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SYSTEMIC VARIABLES
IN EFFECTIVE MANAGEMENT TEAMS

DISSERTATION

Presented in Partial Fulfillment of the Requirements for the Degree Doctor of Philosophy in the Graduate School of the Ohio State University

By
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The Ohio State University

1985

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1985
For my wife, Judy
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- Donald P. Anderson, Dean of the College of Education.

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At home:
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CHAPTER I

BACKGROUND TO THE PROBLEM

During the past decade, there has been a great deal of discussion about the administrative/management team concept as it applies or should apply to school systems. Much of the thinking about the notion of team management has stemmed from the writings of influential scholars such as McGregor (1960) and Likert (1961) on the concept of participative decision making in organizations. In 1971, the American Association of School Administrators published a book titled Profiles of the Administrative Team that was a description of the functions of typical central office positions which would most likely be included in the school district's administrative team. From this point on, the concept has been broadened to that of a management team which includes board of education members, central office administrators, building-level administrators, and, frequently, non-certified supervisors.

Most of the writing on the management/administrative team during this time period has been in the form of position papers advocating the adoption of the team concept by the nation's school systems. Hilston (1972)
described a "management crisis" existing across this country caused by a role confusion of principals created by the collective bargaining process between teacher associations and school boards. Redfern (1972) also argued that collective bargaining was producing a feeling of alienation among the nation's principals which would lead to the formation of separate bargaining units for school middle managers. Likewise, McNally (1973) contended that we would see a rapid increase in the number of administrative bargaining units unless school boards and superintendents began to treat principals as a part of management. Wagstaff (1973) argued that the principalship was in trouble because of the gains made by teachers through collective bargaining at the expense of principals' authority. Each of the writers propose the administrative/management team as a solution to the problem outlined above.

Other writers have suggested and described key elements of the administrative/management team which must be present if the team is to function properly. Lynch (1977) maintained that the major weakness of most management teams is not in the organizational structure itself but in the failure of team members to develop trust and confidence in each other. Pharis (1979) reinforced this view by arguing that a successful administrative team
is dependent upon the personalities of the superintendent and principals and upon the mutual trust that exists between them. Danley (1979) developed this line of thinking further by arguing that a successful management team must meet the three requirements of cooperative planning, coordinated implementation, and cooperative evaluation.

Still other writers have described their own management teams. Floratos, et al (1979), described how colleagues established a process to develop a functioning management team which has produced a constant flow of communication to district managers about vital issues of concern to the Rio Linda, California, Union School District. Bainbridge (1980) outlined his R.E.A.S.O.N.S. program for the Newark, Ohio, City School District which involves peer evaluation by administrators and merit pay for all administrators as key elements of the management team for this school district.

Finally, state administrators' associations have developed pamphlets and booklets exhorting local districts to adopt the management team concept and providing models of the management team. For example, the Colorado Association of School Executives (1974) provided a three-part model which defines the approach to management, the welfare of the administrators, and the decision making
process to be followed. The Ohio Congress of School Administrator Associations (1978) promoted the management team model using the concept of Likert's linking pins to combine the policy team (school board and superintendent) with the administrative team (superintendent, central office, and principals) to produce a management team that is linked to the instructional team (principals and teachers).

STATEMENT OF THE PROBLEM

Although the kinds of writings cited above are helpful to school boards and administrators in thinking about the management team concept -- what it means and how it may work -- these writings are not research efforts designed either to explain how the team process works or to determine whether or not team management actually does provide positive consequences for school systems. Many studies regarding participatory decision making exist, but very few exist which examine the process of team management itself or which provide an operationalized definition of team management which can be observed and measured in quantifiable ways. In fact, the major conclusion of one study on the administrative team (Boles, 1975) recommended that all team members study and understand the team concept and the management-by-objectives system for implementing it. However, if
research is not being conducted to explain the process of team management and to determine its effects, school administrators will have a difficult time in understanding the concept of the management team, much less putting it into practice.

The purpose of this present research, therefore, is to identify operationally defined variables of teaming in school management and to study their relationships to work environment variables.

Team Management Variables --

Status, Communication, Exchange, Trust

Status. Likert says research indicates that for a manager to perform his supervisory functions successfully he must have the capacity to exert influence upward (p. 114). Subordinates, says Likert, expect their supervisors to exert upward influence in order to be able to handle the problems of their level; when supervisors cannot successfully influence upper levels to handle these problems, "an unfavorable reaction to the supervisor and to the organization is likely to occur" (p. 113). The idea of the linking pin establishes the notion that a manager holds official status in two levels of the organization, as the team leader of his own subunit and as a team member of the subunit directly above the one for which he is directly responsible. The goal of such a
formally designated status is to provide the potential for communication to flow up and down, as well as horizontally, within the organization. The linking pin notion, therefore, suggests that the manager has the right as well as the responsibility to attend certain meetings involving members of the next highest level and, therefore, he/she would have the potential to exert influence either through formal or informal channels.

Swift (1971), in a discussion of the origins of the team management concept, reinforces the idea of status as an important variable of teaming:

Teams are composed of professional employees who are granted a social status that enables them to control methodology and output even when working within an organization. Without this status, the worker or middle-management employee is powerless to resist the dictates of his employers... Unless school administrators receive this type of status, they are in a poor position to expect much from the management team. (p. 33)

For building principals, status means that they would have the guaranteed right to attend meetings of what the Ohio model calls the "administrative team." This aspect of team behavior does not imply any certain optimal degree of participation in these meetings; it simply suggests that the mere presence of principals at these meetings will provide a potential for upward influence by principals, exerted formally or informally. For example, a principal might sit through a meeting in silence but
afterwards approach the superintendent or an assistant superintendent privately in an effort to influence his superior. The principal's mere presence at the meeting serves to provide legitimation of this influence attempt.

Communication. Caplow (1964), in his description of the organization in motion, provides a model based on the four variables of status, interaction, valence, and activity (pp. 102-107). The goal of this model (SIVA) is to "predict changes that will occur in the entire system composed of these variables, when a change in any variable is imposed from outside" (p. 104). Thus, a change of status in an interacting pair (individuals or groups) in an organization, for example, will have certain predicted effects on the other three variables shared by this pair.

In outlining the four basic assumptions on which his SIVA model rests (pp. 105-106), Caplow includes the variable interaction in each one of these assumptions, the only one of the four variables to receive such attention. Interaction must be brought into each assumption because without some kind of communication process the other three variables cannot be brought into play with each other. Interaction, then, appears to be crucial if there is to be any motion within the organization. It simply makes common sense that when people are brought together in a group, communication of some form will occur. Since, as
Johnson (1977:1) argues, communication is the process of organization, it only seems logical that communication has a place in this definition of team management.

As defined by Caplow (p. 103), "interaction represents the mutual influence resulting from symbolic communication between a pair of organizational positions."

Baird (1977) maintains that the "shape" assumed by a communication network, and not just the act of communication itself, "has substantial impact upon all aspects of the communication process" (p. 277). Citing various studies on communication networks, Baird generalized that centralized networks (e.g., the wheel or the Y) work best when the situation demands simple tasks, whereas decentralized networks (e.g., the circle or comcon) work best when a complex task requires participation by all group members (p. 279). Thus, in a management team it would be expected that the communications network be more like a circle or a comcon than a wheel or a Y because these patterns would represent a broader range of participation by group members. Thus, communication refers not only to the symbolic act of interaction itself but also to the pattern of interaction which develops.
Exchange. Mills (1967) states that there are five purposes underlying the formation and operation of groups and that these purposes can be classified into five orders: "(1) immediate gratification; (2) sustaining conditions permitting gratification; (3) pursuit of a collective goal; (4) self-determination; and (5) growth" (p. 101). The orders are cumulative; in other words, the final purpose, growth, presumes the capabilities necessary to achieve the lower four orders (p. 103). Entry into each successive level depends on the individual's, and ultimately the group's, ability to solve the critical issue(s) governing role entry to each level; hence, advancement of a group to the next higher order purpose becomes a "strategic concern" to the executive since this advancement is not automatic, but must be "imagined and engineered" (p. 105).

It seems clear that the common thread which runs through the successful resolution of each of the critical issues is the willingness of the individual (and ultimately the group) to defer his/her own sense of autonomy. For example, Mills states that entry into the behavioral and primordial roles (first and second orders
of group purpose) is governed by resolution of the social arrangement of commitment, which he defines as

an understanding of give-and-take among the parties. Whether explicit or implicit, it is an arrangement whereby each party agrees, in effect, to give up something to the other on the promise of receiving something extra in exchange (p. 106).

However, entry into the generative role (the purpose of which is growth) depends on the group's ability to provide a solution for the critical issue of interchange, which he defines as

The problem of maintaining system integrity while boundaries are being permeated and the group is becoming interdependent with all groups (p. 112).

A careful examination of the resolutions of the critical issues for entry into the other group roles will show that in each instance Mills is implying individuals and subunits must be willing to give up some independence of functioning in order to achieve each group purpose. He also is suggesting that this process must work in reverse for the group as a whole, or what Mills calls the metagroup (p. 89).

Thus, exchange, or the willingness of team members to surrender some independence of functioning autonomy, is the third variable in this definition of team management. For example, in order to achieve status and consequent communication, principals must be willing and able to give up something to gain something extra in exchange.
Conversely, in granting status and consequent interaction to principals, a school board and central office must also be willing and able to transact such an exchange with the principals.

**Trust.** Zand (1972) developed a model of trust in relation to problem solving in which trust is conceptualized as behavior that "conveys appropriate information, permits mutuality of influence, encourages self-control and avoids abuse of the vulnerability of others" (p. 238). By conceptualizing trust as a set of behaviors rather than feelings, Zand is able to develop quantifiable measures of trust in order to test a number of hypotheses about the effect of trust on the performance of groups of managers in problem solving situations.

Zand borrows from Deutsch (1962) to define trusting behavior, which consists of actions that

(a) increase one's vulnerability, (b) to another whose behavior is not under one's control, (c) in a situation in which the penalty (disutility) one suffers if the other abuses that vulnerability is greater than the benefit (utility) one gains if the other does not abuse that vulnerability (p. 230).

From this definition, Zand develops a model which views the "transforming of one's inner state of trust (or mistrust) into behavior that is trusting (or mistrusting) through (1) information, (2) influence, and (3) control" (p. 230).
In essence, people who have a low trust orientation toward others in problem solving situations will conceal or distort information, resist or deflect attempts by others to exert influence, and try to minimize their dependence on others (p. 230). On the other hand, people who hold a high trust orientation toward others will behave in the opposite manner. Therefore, Zand posits that groups characterized by a high trust orientation will be more effective at solving problems than groups which exhibit low trust. Specifically, Zand hypothesizes that problem solving groups with high trust will:

1. Exchange relevant ideas and feelings more openly;
2. Develop greater clarification of goals and problems;
3. Search more extensively for alternative courses of action;
4. Have greater influence on decisions;
5. Be more satisfied with their problem-solving efforts;
6. Have greater motivation to implement conclusions;
7. See themselves as closer and more of a team;
8. Have less desire to leave their group to join another (p. 232).

Zand's research confirms each of his hypotheses to a significant degree; therefore, he concludes that shared
trust or the lack thereof is a significant determinant of managerial problem-solving effectiveness (p. 28).

Since each description of the education management team cited above claims that team management will promote more effective problem solving for school districts, trust will be used as the fourth and final team management variable. If an educational management team is to be effective in solving problems, then trusting behavior as defined by Zand, must be present within that team.

BACKGROUND FOR THE STUDY

In a recent dissertation on the management team, Smith (1982) examined the status of fifty-six identified management teams in Ohio. As part of his research, Smith asked respondents to state whether or not they felt the management team in their school district was "effective." Although most respondents did believe their management team was effective, some felt that their management team was not effective. Since this aspect was a minor part of Smith's study, measures of effectiveness were not determined; however, Smith recommends that it would be helpful for someone to conduct further research into the effects of the management team approach. This study will focus on the relationship of team management variables and work climate variables.
Dependent Variables. Moos (1981) has developed a social climate scale designed to measure the social environments of different types of work settings. The Work Environment Scale (WES) Form R (Real Form) consists of ten subscales which measure perceptions of existing work environments. The ten WES subscales assess the following three underlying sets of dimensions:

1. The Relationship dimensions - measured by the Involvement, Peer Cohesion, and Supervisor Support subscales, which assess respectively "the extent to which employees are concerned about and committed to their jobs; the extent to which employees are friendly to and supportive of one another; and the extent to which management is supportive of employees and encourages employees to be supportive of one another" (p. 1).

2. The Personal Growth (goal orientation) dimensions - measured by the Autonomy, Task Orientation, and Work Pressure subscales, which assess respectively "the extent to which employees are encouraged to be self-sufficient and to make their own decisions; the degree of emphasis on good planning, efficiency, and getting the job done; and the degree to which the press of work and time urgency dominate the job milieu" (p. 1).
3. The System Maintenance and System Change dimensions—measured by the Clarity, Control, Innovation, and Physical Comfort subscales, which assess respectively "the extent to which employees know what to expect in their daily routines and how explicitly rules and policies are communicated; the extent to which management uses rules and pressures to keep employees under control; the degree of emphasis on variety, change, and new approaches; and the extent to which the physical surroundings contribute to a pleasant work environment" (pp. 1-2). Table 1 below graphically illustrates the relationship of the ten subscales to the three sets of underlying dimensions.

The first nine subscales of the WES Form R will serve as the dependent variables for this research. Writings on the management team consistently predict that the existence of a management team will help to produce a more positive work climate. The WES provides for a vehicle through which specific variables of a work environment may be assessed. A tenth variable, job satisfaction, has been added to this scale in an attempt to measure one further aspect of work environment not covered by the WES. Job satisfaction refers to the feelings of influence and contributions to the school system which people would
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experience through their participation on the management team.

**Major Research Questions.**

#1. What is the relationship between each of the four Team Management variables of status, communication, exchange, trust and the dependent variable of involvement?

#2. What is the relationship between each of the four Team Management variables and the dependent variable of peer cohesion?

#3. What is the relationship between each of the four Team Management variables and the dependent variable of supervisor support?

#4. What is the relationship between each of the four Team Management variables and the dependent variable of autonomy?

#5. What is the relationship between the four Team Management variables and the dependent variable of task orientation?

#6. What is the relationship between the four Team Management variables and the dependent variable of work pressure?

#7. What is the relationship between the four Team Management variables and the dependent variable of clarity?
#8. What is the relationship between the four Team Management variables and the dependent variable of control?

#9. What is the relationship between the four Team Management variables and the dependent variable of innovation?

