and action in their school (as measured by their tolerance of freedom scores) was significantly more common.

The principals' leader behavior characteristic of role assumption was found to correlate significantly with the length of time the principal had spent in his present position. This relationship suggests that principals who had spent a greater length of time in their present position displayed significantly more propensity for role assumption.

Another significant correlation existed between the principals' leader behavior characteristic of production emphasis and the principals' formal education. Principals with higher formal education perceived themselves to be applying significantly more pressure for productive output.

Finally, Table 12 reveals significant relationships between the principals' leader behavior characteristic of superior orientation and the principals' formal education and length of time in present school system. This relationship suggests that principals with an increased level of formal education and principals who had spent a greater length of time in their present school system perceived themselves as being significantly more oriented to superiors.

School Comparisons

The final objective of this study was a comparison of the two schools in which the entire faculty participated in the study. An attempt was made to choose one school whose principal was basically authoritarian in leadership style and one who was democratic in orientation.[1] The schools were selected from the group with vice principals and are designated school A (autocratically led) and school B (democratically led) in the following discussion. It was assumed that the autocratic principal would be task-oriented and permit a lesser degree of teacher participation in decision-making than the principal who displayed a democratic style of leader behavior.

A decision was also made to compare schools whose faculties mailed back partial returns with the two schools in which the entire faculty sample participated in order to determine the response differences, if any, between a small group (6-10) and a large group (35-40) of respondents. Since the two schools with full participation had vice principals,

[1] A "reputational" identification was made from the pool of schools with vice principals.

the other schools selected for comparison also had vice principals.

Except for the two schools where all teachers participated, a return of 10 questionnaires indicated 100 percent participation. Since many schools provided a 100 percent return, two schools were selected randomly and were designated C and D. The lowest response from any school was 60 percent. In the entire sample, only two schools, both with vice principals, had a return of 60 percent. The two schools with minimum participation were designated E and F.

In order to make a comparison between schools A and B and among schools A through F, tables of correlation coefficients and means for the DII and LBDQ-XII were developed.

The first comparison, between the school with an autocratic principal (school A) and the school with a democratic principal (school B), is the score received on A School Principal's Thinking. These scores are displayed in Table 13. A low score indicates an autocratic approach to leadership, while a high score indicates a democratic style of leadership. As revealed in Table 13, both principals scored above the mean with practically identical scores. With such slight variation in the two scores, it is doubtful that any valid inference can be drawn concerning a difference in the leader behavior of the principals. Since each scored above the mean, it would appear that the leadership style in each school is more democratic than autocratic.

The means and standard deviations for the leader behavior subscales of the LBDQ-XII appear in Table 14. An overall grand mean was computed for each school and is shown at the bottom of Table 14. As can be seen

Table 13. Leadership style scores of principals from selected schools

School	Score
Autocratic (school A)	39
Democratic (school B)	41
C	40
D	40
E	40
F	43
Mean Principal from schools with vice principals	38.85
Standard deviation Principal from schools with vice principals	3.05
Range Principal from schools with vice principals	32-46

in Table 14, all of the means for school B are higher than for school A with the exception of subscale 12. In general, the mean scores of the separate schools parallel one another. The grand mean is highest for school C and lowest for school A. The description of each subscale appears in Chapter I.

Except for subscale 12 (Superior orientation), teachers in the democratically led school (school B) rated their principal higher in all

Table 14. Means and standard deviations of principals' leader behavior as perceived by teachers of selected schools with vice principals

Sub-scale	Means of selected schools with vice principals						Standard deviation of selected schools with vice principals					
	A (N=40)	B (N=37)	C (N=10)	D (N=10)	E (N=6)	F (N=6)	A (N=40)	B (N=37)	C (N=10)	D (N=10)	E (N=6)	F (N=6)
1	16.41	19.78	20.70	17.50	18.50	19.50	3.31	2.50	2.71	4.17	2.59	.84
2	14.15	17.75	22.70	14.00	20.33	20.00	3.42	3.01	1.42	3.83	2.58	1.55
3	30.28	34.59	36.60	30.40	39.66	36.50	4.93	5.78	3.17	2.32	1.96	2.74
4	28.15	33.24	40.30	29.70	34.00	39.16	6.88	6.11	3.77	5.54	2.68	2.14
5	35.21	36.91	42.50	34.20	39.16	40.00	5.26	6.00	2.95	6.39	3.19	2.00
6	35.23	39.51	41.50	37.60	42.66	38.50	6.08	5.54	4.14	2.88	2.66	2.25
7	30.69	34.45	44.60	32.30	39.33	42.50	7.11	5.39	4.14	4.39	3.33	3.02
8	30.51	37.00	39.50	31.90	41.50	40.50	5.73	6.27	4.50	5.15	2.43	4.37
9	29.31	29.78	35.20	33.30	31.00	33.83	4.83	5.18	2.57	5.78	3.95	3.13
10	15.44	16.92	20.50	14.10	19.33	18.16	2.88	2.81	.70	2.69	1.75	2.14
11	14.64	16.22	20.30	15.10	19.00	19.50	3.66	4.20	2.45	3.21	2.83	1.76
12	34.28	34.08	38.30	35.40	38.33	38.16	4.64	5.00	2.79	3.23	2.58	2.40
Grand mean	26.19	29.18	33.60	27.10	31.90	32.20						

Key:

1. Representation
2. Demand reconciliation
3. Tolerance of uncertainty
4. Persuasiveness
5. Initiating structure
6. Tolerance of freedom
7. Role assumption
8. Consideration
9. Production emphasis
10. Predictive accuracy
11. Integration
12. Superior orientation

categories than teachers of the autocratic school (school A). The mean score for all teachers was given previously in Table 4. To draw inferences concerning the differences between the two schools, it is necessary to compare them on selected subscales. A comparison of subscale six (Tolerance of freedom) reveals that the principal of school A received a score of 35.23, which is below the mean of 39.83 (Table 4) but the principal of school B, with a score of 39.51, approximates the average score. One might expect on subscale five (Initiating structure) that the principal of school A would score higher than the principal of school B. This was not the case, and, in fact, both schools fell below the mean of 38.21 (Table 4). In consideration for the comfort, well-being, status, and contributions of their teachers as measured by subscale eight (Consideration), the principal of school A had a much lower score than the principal of school B. While this was not unexpected, the principal of school B scored the same as the mean score for all schools. Thus, even though there are some basic differences between autocratic school A and democratic school B, they are too slight to be considered important.

Participation in the decision-making process was the essence of this investigation. Tables 15 and 16 illustrate a comparison among the six schools on teacher participation in the making of decisions. The individual means and grand means for the six schools of present and desired participation of teachers in decision-making appear in these tables. As can be seen in Table 15, the teachers in schools A and B consider their overall present participation in the making of decisions to be the same. There is some variance in the grand means among the schools, with teachers

Table 15. Decision Involvement Index means and standard deviations of selected schools with vice principals of teachers' present participation in decision-making

Decision items	Selected schools											
	A (N=40)		B (N=37)		C (N=10)		D (N=10)		E (N=6)		F (N=6)	
	Mean	Std. dev.	Mean	Std. dev.	Mean	Std. dev.	Mean	Std. dev.	Mean	Std. dev.	Mean	Std. dev.
1	1.20	.61	1.42	.64	1.70	1.25	1.50	.85	1.83	1.32	1.67	1.21
2	1.82	1.22	1.43	.89	1.10	.32	1.90	.99	1.67	1.21	1.67	.82
3	2.70	1.32	3.13	1.53	1.80	1.03	2.60	1.26	2.67	1.50	2.17	1.33
4	1.65	1.10	1.67	1.06	1.70	1.06	1.60	1.26	1.83	1.33	1.67	1.21
5	2.47	1.36	2.24	1.26	3.20	1.40	3.00	1.05	1.83	.98	2.33	1.37
6	2.33	1.42	1.81	1.31	2.00	1.63	1.40	.70	2.17	1.47	2.17	1.33
7	4.05	1.47	4.35	1.14	3.90	1.60	4.40	.97	4.33	1.63	4.33	.52
8	1.45	1.01	1.19	.62	1.00	.00	1.00	.00	1.50	1.22	1.00	.00
9	2.07	1.35	2.29	1.24	1.30	.95	1.40	.97	1.50	.84	1.17	.41
10	4.05	1.15	4.27	1.04	3.60	1.43	4.10	1.29	3.83	1.47	4.17	.41
11	1.20	.69	1.06	.33	1.10	.32	1.20	.42	1.00	.00	1.17	.41
12	2.65	1.35	2.59	1.50	1.10	.32	1.10	.32	1.50	.84	2.33	1.36
13	3.03	1.29	2.97	1.34	2.50	1.58	2.60	1.71	2.50	1.22	2.83	.75
14	2.03	1.38	2.64	1.36	1.40	.97	1.80	1.48	1.83	1.17	1.83	1.16
15	2.40	1.32	2.67	1.29	1.60	1.26	2.40	1.35	2.17	1.83	3.50	1.22
16	2.92	1.24	3.00	1.27	2.40	1.26	2.60	1.51	2.17	1.17	3.33	.82
17	3.15	1.35	3.43	1.24	2.80	1.40	3.40	1.35	2.83	1.72	3.33	1.37
18	2.48	1.24	2.00	.85	2.70	1.06	2.60	1.26	1.50	.54	2.00	1.26
19	2.95	1.33	2.89	1.41	3.10	1.73	2.60	1.42	3.00	1.26	2.33	1.37
20	1.35	.86	1.19	.70	1.10	.31	2.60	.69	1.00	.00	1.17	.41
Grand mean	2.40		2.41		2.06		2.29		2.13		2.31	

Table 16. Decision Involvement Index means and standard deviations of selected schools with vice principals of teachers' desired participation in decision-making

Decision items	Selected schools											
	A (N=40)		B (N=37)		C (N=10)		D (N=10)		E (N=6)		F (N=6)	
	Mean	Std. dev.	Mean	Std. dev.	Mean	Std. dev.	Mean	Std. dev.	Mean	Std. dev.	Mean	Std. dev.
1	3.08	1.33	2.89	1.10	3.50	.70	2.90	.99	3.67	.82	3.50	.84
2	3.23	1.05	3.00	1.10	3.30	1.06	3.20	1.23	3.33	1.21	3.00	.89
3	4.25	.78	4.24	1.01	3.90	.99	4.20	.63	4.50	.55	3.83	.75
4	3.33	1.05	3.81	.97	3.70	.48	3.90	.74	3.83	1.33	3.83	.98
5	3.70	.76	3.54	.99	4.00	.82	4.00	.94	4.00	.89	3.50	1.38
6	3.45	1.22	3.22	1.32	3.60	1.17	2.80	1.40	3.83	.98	3.33	1.21
7	4.43	1.01	4.78	.42	4.60	.52	4.80	.42	4.50	1.22	5.00	.00
8	2.63	1.53	2.62	1.32	2.50	1.35	2.80	1.32	4.17	.41	2.00	1.55
9	3.18	1.26	3.54	1.10	2.90	1.66	3.10	1.45	4.00	.63	3.33	1.03
10	4.50	.68	4.54	.65	4.50	.53	4.70	.48	4.83	.41	4.50	.55
11	3.05	1.28	2.65	1.32	2.10	1.20	3.10	.88	2.83	1.72	2.83	1.33
12	3.53	1.10	3.76	1.12	2.20	1.14	3.00	1.33	3.83	.41	4.00	.63
13	3.78	1.00	4.14	.86	4.20	.42	3.80	1.14	4.33	.52	4.33	.52
14	3.88	.97	4.21	.75	4.20	.63	4.10	.57	4.50	.55	4.00	.63
15	3.70	1.11	3.59	1.07	3.40	1.11	3.90	.74	4.00	1.26	4.17	.41
16	3.90	.98	4.22	.87	4.20	.42	3.90	.74	4.00	1.26	4.17	.41
17	4.00	.85	4.11	.91	4.20	1.03	4.20	.63	4.00	1.10	4.50	.55
18	3.85	.83	3.89	.84	4.30	.48	3.80	.78	4.17	.41	4.00	.00
19	3.63	.93	4.27	.73	4.00	1.15	4.10	.88	4.17	1.17	3.83	.98
20	2.68	1.35	2.84	1.40	2.40	1.26	3.60	.70	3.50	1.22	3.00	1.26
Grand Mean	3.59		3.69		3.59		3.68		4.00		3.73	

in school C believing they have the least amount of present participation in decision-making and teachers in school B the most. As revealed in Table 16, the desired participation of the teachers for each school is quite similar except for school E which has a somewhat higher grand mean.