#10. What is the relationship between the four Team Management variables and the dependent variable of job satisfaction?

DEFINITION OF KEY TERMS

1. **Management Team**
   The policy and administrative teams of a school district.

2. **Policy Team**
   The board of education and superintendent.

3. **Administrative Team**
   The superintendent, central office administrators, and building principals.

4. **Instructional Team**
   The building principal and teaching staff.

5. **Building Principal**
   The chief executive officer for a discrete instructional unit within a school district.
6. **Status**

The authorization of principals to attend cross-hierarchical-level meetings of administrators and board members.

7. **Communication**

Both the symbolic interaction between a pair of organizational positions and the pattern of that interaction within the team itself.

8. **Exchange**

The willingness of team members to sacrifice some independence of functioning to achieve both meta-group and sub-group goals.

9. **Trust**

Behavior that conveys appropriate information, permits mutuality of influence, encourages self control, and avoids abuse of the vulnerability of others (Zand, p. 238).
10. **Involvement**
   The extent to which team members are concerned about and committed to their jobs.

11. **Peer Cohesion**
   The extent to which team members are friendly and supportive of one another.

12. **Supervisor Support**
   The extent to which management is supportive of team members and encourages team members to be supportive of one another.

13. **Autonomy**
   The extent to which team members are encouraged to be self-sufficient and to make their own decisions.

14. **Task Orientation**
   The degree of emphasis by team members on good planning, efficiency, and getting the job done.

15. **Work Pressure**
   The degree to which the press of work and time urgency dominate the job milieu of team members.
16. **Clarity**
   
   The extent to which team members know what to expect in their daily routine and how explicitly rules and policies are communicated.

17. **Control**
   
   The extent to which management uses rules and pressures to keep team members under control.

18. **Innovation**
   
   The degree of emphasis by team members on variety, change, and new approaches.

19. **Job Satisfaction**
   
   The extent to which a team member feels a sense of influence and contribution as a result of one's participation on the management team.

**ASSUMPTIONS AND LIMITATIONS**

This study assumes that the four elements of team management - status, communication, exchange, and trust - are indeed key variables identified as critical to the process of team management. Although these four variables will be regarded as essential to team management, this
does not rule out the possibility that other critical variables remain to be identified.

A limitation of the study was the decision to include only high school principals (see Chapter III) from school systems previously identified as operating with management teams (Smith, 1982) as the population for the survey. Within the Ohio Congress model of the educational management team, principals serve as the linking pin between the instructional and administrative teams. Since the high school principal is usually the most visible and often most politically active principal in a school system, it was felt that he/she would be in the best position to observe the effects of the management team in operation.

On the other hand, because of the fact that the population is drawn from a strictly self-identified group of management team members in the state of Ohio, the generalizability of this study may be somewhat limited.

Another limitation of the study was the use of a questionnaire as the data gathering instrument. The use of questionnaires in research is based on the assumption that the respondent will give truthful answers (Goode, 1962; Huffman, 1948; Klein, et al., 1967). There is always the potential danger that some respondents will not understand some items as the researcher intended them to
be interpreted (Berdie and Anderson, 1974). However, despite some of the disadvantages of using questionnaires to gather data, they were used in this study because they allow uniformity in the information provided by the respondents. This uniformity creates greater comparability of the answers (Mouly, 1963).

A third limitation of the study is that the data collected is all perceptual in nature. A single individual from each school system was asked to provide his/her perception about the system's approach to team management using the same method for reporting these perceptions (the questionnaire) as all other respondents. This lack of diversity in the sources for the data as well as the use of the same method to collect the data may limit the generalizability of the study.

A fourth limitation of the study lies with the instrumentation itself. One section of the survey instrument was newly created for this study and therefore may be somewhat limited in terms of reliability and validity. Another section of the survey instrument is an adaptation of an existing, validated instrument. Because some adaptation of the original did occur to make it pertinent to this study, this section of the instrument may be slightly limited in terms of reliability and validity.
METHODOLOGY

This study was essentially a descriptive survey, designed to "collect detailed descriptions of existing phenomena with the intent of employing the data to justify current conditions and practices or to make more intelligent plans for improving them" (Van Dalen, 1973, p. 196). According to Mouly (1963), educational surveys are highly practical for administrators since they identify present conditions and suggest present needs.

Questionnaires were used to collect data. The primary data gathering instrument was refined after a panel of experts including principals, assistant superintendents, and a superintendent, reviewed the tentative instrument and provided criticisms and suggestions. All comments were considered when the final instrument was prepared.

A more detailed discussion of the methodology is included in Chapter III.

SIGNIFICANCE

There exists a great body of writing about the management team, but very little empirical research has taken place. As noted earlier, most writing on the management team is in the form of position papers extolling the virtues of the concept. This study provides an empirical base for identifying essential variables of
the management team and for examining relationships of these variables to the work climate of the management teams included in the research.

The findings of this study can provide future researchers with tentative answers to such questions as: What are important variables of Team Management? What relationship do they have with the work environment of a management team? Are some management team variables more important than others in explaining the relationships to work climate?
CHAPTER II
REVIEW OF LITERATURE

The management team concept has been only recently introduced into writings on organizations and administration of organizations. The concept, however, appears to be a natural outgrowth of the development of organizational theory. Kuhn (1970) gives the term paradigm to models or theories which stand out from others as acceptable explanations of "what is." He describes a process of paradigm evolution in which researchers build from the salient aspects of previous models to produce new paradigms.

Such a paradigm evolution can be traced in the realm of writings and research on organizations. The evolution has often been broken down into periods or eras. Hoy and Miskel (1978) provide the following breakdown:
(1) classical organization thought (1900 - 1930);
(2) human relations approach (1930 - 1950); and (3) the behavioral approach (1950 - present). Many writers use these or similar titles to label these areas of paradigm evolution in the study of organizations.
Max Weber is considered the father of organizational study and is, therefore, the key figure in the classical era. Weber (1947) created the "rational" or "machine" model of organizations. The emphasis during this era was on studying ways to effectively and efficiently use men in industrial organizations. A hierarchy, or bureaucracy, for an organization was characterized by an atmosphere of impersonality and a division of labor, which led to specialization and a limitation to any one person's authority - hence, the organization as a rational system became the dominant image of this era.

Frederick Taylor (1856 - 1915), often referred to as the father of scientific management, attempted to behavioralize Weber's model, with the result being a high focus on efficiency of operation through tight controls of employees' use of time on task. The automobile assembly line is a classic manifestation of Taylor's influence.

A paradigm shift occurred in the 1930's with the rise of the human relations school of study. Spurred on by studies conducted by May, Roethlisberger, and others at the Hawthorne plant of the Western Electric Company in Chicago (Roethlisberger and Dickson, 1939), the human relations approach recognizes the importance of social relationships among the human beings employed by an organization. Emphasis was placed on developing and
maintaining dynamic and harmonious relationships in organizations. Selznick (1962) and others recognized the importance of the informal organization and the need to make use of it to improve productivity. The writings of this time picture an organization as reacting and adapting to changes within itself, thus the dominant image becomes that of the organization as a natural system.

The next paradigm shift produced the dominant image of the organization as an open system. Building upon the previous paradigms, the behavioral approach recognizes the importance of the environment to the organization (Thompson, 1967). Katz and Kahn (1978) describe the organization in near-biological terms as interacting with its environment in an input-throughput-output cycling of energy. Constant change caused by this interchange is the accepted state of life in an open system organization. Because of the pressures created by constant change, organizations reject the "one best system" principle promoted by Taylor and strive for "equifinality" - taking many routes to achieve organizational goals.

**General Background to the Team Management Concept**

The first mention of the team management concept appears in the literature on organizations during the behavioral or open-systems era. The crystallization of the concept, however, appears to have been preceded by the
writings of prominent scholars such as Maslow, Herzberg, Likert, and McGregor, during this era. Most of these writings hearken back to the human relations school since they deal largely with the notions of employee participation, motivation, and involvement in the operations of an organization.

Maslow (1954) developed a needs hierarchy for human beings - a five-level taxonomy arranged in a hierarchical order of prepotency. The prepotency feature specifies that a person must satisfy his/her needs at a lower level before becoming interested in the needs at the next higher level. The five need levels, according to Maslow, in ascending order are physiological, security, social, esteem, and self-actualization. The challenge to the organization is to motivate people to move up this hierarchy to satisfy needs at the esteem and self-actualization levels.

Herzberg (1966), on the basis of his research, developed a framework for describing motivation. Herzberg's contention is that the presence of the satisfiers (e.g., advancement, responsibility recognition, achievement) contributes to satisfaction but that their absence does not lead to dissatisfaction. On the other hand, the absence of hygiene (e.g., salary, supervision, status, interpersonal relationships) contributes to
dissatisfaction but their presence does not lead to satisfaction. The challenge to the organization, according to Herzberg, becomes

- the proper management of hygiene needs and
- the proper management of the motivators.
Hygiene deals with the question of how well you treat your employees, and the motivator question is concerned with how well you use your employees (Herzberg, 1976, p. 84).

The management team model has its roots in this recognition of the necessity to address certain levels of needs to motivate people to stronger performances.

Douglas McGregor's (1958) now classic Theory X and Theory Y framework helped to give students of organizations a way of comparing and contrasting traditional management theory (Theory X) and newer management theory (Theory Y). Theory X managers tend to view their jobs with respect to people as "directing efforts of subordinates, motivating them, controlling them, and modifying their behavior to fit the needs of the...organization" (Sergiovanni and Carver, p. 42). The two most common approaches to Theory X are through authoritarian or coercive leadership (rational model) or paternal leadership (human relations model). Theory Y managers, on the other hand, will assume that people are indeed motivated to work; therefore, the manager's role with respect to people is that of "arranging organization
conditions and methods of operation in order to facilitate and support the efforts of subordinates" (Sergiovanni and Carver, p. 42). A Theory Y manager will allow subordinates to participate in these activities because he/she perceives them to be mature adults responsible for exercising self-control and self-direction. The tenets of the Theory Y model, particularly the recognition of the employee as a contributor to organizational arrangements and operations, are key elements of the management team concept as it has developed.

It is probably the work of Rensis Likert (1961 - 1967) which provided the conceptual framework needed for students of organizations to move from the classical autocratic organizational hierarchy to thinking about a new pattern, such as a team concept. Characterizing the traditional organization as autocratic, Likert was critical of the classical approach for creating rigid organizational structures, permitting information to flow downward only, causing fear and distrust, creating a lack of responsibility among subordinates, and concentrating controlling processes within the top management (1967). In his book New Patterns of Management Likert proposes that organizations restructure their chain of command around the "linking pin" concept (see discussion in Chapter One), in which managers are granted status in two
levels of the organization in order to provide the capacity to exercise influence upward through the organization as well as downward. Since this time a flurry of writing and research has occurred on the subject of participation in decision-making by people in all levels of the organization. From Likert's linking-pin notion through this interest in involvement, comes the idea of a group of people pulling together and sharing responsibility and power in working to achieve organizational goals - in other words, a team.

Later writings on management in organizations has helped to nurture and strengthen the team management concept. Of particular interest in recent years has been the study of the Japanese patterns of management in industrial organizations. The rise of Japan as a world leader in industry and high technology has stimulated a number of studies of the Japanese management style. Vogel (1975) explains that the Japanese have a custom called nemawashi which is the practice of broad consultation before taking action. Japanese organization is characterized, says Vogel, by nearly continuous consultation among peers in the organization as well as among levels and units. "The consultation varies from mundane detail to broad general issues, and usually it takes place in a climate of great mutual confidence and
support" (Vogel, pp. xxii-xxiii). Usually, executives are reluctant to move until consensus is reached which means that there will exist greater levels of support among the organization's members for a decision and greater willingness to implement it.

Ouchi's (1981) analysis of Japanese management has led to his development of Theory Z. One characteristic of the Theory Z organization is the perception of the organization as a clan versus traditional hierarchy or a bureaucracy. A Theory Z organization involves "intimate associations of people engaged in economic activity but tied together through a variety of bonds" (Ouchi, p. 83). A natural extension of this climate becomes what Ouchi calls "teaming up" (p. 207). A Theory Z organization will have many "cohesive and semi-autonomous work groups even through a Z company seldom undertakes explicit attempts at team building" (Ouchi, p. 207). The Z organization creates a culture which fosters interpersonal intimacy, and it is this culture which encourages cohesive work groups.

Drucker (1981) suggests that this work group cohesiveness is also fostered by the custom set at the top with Japanese industrial leaders putting the national interest first rather than the interests of the company.
Back on the American scene, other writers have been encouraging managers to look at the administration of organizations in more non-traditional ways. Weick (1976), for example, challenges the assumptions of the rational model by describing organizations as "loosely coupled systems" which possess certain strengths because of their looseness. Managers of loosely coupled systems will have to abandon or modify many of their practices and structures based on assumptions of tight couplings fostered by the classical model as well as develop new management patterns to take advantage of the strengths of the loosely coupled aspects of their organizations.

Cohen, March, and Olsen (1977) picture organizational decision making as a "garbage can" into which "various kinds of problems and solutions are dumped by participants as they are generated" (p. 2). Hedberg, Nystrom, and Starbuck (1977) portray organizations as "camping on seesaws," attempting to achieve organizational health by dynamically balancing certain factors. Peters and Waterman (1982) in their study of excellent companies in the United States argue that these companies create in all employees the awareness that their best efforts are essential and that these companies have a simple form with few administrative layers. Naisbitt (1982) predicts that a major trend in organizations of the future will be a
movement away from hierarchical structures to networking. Naisbitt describes networking as not the finished product but the "process of getting there - the communication that creates the linkages between people and clusters of people" (p. 215). By promoting horizontal linkages instead of just the vertical linkages of the classical model, an environment is created, contends Naisbitt in which "rewards come by empowering others, not by climbing over them" (p. 229).

These new images of organizations are stimulating managers to consider new management structures and styles for their organizations.

**The Emergence and Development of the Management Team Concept in Educational Organizations**

From the time that the American Association of School Administrators published the book titled *Profiles of the Administrative Team* (1971), writings on the administrative/management team approaches in educational organizations have appeared with frequency in educational journals and publications. The team approach to management has been endorsed by state educational organizations as the recommended approach to operating public school districts. The Ohio Congress of School Associations (BASA, et al, 1978) has suggested a model (see Fig. 1) for the management team based on Likert's
Three Teams Connected Through Linking Pins

FIGURE 1
notion of the linking pins, with the superintendent and principal serving as key links between the policy team (Board of Education and Superintendent) the administrative team (superintendent, central office administrators, and principals), and the instructional team (principals and teachers). The Colorado Association of School Executives (1974) has also given strong support to the "team administration" concept.

Perhaps the most fully descriptive work on the management team approach in educational organizations was done by Blake and Mouton (1981). Using a grid to characterize management styles in the university setting, Blake and Mouton define styles into which an administrator would fall in relation to two fundamental aspects of leadership: (1) concern for institutional performance and (2) concern for people. The style which displays a strong regard for both fundamental aspects is termed "9'9" or "team administration" (Blake and Mouton, p. 15). A team administration orientation involves

...An integration of concerns: a high concern for institutional performance combined with a high concern for people. This integration is carried out in ways that encourage subordinates to achieve the highest possible performance in terms of quality, quantity, and personal satisfaction. The consequences of 9'9 administration are that subordinates also develop a personal commitment to organizational achievement. Involvement is
generated in people who are able to mesh their individual efforts for the accomplishment of meaningful goals that are both sound and creative (p. 15).

Some writers have posed the management team approach as an effective alternative to the possibility of principals forming collective bargaining units of their own or as a means of empowering administrators and Boards of Education in the wake of broad-scale collective bargaining by teachers unions. The National Association of Secondary School Principals (1971) has recommended the implementation of the administrative team by school districts to avert this "management crisis." Sinclair (1977) argues that the administrative team, not separate bargaining units for principals, is the appropriate structure if school districts are to accomplish goals of mutual interest.

Knoester (1978) conducted a study of school decision-making practices in 100 Michigan school districts, where middle managers were allowed to bargain collectively. He found that unionized secondary principals are substantially less involved in decision making than their non-unionized counterparts, regardless of the size of the districts. Knoester's findings also suggest that both groups would rather belong to a "functional" management team than to an administrators'
bargaining unit (p. 420). Wagstaff (1973) stated that principals may be forced to form separate bargaining units to stem the erosion of their power caused by the emergence of strong teacher unions. However, he argues that school districts would be better served by forming administrative teams to counter the power gains made by teachers unions.

Other writers have attempted to define the composition of the management team or have described their own efforts to implement the team approach in their own school districts. Schmuck, (1974) defines the management team as

\begin{quote}

a task-oriented group of educational personnel who are representative of the important sub-systems of the organization, hold some organizational goals in common, interact through a formal role structure, and have some degree of reciprocal influence over one another (p. 4).
\end{quote}

Schmuck contends that a management team must be large enough to incorporate the important sub-systems that are administratively subordinate to it but must be small enough to allow for face-to-face problem solving discussions and collaborative decision making. Large school systems, says Schmuck, may have to use multiple teams tied together through Likert's linking pin idea. Wilhelm (1984) indicates that sophisticated school districts incorporate the principal as a functional member of management rather than simply using that position as a
"funnel through which the intentions of the top management flow down and integrated information flows up" (p. 28).

Floratos, et al (1977), describe the role of the Board of Education, the superintendent, and school personnel in the development of the Rio Lindo California, Management Team. Cavanaugh (1984) has described how the Deer Park, Ohio, school district established a community task force to develop and implement the management team concept along with a merit pay scheme for district administrators, similar to Bainbridge's R.E.A.S.O.N.S. program for the Newark, Ohio, school district.

Despite all of the favorable writings on the team management concept, Lieberman (1977) casts one caveat toward the team approach, calling the administrative team an "invitation to trouble" (p. 25). Lieberman argues that the meaning of administrative team is neither clear nor commonly understood. He also suggests that the term is mainly used to cloak traditional (Theory X) practices in school administration.

Research Efforts on the Management Team Concept in Educational Organizations

Much of the actual research conducted on the management team in educational organizations makes Lieberman sound like a prophet. Research on the management team indicates that confusion about the meaning
of the concept does exist, especially as it is translated from theory into practice.

Boles (1975) studied an administrative team in a Michigan school district, which had introduced the concept and implemented it through management by objectives. Boles observed that the "team" was not functioning as a team mainly because the team members understood neither the team concept or the MBO approach. As a result, Boles developed an instrument to measure the effectiveness of each individual person as a team member. Boles recommended that before implementing a management team approach, school districts should take steps to make sure that the team members understand the concept, that the superintendent exercises leadership of the group, and that team members be given in-service to learn how to communicate more effectively with each other (p. 80).

Adams (1971) conducted a study to compare the perceptions of superintendents, elementary principals, and secondary principals with respect to the practice of the management team concept. He found that superintendents had a more positive perception of the management team than did the secondary principals, who, in turn, had a higher perception than the elementary principals.

Perkins (1976) studied selected principals and superintendents in Mississippi to determine their
perceptions of team management as a method for administering public schools. Participants were asked to respond to an "ideal" questionnaire - what should the management team be? - and to a "real" questionnaire - what is it really like? Perkins' findings showed that administrators in all positions, except superintendents, indicated a significant higher mean perception of team management on the ideal scale than on the real scale. Thus, concludes Perkins, administrators other than superintendents view team management as an ideal system of administration more positively than they view it as a real system of administration.

Wilson (1979) conducted a study of principals and superintendents in selected California school districts to examine their perceptions about the current status of the management team as an organizational strategy. Her findings indicate significant differences between principals and superintendents (with superintendents being more favorable toward the team approach) in the following areas:

1. their perceptions of the operation of the management team model;

2. their perceptions of trust and confidence among members of the management team;
3. their perceptions concerning the protection of management rights in the negotiations process;
4. their perceptions of the role of the principal in practical applications;
5. their perceptions of how principals feel about the effectiveness of the management team (p. 4844 - A).

Much of the other research on the management team in school districts has focused on perceptions of team members' feelings of participation and satisfaction as a result of their inclusion on a management team. Cruz (1982) discovered significant differences among elementary, junior high, and senior high school principals in their feelings about levels of participation and satisfaction, with elementary principals tending to score the lowest of the three groups. Brooks (1980) found that among administrators she studied in Colorado, superintendents and assistant superintendents were more satisfied with their level of involvement in the management team than were other administrators. Also, Brooks' findings indicated that although all levels of administrators felt they were more involved in communications and establishing a supportive environment as members of a management team, they did not feel the same level of involvement in shared decision making. Potter (1982), on the other hand, found, in a study of
school districts in the state of Washington, that principals, superintendents, and board of education members felt the management team approach is functioning positively in the large majority of school districts in the state.

Other research efforts on the management team have studied the role of the principal on the management team (Sladky, 1979); principals' perceptions of themselves as controllers of decisions on the management team (Faulkner, 1977); the relationships between management team patterns of school organizational structure and the degree of involvement among members of the management team in the decision-making process (Buttenmiller, 1972); the development of a spirit of collaboration among members on a management team in a rural school district (Barnes, 1979). One other effort included the development of an instrument to measure the effectiveness of the management team (Floyd, 1981).

The Four Systemic Variables of Team Management

Although the four systemic management team variables of status, communication, exchange, and trust have never been isolated, operationalized, and studied before, allusions to them appear frequently in the literature on the management team. It is important to the understanding
of this study that an awareness of references to the variables be established.

**Status**

Whether or not school districts create special policies or documents formalizing the management team concept, it does appear from the literature that it is important for management team members to understand they do belong to the team - that they do have a status.

To assure this sense of status, most writers believe it is important that school districts formally adopt the management team approach. Wynn (1973) defines an administrative team as a "formally constituted, de jure body of administrators who exercise collaboratively all the administrative processes" (p. 26). Salmon (1977) states that team job descriptions should be developed which outline relationships between and among staff members. Also, says Salmon, ground rules should be spelled out, such as the "management team is the officially designated leadership unit for developing, recommending, implementing, and monitoring board policy and administrative regulations" (p. 24).

The Rio Lindo School District (Floratos, 1977) created a management team model before implementing the approach. One of the strengths of their team, says Floratos, is that the entire administrative staff was involved in the
development of the model and agreed to its implementation. In addition, team members received training in how the model should function in practice.

The Ohio Congress of School Associations (BASA, et al, 1977) recommends that if school districts are truly interested in implementing the management team approach then "there must be a genuine commitment by the board of education and the superintendent to implement the management team concept - and this commitment should be in writing as an official board policy" (p. 10). The Colorado Association of School Executives (1974) also has made this recommendation.

Wagstaff (1973) states that a management team should create a "management manifesto." This document would formalize the team concept and essentially define the status of each member by specifically stating:

(1) the limits of each member's authority;
(2) the nature of the team's composition;
(3) the working relationships among its members;
(4) the limits of rights and responsibilities;
(5) how the team will be held accountable for its actions; and
(6) the type of matters that may comprise the agenda (p. 46).
Swift (1971) points to potential trouble spots if school districts are not careful to define the status of team members:

Teams are composed of professional employees who are granted a social status that enables them to control methodology and output even when working within an organization. Without this status, the middle management employee is powerless to resist the dictates of his employers. Until school administrators receive this type of status, they are in a poor position to expect much from management teams (p. 33).

Communication

The importance of communication to the success of a management team approach is spoken to in the literature, but the nature of the communication is usually glossed over. Salmon (1977) states that communication is the "key" to the successful management team operation. The Ohio Congress (1977) stresses that one attribute of an effective management team is a system of communication which "provides for a regular flow of information between and among teams and team members" (p. 9). Likewise, Schmuck, (1974) states that an effective management team must be characterized by communication that is a "two-way flow of valid information among team members." Wynn (1983) sees the refinement of group process skills as a major factor in effective communications within the management team.
Floratos (1977) recognizes communication as a key element in the success of the Rio Lindo management team. He indicates that nothing is hidden from team members:

A constant flow of communication is maintained about negotiation progress, personnel issues, budget preparation, fiscal problems, community dynamics and any and all information that affects the management of the district. This requires constant effort ... but is absolutely vital to the integrity of the management team concept and pays handsome dividends in staff unity and clarity of purpose ... The withholding of information is not simply a roadblock to effective management, it is fatal to it (pp. 7-8).

These writers all seem to be emphasizing that communication on the management team cannot be from the top down. Communication must flow at least up and down the team structure as well as horizontally.

Exchange

The notion of exchange, although not referred to by that term, figures into a prominent place in the literature on the management team. Writers have emphasized that two key features of the management team are the board of education's and superintendent's willingness and ability to share power with subordinate administrators, as well as the subordinate administrators' willingness to commit to the team concept and accept the responsibility of being included as a part of management.
In order to successfully implement the management team, says the Ohio Congress (1977), the various members must make certain commitments. The Board of Education is required to treat all administrators as management. The superintendent must be willing to relinquish previously held power and influence. And other administrators "must recognize that leaving the rank of teachers to become a part of management brings with it a change of expectations on issues such as excessive job security" (p. 11).

The superintendent's actions appear to be a key factor as to whether or not a spirit of exchange will actually exist within the team. Salmon (1977) states that one imperative for the management team is for a total commitment to be felt and demonstrated by the superintendent. Salmon advises that a method should be formalized to deal with the possibility that other team members will disagree with the superintendent on some issues. Hale (1978) notes that decision-making procedures on the team must reflect the leader's ability to share power with the group. Redfern (1972) contends that the management team becomes "more rhetoric than reality" when the Board of Education or superintendent deny other team members the "right of access" (p. 2). The right of access, says Redfern, "must really exist and be
operationally effective if middle managers can be expected to truly feel a part of the management team" (pp. 3-4).

Although the board of education and superintendent establish the atmosphere in which exchange can exist, it is not merely a one-way street emanating from the top; subordinate administrators must be willing to behave in a spirit which nurtures the environment for exchange. Danley (1979) notes that although a team member has a right to expect certain things, he or she also has a responsibility to other team members. Pharis (1979) argues that while the implementation of a management team depends on the support of the board of education and the superintendent, its success and continuation rest primarily on the willingness of the principals to "share the load" (p. 58).

Trust

Most writers quickly agree that trust is one of the essentials of the successful management team. Without trust, all other aspects of the management team simply become window dressing.

Wynn (1973) writes that "trust in people is probably the most essential element in the success of the administrative team" (p. 39). Lynch (1977) contends that above all other factors "trust and confidence must be the most pervasive forces that dominate the actions and
interactions of the management team operation" (p. 9). Likewise, Pharis (1979) states that a "successful administrative team is a function of the personalities of the superintendent and principals, and of the mutual trust that exists between them. It cannot be unilateral on the part of either" (p. 58).

Potter's study (1982) of school districts in the state of Washington indicates that successful management teams are characterized by the climate of trust and openness. Trust is essential on the Rio Lindo management team, says Floratos (1977), so that members can feel confident in taking action which involves risk taking and the possibility of error.

The Work Environment and the Management Team

The writers on the management team contend that the implementation of the management team approach will provide many benefits. Most of the benefits are seen to be higher productivity of employees and improved educational services to children. Usually, these benefits are attributed to the positive environment established through the team approach.

The National Association of Secondary School Principals (1971) suggests that these benefits are caused by a spirit of unity because the administrative team "represents a means of establishing smooth lines of
organization and communication, common agreements, and definite patterns of mutuality among administrators and the board of education as they unite to provide effective educational programs for the community" (p. 8). Hale (1978) contends that the atmosphere of involvement that exists on a functional management team improves employee satisfaction because a "worker who is actively involved in making decisions that affect his or her own work will be motivated to be more efficient and creative" (p. 2).

Blake and Mouton (1981) describe a work environment created by a team management orientation which supports organizations to

achieve full participation of members, pursuing common goals and objectives that integrate both personal and institutional perspectives. Individuals gain a sense of gratification, enthusiasm, and excitement when they are able to make important contributions. The closer they come to success, the greater their sense of emotional reward (p. 237).

The functional management team, then, can be an attribute to school systems because its existence helps to create a climate in which people can achieve personal and professional rewards while helping the institution to achieve its own goals and fulfill its mission to the community.

In order to measure the social climate of work settings, Moos (1981) has identified ten variables
relating to the measurement of work environment or climate which he has included in the WES, Form R. These variables are categorized into three dimensions - relationship, personal growth, system maintenance and system change (see Chapter 1 for description of the WES subscales and dimensions).

That "job satisfaction" is an additional factor which could influence work climate is born out by some of the writings on the management team itself and those on the topic of motivation. Job satisfaction is defined in this study as the extent to which a person feels a sense of influence and contribution as a result of one's participation on the management team. The Ohio Congress of School Administrator Associations (1978, p. 12) asserts that one of the distinct benefits a school district will experience by implementing a management team approach will be greater job satisfaction among the members of the team. Ouchi (1981, p. 4) indicates that a Theory Z approach will create a sense of involvement and influence among employees that will lead to increased productivity. Likert (1961) contends that supervisors must have sufficient influence with their superiors to be able to affect the superiors' decisions. Without this "capacity to exert upward influence" a manager cannot perform his supervisory functions satisfactorily (Likert, p. 114).
Blake and Mouton (1981, p. 15) describe the consequences of team administration as helping to create a sense of "personal commitment to organizational achievement." Involvement enables employees to "mesh their individual efforts for the accomplishment of meaningful goals that are both sound and creative" (Blake and Mouton, p. 15). Herzberg's (1966) theory of motivation revolves around the idea of job satisfaction or dissatisfaction. Motivators that lead to satisfaction are not factors like money and working conditions, but possible growth and advancement, recognition, achievement, and responsibility.