Tables 35 and 36 in Appendix P present the coefficients of correlation between teachers' total response and teachers' response for each of the individual decision items of their present and desired participation in decision-making. There was greater agreement among the teachers in their perception of present participation in decision-making in autocratically led school A than in democratically led school B, with 17 of 20 items having higher coefficients of correlation (Table 35). The teachers of democratically led school B had greater agreement among themselves on 17 of the 20 decision items as to their perception of desired participation in decision-making (Table 36) than of their present perceived participation in decision-making. While it is difficult to draw specific inferences from these tables, they do present a graphic illustration of the relationship between the number of respondents from each selected school and the significance of the coefficients of correlation. As an example, for school F on decision item 13, a coefficient of .86 is significant, while for school B a coefficient of .49 is highly significant (Table 35).

The school comparison tables were developed in order to determine the amount of variation between a school with a small sample and one with total representation. The tables reveal greater variation within the two schools with a sample of six teachers than in the larger sample

of 10 teachers, or the total faculty of 40 teachers. The general inference to be drawn from these tables is that a representative sample from each school selected is needed for maximum accuracy of results.

CHAPTER V. SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

The purpose of this study was to investigate the relationship between the leader behavior characteristics of secondary school principals and teachers' participation in the decision-making process. Within this study the principals' leader behavior was defined by the teachers' and principals' perception of this behavior utilizing the 12 subscale dimensions of the LBDQ-XII. A study by Yukl (1967) and a report by Jacobs (1970) support the thesis that leader behavior is a more effective measure of leadership than personality variables. Therefore, the leader behavior of the principal was studied--not his personality. Teacher participation in decision-making was based on the way teachers perceived themselves and as principals perceived their teachers' participation in the decision-making process, as measured by the DII.

Observational units in this study were a random sample of secondary schools from the state of Iowa. A letter was sent to each of the selected secondary schools explaining the project and soliciting the principal's participation. Fifty-six schools agreed to participate in this study and data were received from 55 schools. The 55 responses included 27 schools with vice principals and 28 schools without vice principals. A 100 percent response was received from the 55 principals and a 91 percent response was received from the 623 teachers sampled. As with most research, conclusions based upon this study are limited by the characteristics of the sample selected, viz., 55 principals and 568 teachers to

represent the 505 secondary schools in the state of Iowa.

The data used in this research were derived from three instruments--Leadership Behavior Description Questionnaire - Form XII, Decision Involvement Index, and A School Principal's Thinking. Two forms of the Leadership Behavior Description Questionnaire - Form XII were utilized. The LBDQ-XII Self was utilized to measure leader behavior as perceived by the principal. The LBDQ-XII was completed by the teachers as an assessment of their perception of the leader behavior of the principal. The LBDQ-XII consisted of the following 12 dimensions of leader behavior: 1) representation; 2) demand reconciliation; 3) tolerance of uncertainty; 4) persuasiveness; 5) initiation of structure; 6) tolerance of freedom; 7) role assumption; 8) consideration; 9) production emphasis; 10) predictive accuracy; 11) integration; and 12) superior orientation.

A School Principal's Thinking was completed by each principal and used as an additional measure of the leadership style of the principal. The Decision Involvement Index, which was completed by all respondents, measured the extent of perceived participation of the teachers in the decision-making process. A Background Data sheet was developed to gather personal data from the participating teachers and principals.

Twelve hypotheses were tested utilizing Pearson product-moment correlation coefficients. All hypotheses were stated in the null form, i.e., no relationship between the variables under analysis. A confidence level for determining significance was established at the .05 level. An analysis of the biographical data provided by the Background Data sheet was conducted, also utilizing Pearson product-moment correlation

coefficients.

Conclusions

A number of significant associations were established, however, all were of low magnitude. All of the findings of this study apply directly to only the secondary school principals and teachers sampled within the state of Iowa. The significant correlations for the major hypotheses are as follows:

Principals' leader behavior characteristic	Teachers' participation in decision-making
1. Demand reconciliation	-.2293 (Present)
2. Initiating structure	-.2538 (Desired)
3. Tolerance of freedom	.2490 (Present)

Based upon the analysis of the data compiled for this study and within the limitations presented, the following conclusions seem justified.

Hypothesis number 2:

> There is no significant relationship between teacher participation in decision-making and the principal leadership characteristic of demand reconciliation.

The second hypothesis was rejected at the .05 level, indicating the existence of a significant inverse relationship between the amount of teachers' involvement in the making of decisions and the presence of a principal who reconciles conflicting demands and conducts the school business in an orderly fashion.

Hypothesis number 5:

> There is no significant relationship between teacher participation in decision-making and the principal leadership characteristic of initiation of structure.

The fifth hypothesis was rejected at the .05 level. This justifies the conclusion that an inverse relationship exists between the presence of principals who clearly define their own role and who inform teachers of their expectations of them in school (as measured by principals' initiating structure score) and the desired extent of teachers' involvement in the making of decisions.

Hypothesis number 6:

> There is no significant relationship between teacher participation in decision-making and the principal leadership characteristic of tolerance of freedom.

These two factors were found to correlate at the .05 level. This suggests a positive relationship between the allowance of freedom for decisions and actions in the school as authorized by the principal (as measured by his leadership characteristic of tolerance of freedom score) and the teachers' present involvement in decision-making.

There was no relationship established between teachers' perceived participation in decision-making and the following principals' leader behavior characteristics:

Principals' leader behavior characteristic	Teachers' participation in decision-making	
	Present	Desired
1. Representation	.0410	-.0842
2. Tolerance of uncertainty	-.0626	.0584
3. Persuasiveness	-.0002	-.0093
4. Role assumption	-.0771	.0109
5. Consideration	.1939	.1261
6. Production emphasis	.1612	.0406

Principals' leader behavior characteristic	Teachers' participation in decision-making	
	Present	Desired
7. Predictive accuracy	.0216	-.1763
8. Integration	.1227	.0540
9. Superior orientation	.0545	-.1213

In addition to examining relations among leadership characteristics and teachers' participation in decision-making, numerous other findings from this investigation are of interest. The findings relative to teachers' demographic characteristics are as follows:

1. Teachers in schools with vice principals were older, had more years of formal education, had spent a greater length of time in their present position and school system, and had more years of total experience than did teachers in schools without vice principals.
2. Male teachers had a higher level of formal education than female teachers.
3. The higher the level of formal education of the teachers, the greater the number of years they had been employed in education.
4. Teachers with more formal education had been employed in their present position and present school system longer than those teachers with a lower level of formal educational attainment.
5. The negative correlation between teachers' age and the teachers' present and desired participation in decision-making was significantly greater than zero; older teachers reported less participation and desired less participation.
6. The negative correlation between teachers' desired participation in decision-making and their total years of educational experience was

significantly greater than zero; more experienced teachers desired less participation.

7. The correlation between the type of school organization and the teachers' present and desired participation in decision-making was significantly greater than zero; teachers in schools with vice principals reported greater participation and desired more participation.
8. The correlation between teachers' age and the principals' leader behavior characteristic scores was significantly greater than zero on the following subscales: demand reconciliation, tolerance of uncertainty, persuasiveness, initiation of structure, tolerance of freedom, consideration, predictive accuracy, integration, and superior orientation. Generally, older teachers reported more often their principals reconciled conflicting demands, tolerated uncertainty, used persuasion effectively, clearly defined their own role, allowed the teachers opportunity for initiative, considered the well-being of the teachers, exhibited foresight, resolved internal conflicts, and maintained cordial relations with their superiors.
9. The correlation between teachers' sex and the principals' leader behavior characteristic scores (of representation, demand reconciliation, tolerance of uncertainty, persuasiveness, initiation of structure, tolerance of freedom, consideration, and predictive accuracy) was significantly greater than zero. Female teachers frequently reported their principals acted as the teachers' representative, reconciled conflicting demands, tolerated uncertainty, exhibited strong convictions, let the teachers know what was expected, allowed

teachers opportunity to make decisions, considered the well-being of the teachers, and exhibited foresight.

10. The correlation between the teachers' length of time in present position and the principals' leader behavior characteristic scores (of representation, persuasiveness, initiation of structure, tolerance of freedom, production emphasis, integration, and superior orientation) was significantly greater than zero. Teachers with more tenure in their present position reported their principals more often acted as the teachers' representative, used persuasion and argument effectively, clearly defined their own role, allowed teachers opportunity for own initiative, emphasized greater output, maintained a close-knit organization, and maintained cordial relations with superiors.
11. The correlation between the principals' leader behavior characteristic scores (of representation, persuasiveness, initiation of structure, tolerance of freedom, consideration, production emphasis, integration, and superior orientation) and the teachers' length of time in present school system was significantly greater than zero. Teachers with more tenure in their present school system many times reported their principals acted as the representative of the teachers, used persuasion and argument effectively, clearly defined their own role, allowed teachers scope in making decisions, regarded the comfort of the teachers, emphasized greater output, resolved intermember conflicts, and maintained cordial relations with superiors.
12. The correlation between the teachers' total years of educational experience and the principals' leader behavior characteristic scores

was significantly greater than zero on the following subscales: representation, persuasiveness, initiation of structure, tolerance of freedom, consideration, production emphasis, integration, and superior orientation. Generally, teachers with more educational experience more frequently reported their principals spoke as the teachers' representative, exhibited strong convictions, clearly defined their own role, allowed teachers opportunity to make decisions, regarded the well-being of the teachers, pressured for greater output, resolved intermember conflicts, and maintained cordial relations with his superiors.