**SUMMARY**

The management team approach as applied in school systems is a concept that has grown naturally from the body of writings on organizations and management during this century. The team approach to management, contend its proponents, will create a positive work environment for organizations, thus leading to greater productivity.
CHAPTER III
Methodology

This study was designed to investigate specified operational variables of the management team concept and to determine what relationships these variables have on the work climate of school districts said to be operating with an effective team approach to management.

Setting of the Study

The study was conducted in the state of Ohio. In recent years, much emphasis has been placed on team management in Ohio. Several state organizations (BASA et al., 1978) have given their endorsement to the team concept as the recommended approach for operating public school districts in Ohio. In addition to the strong interest in the management team concept in Ohio, this state serves as a good setting for educational research, according to one researcher (Wilson, 1980), because Ohio's demographic, economic and political characteristics make it an average state with few extremes. Therefore, research conducted in Ohio should allow for the possibility of generalizing findings.
Population

The population for this study was based on that of a prior research effort on the management team at the Ohio State University by Arthur D. Smith, Jr., in 1982. The purpose of Smith's study was to "investigate what school administrators think and what they do as participants in school districts operating with a team approach to management" (p. 67).

Smith drew his sample from the population of 190 city school districts and 49 exempted village public school districts in Ohio. Although the total number of school districts in Ohio at that time was 615, Smith excluded 376 local school districts from his study because they were not autonomous in the way that city and exempted village districts were (e.g., the county office of education provides leadership and consulting services to local districts in some program areas).

From this population, Smith defined his sample by sending letters to the superintendents of each of the 239 city and exempted village school districts asking whether they were using the management team approach in operating their districts. The final population included 56 school districts in Ohio, the superintendents of which indicated that the district was using a management team approach and gave Smith permission to conduct his study in their school
district. A survey was sent to each member of the management team as identified by the superintendent in every school district studied.

For the purposes of the study under consideration, the population included only the high school principals in the 56 school districts identified by Smith. Because several of these districts had more than one high school, a total of 64 individuals were identified. Five of the districts in the population had two high schools. This means that in five cases, two principals were responding to the same management team approach. In order to guard against possible duplication of response in these five cases, one of the two high school principals was selected on a random basis to remain in the population. Thus, the unit of analysis becomes the individual school system.

Of the 64 individuals surveyed, 61 returned questionnaires for a response rate of 95%. One, however, disqualified himself because his position was that of "associate principal." Two respondents mailed back only partially completed instruments. With the five principals removed from the two-high school districts, the questionnaires used provided a population of 53 for a usable response rate of 83%.

This study was limited to a population of strictly high school principals for several reasons. First,
several research efforts have indicated that
suprindentents and principals may have differing points of
view regarding the effectiveness of the team approach in
their school districts. For example, Adams (1971)
reported that superintendents had significantly more
positive perceptions regarding the extent to which the
management team concept was "practiced" than did
principals. Perkins (1976) discovered that on a
real/ideal scale of team management operations
superintidents as a group were the only management team
position surveyed which did not indicate a significantly
higher mean perception of team management on the ideal
scale than on the real scale. Wilson (1980) discovered
significant differences between superintendents and
principals in their perceptions of the operation of the
management team, the levels of trust and confidence among
members of the management team, and their feelings of
principals' opinions about the effectiveness of the
management team. Brooks (1980) found that superintendents
and assistant superintendents were more satisfied with
their level of involvement than were other
administrators. Thus, it would appear that principals on
management teams are better able to judge whether or not a
team approach to school district operations may be more
than just lip service to the concept and may be having the desired effects.

The second reason for narrowing the population to just high school principals is that research indicates the high school principal may be in a better position to objectively evaluate the management team operation than other principals. Adams (1971) discovered that secondary principals had a more positive perception of the practice of the management team concept than did elementary principals, particularly in the areas of decision-making and communication. Brooks (1980) reported that junior high and elementary principals in her study were the most dissatisfied with their level of involvement in the operations of the management team, which suggests that their position does not provide opportunities necessary to influence final decisions. In a study which compared the levels of participation and satisfaction of elementary, intermediate, and high school principals on management teams, Cruz (1982) found that high school principals have significantly higher levels of participation in collective bargaining than elementary principals and significantly higher levels of participation in the budget development process than both intermediate and elementary principals.
Instrumentation

One questionnaire was used to collect the data for this study. The research instrument was divided into three sections - professional information, team variables, and work climate of the management team.

The Professional Information section consisted of 8 items. The items were designed to obtain personal and professional information from each respondent (sex, age, length of employment as an administrator inside the present school district, highest academic degree held) as well as some demographic information about the respondent's high school (size and grade level structure of the high school).

The Team Variables section included 41 items designed to solicit information about the degree of strength of the systemic variables of status, communication, exchange, and trust. A tentative instrument was first developed by this researcher using information gleaned from the literature used to isolate the four variables and suggestions provided by the members of the researcher's dissertation committee. Ten of the items related to the respondents' perceptions of the degree to which the variable of status existed within the district's management team. Ten of the items related to the respondents' perceptions of the existence of the communication variable. Ten items
related to the respondents' perceptions of the existence of the exchange variable. And eleven of the items related to the respondents' perceptions of the level of the existence of the trust variable. The respondents were asked to indicate the extent to which they believed each statement was true for their district's management team using the following options: strongly agree, agree, uncertain, disagree, and strongly disagree.

The Work Climate of the Management Team section was adapted from a social climate scale developed by Rudolf H. Moos and Paul M. Insel of the Social Ecology Laboratory of Stanford University (Moos, 1981). The specific social climate scale used for this study was the Work Environment Scale (WES), Form R (Real Form), developed and tested in 1974. The WES has three forms: the Real Form (Form R), which measures perceptions of existing work environments; the Ideal Form (Form I), which measures conceptions of ideal work environments; and the Expectations Form (Form E), which measures employee expectations about work settings. Form R was selected for this study because of the interest in investigating the impact of the team management approach on the actual work environment which is perceived to exist within the management team itself. A more detailed description of the variables included in the WES, Form R is included in Chapter One.
The language in the WES, Form R, was modified slightly to make the items more relevant to the management team concept. Eighty-five items are included in the Work Climate of the Management Team section of this questionnaire - nine each relating to the WES, Form R, subscales of involvement, peer cohesion, supervisor support, autonomy, task orientation, work pressure, clarity, control, and innovation. Four additional items were included at the end of this section at the suggestion of the dissertation committee to measure perceptions of the respondents' feelings of job satisfaction as related to the four systemic management team variables. The respondents were asked to indicate whether they believed or did not believe each statement by simply marking true or false. This format conforms to the responses solicited on the WES, Real Form.

At the end of this section, space was provided for "Additional Comments" to allow the respondents to provide narrative information about their perceptions of the team approach used in their district. Only a few of the respondents added comments.

**Research Variables**

The variables investigated during this study were: status, communication, exchange, trust (the four systemic management team variables); involvement, peer cohesion,
supervisor support, autonomy, task orientation, work pressure, clarity, control, and innovation (the nine WES, Form R, subscales); and job satisfaction (the variable added to the WES).

All the variables were operationalized using responses from the high school principals to each section of the final survey instrument itself.

The value of each variable was obtained by computing the mean of all the individual principals' responses to the items pertaining to each of the research variables. For example, "status" is operationalized by computing the mean of the individual responses to each of the ten items relating to "status" in the "Team Variables" section of the research instrument. A breakdown of these items by variable in the instrument is provided in Appendix B, Table 1.

Field Test of Instrument

After developing the tentative instrument to be used to obtain data from each respondent, it was field-tested by a panel of experts. This panel consisted of administrators from three school districts in Ohio representing various levels of the management team - one superintendent, two assistant superintendents, one high school principal, one assistant high school principal, one middle school principal, and one elementary school
principal. Each panel member was asked to complete the instrument and provide criticism, comments, and suggestions for improvement. Panel members were asked to do the following specific tasks:

1. Suggest additions or modifications to the directions for each section;
2. Suggest additions or deletions to the Professional Information section.
3. Suggest clarifications of language to the Team Variable section;
4. Read the Team Variable section items carefully to ensure a proper fit between each item and the definition of each of the four systemic management team variables and suggest appropriate revisions;
5. Suggest clarifications of language to any of the items of the Work Climate of the Management Team section.

The field test indicated that the respondents generally understood the instrument and that the items were appropriate for investigating the systemic variables of team management as well as their impact on the work environment of the management team. Based on the results of the field test, no major changes were made in the structure and organization of the instrument; however,
numerous changes in the wording of specific items were made based on the suggestions of the members of the panel.

Reliability of Instrument

Reliability is defined as the "accuracy or precision of a measuring instrument" (Kerlinger, 1966, p. 430). Mouly (1963) indicates, however, that reliability can be difficult to establish with much precision (p. 254).

Mouly (1963) considers attempting to establish reliability by simply phrasing the questions in different ways of dubious validity since respondents would probably see through the intent of the researcher. Nonetheless, this researcher did find it desirable to state questions in different ways in the "Team Variables" section of the research instrument. Likewise, Moos, in his WES, Real Form, upon which the "Work Climate" section of this research instrument is based, chose to phrase the same question in different ways. The questions for each variable were interpreted with questions for the other variables in each section, with the exception of those pertaining to "job satisfaction" in the "Work Climate" section, which follow each other consecutively at the conclusion of that section.

Table 2 provides a breakdown of the order of these questions for the two major sections of the research instrument by variable.
Table 2

Breakdown of Questions Pertaining to Each Variable of the "Team Variables" and "Work Climate" Sections as Presented in the Research Instrument

<table>
<thead>
<tr>
<th>Team Variables Section</th>
<th>Question Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Status</td>
<td>1, 5, 9, 13, 17, 21, 25, 29, 33, 37</td>
</tr>
<tr>
<td>Communication</td>
<td>2, 6, 10, 14, 18, 22, 26, 30, 34, 38</td>
</tr>
<tr>
<td>Exchange</td>
<td>3, 7, 11, 15, 19, 23, 27, 31, 35, 39</td>
</tr>
<tr>
<td>Trust</td>
<td>4, 8, 12, 16, 20, 24, 28, 32, 36, 40, 41</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Work Climate Section</th>
<th>Question Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Involvement</td>
<td>1, 10, 19, 28, 37, 46, 55, 64, 73</td>
</tr>
<tr>
<td>Peer Cohesion</td>
<td>2, 11, 20, 29, 38, 47, 56, 65, 74</td>
</tr>
<tr>
<td>Supervisor Support</td>
<td>3, 12, 21, 30, 39, 48, 57, 66, 75</td>
</tr>
<tr>
<td>Autonomy</td>
<td>4, 13, 22, 31, 40, 49, 58, 67, 76</td>
</tr>
<tr>
<td>Task Orientation</td>
<td>5, 14, 23, 32, 41, 50, 59, 68, 77</td>
</tr>
<tr>
<td>Work Pressure</td>
<td>6, 15, 24, 33, 42, 51, 60, 69, 78</td>
</tr>
<tr>
<td>Clarity</td>
<td>7, 16, 25, 34, 43, 52, 61, 70, 79</td>
</tr>
<tr>
<td>Control</td>
<td>8, 17, 26, 35, 44, 53, 62, 71, 80</td>
</tr>
<tr>
<td>Innovation</td>
<td>9, 18, 27, 36, 45, 54, 63, 72, 81</td>
</tr>
<tr>
<td>Job Satisfaction</td>
<td>82, 83, 84, 85</td>
</tr>
</tbody>
</table>
Mouly, (1963) indicates that another measure of reliability is the test-retest method (p. 254). Scores for this measure are determined by asking the same respondents to answer the questionnaire again and comparing their answers for consistency. Mouly states that the test-retest method is the "only feasible approach to the establishment of the reliability of the questionnaire" (p. 254). On the other hand, Mouly warns that since the retest respondent is likely to attempt to remember and duplicate his/her responses the test-retest method is not "foolproof" and should be considered a "questionable measure" of an instrument's reliability (p. 254).

Because the research instrument used in this study was quite lengthy in nature, respondents were asked to respond only once. Since the "Team Variables" section is original to this research, no test-retest information is available for the present study. However, since the "Work Climate" section is adapted from Moos' WES, Real Form, test-retest data is available. Table 3 provides the test-retest data as obtained for Moos' WES, Real Form. Since the variable "job satisfaction" was added to this section, no test-retest information is available for the items relating to this variable.
Table 3

Moos' Correlation Coefficients for the Variables of the WES, Real Form (Test - Re-test)

<table>
<thead>
<tr>
<th></th>
<th>Peer Involvement</th>
<th>Peer Cohesion</th>
<th>Supervisor Support</th>
<th>Autonomy</th>
<th>Task Orientation</th>
<th>Work Pressure</th>
<th>Clarity</th>
<th>Control</th>
<th>Innovation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson R</td>
<td>.83</td>
<td>.71</td>
<td>.82</td>
<td>.77</td>
<td>.73</td>
<td>.76</td>
<td>.69</td>
<td>.79</td>
<td>.75</td>
</tr>
</tbody>
</table>


A second measure of reliability of the instrument, internal consistency, was provided by using Cronbach's Alpha. This method correlates each item in a scale against every other item and obtains the average intercorrelation for the entire set of correlations (Smith, 1975). Coefficient alpha (Cronbach's) is "based both on the average correlation among items (the internal consistency) and the number of items" (Nunnally, p. 210). Cronbach's Alpha sets an upper limit to the reliability. A low alpha indicates that either the test is too short or the items have little in common. Nunnally (p. 120) suggests that Cronbach's Alpha is a good test of reliability because "even though potentially there are important sources of measurement error that are not considered by coefficient alpha, it is surprising what little difference these sources of measurement error usually make" (p. 210).

Cronbach's Alpha was computed for all the variables of the "Team Variables" section (see Table 4). Moos has provided Cronbach's Alpha for the WES, Real Form. These scores are presented in Table 5. Since a few of his items were slightly modified for the "Work Climate" section of this research instrument in response to suggestions provided from the field test, Cronbach's Alpha was again calculated for the "Work Climate" section as a safeguard.
Table 4

Conbrach's Alpha
Management Team Variables - Status, Communication, Exchange, Trust
(N = 53)

<table>
<thead>
<tr>
<th>Status</th>
<th>Communication</th>
<th>Exchange</th>
<th>Trust</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alpha</td>
<td>.90</td>
<td>.86</td>
<td>.64</td>
</tr>
</tbody>
</table>
Table 5

Cronbach's Alpha from Moos' WES, Real Form, for "Work Climate" Variables of Involvement, Peer Cohesion, Supervisor Support, Autonomy, Task Orientation, Work Pressure, Clarity, Control, and Innovation

<table>
<thead>
<tr>
<th>Involvement</th>
<th>Peer Cohesion</th>
<th>Supervisor Support</th>
<th>Autonomy</th>
<th>Task Orientation</th>
<th>Work Pressure</th>
<th>Clarity</th>
<th>Control</th>
<th>Innovation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alpha</td>
<td>.84</td>
<td>.69</td>
<td>.77</td>
<td>.73</td>
<td>.76</td>
<td>.80</td>
<td>.79</td>
<td>.76</td>
</tr>
</tbody>
</table>
This double-check also obtains Alpha for "job satisfaction," the variable added to the "Work Climate" section. Table 6 presents this information.

The results of the tests of reliability suggest that the research instrument had high internal consistency. Nunnally states that "reliability estimated from internal consistency is usually very close to the reliability estimated from correlations between alternative forms" (p. 210). In addition, it can be concluded that the "Work Climate" section is relatively stable over time. Since no test-retest data is available for the "Team Variables" section, no conclusions can be drawn regarding its stability over time.

Validity of Instrument

Validity is defined as whether a researcher is actually measuring what he intended to measure (Kerlinger, 1966, p. 444). Mouly (1963) states that a questionnaire must have at least "face" or content validity. Kerlinger defines content validity as the "representativeness or sampling adequacy of the content - the substance, the matter, the topics - of a measuring instrument. Content validation is guided by the question: Is the substance or content of this measure representative of the content or the universe of content of the property being measured?" (Kerlinger, 1966, pp. 445-46). For Kerlinger, content
Table 6

Cronbach's Alpha for "Work Climate Variables of Involvement, Peer Cohesion, Supervisor Support, Autonomy, Task Orientation, Work Pressure, Clarity Control, Innovation, and Job Satisfaction (N = 53)

<table>
<thead>
<tr>
<th>Involvement</th>
<th>Peer Cohesion</th>
<th>Supervisor Support</th>
<th>Autonomy</th>
<th>Task Orientation</th>
<th>Work Pressure</th>
<th>Clarity</th>
<th>Control</th>
<th>Innovation</th>
<th>Job Satisfaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alpha</td>
<td>.76</td>
<td>.74</td>
<td>.82</td>
<td>.62</td>
<td>.70</td>
<td>.74</td>
<td>.86</td>
<td>.76</td>
<td>.73</td>
</tr>
</tbody>
</table>
validation becomes a matter of judgement (p. 446). Either on his/her own or with the help of others, the researcher "judges the representatives of the items" (Kerlinger, p. 446).

The instrument used for this research was considered valid on the basis of the following three factors:

- the review of the literature;
- the results of the field test of the instrument;
- the input provided by the university professors supervising the research.

**DATA ANALYSIS**

Means and standard deviations were computed for all of the variables investigated. The means provided measures of central tendency, and the standard deviations suggested the variability of the measures. When the responses from a group deviate very little from each other, the standard deviation is small. When the responses from a group vary greatly, the standard deviation is large.

Pearson correlation coefficients were computed for the variables in the research questions concerning relationships. Gay (1976, p. 142) states that correlation research "involves collecting data to determine whether, and to what degree, a relationship exists between two or more quantifiable variables." A correlation coefficient states the degree of relationship between the variables.
The stronger the relationship, the closer to ± 1.00 a correlation coefficient will be approached. The weaker the relationship, the closer the coefficient will be to .00. The following guidelines as suggested by Kerlinger (1974) can be used for interpreting correlation coefficients (r):

- $r = ± .00$ to $± .20$ -- negligible relationship
- $r = ± .20$ to $± .40$ -- low relationship
- $r = ± .40$ to $± .70$ -- marked or moderate relationship
- $r = ± .70$ to $± 1.00$ -- high or very high relationship

Tables were created to assist the interpretation of the collected data. These tables and their explanations are included in Chapter Four.

**Computer Analyses**

The *Statistical Package for the Social Sciences* (SPSS) was employed to analyze the data gathered from the study. This system was used because it allows the researcher to conduct many different types of data analyses simultaneously. Three subprograms from SPSS were used to provide statistical analysis of the research questions.

The subprogram FREQUENCIES was used to provide descriptive statistics which could be helpful in addressing the proposed research questions. This program
provides a number of common measures of central tendency and dispersion for the variables under investigation.

The subprogram PEARSON CORR was used to provide statistical analysis to the research questions investigating relationships between two variables. This subprogram gives a single summary statistic providing the strength of association between two variables.

The subprogram REGRESSION was employed to provide multiple regression equations for the dependent variables analyzed.

In addition, the subprogram RELIABILITY was used to compute Cronbach's Alpha, which is the measure of internal consistency of the instrument.

Procedure for Collecting Data

The survey instruments were mailed to each high school principal selected for the population on March 8, 1984. A cover letter explaining the research project and a self-addressed, stamped envelope were included with the instrument (Appendix A). After most of the instruments had been returned, follow-up telephone calls were made between April, 1984, and May, 1984, to each principal who had not returned a completed survey.
CHAPTER IV

PRESENTATION AND ANALYSIS OF DATA

This chapter presents the data collected and describes the procedures used in conducting the study. The analysis explains how the data were used to derive answers to the research questions which guided the research effort. In addition, other data are provided which appear to add to the understanding of the management team. Tables are provided where appropriate.

Description of Population

The research instrument returned by the high school principals included responses to a "Professional Information" section. These responses gave information for the following variables: sex, length of service as an administrator in present school district, age, length of service in present position, highest academic degree held, length of total experience as a school administrator, high school grade-level organization, and enrollment of high school. Table 7 reports the frequencies, means and standard deviations for the descriptive data for all the principals who provided usable responses.
Table 7
Frequencies, Means and Standard Deviations for Descriptive Variables
(N = 53)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Value</th>
<th>Frequency</th>
<th>Percent</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>1</td>
<td>51</td>
<td>96.2</td>
<td>1.02</td>
<td>0.14</td>
</tr>
<tr>
<td>Female</td>
<td>2</td>
<td>1</td>
<td>1.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No Response</td>
<td>9</td>
<td>1</td>
<td>1.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Length of Service as Administrator in Present District</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than 1 year</td>
<td>1</td>
<td>5</td>
<td>9.4</td>
<td>3.96</td>
<td>1.58</td>
</tr>
<tr>
<td>1 - 3 years</td>
<td>2</td>
<td>4</td>
<td>7.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 - 6 years</td>
<td>3</td>
<td>12</td>
<td>22.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7 - 10 years</td>
<td>4</td>
<td>11</td>
<td>20.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11 - 15 years</td>
<td>5</td>
<td>9</td>
<td>17.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16 or more years</td>
<td>6</td>
<td>12</td>
<td>22.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30 - 40</td>
<td>2</td>
<td>12</td>
<td>22.6</td>
<td>3.00</td>
<td>0.68</td>
</tr>
<tr>
<td>41 - 50</td>
<td>3</td>
<td>29</td>
<td>54.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>51 - 60</td>
<td>4</td>
<td>12</td>
<td>22.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Length of Service as Administrator in Present Position</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than 1 year</td>
<td>1</td>
<td>6</td>
<td>11.3</td>
<td>3.34</td>
<td>1.40</td>
</tr>
<tr>
<td>1 - 3 years</td>
<td>2</td>
<td>8</td>
<td>15.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 - 6 years</td>
<td>3</td>
<td>16</td>
<td>30.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7 - 10 years</td>
<td>4</td>
<td>12</td>
<td>22.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11 - 15 years</td>
<td>5</td>
<td>7</td>
<td>13.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16 or more years</td>
<td>6</td>
<td>4</td>
<td>7.5</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 7 (continued)
Frequencies, Means, and Standard Deviations for Descriptive Variables
(N = 53)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Value</th>
<th>Frequency</th>
<th>Percent</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highest Academic Degree Held</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Doctorate</td>
<td>1</td>
<td>2</td>
<td>3.8</td>
<td>1.96</td>
<td>0.20</td>
</tr>
<tr>
<td>Masters</td>
<td>2</td>
<td>49</td>
<td>92.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No Response</td>
<td>9</td>
<td>2</td>
<td>3.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Years Employed as a School Administrator</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than 1 year</td>
<td>1</td>
<td>1</td>
<td>1.9</td>
<td>4.85</td>
<td>1.20</td>
</tr>
<tr>
<td>1 - 3 years</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 - 6 years</td>
<td>3</td>
<td>8</td>
<td>15.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7 - 10 years</td>
<td>4</td>
<td>8</td>
<td>15.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11 - 15 years</td>
<td>5</td>
<td>16</td>
<td>30.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16 or more years</td>
<td>6</td>
<td>20</td>
<td>37.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grade-level Organization of High School</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9 - 12</td>
<td>1</td>
<td>42</td>
<td>79.2</td>
<td>1.25</td>
<td>.52</td>
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<tr>
<td>10 - 12</td>
<td>2</td>
<td>9</td>
<td>17.0</td>
<td></td>
<td></td>
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<tr>
<td>Other</td>
<td>3</td>
<td>2</td>
<td>3.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enrollment of High School</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Under 300 students</td>
<td>1</td>
<td>1</td>
<td>1.9</td>
<td>4.08</td>
<td>1.21</td>
</tr>
<tr>
<td>300 - 500 students</td>
<td>2</td>
<td>5</td>
<td>9.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>501 - 800 students</td>
<td>3</td>
<td>10</td>
<td>18.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>801 - 1000 students</td>
<td>4</td>
<td>15</td>
<td>28.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1001 - 2000 students</td>
<td>5</td>
<td>17</td>
<td>32.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Over 2000 students</td>
<td>6</td>
<td>5</td>
<td>9.4</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The information provided by these descriptive variables permits the following generalizations about the sample of high school principals included in this study:

(1.) they are predominately male;
(2.) they average 7-10 years of service in their current school district;
(3.) the majority is between 30-40 years old;
(4.) they average 4-6 years of service in their present position of high school principal;
(5.) almost all have master's degrees but only a few hold a doctorate;
(6.) on an average, they have 11-15 years of total administrative experience;
(7.) the predominant grade-level organization of their high schools is 9-12;
(8.) the average enrollment of these principals' high schools in between 801 to 1000 students.

Research Variables

The research variables under investigation were included in two separate sections of the questionnaire. The items included in the "Team Variables" section were: Status, Communication, Exchange, and Trust. The items included in the "Work Climate" section were: Involvement, Peer Cohesion, Supervisor Support, Autonomy, Task Orientation, Work Pressure, Clarity, Control, Innovation,
and Job Satisfaction. The options for response to the items included in the "Team Variables" section were (1) strongly agree; (2) agree; (3) uncertain; (4) disagree; and (5) strongly disagree. The options for response to the items included in the "Work Climate" section were (1) True, and (2) False. By using the numbers for each response and combining the individual responses to provide a composite score for each variable, the means for each variable were computed. Tables 1 and 2 in Appendix B provide the distributions of the raw scores for the responses to each of the research variables as well as an explanation of the composite scores for each research variable. Table 8 provides the actual mean and standard deviation for each research variable.

Relationships Between Variables

Ten research questions concerning the relationships between the Team Management Variables and the Work Climate Variables were stated in Chapter One. Pearson correlation coefficients were computed to provide the magnitude and direction for each of these relationships. Chapter III explains these procedures. Table 9 presents the Pearson R's for the Team Management and Work Climate variables. In addition, multiple regression was used to investigate which Team Management Variables contributed most to the variance in the Work Climate Variables. The results of
Table 8
Means and Standard Deviations of the Research Variables
(N = 53)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>S.D.</th>
<th>Midpoint of Variable Scale*</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Team Management Variables</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Status</td>
<td>22.28</td>
<td>7.90</td>
<td>30.0</td>
</tr>
<tr>
<td>Communication</td>
<td>23.64</td>
<td>6.56</td>
<td>30.0</td>
</tr>
<tr>
<td>Exchange</td>
<td>25.15</td>
<td>4.76</td>
<td>30.0</td>
</tr>
<tr>
<td>Trust</td>
<td>25.13</td>
<td>9.07</td>
<td>33.0</td>
</tr>
<tr>
<td><strong>Work Climate Variables</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Involvement</td>
<td>10.81</td>
<td>1.99</td>
<td>13.5</td>
</tr>
<tr>
<td>Peer Cohesion</td>
<td>12.71</td>
<td>2.36</td>
<td>13.5</td>
</tr>
<tr>
<td>Supervisor Support</td>
<td>11.66</td>
<td>2.51</td>
<td>13.5</td>
</tr>
<tr>
<td>Autonomy</td>
<td>11.68</td>
<td>2.03</td>
<td>13.5</td>
</tr>
<tr>
<td>Task Orientation</td>
<td>11.00</td>
<td>1.97</td>
<td>13.5</td>
</tr>
<tr>
<td>Work Pressure</td>
<td>12.15</td>
<td>2.27</td>
<td>13.5</td>
</tr>
<tr>
<td>Clarity</td>
<td>12.06</td>
<td>2.83</td>
<td>13.5</td>
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<td>Control</td>
<td>13.85</td>
<td>2.49</td>
<td>13.5</td>
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<td>Innovation</td>
<td>14.21</td>
<td>2.37</td>
<td>13.5</td>
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<tr>
<td>Job Satisfaction</td>
<td>5.08</td>
<td>1.40</td>
<td>6.0</td>
</tr>
</tbody>
</table>

*See Tables 1 and 2 in Appendix B for explanation for distribution of raw scores of variables and significance of the midpoint of variable scale. In essence, the lower the Mean score for each variable, the more positive the responses for each variable.
Table 9

Matrix of Pearson Correlation Coefficients for Relationships Among and Between Team Management Variables and Work Climate Variables (N = 51)

<table>
<thead>
<tr>
<th>Work Climate Variables</th>
<th>Involvement</th>
<th>Peer Cohesion</th>
<th>Supervisor Support</th>
<th>Autonomy</th>
<th>Task Orientation</th>
<th>Work Pressure</th>
<th>Clarity</th>
<th>Control</th>
<th>Innovation</th>
<th>Job Satisfaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Status</td>
<td>.63</td>
<td>.64</td>
<td>.67</td>
<td>.57</td>
<td>.56</td>
<td>-.17</td>
<td>.76</td>
<td>.09</td>
<td>.47</td>
<td>.71</td>
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<tr>
<td>Team Communication</td>
<td>.72</td>
<td>.67</td>
<td>.66</td>
<td>.57</td>
<td>.62</td>
<td>-.21</td>
<td>.78</td>
<td>.12</td>
<td>.38</td>
<td>.77</td>
</tr>
<tr>
<td>Management Exchange</td>
<td>.64</td>
<td>.63</td>
<td>.49</td>
<td>.42</td>
<td>.58</td>
<td>-.24</td>
<td>.65</td>
<td>.26</td>
<td>.29</td>
<td>.59</td>
</tr>
<tr>
<td>Variables Trust</td>
<td>.69</td>
<td>.63</td>
<td>.73</td>
<td>.61</td>
<td>.57</td>
<td>-.23</td>
<td>.71</td>
<td>.03</td>
<td>.39</td>
<td>.74</td>
</tr>
</tbody>
</table>
both of these tests will be discussed separately and in the relative order mentioned above.