13. The correlation between the type of school organization and the principals' leader behavior characteristics scores (of representation, demand reconciliation, tolerance of uncertainty, and consideration) was significantly greater than zero. Teachers in schools without vice principals reported greater support for principals who reconciled conflicting demands, tolerated uncertainty, and considered the well-being, status, and contributions of the teachers. Teachers in schools with vice principals reported greater support for principals who acted as the teachers' representative.

The demographic findings relative to principals are as follows:

1. Principals in schools with vice principals were older, had more years of formal education, a greater length of time in their present position and school system, more years of administrative experience and total educational experience than did principals in schools without vice principals.

2. There was a positive correlation between the age of the principals and their time in their present position; older principals had spent a greater length of time in their present position.
3. The correlation between the principals' formal education and length of time in his present position was significantly greater than zero; principals with more formal education had longer tenure in their present position.
4. The principals in schools with vice principals displayed a significantly more democratic style of leadership in their relationship with others, according to their own perception, than did principals in schools without vice principals.
5. Principals in schools with vice principals reported higher faculty participation in decision-making than did schools without vice principals.
6. The correlation between principals' age and their leader behavior characteristic scores of demand reconciliation was significantly greater than zero; older principals reported that they acted less as the teachers' representative.
7. The correlation between principals' formal education and their leader behavior characteristic scores was significantly greater than zero on the following subscales: representation, initiation of structure, tolerance of freedom, production emphasis, and superior orientation. This positive relationship indicated that principals with more formal education reported that they acted to a greater extent as the representative of the teachers, more clearly defined their own roles,

allowed their teachers greater opportunity for initiative, emphasized greater output, and maintained more cordial relations with superiors.

8. The correlation between the principals' length of time in present school system and their leader behavior characteristic of superior orientation was significantly greater than zero. This negative relationship indicated that principals with more tenure in their present position reported less emphasis on maintaining cordial relations with superiors.

9. The correlation between the principals' leader behavior characteristic scores (of initiation of structure, tolerance of freedom, and role assumption) and the principals' length of time in present position was significantly greater than zero. The positive relationship for tolerance of freedom indicated that principals with more tenure in their present position reported that they allowed teachers more opportunity for initiative, decisions, and action. The negative relationship for initiation of structure and role assumption revealed that principals with more tenure in their present position reported less initiation of structure and shared their leadership role with the teachers.

10. The correlation between the principals' total years in administration and total educational experience and their leader behavior characteristic score of demand reconciliation was significantly greater than zero. The negative relationship for demand reconciliation indicated that principals with more tenure in administration

and total educational experience reported less personal activity to reconcile conflicting demands.

11. The correlation between the principals' leader behavior characteristic of representation and the type of school organization was significantly greater than zero. Principals in schools with vice principals reported that they acted as the representatives of the teachers more frequently than did principals in schools without vice principals.

Limitations

The conclusions drawn from results of this research are somewhat constrained by an assumption made in Chapter I that a difference may exist in the organizational structure of a school with an assistant principal or principals. Certain conclusions were drawn concerning the two different types of school organization, but these conclusions may be due to the size of school rather than the assignment of vice principals.

For the purpose of this study, participation in decision-making was defined as that influence which the teacher felt he had or desired to have in the decision-making process. The principal also indicated his perception of the extent of present teacher involvement as well as the desired level of teacher involvement in the making of decisions. The teachers and principals were not required to make any actual decisions. This study was based on the individual's perceptions as indicated on questionnaires. The conclusions can only be generalized for the population being studied and the state of Iowa.

This investigation was limited to secondary school principals and teachers in the state of Iowa; therefore, it cannot be generalized to elementary principals. The principal and a selected number of teachers from each school participated in this study. Each participant had spent at least one year in his respective position. The data were based upon the return of questionnaires and background sheets which had been provided to the participants.

The basic instrument utilized in this study was the LBDQ-XII. This instrument was used by teachers to indicate their perceptions of the leader behavior of the school principal and was also completed by the principals as a measure of their own leader behavior. There is some doubt as to complete objectivity when an individual must rate his own effectiveness as a leader, such as the principal's self-perceptions on the LBDQ-XII. Some individuals may have an inflated view of their effectiveness as a leader while others may respond in a fashion which indicates modesty on their part.

The mailed survey instrument technique had the advantage of collecting data economically, but had a disadvantage of no personal contact with the participants. To reduce the likelihood that respondents would not understand the intent of the instruments, the majority of the schools were personally visited and the instruments discussed with the school principal. Even though a random sample procedure was recommended, there is no guarantee that the principal utilized a random sample procedure to select his teacher respondents.

This study examined only the leader behavior characteristics of the

principal as they relate to teacher perceived involvement in the making of decisions. Students, parents, and the community, even though very important components of school decision-making, were not considered. Likewise, the emerging concept of administrative teams, which offers some identifiable administrative strengths, was not a part of this study. Items that may be related to the productivity of the school system and the morale of the teachers were not included.

Discussion

In the past, general involvement of the classroom teacher in the decision-making process was absent. Since World War II, teacher militancy has emerged as a national trend. Many teachers feel that they have been limited in, or eliminated from, participation in the decision-making process in their schools. More recently, to give the teachers a greater voice in the decisions which affect them, some districts have deliberately fostered the process of participatory leadership.

Participatory leadership can be viewed as an organizational process whereby subordinates are involved in the making of decisions. A review of literature indicated that most teachers desire to participate in the decision-making process. Various studies have shown that teachers who report opportunity to participate regularly and actively in the making of policies are more likely to be enthusiastic about their school system than those who report limited opportunity to participate. By increasing the participative role of teachers, their attitudes, satisfaction, and productivity may be positively enhanced (Dettre, 1970), but participation

is not the quickest procedure for making decisions.

The majority of the investigations reviewed placed special emphasis on the involvement and participation of subordinates. In spite of the psychological, moral, and practical advantages of subordinate participation in decision-making, certain problems recur in participating groups. Mansbridge (1973) listed three of these problems: "the greater length of time involved in decision-making, the greater emotional intensity of the interaction, and the persistence of ingrained inequalities of influence."

Certain individuals will not assume or accept responsibility (Doris, 1974). Likewise, not all teachers desire to be involved in the making of decisions. Studies by Bridges (1964, 1967) and Chase (1952) indicated that certain teachers desire independence from making decisions. These teachers expressed less favorable attitudes toward a principal who involved them in the decision-making process. The results of this investigation imply that the desire for involvement in participation is a more complex phenomenon, i.e., desire for decision-making on the part of teachers may depend on teachers' age, tenure, education, and the extant behaviors of the principal.

The key individual in providing the necessary atmosphere for participatory leadership is the school building principal. The role of the principal as the school building leader has changed dramatically during the past half century. The principal is in a very strategic position as the link between central administration and the school staff. The principal must remember that he has a dual responsibility--to his teachers for

their satisfaction and well-being, and also to the school district for the accomplishment of certain goals and objectives. The school principal as the designated leader of the school may utilize different styles of leadership. Studies indicate that a principal who involves his teachers in the decision-making process will have a more productive group.

There is a relationship between the style of leadership of an individual and the involvement of subordinates in the making of decisions. Evidence suggests that leadership styles through the study of behavioral characteristics of individuals can be determined (Jacobs, 1970). In the study of leadership and decision-making it is more important to study perceived behavior than actual behavior, since this is what actually influences the actions of subordinates.

In the research reported here, the leader behavior of the principal and his involvement of teachers in decision-making were deemed important aspects of the effectiveness of the school organization. Principals' participatory leadership behavior, as measured by the amount of teacher participation in decision-making, was also essential to this study.

Bridges (1964) indicated that teachers had a more favorable attitude toward principals who behaved in a manner conducive to orderly business and who reduced the disagreements between principals and teachers. Yet this study found a significant negative relationship between the teachers' involvement in the making of decisions and the principals' leader behavior characteristic of demand reconciliation. This negative correlation suggests that in schools where principals placed more stress on reduction of disorder (as measured by their demand reconciliation scores), the

teachers perceived less involvement in making decisions. Teachers in schools without vice principals tended to report that the principals reconciled conflicting demands and conducted the school business in an orderly fashion. Teachers in schools without vice principals may have greater access to the principal, but the presence of vice principals may act as a buffer between the teacher and the principal in certain situations where conflicts would have to be reconciled.

This study found that principals with a higher level of formal education more clearly defined their own roles and let the teachers know what was expected of them. Gorton's (1971) studies support these findings. He indicated that the principal's personal role and what he expected from his faculty were significantly related to his behavior in encouraging teacher participation in decision-making. A principal who clearly defines his own role and lets the teachers know what is expected is more successful (Jacobs, 1965).

A significant relationship existed in this study between the teachers' involvement in the making of decisions and the principals' leader behavior characteristic of tolerance of freedom. In schools where the principal authorized greater freedom of action, the teachers perceived greater involvement in the making of decisions. Schools with a participative-group organizational style (Likert, 1961) may be administered by principals whose leadership characteristics allow teachers opportunity for initiative and action (Feitler, 1972). The participative theory of leadership is based on the assumption that the leadership style expands subordinates' involvement in making decisions in order to make full use

of the individual's abilities.

Principals who had spent a greater length of time in their present position and principals with a greater amount of formal education tended to report that teachers were allowed greater freedom for making decisions. This suggests that as the principal becomes more assured of his position within the school and community, he may feel more liberal in allowing teachers greater freedom of action.

Halpin (1956), Fiedler (1971), and Feitler (1972) suggested that the dimension of consideration plays a major role in effective leader behavior. It is interesting to note that in the present study, no significant relationship was found between the teachers' participation in the making of decisions and principals who had a particular interest in the comfort, well-being, status, and contributions of teachers in their schools (as measured by their consideration scores). It is possible that the reduction of questions, from 15 to 10, for the dimension of consideration when the new LBDQ-XII was developed, may have been a contributing factor in the failure to establish a relationship between the principals' leader behavior characteristic of consideration and the teachers' participation in decision-making.

There was a significant relationship between the school organization and the leadership style of the principal, as reported by the principals. In schools with vice principals, the principals displayed a significantly more democratic style of leadership in their relationship with others than did principals in schools without vice principals. The effectiveness of this leadership style was supported by teacher respondents

who tended to report greater involvement in decision-making in schools with vice principals. Earlier studies indicated that in certain situations a more structured type of leader behavior is necessary to complete the task, while in others the objectives will be met through the use of a democratic leader behavior style. In schools without vice principals, the principals' leader behavior may be in contrast to the style of leader behavior which meets the desires of the teachers, but it accomplishes the schools' goals and objectives (Feitler and Long, 1971).

Faculties with more female teachers had more positive support of the principals' leader behavior characteristics. A higher ratio of females associated positively with higher principals' leader behavior characteristic scores of demand reconciliation, tolerance of uncertainty, persuasiveness, initiation of structure, tolerance of freedom, consideration, predictive accuracy, integration, and superior orientation. The nature of females who enter into the teaching field may be in harmony with these leader behavior characteristics. Female teachers may desire a more structured organization than male teachers, or they may feel themselves more threatened in an unstructured organization. Perhaps women by nature may be more organized than men.

In addition, it was found that principals with tenure in their present position displayed a more democratic style of leader behavior by sharing their leadership role. This finding is supported by the research of Feitler (1972) who reported a significant relationship between the school organizational processes and the leader behavior of the principal. A principal who solidifies his position in the school and community may

develop a more democratic leadership style.

A significant relationship existed between the age of the teachers and their participation in decision-making. A higher proportion of older teachers desired less participation in the making of decisions. This finding is in agreement with other studies. Chase's (1952) study indicated that certain teachers do not desire involvement in the making of decisions. Belasco and Alutto (1972) found that older teachers are more satisfied with their role and believe that seasoned teachers may have been saturated with decision requirements.

It appears that older teachers, teachers with more educational experience, and teachers with tenure in the same school system had more leeway in developing their own goals and objectives with minor principal interference. This finding supports the theories of participation where the subordinates are authorized to set their own goals and to modify jobs based on their own initiative (Bendix, 1956).

In the research reported here, a significant relationship existed between the teachers' participation in the making of decisions and the organizational structure of the school. The teachers felt they were not constrained in their participation in schools. Both the teachers and principals tended to report that the present teacher participation in decision-making was higher in schools with vice principals. Additionally, teachers in schools with vice principals reported a greater desire to participate in decision-making. Whether this participation is due to the organizational structure or the size of the school could not be determined by this analysis.

Teachers reported a greater desire for decision-making participation, on all decision items on the DII, than they are presently receiving. Principals, on their answers on the DII, tend to support these findings. School administrators should realize that teachers are demanding greater participation in decision-making. This is especially true of younger teachers. The principal, as the leader in his school building, should initiate action which could result in agreement between the teachers and the building administrators regarding a mutually acceptable role for the faculty in participatory leadership. The DII could serve as a useful diagnostic tool, since the responses would indicate the relationship between present faculty participation and desired faculty participation. The principal, by accurately determining the needs of faculty members, may be able to develop an understanding between the school administrators and teachers regarding the role of the faculty in the decision-making process.

If the school principal's objective is to have satisfied and effective teachers, then the attitudes of the teachers regarding participatory leadership need to be considered. It is also essential that the institutions which train principals recognize this importance in planning and providing professional programs. The superintendent and board of education, in their selection and employment of a school principal, also need to be sensitive to the attitudes of the teachers regarding participatory leadership. If a principal is engaged who stifles teacher participation, when teachers desire to participate, the result would likely be an unproductive school.

Judging from the results of this study, it appears that the leader behavior of the principal is related to the amount of perceived participation by the teachers in the making of decisions. To what extent the lack of participation affected the teachers' performance in the classroom is unknown. By implication, one can postulate that dissatisfaction in general will carry over into the productivity of the individual (Katz et al., 1951). If teachers are unable to voice their professional concerns through present organizational procedures utilized in the school districts of Iowa, they may turn to the formal procedure of collective negotiation. In Iowa that becomes possible July 1, 1975.

Recommendations

From analysis of the data, the literature search, and the foregoing conclusions and discussion, certain recommendations for practice and further research emerged.

Recommendations for practice

Whether they are administrators in public schools or college professors who are responsible for the training of principals and teachers, educators should consider the following recommendations:

1. According to the responses from the teachers, they desire greater participation in decision-making than they are presently receiving. Principals must seek additional ways to have greater teacher involvement in the decision-making process. The DII could serve as a starting point, since the responses would provide a measure of the

congruence between present faculty participation and desired faculty participation. The principal, by accurately determining the desires of his faculty, may be able to develop an understanding between the school administrators and teachers regarding the teachers' role in the decision-making process.

2. The continued use of the LBDQ-XII as a measure of leader behavior of high school principals is considered valid. The DII, however, needs to be updated and broken into two categories for use--one for elementary schools and one for secondary schools. Some of the decision items appeared more suitable for elementary school operations than secondary school.
3. If participatory leadership is to be a catalyst in education, both principals and teachers must understand the decision-making process for organizations and for individuals. Professors of educational administration and those instructors responsible for educating prospective teachers need to place greater emphasis on decision-making and leadership. The art of securing meaningful teacher participation needs to be emphasized in the training of administrators. Additionally, teachers must understand the impact of decisions on an entire school and develop competency in their ability to make rational and meaningful decisions.
4. Since many existing teachers will not be furthering their formal education, they will fail to receive instruction concerning their role in participatory leadership. Therefore, it is important that this topic be provided by in-service training sessions. As an alternative

solution, it may be feasible to require training in decision-making as a prerequisite for renewal of a teacher's certificate.

5. The teachers with greater tenure in their present positions, school systems, and total educational experience generally identified preferred principal behavior characteristics as follows: speaking and acting as the teachers' representative; using persuasion and argument effectively; clearly defining their own role and letting the teachers know what is expected; allowing the teachers opportunity to use their own initiative; exhibiting foresight and ability to predict outcomes accurately; and maintaining a close-knit organization with the ability to resolve intermember conflicts. In order for the principals to enhance their leadership, it is recommended that these leader behavior characteristics be cultivated and utilized by the principals.
6. Teachers perceived greater involvement in decision-making when the principals exhibited the leader behavior characteristic of tolerance of freedom. In order for the principals to enhance the involvement of teachers in decision-making, it is recommended that this leader behavior characteristic be put to use by the principals.

Recommendations for further study

1. This study dealt with leader behavior as it affected teacher participation in decision-making in two different types of school organizations. What would be the effect upon decision-making in the organizational structure of a school which has fully implemented the New Design with team teaching, large group instruction, small group

instruction and independent study? It is recommended that a study be conducted to compare participatory leadership in both types of schools (with and without vice principals) where the New Design has been implemented.

2. Principals' and teachers' perceived participation in decision-making was the heart of this study. The teachers and principals were not required to make any actual decisions, nor was the ability of the participants to make decisions measured. Further study should be completed using an objective decision-making measurement, where the participants are required to make decisions based on definitive answers. The project could be similar to the landmark Whitman Elementary School Project, but should be conducted in a secondary school and with teachers as well as principals involved.
3. There does not appear to be any single effective leadership style for every situation. It is becoming widely recognized that the most effective leadership style may vary according to the situation. Therefore, it is recommended that situational variables be developed for the study of decision-making involvement.
4. Instruments to measure leader behavior as developed by Fiedler, Fleishman, and Halpin have two basic scales of measurement--consideration and initiating structure. Subsequently, experience with the instruments indicated there were other factors which determined a leader's behavior. As a result of this evidence, the LBDQ-XII with 12 subscales of leader behavior was developed. By increasing the subscales from two to twelve, the basic scales of consideration and

initiating structure may have been diluted. Therefore, it is recommended that a leader behavior study be conducted utilizing both the LBDQ and the LBDQ-XII to determine if the actual measurements of consideration and initiating structure are the same for each instrument.

5. If the procedures of this study were utilized in a state where collective bargaining is mandatory, would the results be similar? A similar study might be completed comparing the results from two states--one in which collective bargaining is mandatory and well established, and one without any mandatory negotiating requirements.
6. This study dealt with the leader behavior characteristics of secondary school principals and their relationship to teachers' perceived participation in decision-making. Will the teachers' perceptions, as reported in this study, remain the same after the new Public Employment Relations Act goes into effect in Iowa on July 1, 1975? It is recommended that a corresponding study be conducted after the Act has been in effect one year and the results compared with this study.
7. In this study, teacher perceived participation in decision-making was found to be related to the leader behavior of the principal. It appears that if a teacher desires involvement and is authorized to participate, his morale and satisfaction will be higher, ceteris paribus. Does participation in decision-making make the teacher more effective? To what extent does the lack of participation affect the teachers' performance in the classroom? It seems important to determine whether teacher effectiveness is related to participation.
8. Recently there has been increased focus upon accountability in

education. Does accountability foster participatory leadership, or vice versa? If the principal is held accountable for the ultimate product of his school, will he broaden the range of involving subordinates in decision-making? The assumption of responsibility for decisions and its relationship to participatory leadership need to be investigated.

9. This research centered on the perceived participation of principals and teachers in participatory leadership. Students, parents, and the community, even though very important components of school decision-making, were not considered for this study. Should there be greater involvement of parents and students in making decisions in our schools? Further study is recommended to determine the perceived participation in participatory leadership of students, parents, and selected publics in Iowa secondary schools.

10. The concept of administrative teams, which offers some identifiable administrative strengths, was not a part of this study. Do administrative teams promote or hamper participatory leadership vis-a-vis teachers? It is recommended that research be conducted to compare schools which have administrative teams with those without administrative teams to determine teachers' satisfaction and participation in decision-making.

11. In this study, the sample of secondary schools was divided into two groups--those with vice principals and those without. The mean enrollment for schools with vice principals was 966 while the mean for schools without vice principals was 312. A wide variance existed

in the sizes. Does the size of a school or the addition of a vice principal have an effect on teachers' participation in decision-making? The size of a school and its relationship to participatory leadership must be studied.

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A special note of thanks to my educational committee for their time, assistance, and consultation: Dean Arthur Gowan, Dr. John Menne, Dr. Trevor Howe, and Dr. Richard Warren whose statistical guidance was invaluable.

My wife Mary was an ideal wife. Not only did she put up with a husband writing a dissertation, but she performed innumerable, time-consuming, behind the scene duties necessary for completion of this project. An extra special thank you is due her and also to my son Bruce who unquestioningly gave up his father on countless occasions. Without their assistance and encouragement, the completion of this study would not have been possible.

APPENDIX A: LETTER TO SELECTED SECONDARY SCHOOL PRINCIPALS EXPLAINING THE STUDY AND REQUESTING THEIR PARTICIPATION

IOWA STATE
UNIVERSITY

College of Education
Professional Studies
201 Curtiss Hall
Ames, Iowa 50010

Telephone: 515-294-4143

March , 1974

One of the major functions of the Educational Administration Division at Iowa State University is to encourage educational research that will contribute to the advancement of administrative leadership and be of a value to administrators throughout the state of Iowa. We believe that secondary principals are faced with many new problems and pressures which demand that professors do a much better job of making the prospective principal aware of these problems thus having better prepared and more informed administrators. You can have a major role in upgrading our preparation of principals!

One of the doctoral candidates at Iowa State University is embarking on a project that I believe will make a positive contribution to professional leadership and be of concern to secondary school principals. The project, "Leadership Characteristics of Secondary School Principals and Teacher Participation in Decision Making", is under the direction of Don Gress. This study is the first of its kind involving participatory leadership in the secondary school environment. The results hopefully will be of value to you as well as secondary principal's associations and universities. We are examining the association of leadership styles and the conceived amount of teacher participation in decision making.

You are one of fifty secondary school principals in the State of Iowa selected to participate in this project. Participation will involve the completion of two questionnaires by you and two by ten teachers of your selection. The entire procedure will require approximately fifty minutes of your time.