Research Questions

Research Question #1: What is the relationship between each of the four team management variables of Status, Communication, Exchange, Trust, and the dependent variable of Involvement?

In each case, the relationship between each of the four Team Management variables and Involvement is positive. According to Kerlinger's guidelines for interpreting the strength of correlation coefficients (see Chapter Three), the Pearson's R's between Status/Involvement (.63) and Exchange/Involvement (.64), and Trust/Involvement (.69) show a "marked or moderate" relationship. The Pearson's R between Communication/Involvement (.72) indicates a "high or very high" relationship. In other words, it can be said that a moderate to strong positive relationship exists among the four Team Management variables and the "extent to which team members are concerned about and committed to their jobs" (Involvement).
Research Question #2: What is the relationship between each of the four Team Management variables and the dependent variable of Peer Cohesion?

In each case, the relationship between each of the four Team Management variables and Peer Cohesion is positive. The Pearson's R's for Status/Peer Cohesion (.64), Communication/Peer Cohesion (.67), Exchange/Peer Cohesion (.63), and Trust/Peer Cohesion (.63) all show a "moderate or marked" relationship. Thus, it can be said that a moderate positive relationship exists between each of the Team Management variables and "the extent to which team members are friendly and supportive of one another" (Peer Cohesion).

Research Question #3: What is the relationship between each of the four Team Management Variables and the dependent variables of Supervisor Support?

In each case, the relationship between each of the four Team Management variables and Supervisor Support is positive. The Pearson's R's between Status/Supervisor Support (.67), Communication/Supervisor Support (.66), and Exchange/Supervisor Support (.49), all reflect a "marked or moderate" relationship. The Pearson's R for Trust/Supervisor Support (.73) indicates a "high or very
high" relationship. Therefore, it can be said that a moderate to high positive relationship exists between the team management variables and "the extent to which management is supportive of team members and encourages team members to be supportive of one another" (Supervisor Support).

Research Question #4: What is the relationship between each of the four Team Management variables and the dependent variable of Autonomy?

In each case, the relationship between each Team Management variable and Autonomy is positive. The Pearson's R's between Status/Autonomy (.57), Communication/Autonomy (.57), Exchange/Autonomy (.42), and Trust/Autonomy (.61) all reflect a "marked or moderate" relationship. Therefore, it can be said that a moderate, positive relationship exists between each of the four Team Management variables and "the extent to which team members are encouraged to be self-sufficient and to make their own decisions" (Autonomy).

Research Question #5: What is the relationship between the Team Management variables and the dependent variable of Task Orientation?
In each case, the relationship between the four Team Management variables and Task Orientation is positive. The Pearson's R's between Status/Task Orientation (.56), Communication/Task Orientation (.62), Exchange/Task Orientation (.58), and Trust/Task Orientation (.59) all reflect a "marked or moderate" relationship. Thus, it can be said that there exists a moderate, positive relationship between each of the four Team Management variables and "the degree of emphasis by team members on good planning, efficiency, and getting the job done" (Task Orientation).

Research Question #6: What is the relationship between the four Team Management variables and the dependent variable of Work Pressure?

In each case, the relationship between the four Team Management variables and Work Pressure is negative. The Pearson's R's for Status/Work Pressure (-.17) Communication/Work Pressure (-.17), Exchange/Work Pressure (-.24), and Trust/Work Pressure (-.23) indicate a "low" relationship, according to Kerlinger's framework. Therefore, it can be said that a low, negative relationship exists between the four Team Management variables and "the degree to which the press of work and
time urgency dominate the work milieu of team members" (Work Pressure).

Research Question #7: What is the relationship between the four Team Management variables and the dependent variable of Clarity?

In each case, the relationship between the four Team Management variables and Clarity is positive. The Pearson's R's for Status/Clarity (.76), Communication/Clarity (.78), and Trust/Clarity (.71) all indicate a "high or very high" relationship. The Pearson's R for Exchange/Clarity (.65) reflects a "marked or moderate" relationship. Thus, it can be said that there exists a moderate to high relationship between the four Team Management variables and "the extent to which team members know what to expect in their daily routine and how explicitly rules and policies are communicated" (Clarity).

Research Question #8: What is the relationship between the four Team Management variables and the dependent variable of Control?

In each case, the relationship between the four Team Management variables and Control was positive. However, Pearson's R's for Status/Control (.09), Communication/
Control (.12), and Trust/Control (.03) indicate a "negligible" relationship. The Pearson's R for Exchange/Control (.26) reflects a "low" relationship. Therefore, it can be said that a negligible relationship generally exists between the four Team Management variables and "the extent to which rules and pressures are used to keep team members under control" (Control).

Research Question #9: What is the relationship between the four Team Management variables and the dependent variable of Innovation?

In each case, the relationship between the four Team Management variables and Innovation is positive. The Pearson's R for Status/Innovation (.47) indicates a "marked to moderate" relationship. The Pearson's R's for Communication/Innovation (.38) Exchange/Innovation (.29), and Trust/Innovation (.39) reflect a "low" relationship. Thus, it can be said that a low, positive relationship exists between the four Team Management variables and "the degree of emphasis by team members on variety, change, and new approaches" (Innovation).

Research Question #10: What is the relationship between the four Team Management variables and the dependent variable of Job Satisfaction?
In each case, the relationship between the four Team Management variables and Job Satisfaction is positive. The Pearson's R's for Status/Job Satisfaction (.71), Communication/Job Satisfaction (.74), and Trust/Job Satisfaction (.74) indicate a "high or very high" relationship. The Pearson's R for Exchange/Job Satisfaction (.59) reflects a "marked or moderate" relationship. Thus, it can be said that there exists a moderate to high, positive relationship between the four Team Management variables and "the extent to which team members feel a sense of influence and contribution as a result of their participation on the management team" (Job Satisfaction).

**Multiple Regression Analysis**

In addition to computing the coefficients of correlation between the Team Management variables and the Work Climate variables as called for in the research question for this study, setwise multiple regression was performed for these variables as well. Multiple regression is useful in attempting to explain the sources of the variance for a dependent variable. In regression analysis, one examines the regression of dependent variable scores on independent variables scores; i.e., how do the dependent variable scores "go back to," or how do they "depend upon," the independent variable scores
(Kerlinger and Pedhazur, p. 17). Multiple regression can tell a researcher, then, the percentage of the variance in a dependent variable accounted for by the independent variables. The coefficient of determination ($R^2$) expresses this proportion of the variance in the dependent variable determined by the independent variable (Kerlinger and Pedhazur, p. 14). The coefficient of multiple correlation (Multiple R) indicates the cumulative correlational impact of the independent variables on a dependent variable. Multiple regression is helpful also in telling a researcher the relative importance of the different independent variables in making predictions to a dependent variable (Kerlinger and Pedhazur, p. 34). These predictions are provided by the $b$ and Beta scores for each independent variable in the equation. The Beta scores are relied on most heavily in this study to determine the relative importance of each independent variable in an equation since Beta represents the regression weight in standard score form (Kerlinger and Pedhazur, p. 25).

The standard regression equation used to predict the dependent variable from any number of independent variables is

$$Y_1 = a + b_1X_1 + b_2X_2 + \ldots + b_kX_k$$

where $Y_1$ is the predicted value of the dependent variable, $a$ is the intercept constant, and $b_1, b_2, \ldots, b_k$ are
Multiple regression can tell a researcher, then, the percentage of the variance in a dependent variable accounted for by the independent variables. The coefficient of determination ($R^2$) expresses this proportion of the variance in the dependent variable determined by the independent variable (Kerlinger and Pedhazur, p. 14). The coefficient of multiple correlation (Multiple R) indicates the cumulative correlational impact of the independent variables on a dependent variable. Multiple regression is helpful also in telling a researcher the relative importance of the different independent variables in making predictions to a dependent variable (Kerlinger and Pedhazur, p. 34). These predictions are provided by the $b$ and Beta scores for each independent variable in the equation. The Beta scores are relied on most heavily in this study to determine the relative importance of each independent variable in an equation since Beta represents the regression weight in standard score form (Kerlinger and Pedhazur, p. 25).

The standard regression equation used to predict the dependent variable from any number of independent variables is

$$Y_1 = a + b_1X_1 + b_2X_2 + \ldots + b_kX_k$$

where $Y_1$ is the predicted value of the dependent variable, $a$ is the intercept constant, and $b_1, b_2, \ldots, b_k$ are
regression coefficients associated with the independent variables $X_1, X_2, \ldots, X_K$ (Kerlinger and Pedhazur, p. 30).

Using the SPSS subprogram Multiple REGRESSION, multiple regression calculations were performed. Table 10 gives a breakdown of the regression analysis for the Team Management and Work Climate variables.

The regression analysis indicates that in seven of the ten cases, the four Team Management variables explain a moderate amount of the total variance for the Work Climate variables of Involvement ($R^2 = .54$), Peer Cohesion ($R^2 = .48$) Supervisor Support ($R^2 = .41$), Clarity ($R^2 = .63$), and Job Satisfaction ($R^2 = .59$). The four Team Management variables explain a low amount of the total variance for the Work Climate variables of Control ($R^2 = .20$) and Innovation ($R^2 = .07$). The Team Management variables explain only a negligible amount of the variance for the Work Climate variable of Work Pressure ($R^2 = .07$). Other factors, such as chance, measurement error, and possible unidentified independent variables, would account for the amount of variance not explained by the regression analysis.

The Beta weights obtained from the analysis indicate that the Team Management variables Communication and Trust have the greatest importance in explaining the amount of
Table 10
Multiple Regression with Work Climate Variables as Dependent Variables

<table>
<thead>
<tr>
<th>Work Climate Variables</th>
<th>Multiple R</th>
<th>$R^2$</th>
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<th>Beta</th>
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<td>-.05</td>
<td>-.21</td>
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<td>.04</td>
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<td>.15</td>
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<td>.02</td>
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Table 10 (continued)

Multiple Regression with Work Climate Variables as Dependent Variables

<table>
<thead>
<tr>
<th>Work Climate Variables</th>
<th>Multiple R</th>
<th>R²</th>
<th>b</th>
<th>Beta</th>
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<tr>
<td>Work Pressure</td>
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<td>.63</td>
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<td></td>
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<td>Status</td>
<td>.02</td>
</tr>
</tbody>
</table>

*Team Management (Independent) Variables listed in order of descending Beta scores.
variance in the dependent variables. Communication obtains the highest Beta in the following four equations:

- Involvement Beta = .59
- Peer Cohesion Beta = .42
- Task Orientation Beta = .53
- Clarity Beta = .51

Trust obtains the highest Beta in these following four equations:

- Supervisor Support Beta = .79
- Autonomy Beta = .58
- Control Beta = .75
- Job Satisfaction Beta = .45

The Team Management variable of Status obtains the highest Beta in the equations for Work Pressure (Beta = .21) and Innovation (.68). The Team Management variable of Exchange does not obtain the strongest Beta Weight in any of the ten equations; however, in eight of the ten cases it is the independent variable with the second strongest Beta.

Summary

The research results of the study on systemic variables in the management team were provided in this chapter. The results of the data analysis suggest that, in general, the team management approach does appear to have a positive relationship to the work environment of
the high school principals included in the study. Strong, positive correlation coefficients were obtained for:

1. Status and
   a. Clarity (.76)
   b. Job Satisfaction (.71)

2. Communication and
   a. Involvement (.72)
   b. Clarity (.78)
   c. Job Satisfaction (.74)

3. Trust and
   a. Supervisor Support (.73)
   b. Clarity (.71)
   c. Job Satisfaction (.74)

Moderate, positive correlation coefficients were obtained for:

1. Status and
   a. Involvement (.63)
   b. Peer Cohesion (.64)
   c. Supervisor Support (.67)
   d. Autonomy (.57)
   e. Task Orientation (.56)
   f. Innovation (.47)
2. Communication and
   a. Peer Cohesion (.67)
   b. Supervisor Support (.66)
   c. Autonomy (.57)
   d. Task Orientation (.62)

3. Exchange and
   a. Involvement (.64)
   b. Peer Cohesion (.63)
   c. Supervisor Support (.49)
   d. Autonomy (.42)
   e. Task Orientation (.58)
   f. Clarity (.65)
   g. Job Satisfaction (.59)

4. Trust and
   a. Involvement (.69)
   b. Peer Cohesion (.63)
   c. Autonomy (.61)
   d. Task Orientation (.57)

Low, positive correlation coefficients were obtained for:

1. Communication and
   a. Innovation (.38)

2. Exchange and
   a. Control (.26)
   b. Innovation (.29)
3. Trust and
   a. Innovation (.39)

Low, negative correlation coefficients were obtained for:

1. Communication and
   a. Work Pressure (-.21)

2. Exchange and
   a. Work Pressure (-.24)

3. Trust and
   a. Work Pressure (-.23)

Negligible, positive correlation coefficients were obtained for:

1. Status and
   a. Control (.09)

2. Communication and
   a. Control (.12)

3. Trust and
   a. Control (.03)

Negligible, negative correlation coefficients were obtained for:

1. Status and
   a. Work Pressure (-.17)

Moreover, the multiple regression analysis indicates that the four Team Management variables of Status, Communication, Exchange, and Trust explain a moderate degree of the variance in seven of the ten Work Climate
variables (Involvement, Peer Cohesion, Supervisor Support, Autonomy, Task Orientation, Clarity, and Job Satisfaction. It appears that the Team Management variables of Communication and Trust have the greatest relative importance of the four in explaining variance within Work Climate variables.
CHAPTER V
SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The Problem

The concept of team management in educational organizations has received much attention over the last fifteen years. Many educational associations across the nation have endorsed team management as a desirable way of operating school systems. A number of writers have explained the potential benefits of implementing the idea of team management. Other writers have described their own management teams as they exist in their school systems. Some researchers have studied the status of the management team concept in a certain location while others have investigated the attitudes toward team management held by different groups represented on the management team itself. Little research has been conducted to examine the dynamics of the management team and its effects.