If you agree to participate, Mr. Gress will send you complete information and materials. We will report our findings through the Iowa Association of Secondary School Principals. Please be assured that your responses will be treated confidentially. None will be identified by respondent or by school.

If you desire to participate, a return, postage-paid card is provided. We will look forwarded to receiving your answer at the earliest convenience. Thank you.

Very truly yours,

RICHARD P. MANATT

APPENDIX B: COVER LETTER TO SECONDARY SCHOOL PRINCIPALS WITH GENERAL INSTRUCTIONS

IOWA STATE UNIVERSITY

College of Education
Professional Studies
201 Curtiss Hall
Ames, Iowa 50010

Telephone: 515-294-4143

March 28, 1974

Thank you for agreeing to participate in our research project, "Leadership and Decision Making". The fact that you are willing to take time from your busy schedule to assist indicates your concern that prospective principals are made aware of these problems, thus having better prepared and more informed administrators.

Enclosed you will find two packets of questionnaires, one group is for yourself and one group is for the ten teachers of your selection. It is requested that the teachers selected will have spent at least one year in your school. In order to keep each set together the packet to be completed by each teacher has a number assigned.

Attached to each questionnaire is a set of instructions for yourself and the teachers to follow. After the sets have been completed it is requested that they be returned in the enclosed self addressed envelope. Your prompt response will be greatly appreciated.

Again, may I extend my sincere thanks to you for consenting to participate in this study. Your cooperation will help insure success in acquiring the information needed for the completion of the research.

I plan to send you a summary of the research findings which will be reported to the Iowa Association of Secondary School Principals.

Very truly yours,

Richard P. Manatt

APPENDIX C: BACKGROUND DATA - ADMINISTRATOR

PLEASE NOTE:

Pages 192-212, "Background Data--Administrator" not microfilmed at request of author. Available for consultation at Iowa State University Library.

UNIVERSITY MICROFILMS.

APPENDIX J: LEADER BEHAVIOR DESCRIPTION QUESTIONNAIRE - FORM XII, 1962

LEADER BEHAVIOR DESCRIPTION QUESTIONNAIRE—Form XII

TEACHER DESCRIPTION OF SCHOOL PRINCIPAL

Originated by staff members of
The Ohio State Leadership Studies
and revised by the
Bureau of Business Research

Purpose of the Questionnaire

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

Note: The term, "*group*," as employed in the following items, refers to a department, division, or other unit of organization that is supervised by the person being described.

The term "*members*," refers to all the people in the unit of organization that is supervised by the person being described.

Published by

Bureau of Business Research
College of Commerce and Administration
The Ohio State University
Columbus, Ohio

DIRECTIONS:

a. READ each item carefully.

b. CONSIDER how frequently your school principal engages in the behavior described by the item.

c. DECIDE whether he (A) *always*, (B) *often*, (C) *occasionally*, (D) *seldom* or (E) *never* acts as described by the item.

d. WHEN you have decided on an answer, blacken the corresponding space on the answer sheet with a No. 2 pencil. If you change your mind, erase your mark completely.

A = Always

B = Often

C = Occasionally

D = Seldom

E = Never

e. MARK your answers as shown in the examples below.

	A	B	C	D	E
Example: He often acts as described	—	■	—	—	—
Example: He never acts as described	—	—	—	—	■

---

1. He acts as the spokesman of the group.....	A	B	C	D	E
2. He waits patiently for the results of a decision.....	A	B	C	D	E
3. He makes pep talks to stimulate the group.....	A	B	C	D	E
4. He lets group members know what is expected of them.....	A	B	C	D	E
5. He allows the members complete freedom in their work.....	A	B	C	D	E
6. He is hesitant about taking initiative in the group.....	A	B	C	D	E
7. He is friendly and approachable.....	A	B	C	D	E
8. He encourages overtime work.....	A	B	C	D	E
9. He makes accurate decisions.....	A	B	C	D	E
10. He gets along well with the people above him.....	A	B	C	D	E
11. He publicizes the activities of the group.....	A	B	C	D	E
12. He becomes anxious when he cannot find out what is coming next.....	A	B	C	D	E

A = Always
B = Often
C = Occasionally
D = Seldom
E = Never

13. His arguments are convincing.....	A	B	C	D	E
14. He encourages the use of uniform procedures.....	A	B	C	D	E
15. He permits the members to use their own judgment in solving problems.	A	B	C	D	E
16. He fails to take necessary action.....	A	B	C	D	E
17. He does little things to make it pleasant to be a member of the group...	A	B	C	D	E
18. He stresses being ahead of competing groups.....	A	B	C	D	E
19. He keeps the group working together as a team.....	A	B	C	D	E
20. He keeps the group in good standing with higher authority.....	A	B	C	D	E
21. He speaks as the representative of the group.....	A	B	C	D	E
22. He accepts defeat in stride.....	A	B	C	D	E
23. He argues persuasively for his point of view.....	A	B	C	D	E
24. He tries out his ideas in the group.....	A	B	C	D	E
25. He encourages initiative in the group members.....	A	B	C	D	E
26. He lets other persons take away his leadership in the group.....	A	B	C	D	E
27. He puts suggestions made by the group into operation.....	A	B	C	D	E
28. He needles members for greater effort.....	A	B	C	D	E
29. He seems able to predict what is coming next.....	A	B	C	D	E
30. He is working hard for a promotion.....	A	B	C	D	E
31. He speaks for the group when visitors are present.....	A	B	C	D	E
32. He accepts delays without becoming upset.....	A	B	C	D	E
33. He is a very persuasive talker.....	A	B	C	D	E
34. He makes his attitudes clear to the group.....	A	B	C	D	E
35. He lets the members do their work the way they think best.....	A	B	C	D	E
36. He lets some members take advantage of him.....	A	B	C	D	E

A = Always
B = Often
C = Occasionally
D = Seldom
E = Never

37. He treats all group members as his equals	A	B	C	D	E
38. He keeps the work moving at a rapid pace	A	B	C	D	E
39. He settles conflicts when they occur in the group	A	B	C	D	E
40. His superiors act favorably on most of his suggestions	A	B	C	D	E
41. He represents the group at outside meetings	A	B	C	D	E
42. He becomes anxious when waiting for new developments	A	B	C	D	E
43. He is very skillful in an argument	A	B	C	D	E
44. He decides what shall be done and how it shall be done	A	B	C	D	E
45. He assigns a task, then lets the members handle it	A	B	C	D	E
46. He is the leader of the group in name only	A	B	C	D	E
47. He gives advance notice of changes	A	B	C	D	E
48. He pushes for increased production	A	B	C	D	E
49. Things usually turn out as he predicts	A	B	C	D	E
50. He enjoys the privileges of his position	A	B	C	D	E
51. He handles complex problems efficiently	A	B	C	D	E
52. He is able to tolerate postponement and uncertainty	A	B	C	D	E
53. He is not a very convincing talker	A	B	C	D	E
54. He assigns group members to particular tasks	A	B	C	D	E
55. He turns the members loose on a job, and lets them go to it	A	B	C	D	E
56. He backs down when he ought to stand firm	A	B	C	D	E
57. He keeps to himself	A	B	C	D	E
58. He asks the members to work harder	A	B	C	D	E
59. He is accurate in predicting the trend of events	A	B	C	D	E
60. He gets his superiors to act for the welfare of the group members	A	B	C	D	E

A = Always
B = Often
C = Occasionally
D = Seldom
E = Never

61. He gets swamped by details	A	B	C	D	E
62. He can wait just so long, then blows up	A	B	C	D	E
63. He speaks from a strong inner conviction	A	B	C	D	E
64. He makes sure that his part in the group is understood by the group members	A	B	C	D	E
65. He is reluctant to allow the members any freedom of action	A	B	C	D	E
66. He lets some members have authority that he should keep	A	B	C	D	E
67. He looks out for the personal welfare of group members	A	B	C	D	E
68. He permits the members to take it easy in their work	A	B	C	D	E
69. He sees to it that the work of the group is coordinated	A	B	C	D	E
70. His word carries weight with his superiors	A	B	C	D	E
71. He gets things all tangled up	A	B	C	D	E
72. He remains calm when uncertain about coming events	A	B	C	D	E
73. He is an inspiring talker	A	B	C	D	E
74. He schedules the work to be done	A	B	C	D	E
75. He allows the group a high degree of initiative	A	B	C	D	E
76. He takes full charge when emergencies arise	A	B	C	D	E
77. He is willing to make changes	A	B	C	D	E
78. He drives hard when there is a job to be done	A	B	C	D	E
79. He helps group members settle their differences	A	B	C	D	E
80. He gets what he asks for from his superiors	A	B	C	D	E
81. He can reduce a madhouse to system and order	A	B	C	D	E
82. He is able to delay action until the proper time occurs	A	B	C	D	E
83. He persuades others that his ideas are to their advantage	A	B	C	D	E

A — Always

B — Often

C — Occasionally

D — Seldom

E — Never

84. He maintains definite standards of performance.....	A	B	C	D	E
85. He trusts the members to exercise good judgment.....	A	B	C	D	E
86. He overcomes attempts made to challenge his leadership.....	A	B	C	D	E
87. He refuses to explain his actions.....	A	B	C	D	E
88. He urges the group to beat its previous record.....	A	B	C	D	E
89. He anticipates problems and plans for them.....	A	B	C	D	E
90. He is working his way to the top.....	A	B	C	D	E
91. He gets confused when too many demands are made of him.....	A	B	C	D	E
92. He worries about the outcome of any new procedure.....	A	B	C	D	E
93. He can inspire enthusiasm for a project.....	A	B	C	D	E
94. He asks that group members follow standard rules and regulations.....	A	B	C	D	E
95. He permits the group to set its own pace.....	A	B	C	D	E
96. He is easily recognized as the leader of the group.....	A	B	C	D	E
97. He acts without consulting the group.....	A	B	C	D	E
98. He keeps the group working up to capacity.....	A	B	C	D	E
99. He maintains a closely knit group.....	A	B	C	D	E
100. He maintains cordial relations with superiors.....	A	B	C	D	E

APPENDIX K: LETTER TO DR. KOERNER, NATIONAL ASSOCIATION OF SECONDARY SCHOOL PRINCIPALS

2828 Wood Street
Ames, Iowa 50010
July 31, 1974

Dr. Thomas Koerner
National Association of Secondary School Principals
1904 Association Drive
Reston, Virginia 22091

Re: Telephone conversation of July 29, 1974.

Dear Dr. Koerner:

In my research I want to compare biographical data of secondary school principals and teachers in the state of Iowa with the national average (mean) or percentage. I have divided the principals into the following two categories:

1. Schools where the principal has one or more vice principals
2. Schools without vice principals

I desire to compare biographical data on the following items for schools with vice principals and schools without vice principals:

1. Age - percentage of secondary principals in the following categories:

	National	With Vice Principals	Without Vice Principals
a. 20-25	_____	_____	_____
b. 26-30	_____	_____	_____
c. 31-35	_____	_____	_____
d. 36-40	_____	_____	_____
e. 41-45	_____	_____	_____
f. 46-50	_____	_____	_____
g. 51-55	_____	_____	_____
h. 56-60	_____	_____	_____
i. 61 or over	_____	_____	_____

Dr. Thomas Koerner
July 31, 1974
Page 2

2. Highest level of professional preparation - percentage of secondary principals in the following categories:

	National	With Vice Principals	Without Vice Principals
a. Less than Bachelors Degree			
b. Bachelors Degree			
c. Bachelors + 15 semester hours (22.5 quarter hours)			
d. Masters Degree			
e. MA + 15 semester hours (22.5 quarter hours)			
f. MA + 30 semester hours (45 quarter hours)			
g. Ph.D. or Ed.D. Degree			
3. Average number of years in present school system:			
4. Average number of years as a secondary school principal:			
5. Average number of total years of administrative or supervisory experience:			
6. Average number of total years in secondary education including teaching and administration			
7. Average size of school (professional staff) per secondary school:			
8. Average size of school (number of students per secondary school:			

Additionally, I desire to compare the national average or percentage of secondary school teachers with biographical data in the following categories:

1. Age - percentage of teachers in each of the following categories:

	National	With Vice Principals	Without Vice Principals
a. 20-25	_____	_____	_____
b. 26-30	_____	_____	_____
c. 31-35	_____	_____	_____
d. 36-40	_____	_____	_____
e. 41-45	_____	_____	_____
f. 46-50	_____	_____	_____
g. 51-55	_____	_____	_____
h. 56-60	_____	_____	_____
i. 61 or over	_____	_____	_____

2. Sex - percentage of teachers in each of the following categories:

a. Male	_____	_____	_____
b. Female	_____	_____	_____

3. Highest level of professional preparation - percentage of secondary teachers in each of the following categories:

a. Less than Bachelors Degree	_____	_____	_____
b. Bachelors Degree	_____	_____	_____
c. Bachelors + 15 semester hours (22.5 quarter hours)	_____	_____	_____
d. Masters Degree	_____	_____	_____

	National	With Vice Principals	Without Vice Principals
e. MA + 15 semester hours (22.5 quarter hours)	_____	_____	_____
f. MA + 30 semester hours (45 quarter hours)	_____	_____	_____
g. Ph.D. or Ed.D. Degree	_____	_____	_____

4. Percentage of secondary teachers in each of the following disciplines:

a. Agriculture	_____	_____	_____
b. Art	_____	_____	_____
c. Distributive Ed. or Work Study	_____	_____	_____
d. Driver education	_____	_____	_____
e. English language art	_____	_____	_____
f. Foreign languages	_____	_____	_____
g. Home economics	_____	_____	_____
h. Industrial arts	_____	_____	_____
i. Mathematics	_____	_____	_____
j. Music	_____	_____	_____
k. Physical & Health Edu.	_____	_____	_____
l. Science	_____	_____	_____
m. Social Studies	_____	_____	_____
n. Other	_____	_____	_____
5. Average number of years in present position	_____	_____	_____

	National	With Vice Principals	Without Vice Principals
6. Average number of years in present school system:	_____	_____	_____
7. Total number of years of teaching experience:	_____	_____	_____

Thank you so much for agreeing to assist me in this endeavor.

Sincerely,

D. H. GRESS

APPENDIX L: LETTER FROM EDUCATIONAL RESEARCH SERVICE, INC.

Educational Research Service, Inc.
1815 North Fort Myer Drive, Arlington, Virginia 22209

Glen E. Robinson, Executive Vice President
Director of Research
Dale Gaddy
Assistant Director

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August 12, 1974

Mr. D.H. Gress
2828 Wood Street
Ames, Iowa 50010

Dear Mr. Gress:

Dr. Koerner of the NASSP has referred to us your recent letter requesting various data on secondary school principals and teachers.

We know of no data that have been collected according to the categories of schools with vice principals and schools without vice principals. Any data on national averages which we might be able to provide are included in the NASSP STUDY OF THE SECONDARY SCHOOL PRINCIPALSHIP, Volumes 1 and 2. Although we usually lend materials to subscribers only, we are sending you the two volumes of this study on loan and request that they be returned to us within two weeks.

As for information on secondary school teachers, we suggest that you refer to the National Educational Association Research Report, STATUS OF THE AMERICAN PUBLIC-SCHOOL TEACHER, 1970-71. We have enclosed summary highlights from that study.

We have also enclosed a brochure introducing you to ERS and explaining its organization and services.

Sincerely yours,

Ann H. Tognetti

Ann H. Tognetti
Information Specialist

APPENDIX M: TEACHERS' AND PRINCIPALS' DEMOGRAPHIC DATA

Table 17. Distribution by age (principals)

Age	All princ.		With V. P.		Without V. P.	
	Number	Percent	Number	Percent	Number	Percent
26-30	3	5.5	0	0.0	3	10.7
31-35	8	14.5	2	7.4	6	21.4
36-40	19	34.5	7	25.9	12	43.0
41-45	11	20.0	8	29.7	3	10.7
46-50	7	12.7	5	18.5	2	7.1
51-55	4	7.3	4	14.8	2	7.1
56-60	3	5.5	1	3.7	0	0.0
Total	55	100.0	27	100.0	28	100.0

Table 18. Formal educational level (principals)

Educational level	All princ.		With V. P.		Without V. P.	
	Number	Percent	Number	Percent	Number	Percent
Masters degree	9	16.4	3	11.1	6	21.4
MA + 15 sem. hrs. (22.5 quarter hrs.)	20	36.3	7	25.9	13	46.4
MA + 30 sem. hrs. (45 quarter hrs.)	21	38.2	13	48.2	8	28.6
Ph.D. or Ed.D. degree	5	9.1	4	14.8	1	3.6
Total	55	100.0	27	100.0	28	100.0

Table 19. Length of time in present position (principals)

Years	All princ.		With V. P.		Without V. P.	
	Number	Percent	Number	Percent	Number	Percent
1-5	37	67.3	16	59.3	21	75.0
6-10	12	21.9	7	25.9	5	17.8
11-15	2	3.6	1	3.7	1	3.6
16-20	2	3.6	1	3.7	1	3.6
21-25	2	3.6	2	7.4	0	0.0
Total	55	100.0	27	100.0	28	100.0
Mean	5.42		6.56		4.32	
Median	3.80		4.67		3.21	
Std. dev.	5.01		5.85		3.84	

Table 20. Length of time in present school system (principals)

Years	All princ.		With V. P.		Without V. P.	
	Number	Percent	Number	Percent	Number	Percent
1-5	29	52.8	11	40.8	18	64.2
6-10	17	31.0	9	33.3	8	28.6
11-15	4	7.2	3	11.1	1	3.6
16-20	3	5.4	2	7.4	1	3.6
21-25	2	3.6	2	7.4	0	0.0
Total	55	100.0	27	100.0	28	100.0
Mean	6.26		7.67		4.89	
Median	5.00		7.19		4.00	
Std. dev.	4.90		5.51		3.85	

Table 21. Total number of years in administration (principals)

Years	All princ.		With V. P.		Without V. P.	
	Number	Percent	Number	Percent	Number	Percent
1-5	16	29.1	5	18.5	11	39.3
6-10	17	31.0	7	25.9	10	35.7
11-15	9	16.4	5	18.5	4	14.2
16-20	8	14.4	7	25.9	1	3.6
21-25	3	5.5	2	7.5	1	3.6
26-30	2	3.6	1	3.7	1	3.6
Total	55	100.0	27	100.0	28	100.0
Mean	10.26		12.48		8.11	
Median	7.75		13.00		6.90	
Std. dev.	7.03		6.80		6.67	

Table 22. Total number of years in secondary education teaching and administration (principals)

Years	All princ.		With V. P.		Without V. P.	
	Number	Percent	Number	Percent	Number	Percent
1-5	2	3.6	0	0.0	2	7.2
6-10	9	16.4	2	7.4	7	24.9
11-15	19	34.4	5	18.5	14	50.0
16-20	11	20.0	8	29.6	3	10.7
21-25	9	16.4	9	33.4	0	0.0
26-30	5	9.2	3	11.1	2	7.2
Total	55	100.0	27	100.0	28	100.0
Mean	16.35		19.49		13.36	
Median	15.00		19.00		13.64	
Std. dev.	6.52		5.73		5.86	

Table 23. Distribution by age (teachers)

Age	All teachers		With V. P.		Without V. P.	
	Number	Percent	Number	Percent	Number	Percent
20-25	84	15.1	29	9.6	55	21.7
26-30	142	25.5	71	23.4	71	27.8
31-35	89	16.0	59	19.4	30	11.8
36-40	85	15.3	48	15.8	37	14.6
41-45	53	9.5	35	11.6	18	7.1
46-50	37	6.6	19	6.3	18	7.1
51-55	27	4.8	20	6.6	7	2.8
56-60	26	4.7	12	4.0	14	5.5
61 or over	14	2.5	10	3.3	4	1.6
Total	557	100.0	303	100.0	254	100.0

Table 24. Distribution by sex (teachers)

Sex	All teachers		With V. P.		Without V. P.	
	Number	Percent	Number	Percent	Number	Percent
Male	344	61.8	193	63.7	151	59.4
Female	213	38.2	110	36.3	103	40.6
Total	557	100.0	303	100.0	254	100.0

Table 25. Formal educational level (teachers)

Educational level	All teachers		With V. P.		Without V. P.	
	Number	Percent	Number	Percent	Number	Percent
Bachelors degree	207	37.3	81	26.7	126	49.7
BA + 15 sem. hrs. (22.5 quarter hrs.)	147	26.4	77	25.4	70	27.7
Masters degree	122	21.9	83	27.4	39	15.4
MA + 15 sem. hrs. (22.5 quarter hrs.)	41	7.4	33	10.9	8	3.2
MA + 30 sem. hrs. (45 quarter hrs.)	35	6.3	25	8.3	10	4.0
Ph.D. or Ed.D. degree	4	0.7	4	1.3	0	0.0
Total	556	100.0	303	100.0	253	100.0

Table 26. Distribution by discipline taught (teachers)

Discipline taught	All teachers		With V. P.		Without V. P.	
	Number	Percent	Number	Percent	Number	Percent
Agriculture	5	0.9	1	0.3	4	1.6
Art	22	4.0	11	3.6	11	4.4
Business Edu.	61	11.0	32	10.6	29	11.5
Distrib. Edu.	5	0.9	5	1.7	0	0.0
Driver Edu.	6	1.1	4	1.3	2	0.8
English and Language Arts	99	17.8	58	19.2	41	16.2
Foreign Lang.	20	3.6	13	4.3	7	2.8
Home Economics	21	3.8	7	2.3	14	5.6
Industrial Arts	29	5.2	17	5.6	12	4.8
Mathematics	62	11.2	34	11.3	28	11.1
Music	25	4.5	12	4.0	13	5.2
Physical and Health Edu.	28	5.1	18	6.0	10	4.0
Science	54	9.7	25	8.3	29	11.4
Social Studies	74	13.4	43	14.2	31	12.3
Other	43	7.8	22	7.3	21	8.3
	554	100.0	302	100.0	252	100.0