The present study was designed to identify and operationalize key variables that define the operation of the management team and to measure the impact of these variables upon the work environment of those included on
the management team. The study was guided by the beliefs and opinions expressed in the literature on the management team and participatory decision-making that such an approach to managing school systems would relate to a positive working climate and thereby contribute in a positive fashion to increased productivity. From the review of the literature, four systemic variables of the management team were identified: Status, Communication, Exchange, and Trust. Using the Moos Work Environment Scale, Real Form, ten variables - Involvement, Peer Cohesion, Supervisor Support, Autonomy, Task Orientation, Work Pressure, Clarity, Control, Innovation, and Physical Comfort - were identified as measures of the work climate of the management team. At the suggestion of the dissertation committee, the variable of Physical Comfort was dropped in favor of another variable judged to contribute to work environment, Job Satisfaction.

The study itself was guided by ten research questions involving the relationships among the Team Management variables and the Work Climate variables. These research questions were:

1. What is the relationship between each of the four Team Management variables and the dependent variable of Involvement?
2. What is the relationship between the four Team Management variables and the dependent variable of Peer Cohesion?

3. What is the relationship between each of the four Team Management variables and the dependent variable of Supervisor Support?

4. What is the relationship between each of the four Team Management variables and the dependent variable of Autonomy?

5. What is the relationship between the four Team Management variables and the dependent variable of Task Orientation?

6. What is the relationship between the four Team Management variables and the dependent variable of Work Pressure?

7. What is the relationship between the four Team Management variables and the dependent variable of Clarity?

8. What is the relationship between the four Team Management variables and the dependent variable of Control?

9. What is the relationship between the four Team Management variables and the dependent variable of Innovation?
10. What is the relationship between the four Team Management variables and the dependent variable of Job Satisfaction?

**Procedures**

The study was conducted on the basis of a population of school systems employing the concept of management teams in Ohio as identified in a prior research effort at the Ohio State University by Arthur D. Smith, Jr., (1982). Smith selected his population from the 190 city school districts and 49 exempted village school districts in Ohio at that time. A district was included in Smith's population if it had a team approach and the superintendent agreed to participate. Fifty-six Ohio districts were identified and surveyed by Smith.

For the purposes of this study, the population was limited to the 64 high school principals in the 56 districts identified by Smith. One respondent was disqualified. Fifty-nine (93.7%) usable responses were returned. However for those districts having more than one high school principal, only the responses from one high school principal were allowed so that possible duplication of responses was eliminated. The principals to be included were selected randomly per district. This reduced the total population to 53 high school
principals. Thus, the unit of analysis for this study is the school system.

A questionnaire, containing three sections, was developed and sent to the high school principals. The first section provided descriptive data for the sample. The second section contained items pertaining to the four Team Management variables. The third section, based on Moos' Work Environment Scale, contained items pertaining to the ten Work Climate variables.

Frequencies, means, and standard deviations were provided for all the variables. Pearson correlation was used to investigate the relationships among the variables posed by the research questions. Regression analysis was used to investigate the relative importance of the four Team Management variables in determining the proportion of variance within the Work Climate variables.

SUMMARY OF FINDINGS

Descriptive Variables

Each of the survey respondents was asked to provide professional information along with some information about his school. The responses to these items reveal the following information:

1. The population was dominated by male high school principals. Only one (1.9%) of the respondents was a female.
2. The principals included in this population, as a whole, have had a relatively long tenure as administrators in their present school districts. Well over half (60%) of the respondents had served in an administrative capacity for their districts for over seven years. This fact suggests that because of their relative longevity of experience in their current school district, the respondents included in this population serve as good judges of what is presently happening in regard to how the district is managed.

3. Most of the respondents (77%) are over 41 years of age. Again, this fact indicates that the population as a whole provides a good degree of life experience, enough perhaps to preclude most members of the sample from quickly embracing a passing fad or trend.

4. The majority of the respondents (75%) has served in their current position of high school principal for at least four years, indicating that their stability in their present roles would place them in a good position to have observed and felt the effects of their district's team approach.

5. Only two members of the population (3.8%) responded that they held doctorates.
6. The great majority (68%) of the population has had at least 11 years of total administrative experience. As compared to their length of administrative experience in their current district, this figure suggests that a number of the respondents have held administrative positions in other school districts. This overlap of experience would provide some members of the population different perspectives from which to evaluate varying approaches to management.

7. Seventy-nine percent of the principals lead high schools organized on a 9-12 basis.

8. Of the high schools represented by the principals in the sample, 70% have enrollments over 801 students.

**Research Questions**

Ten research questions regarding the relationship between the four Team Management variables of Status, Communication, Exchange, and Trust and the ten Work Climate variables of Involvement, Peer Cohesion, Supervisor Support, Autonomy, Task Orientation, Work Pressure, Control, Clarity, Innovation, and Job Satisfaction. Although a discussion of the statistical analysis for these research questions is presented in the preceding chapter, a brief summary is provided here.
1. **Status, Communication, Exchange, Trust and Involvement.**

The Pearson's R for each relationship fell in the moderate or strong, positive range, according to Kerlinger's guidelines. The regression analysis shows that 54% of the total variance of Involvement is explained by these four Team Management variables. It appears then that the extent to which team members are concerned about and committed to their jobs (Involvement) has a positive association with the existence of Status, Communication, Exchange, and Trust on the management team.

2. **Status, Communication, Exchange, Trust and Peer Cohesion.**

The Pearson's R for each relationship fell in the moderate, positive range. The regression analysis shows that 48% of the total variance of Peer Cohesion is explained by the four Team Management variables. These results suggest that the extent to which team members are friendly and supportive of one another (Peer Cohesion) is moderately, positively associated with the existence of Status, Communication, Exchange, and Trust on the management team.
3. **Status, Communication, Exchange, Trust and Supervisor Support.**

The Pearson's R for each relationship fell in the moderate to high positive range. The regression analysis shows that 59% of the total variance of Supervisor Support is accounted for by the four Team Management variables. Thus, it appears that the extent to which management is supportive of team members and encourages team members to be supportive of one another (Supervisor Support) is closely, positively associated with the presence of Status, Communication, Exchange, and Trust on the management team.

4. **Status, Communication, Exchange, Trust and Autonomy.**

The Pearson's R for each relationship fell in the moderate, positive range. The regression analysis shows that 41% of the total variance of Autonomy can be explained by the four Team Management variables. It can be concluded, therefore, that the extent to which team members are encouraged to be self-sufficient and to make their own decisions (Autonomy) has a clear, positive association with the presence of Status, Communication, Exchange, and Trust on the management team.
5. **Status, Communication, Exchange, Trust and Task Orientation.**

The Pearson's R for each relationship fell into the moderate, positive category. The regression analysis shows that 41% of the total variance of Task Orientation is accounted for by the four Team Management variables. These results indicate that a clear, positive association exists between the degree of emphasis by team members or good planning, efficiency, and getting the job done (Task Orientation) and the existence of Status, Communication, Exchange, and Trust on the management team.

6. **Status, Communication, Exchange, Trust and Work Pressure.**

The Pearson's R for each relationship fell in the low, negative range. The regression analysis shows that only 7% of the total variance of Work Pressure is accounted for by the Team Management variables. It can be said that a very slight negative association exists between the degree to which the press of work and time urgency dominate the job milieu of team members (Work Pressure) and the presence of Status, Communication, Exchange and Trust on the management team.
7. **Status, Communication, Exchange, Trust and Clarity.** The Pearson's R for each relationship fell in the moderate to strong, positive range. The regression analysis shows that 63% of the total variance of Clarity is explained by the four Team Management variables. These results indicate that a strong, positive association exists between the extent to which team members know what to expect in their daily routine and how explicitly rules and policies are communicated (Clarity) and the presence of Status, Communication, Exchange, and Trust on the management team.

8. **Status, Communication, Exchange, Trust and Control.** The Pearson R for each relationship fell in the negligible range. In addition, only 20% of the total variance for Control is accounted for by the Team Management variables. Thus, little can be said about these relationships, except that Status, Communication, Exchange, and Trust appear to have no definite effect on whether team members feel that rules and pressures are being used to keep them under control (Control).
9. **Status, Communication, Exchange, Trust, and Innovation.**

The Pearson's R for each relationship fell in the low to moderate, positive range. The regression analysis shows that only 24% of the total variance of Innovation is explained by the Team Management variables. Thus, it appears that a slight, positive association does exist between the degree of emphasis by team members on variety, change, and new approaches (Innovation) and the presence of Status, Communication, Exchange, and Trust on the management team.

10. **Status, Communication, Exchange, Trust and Job Satisfaction.**

The Pearson R for each relationship was in the moderate to high positive range. The regression analysis shows that 59% of the total variance of Job Satisfaction is explained by the four Team Management variables. These results indicate that a strong, positive association exists between the extent to which team members feel a sense of influence and contribution as a result of their participation on the management team (Job Satisfaction) and the presence of Status,
Communication, Exchange, and Trust on the management team.

CONCLUSIONS

Several conclusions can be offered from the analysis of data reported in this study. These conclusions are based on the findings as presented in the previous section of this chapter.

I. The team management approach has a consistently strong, positive impact on the Relationship Dimension of the Work Environment for the principals in this study.

According to Moos (1981) the Relationship Dimension of a work environment identifies "the nature and intensity of personal relationships within the environment" (p. 11). This dimension assesses "the extent to which people are involved in the environment, the extent to which they support and help each other, and the extent to which there is spontaneity and free and open expression among them (Moos, p. 11). In Moos' WES, Real Form, the three measures which comprise the Relationship Dimension are the variables of Involvement, Peer Cohesion, and Supervisor Support. The analysis of the data has shown that in each case, the relationships between these three variables and the four Team Management variables exist in the moderate to high positive range, with a low of .49
(Exchange/Supervisor Support) to a high of .73 (Trust/Supervisor Support). In addition, the regression analysis lends support to this conclusion since the Team Management variables explain a good degree of the variance of these Relationship Dimension variables. The team approach, therefore, does have a strong, positive relationship to building and developing positive personal and organizational relationships for the school systems included in this study.

II. The team management approach has a generally strong, positive impact on the Personal Growth Dimension of the Work Environment for the principals in this study.

Moos says that the Personal Dimension of a work environment assesses "the basic directions along which personal growth and self-enhancement tend to occur in the particular environment" (1981, p. 13). The measures comprising the Personal Dimension of the WES, Real Form, are the variables of Autonomy, Task Orientation, and Work Pressure. To that dimension the added variable of Job Satisfaction should be included. In the cases of Autonomy, Task Orientation, and Job Satisfaction the relationships of these variables to the Team Management variables fell into the moderate to high range. The coefficients for Work Pressure/Team Management variables
were all in the low, negative range. The range of the coefficients for these variables extends from a low of -.17 (Status/Work Pressure) to a high of .74 (Communication/Job Satisfaction) and Trust/Job Satisfaction. The low, negative relationship between Work Pressure and the Team Management variables suggests that the Team Management approach does provide some relief for the press of work and time urgency on the management team. With the exception of Work Pressure/Team Management variables, the regression analysis indicates that the Team Management variables explain a moderate amount of the total variance for the Work Climate variables included in the Personal Growth Dimension. Thus, the team management approach does have a generally strong, positive relationship to promoting personal growth and development in the school systems included in this study.

III. The team management approach has a mildly positive impact on the System Maintenance and System Change Dimensions for the principals in this study.

According to Moos, the System Maintenance and System Change Dimension of a work environment assess the "extent to which the environment is clear in its expectations, maintains control, and is responsive to change" (1981, pp. 13-14). The measures of this dimension in the WES, Real Form, are the variables of Clarity, Control, and
Innovation. This data analysis for the variables in this dimension displays a wider range of relationships than the other two dimensions. For example, it appears that the Team Management variables bear very little relationship to the principals' feelings about whether or not rules and pressures are imposed to keep them in line (Control). Coefficients for these relationships were mainly in the negligible category, and the regression analysis shows that the Team Management variables explain only about 20% of the total variance of Control. On the other hand, the relationships between the four Team Management variables and Clarity are very strong, and the regression analysis shows that over 60% of the total variance of Clarity is explained by the four Team Management variables. Thus, for these school systems a Team Management approach does have a very positive relationship to whether the principals know what to expect in their daily routine (Clarity). The coefficients obtained for the Team Management variables and Innovation all fall within the low, positive range, and the regression analysis indicates that the Team Management variables do make a contribution, albeit not a large one, to the explanation of the total variance of Innovation. It can be concluded, therefore, that the team management approach does have a fairly positive relationship to school systems in this study.
having clear expectations of their people (Clarity) and being responsive to change (Innovation).

IV. Of the four Team Management variables, Communication and Trust have the greatest influence on the Work Environment of the school districts included in this study.

The discussion of the regression analysis shows that the Team Management variables of Communication and Trust each obtained the highest Beta Weight four times out of the total equations. For eight of the Work Climate variables, Communication or Trust do the best job of explaining the amount of variance for those eight variables. In addition, these results for Communication cut across all three of the general dimensions of the Work Climate scale, and the results for Trust cut across two dimensions - Relationship and Personal Growth. These results for this population would indicate that the clearer and richer the communication within a management team and the higher the degree of trusting behavior, the stronger and more effective the team approach would be.

RECOMMENDATIONS

1. Since the population of this study was limited to high school principals from selected school districts in Ohio, it would be helpful to replicate this study using different populations. A better understanding of the Team
Management variables would be obtained by surveying a broader representation of different types of management team members. Also, a more diversified population would enable a researcher to more thoroughly investigate attitudes of females toward the management team approach as well as to study whether the educational level of team members has an impact on attitudes toward the management team. In addition, this study should be replicated in states other than Ohio to determine if any regional differences exist.

2. In order to make inferences about the team management concept in general, this study should be replicated using a random sample of management team members in school systems throughout the state of Ohio or possibly across the nation.

3. Since a high degree of interest in team management also exists in the business world, this study should also be replicated in the field of business. Results of this study could be compared and contrasted to see if certain applications of the team management approach exist between educational and business organizations.