Table 27. Length of time in present position (teachers)

Years	All teachers		With V. P.		Without V. P.	
	Number	Percent	Number	Percent	Number	Percent
1-5	295	53.0	145	47.8	150	59.0
6-10	145	26.0	92	30.4	53	21.0
11-15	73	13.1	38	12.5	35	14.0
16-20	29	5.2	16	5.3	13	5.2
21-25	7	1.3	5	1.7	2	0.8
26-30	5	1.0	5	1.7	0	0.0
31-35	2	0.4	2	0.6	0	0.0
Total	556	100.0	303	100.0	253	100.0
Mean	6.91		7.56		6.12	
Median	5.24		5.77		4.56	
Std. dev.	5.44		5.82		4.85	

Table 28. Length of time in present school system (teachers)

Years	All teachers		With V. P.		Without V. P.	
	Number	Percent	Number	Percent	Number	Percent
1-5	283	50.7	139	46.0	144	56.8
6-10	149	26.8	93	30.7	56	22.1
11-15	77	13.9	42	13.8	35	14.0
16-20	30	5.4	16	5.2	14	5.5
21-25	9	1.7	6	2.0	3	1.2
26-30	6	1.1	5	1.7	1	0.4
31-35	2	0.4	2	0.6	0	0.0
Total	566	100.0	303	100.0	253	100.0
Mean	7.14		7.75		6.40	
Median	5.42		5.98		4.80	
Std. dev.	5.56		5.88		5.14	

Table 29. Total number of years in teaching (teachers)

Years	All teachers		With V. P.		Without V. P.	
	Number	Percent	Number	Percent	Number	Percent
1-5	191	34.7	79	26.3	112	44.0
6-10	133	23.9	82	27.3	51	20.4
11-15	108	19.4	62	20.5	46	18.4
16-20	57	10.2	35	11.5	22	8.8
21-25	28	5.0	16	5.3	12	4.8
26-30	18	3.2	15	4.9	3	1.2
31-35	10	1.9	5	1.6	5	2.0
36-40	8	1.5	7	2.3	1	0.4
41-45	1	0.2	1	0.3	0	0.0
Total	554	100.0	302	99.7	252	100.0
Mean	10.65		11.98		9.06	
Median	8.64		9.97		6.50	
Std. dev.	8.21		8.58		7.45	

Table 30. Size of school system (professional staff)

Size	All schools		With V. P.		Without V. P.	
	Number	Percent	Number	Percent	Number	Percent
15-25	18	32.9	0	0.0	18	64.3
26-35	14	25.5	6	22.1	8	28.5
36-45	9	16.4	7	25.7	2	7.2
46-55	3	5.4	3	10.9	0	0.0
56-65	1	1.8	1	3.7	0	0.0
66-75	4	7.2	4	15.6	0	0.0
76-85	3	5.4	3	10.9	0	0.0
86-95	1	1.8	1	3.7	0	0.0
96-105	0	0.0	0	0.0	0	0.0
106-115	2	3.6	2	7.4	0	0.0
Total	55	100.0	27	100.0	28	100.0
Mean	40.00		56.00		24.89	
Median	33.00		47.00		24.70	
Std. dev.	23.50		24.05		6.33	

Table 31. Size of school building (students)

Size	All schools		With V. P.		Without V. P.	
	Number	Percent	Number	Percent	Number	Percent
150-300	13	23.8	0	0.0	13	46.4
301-450	14	25.6	1	3.8	13	46.4
451-600	9	16.3	7	25.9	2	7.2
601-750	7	12.7	7	25.9	0	0.0
751-900	0	0.0	0	0.0	0	0.0
901-1050	2	3.6	2	7.4	0	0.0
1051-1200	2	3.6	2	7.4	0	0.0
1201-1350	2	3.6	2	7.4	0	0.0
1351-1500	2	3.6	2	7.4	0	0.0
over 1500	4	7.2	4	14.8	0	0.0
Total	55	100.0	27	100.0	28	100.0
Mean		633.00		966.00		312.00
Median		452.00		722.00		309.00
Std. dev.		477.33		486.94		97.95

APPENDIX N: TEACHER PARTICIPATION BY SCHOOL

Table 32. Teacher participation by school

School	Teachers sampled	Questionnaires returned	Percentage completing questionnaire
1	10	10	100.0
2	10	10	100.0
3	10	10	100.0
4	48	40	83.1
5	10	10	100.0
6	10	10	100.0
7	10	10	100.0
8	10	10	100.0
9	10	9	90.0
10	10	6	60.0
11	10	10	100.0
12	10	10	100.0
13	10	10	100.0
14	10	8	80.0
15	10	10	100.0
16	45	37	82.2
17	10	6	60.0
18	10	9	90.0
19	10	8	80.0
20	10	8	80.0
21	10	10	100.0
22	10	10	100.0
23	10	10	100.0
24	10	10	100.0
25	10	10	100.0
26	10	9	90.0
27	10	10	100.0
28	10	10	100.0
29	10	10	100.0
30	10	10	100.0
31	10	8	80.0
32	10	9	90.0
33	10	9	90.0
34	10	9	90.0
35	10	8	80.0
36	10	9	90.0
37	10	9	90.0
38	10	8	80.0
39	10	10	100.0
40	10	8	80.0
41	10	10	100.0
42	10	10	100.0
43	10	8	80.0

Table 32 (Continued)

School	Teachers sampled	Questionnaires returned	Percentage completing questionnaire
44	10	9	90.0
45	10	10	100.0
46	10	9	90.0
47	10	10	100.0
48	10	10	100.0
49	10	10	100.0
50	10	8	80.0
51	10	10	100.0
52	10	9	90.0
53	10	8	80.0
54	10	10	100.0
55	10	10	100.0
Total:			
55	623	568	91.17

APPENDIX O: MEASUREMENTS OF TEACHERS' PARTICIPATION IN DECISION-MAKING

Table 33. Decision Involvement Index means and standard deviations of present and desired nature of teachers' participation in decision-making as perceived by the teachers and principals

Decision items		Teachers in schools						Principals in schools					
		All (N=566)		With V.P. (N=309)		Without V.P. (N=257)		All (N=55)		With V.P. (N=27)		Without V.P. (N=28)	
		Mean	Std. dev.	Mean	Std. dev.	Mean	Std. dev.	Mean	Std. dev.	Mean	Std. dev.	Mean	Std. dev.
1	Present	1.53	.96	1.56	.99	1.50	.92	1.55	.81	1.67	.83	1.43	.79
	Desired	3.12	1.12	3.12	1.13	3.11	1.10	2.93	.88	2.96	.76	2.89	.99
2	Present	1.48	.94	1.61	1.02	1.33	.79	1.51	.64	1.78	.70	1.25	.44
	Desired	3.16	1.04	3.16	1.04	3.17	1.04	2.89	1.03	2.93	1.04	2.86	1.04
3	Present	2.55	1.40	2.57	1.39	2.52	1.41	2.76	.84	2.74	.71	2.79	.96
	Desired	3.95	.89	3.96	.87	3.95	.92	3.89	.76	3.74	.76	4.04	.74
4	Present	1.56	1.02	1.67	1.11	1.42	.88	1.66	.73	1.93	.78	1.39	.57
	Desired	3.49	.97	3.50	1.00	3.47	.94	3.24	.72	3.19	.79	3.29	.66
5	Present	2.13	1.21	2.36	1.25	1.85	1.10	2.11	.94	2.37	.79	1.86	1.01
	Desired	3.57	.93	3.66	.95	3.46	.90	3.44	.81	3.44	.80	3.43	.84
6	Present	1.80	1.15	1.93	1.25	1.64	.99	2.04	.90	2.22	.85	1.86	.93
	Desired	3.32	1.11	3.37	1.15	3.26	1.06	3.27	.83	3.37	.79	3.18	.86
7	Present	4.22	1.29	4.29	1.20	4.14	1.38	4.06	1.18	4.26	.94	3.86	1.35
	Desired	4.63	.74	4.62	.79	4.65	.69	4.47	.74	4.48	.70	4.46	.79
8	Present	1.24	.71	1.20	.62	1.28	.81	1.46	.88	1.44	.64	1.46	1.07
	Desired	2.59	1.36	2.72	1.38	2.44	1.32	2.31	1.18	2.44	1.15	2.18	1.22

9	Present	1.41	.92	1.53	1.02	1.25	.76	1.55	.72	1.63	.63	1.46	.79
	Desired	2.66	1.39	2.93	1.37	2.33	1.35	2.47	1.15	2.48	1.05	2.46	1.26
10	Present	4.15	1.17	4.16	1.12	4.14	1.22	4.11	.96	4.15	.77	4.07	1.12
	Desired	4.59	.70	4.60	.66	4.57	.74	4.60	.56	4.67	.56	4.54	.58
11	Present	1.12	.44	1.10	.43	1.14	.46	1.13	.34	1.22	.42	1.04	.19
	Desired	2.38	1.23	2.52	1.25	2.23	1.17	1.78	1.12	1.85	1.17	1.71	1.08
12	Present	1.83	1.16	2.05	1.28	1.56	.92	1.84	.81	2.19	.74	1.50	.75
	Desired	3.24	1.14	3.35	1.17	3.10	1.08	3.11	.96	3.22	.93	3.00	.98
13	Present	2.63	1.28	2.76	1.28	2.46	1.25	2.56	.83	2.85	.60	2.29	.94
	Desired	3.83	.89	3.86	.94	3.79	.84	3.86	.49	3.85	.53	3.86	.36
14	Present	2.02	1.24	2.17	1.30	1.85	1.14	2.22	.79	2.56	.58	1.89	.83
	Desired	3.88	.87	3.94	.86	3.80	.87	3.64	.68	3.70	.67	3.57	.69
15	Present	2.19	1.29	2.35	1.38	2.00	1.14	2.27	.97	2.56	.85	2.00	1.02
	Desired	3.62	1.02	3.67	1.02	3.55	1.01	3.55	.81	3.67	.68	3.43	.92
16	Present	2.57	1.23	2.74	1.26	2.37	1.17	2.53	.90	2.74	.94	2.32	.82
	Desired	3.85	.82	3.97	.81	3.71	.82	3.89	.46	3.85	.53	3.93	.38
17	Present	3.24	1.29	3.38	1.27	3.06	1.28	3.09	.93	3.19	.88	3.00	.98
	Desired	4.05	.86	4.11	.87	3.98	.84	3.98	.56	3.96	.65	4.00	.47
18	Present	2.53	.84	2.41	.69	2.64	.95	2.50	1.12	2.43	1.14	2.60	1.08
	Desired	3.58	.69	3.59	.69	3.57	.69	3.87	.72	3.87	.77	3.87	.67
19	Present	2.80	1.03	3.00	.96	2.61	1.07	2.95	1.40	3.02	1.40	2.88	1.39
	Desired	3.87	.67	3.96	.71	3.79	.63	3.94	.94	4.01	.90	3.85	.98
20	Present	1.31	.54	1.48	.64	1.14	.36	1.24	.61	1.29	.68	1.18	.50
	Desired	2.00	1.09	2.00	1.04	2.00	1.16	2.50	1.28	2.65	1.31	2.32	1.22

Table 34. Means, standard deviations, and ranges of present and desired nature of teachers' participation in decision-making as perceived by teachers and principals and categorized by school

School	Teachers					Principals	
	N		Mean	Std. dev.	Range	N	Mean
1	10	Present	49.9	8.63	40-67	1	52
	10	Desired	66.7	10.15	49-80	1	68
2	10	Present	56.9	13.88	38-88	1	66
	10	Desired	68.9	10.18	57-86	1	77
3	10	Present	47.6	12.19	29-65	1	44
	10	Desired	65.5	8.70	55-82	1	57
4	40	Present	47.9	12.88	26-77	1	43
	40	Desired	71.7	9.94	48-90	1	77
5	10	Present	48.4	7.81	38-61	1	58
	10	Desired	73.8	7.54	65-85	1	77
6	10	Present	35.7	9.09	20-52	1	32
	10	Desired	66.7	14.33	42-89	1	51
7	10	Present	41.1	5.57	34-47	1	41
	10	Desired	71.7	8.65	56-84	1	59
8	10	Present	43.3	9.56	33-59	1	50
	10	Desired	67.0	10.46	47-82	1	68
9	9	Present	50.6	9.94	37-66	1	41
	9	Desired	73.0	8.99	59-86	1	76
10	6	Present	42.7	13.80	25-64	1	43
	6	Desired	80.0	13.20	61-97	1	63
11	10	Present	48.4	8.62	38-64	1	48
	10	Desired	73.9	10.30	58-90	1	66
12	10	Present	44.2	8.20	33-64	1	52
	10	Desired	73.9	8.79	56-85	1	79
13	10	Present	41.0	6.41	33-54	1	46
	10	Desired	67.2	7.30	56-80	1	60

Table 34 (Continued)

School	Teachers N		Mean	Std. dev.	Range	Principals N	Mean
14	8	Present	45.0	6.41	36-52	1	43
	8	Desired	74.1	6.66	62-85	1	66
15	10	Present	44.6	10.55	30-64	1	54
	10	Desired	74.8	10.12	51-85	1	72
16	37	Present	48.3	8.37	31-65	1	57
	37	Desired	73.9	10.08	52-93	1	74
17	6	Present	46.2	9.93	34-64	1	53
	6	Desired	74.7	5.43	66-80	1	72
18	9	Present	44.8	6.73	37-53	1	46
	9	Desired	71.1	9.91	57-83	1	68
19	8	Present	47.5	7.95	39-61	1	51
	8	Desired	75.1	7.26	64-84	1	71
20	8	Present	43.9	7.24	30-52	1	45
	8	Desired	71.1	7.77	57-80	1	64
21	10	Present	45.1	6.23	32-54	1	53
	10	Desired	75.4	9.11	58-86	1	64
22	10	Present	40.3	7.15	35-57	1	34
	10	Desired	70.9	9.36	57-90	1	57
23	10	Present	49.8	8.23	31-60	1	56
	10	Desired	70.2	7.54	54-80	1	70
24	10	Present	49.0	10.04	33-63	1	58
	10	Desired	67.1	8.35	56-83	1	70
25	10	Present	40.6	6.08	31-51	1	41
	10	Desired	66.8	8.64	52-75	1	59
26	9	Present	47.3	7.87	37-60	1	46
	9	Desired	73.4	6.95	63-83	1	63
27	10	Present	46.0	9.76	32-61	1	53
	10	Desired	73.9	8.43	52-83	1	71

Table 34 (Continued)

School	Teachers N		Mean	Std. dev.	Range	Principals N	Mean
28	10	Present	38.7	6.27	30-49	1	38
	10	Desired	67.3	7.17	64-77	1	67
29	10	Present	41.7	11.13	24-59	1	41
	10	Desired	64.2	7.28	52-73	1	64
30	10	Present	46.3	9.01	35-59	1	47
	10	Desired	64.9	7.82	49-78	1	58
31	8	Present	42.9	5.30	34-48	1	51
	8	Desired	62.9	9.34	51-80	1	60
32	9	Present	44.4	8.09	34-59	1	53
	9	Desired	67.1	8.94	55-77	1	67
33	9	Present	52.8	5.61	46-62	1	54
	9	Desired	70.6	7.37	61-82	1	63
34	9	Present	37.9	3.89	33-46	1	30
	9	Desired	72.8	7.26	59-84	1	72
35	8	Present	39.6	6.80	29-49	1	38
	8	Desired	71.3	9.87	57-87	1	68
36	9	Present	46.2	7.19	32-56	1	44
	9	Desired	65.1	11.61	40-80	1	55
37	9	Present	53.4	6.50	44-65	1	46
	9	Desired	73.3	8.96	62-90	1	75
38	8	Present	35.1	5.36	30-44	1	35
	8	Desired	67.0	9.83	49-84	1	56
39	10	Present	40.7	6.46	26-48	1	40
	10	Desired	65.8	5.53	56-77	1	64
40	8	Present	39.8	7.29	28-49	1	40
	8	Desired	72.4	8.53	62-87	1	71
41	10	Present	34.8	5.43	26-42	1	34
	10	Desired	68.5	7.82	55-78	1	65

Table 34 (Continued)

School	Teachers N		Mean	Std. dev.	Range	Principals N	Mean
42	10	Present	38.2	5.45	29-46	1	34
	10	Desired	71.7	9.12	60-89	1	63
43	8	Present	42.8	4.56	37-49	1	44
	8	Desired	65.9	8.27	57-79	1	67
44	9	Present	46.1	4.94	38-53	1	44
	9	Desired	70.6	8.71	57-82	1	64
45	10	Present	39.5	4.38	33-46	1	43
	10	Desired	67.8	8.94	54-85	1	64
46	9	Present	44.0	7.00	28-51	1	42
	9	Desired	70.2	6.85	58-81	1	71
47	10	Present	47.3	7.02	37-57	1	54
	10	Desired	67.3	9.08	48-76	1	73
48	10	Present	39.1	5.80	29-48	1	36
	10	Desired	66.5	6.04	58-75	1	65
49	10	Present	45.4	6.83	36-54	1	50
	10	Desired	71.5	7.53	56-80	1	67
50	8	Present	32.1	7.66	22-45	1	28
	8	Desired	69.0	10.47	52-87	1	70
51	10	Present	47.5	5.80	36-55	1	49
	10	Desired	75.1	9.28	54-88	1	82
52	9	Present	39.3	7.57	27-48	1	41
	9	Desired	65.8	8.96	52-76	1	63
53	8	Present	45.0	7.86	34-56	1	41
	8	Desired	67.3	10.04	53-83	1	73
54	10	Present	39.9	6.33	30-49	1	42
	10	Desired	72.1	7.61	59-84	1	66
55	10	Present	39.1	5.80	33-49	1	33
	10	Desired	66.3	6.65	57-77	1	60

APPENDIX P: CORRELATIONS OF DECISION ITEMS FOR SELECTED SCHOOLS

Table 35. Summary of the Pearson product-moment coefficients of correlation of selected schools with vice principals between total teachers' response and teachers' response for each of the individual items (r_{it}) of their present participation in decision-making as measured by the Decision Involvement Index

Decision items	Selected schools					
	A (N=40)	B (N=37)	C (N=10)	D (N=10)	E (N=6)	F (N=6)
1	.1750	.4833**	.4672	.0159	.8790*	.8705*
2	.5148**	.1892	.3724	.0572	.8651*	-.0905
3	.4893**	.3394*	.5643*	.7903**	.6959	-.2450
4	.4844**	.3477*	.5709*	.8652**	.8790	.6875
5	.5877**	.1277	.3825	.2056	.3192	.6586
6	.3946**	.3197*	.0367	.1007	.7216	.3764
7	.4346**	.5527**	-.2115	.0028	.6268	.7672*
8	.2617	.3173*	+	+	.7569*	+
9	.4393**	.2580	.1830	.0168	.2943	-.1069
10	.5629**	.4829**	.3127	-.0021	.5871	.0905
11	.3143*	.1555	.2462	.0193	+	.8800**
12	.6641**	.6187**	.1831	.0771	.2943	.8208*
13	.7283**	.4874**	.8016**	.3069	.8278*	.8608*
14	.6507**	.2489	.4256	.7930**	.2932	.8645*
15	.5851**	.3456*	-.2777	.7044*	.4210	.6004
16	.7224**	.4863**	.0252	.4211	.5617	.2138
17	.6553**	.4863**	.2455	.5639*	.6447	.5259
18	.5989**	.2578	-.0697	.5547*	-.5024	.8919**
19	.5636**	.5395**	.5299	.6707*	.8474*	.6144
20	.5226**	.2222	.3724	+	+	-.2056

+ All teachers provided same answer, therefore correlation coefficient not appropriate.

Table 36. Summary of the Pearson product-moment coefficients of correlation of selected schools with vice principals between total teachers' response and teachers' response for each of the individual items (r_{it}) of their desired participation in decision-making as measured by the Decision Involvement Index

Decision items	Selected schools					
	A (N=40)	B (N=37)	C (N=10)	D (N=10)	E (N=6)	F (N=6)
1	.3356*	.6673**	.2451	.6345*	.6863	.5284
2	.0970	.6055**	.2533	.1152	.7628*	-.0412
3	.2616	.5291**	.7320**	.4239	.8848**	-.0163
4	.4323**	.6239**	.6937*	.5981*	.9457**	.0250
5	.3188*	.4004**	.4717	.6706*	.8466*	+
6	.4359**	.3500*	.6869*	.3508	.1078	.7200
7	.3005*	.4681**	.0696	.5038	.7048	+
8	.4934**	.3697*	.3651	.5071	.6306	.5470
9	.5633**	.6431**	.5997*	.6989*	.4226	.7373*
10	.3094*	.5119**	.5968*	.6466*	.7048	.8745*
11	.4846**	.4377**	.6574*	.5935*	.7122	-.2033
12	.5598**	.6069**	.5496*	.3509	.3339	.1748
13	.5921**	.3211*	.6577*	.5992*	.7918*	.7610*
14	.7119**	.5877**	.1949	.5369	.8848**	.8156**
15	.6498**	.5529**	.2975	.3068	.8860**	.4813
16	.7377**	.5443**	.0487	.4610	.8860**	.4813
17	.5722**	.5366**	.4425	.8637**	.8986**	-.0673
18	.4960**	.3513*	.2897	.4777	.6306	+
19	.6965**	.5845**	.2891	.4491	.7902*	.7370*
20	.3549*	.5083**	.7937**	.1736	.5317	.1748

+ All teachers provided same answer, therefore correlation coefficient not appropriate.