4. Further study of the literature and research on team management should be conducted in order to isolate other possible Team Management variables. Although the results of this study appear to support Status,
Communication, Exchange and Trust as important elements of a team management approach, the multiple regression analysis indicates that other unidentified factors may also be of importance. One suggested additional possible management team variable for study is that of the sharing of organizational goals by management team members, as identified by Schmuck in his definition of the management team (1974).

5. Administrator training programs should make potential school administrators aware of the team approach to management since this study suggests that the benefits of this approach can be quite positive for school districts.

6. Boards of Education or superintendents who wish to implement a team management approach should study the elements of such an approach as identified in this study and understand the possible consequences of using such an approach. In addition, school districts operating with team management approaches could use the questionnaire for this study with their management team members to evaluate their degree of success as well as to develop plans for improving their management team.

7. Further study of the Team Management variables should be conducted using a qualitative methodology, such as the case study approach, to provide a richer data base
through which to describe the relationships of these as well as additional variables which may be present.

8. Although this study indicates that the Team Management variables have a positive relationship with the work climate of the management team, this does not allow one to draw conclusions about the relationship of the Team Management variables to the productivity and effectiveness of the management team. Therefore, further study should be conducted relating productivity and effectiveness variables to management team characteristics.
APPENDICES
Appendix A
Dear Fellow Principal:

The team approach to management has been recommended for Ohio's school districts by the following organizations: Buckeye Association of School Administrators; Ohio Association of Elementary School Administrators; Ohio Association of Pupil Personnel Administrators; Ohio Association of School Business Officials; Ohio Association of Secondary School Administrators; Ohio School Boards Association; Ohio School Supervisors Association; and Ohio School Psychologists Association.

Through a prior research effort within the Ohio State University Department of Educational Administration, your district has been identified as having an effective management team. I am presently engaged in research to isolate variables associated with a management team and to determine the effect of these variables on the work environment of school administrators. The results of this research may help us to better understand the operational dynamics of the educational management team. This project is being conducted under the supervision of Professors Lonnie Wagstaff, Donald Anderson, and Walter Hack. I am asking your assistance in this research effort.

Would you please take a few minutes and complete the attached survey. I am aware of the many constraints placed upon your time; however, your response is urgently needed for me to move ahead with my research project. I will be very appreciative if you complete the enclosed survey and return it within the next ten days. An addressed, stamped envelope is enclosed for your convenience.

Again, thank you for your assistance.

Sincerely,

John W. Heffler
Doctoral Candidate

JWH/bd

Enclosures
VARIABLES IN THE MANAGEMENT TEAM
AND THEIR EFFECT
ON ORGANIZATIONAL CLIMATE

ABOUT THIS INSTRUMENT

This instrument is designed to examine several variables of the teaming process in management and to determine the effects on the organization's climate. Please respond to each item as thoughtfully and frankly as possible. If none of the alternatives provided for an item correspond exactly to your position or opinion, please select the alternative which comes closest to the answer you would like to give.

Each instrument is identified by a code number to simplify record-keeping and follow-up procedures. In reporting the results, no individual identity will be revealed.

Please complete this survey within the next ten days and return in the enclosed self-addressed, stamped envelope to:

John W. Hoeffler
6729 Masefield Street
Worthington, OH 43085

(Over)
I. PROFESSIONAL INFORMATION

Place a check (✓) by the response which indicates your answer for each item in this section.

A. 1. ______ male 2. ______ female

B. How long have you been employed as an administrator in your current school district?

1. less than 1 year
2. (1-3) years
3. (4-6) years
4. (7-10) years
5. (11-15) years
6. 16 or more years

C. What is your age?

1. Under 30
2. 30-40
3. 41-50
4. 51-60
5. Over 60

D. How long have you held your present position?

1. less than 1 year
2. (1-3) years
3. (4-6) years
4. (7-10) years
5. (11-15) years
6. 16 or more years

E. Indicate the highest academic degree you hold and in which field.

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<th>Degree</th>
<th>Field</th>
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<td>1. Doctorate</td>
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F. How many years have you been employed as administrator in this or any other school district?

1. less than 1 year
2. (1-3) years
3. (4-6) years
4. (7-10) years
5. (11-15) years
6. 16 or more years

G. Is your high school

1. 9 - 12
2. 10 - 12
3. Other (please specify)

H. What is the enrollment of your high school?

1. Under 300
2. 300 - 500
3. 501 - 800
4. 801 - 1000
5. 1001 - 2000
6. Over 2000
II. TEAM VARIABLES  For each item in this section, circle the response to the right that indicates the extent to which you believe the statement is true for your district. Supervisor is defined throughout as the person to whom one reports immediately. Management team refers to the entire district management team.

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(Over)
15. In order to do my job, I must have a high degree of autonomy in my position. 1 2 3 4 5

16. Our management team feels free to look at a number of alternatives before arriving at a conclusion. 1 2 3 4 5

17. Principals are involved in the district management team only when the Central Office finds it useful to include them. 1 2 3 4 5

18. Communications within our management team facilitate our team's ability to complete complex tasks. 1 2 3 4 5

19. Sometimes when I think it's best for the total district, I will press less hard for a need or goal of my own unit. 1 2 3 4 5

20. Our management team works closely as a group to solve problems. 1 2 3 4 5

21. A management team approach is desirable for this school district. 1 2 3 4 5

22. Our management team meetings are best characterized as "informational" in nature. 1 2 3 4 5

23. When the unit over which I have direct responsibility has a critical need, I find that the management team comes forward to help us out. 1 2 3 4 5

24. If I have an idea that might help to solve a problem, I feel encouraged to share it with our management team. 1 2 3 4 5

25. District policy or practice clearly indicates that I have a place on our management team. 1 2 3 4 5

26. At our management team meetings we discuss problems as a group. 1 2 3 4 5

27. As a management team, we are like an athletic team - the coach (superintendent) calls the plays and we execute them. 1 2 3 4 5

28. Our management team approach makes me want to stay with this district. 1 2 3 4 5

29. I am expected to attend our management team meetings in our district. 1 2 3 4 5
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<td>30.</td>
<td>Lines of communications within our management team permit a high degree of interaction among team members.</td>
<td>1</td>
<td>2</td>
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<td>31.</td>
<td>My involvement in our management team usually makes me feel like a winner.</td>
<td>1</td>
<td>2</td>
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<td>32.</td>
<td>Principals in this district feel free to present their opinions on problems and issues to the management team even if those opinions are in conflict with the opinions of the superintendent or a majority of the members of the team.</td>
<td>1</td>
<td>2</td>
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<td>33.</td>
<td>According to my &quot;gut level&quot; instincts, I feel that I am part of a management team.</td>
<td>1</td>
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<td>34.</td>
<td>Board of Education members direct questions or concerns about my unit through the superintendent.</td>
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<td>2</td>
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<td>35.</td>
<td>A spirit of cooperation prevails within our management team.</td>
<td>1</td>
<td>2</td>
<td>3</td>
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<td>36.</td>
<td>On this management team you learn in a hurry to keep your mouth shut.</td>
<td>1</td>
<td>2</td>
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<td>37.</td>
<td>I am included in management team meetings which have a direct bearing on my administrative unit.</td>
<td>1</td>
<td>2</td>
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<td>38.</td>
<td>The basic purpose of our management team meetings is to make decisions which address the problems and issues of the district.</td>
<td>1</td>
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<td>3</td>
<td>4</td>
</tr>
<tr>
<td>39.</td>
<td>On our management team it pays to act unselfishly.</td>
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<tr>
<td>40.</td>
<td>Our management team functions as a closely-knit group.</td>
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</tr>
<tr>
<td>41.</td>
<td>I trust our superintendent.</td>
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</table>

(Over)
III. WORK CLIMATE OF THE MANAGEMENT TEAM

There are 85 statements in the following section. They are statements about the environment of the management team within which you work.

You are to decide which statements are true of your work environment and which are false. If you think the statement is TRUE or most TRUE of your work environment, circle the 1 to the right of that statement. If you think the statement is FALSE or mostly FALSE of your work environment, circle the 2 to the right of that statement.

Please be sure to answer every statement. In this section, supervisor is defined throughout as the person to whom one immediately reports. Management team refers to the entire district management team.

<table>
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<tr>
<th>TRUE</th>
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<td>1. My work is challenging.</td>
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</tr>
<tr>
<td>2. Management team members go out of their way to help a new member feel comfortable.</td>
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</tr>
<tr>
<td>3. Central Office administrators tend to talk down to principals.</td>
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<tr>
<td>4. Principals have few important responsibilities on our management team.</td>
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<tr>
<td>5. Members of the management team pay a lot of attention to getting work done.</td>
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<tr>
<td>6. There is constant pressure to keep working.</td>
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<tr>
<td>7. Things are sometimes disorganized on our management team.</td>
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</tr>
<tr>
<td>8. There's a strict emphasis on following policies and regulations within our management team.</td>
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<tr>
<td>9. Doing things in a different way is valued on our management team.</td>
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<tr>
<td>10. There's not much group spirit on our management team.</td>
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<tr>
<td>11. The atmosphere on our management team is somewhat impersonal.</td>
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<tr>
<td>12. Supervisors usually compliment a team member who does something well.</td>
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<tr>
<td>13. Management team members have a great deal of freedom to do as they like.</td>
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<tr>
<td>14. There's a lot of time wasted on our management team because of inefficiencies.</td>
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<tr>
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</tr>
<tr>
<td>---</td>
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</tr>
<tr>
<td>15.</td>
<td>There usually seems to be an urgency on our management team about everything.</td>
</tr>
<tr>
<td>16.</td>
<td>Most management team activities are well planned.</td>
</tr>
<tr>
<td>17.</td>
<td>Most members of the management team dress in a similar style.</td>
</tr>
<tr>
<td>18.</td>
<td>New and different ideas are always being tried on our management team.</td>
</tr>
<tr>
<td>19.</td>
<td>A lot of management team members seem to be just putting in time.</td>
</tr>
<tr>
<td>20.</td>
<td>Management team members take a personal interest in each other.</td>
</tr>
<tr>
<td>21.</td>
<td>Supervisors tend to discourage criticism from team members.</td>
</tr>
<tr>
<td>22.</td>
<td>Management team members are encouraged to make their own decisions.</td>
</tr>
<tr>
<td>23.</td>
<td>Things rarely get &quot;put off til tomorrow&quot; on our management team.</td>
</tr>
<tr>
<td>24.</td>
<td>Management team members can rarely take time to relax.</td>
</tr>
<tr>
<td>25.</td>
<td>Rules and regulations for management team members are somewhat vague and ambiguous.</td>
</tr>
<tr>
<td>26.</td>
<td>Management team members are expected to follow set rules in doing their work.</td>
</tr>
<tr>
<td>27.</td>
<td>Our management team would be one of the first to try out a new idea.</td>
</tr>
<tr>
<td>28.</td>
<td>Management team members seem to take pride in our organization.</td>
</tr>
<tr>
<td>29.</td>
<td>Management team members rarely do things together after work.</td>
</tr>
<tr>
<td>30.</td>
<td>Supervisors usually give full credit to ideas contributed by team members.</td>
</tr>
<tr>
<td>31.</td>
<td>Management team members can use their own initiative to do things.</td>
</tr>
<tr>
<td>32.</td>
<td>Our management team is highly efficient and work-oriented.</td>
</tr>
<tr>
<td>33.</td>
<td>Few members of our management team work up to their potential.</td>
</tr>
</tbody>
</table>

(Over)
34. The responsibilities of supervisors on the management team are clearly defined.  
35. Supervisors keep a rather close watch on team members.  
36. Variety and change are not particularly important to our management team.  
37. Management team members put quite a lot of effort into what they do.  
38. Management team members are generally frank with each other about how they feel.  
39. Supervisors often criticize team members over minor things.  
40. Management team members are encouraged to rely on themselves when a problem arises.  
41. Getting a lot of work done is important to management team members.  
42. Management team members feel little time pressure.  
43. The details of assigned jobs are generally explained to team members.  
44. Rules and regulations are pretty well enforced on our management team.  
45. The same methods have been used for quite a long time on our management team.  
46. Few team members ever volunteer.  
47. Management team members socialize together when possible.  
48. Management team members generally feel free to discuss their compensation plan with the superintendent.  
49. Management team members generally do not try to be unique and different.  
50. Our management team emphasizes getting the work done before taking time to relax.  
51. It is very hard to keep up with your work load on our management team.
52. Expectations for management team members are clearly established.  
   TRUE  FALSE
   1      2

53. Supervisors are always checking on team members and supervise them very closely.  
   TRUE  FALSE
   1      2

54. New approaches to things are rarely tried on our management team.  
   TRUE  FALSE
   1      2

55. This organization is quite a lively place.  
   TRUE  FALSE
   1      2

56. Management team members who differ greatly from the others on the team don't get along well.  
   TRUE  FALSE
   1      2

57. Supervisors expect far too much from team members.  
   TRUE  FALSE
   1      2

58. Management team members are encouraged to learn things even if they are not directly related to the job.  
   TRUE  FALSE
   1      2

59. Management team members work very hard.  
   TRUE  FALSE
   1      2

60. A management team member can take it easy and still get his/her work done.  
   TRUE  FALSE
   1      2

61. Fringe benefits are fully explained to management team members upon employment.  
   TRUE  FALSE
   1      2

62. Supervisors do not often give in to pressure from team members.  
   TRUE  FALSE
   1      2

63. Things tend to stay just about the same on our management team.  
   TRUE  FALSE
   1      2

64. It's hard to get team members to do any extra work.  
   TRUE  FALSE
   1      2

65. Management team members talk to each other about their personal problems.  
   TRUE  FALSE
   1      2

66. Management team members discuss their personal problems with supervisors.  
   TRUE  FALSE
   1      2

67. Management team members function fairly independently of their supervisors.  
   TRUE  FALSE
   1      2

68. Most management team members seem to be quite inefficient.  
   TRUE  FALSE
   1      2

69. There are always deadlines to be met on our management team.  
   TRUE  FALSE
   1      2

(Over)
70. Management team rules and policies are constantly changing.  
1   2
71. Management team members are expected to conform rather strictly to the rules and customs.  
1   2
72. There is a fresh, novel atmosphere about our school district.  
1   2
73. My work is usually very interesting.  
1   2
74. Management team members sometimes make trouble by talking behind others' backs.  
1   2
75. Supervisors stand up for their people.  
1   2
76. Supervisors meet with team members occasionally to discuss their future goals.  
1   2
77. There's a tendency for some management team members to come to work late.  
1   2
78. Management team members often have to work beyond the normal day to get their work done.  
1   2
79. Supervisors encourage team members to be neat and orderly.  
1   2
80. If a management team member needs some time off, he/she can make it up by working extra.  
1   2
81. Things seem to be changing frequently on our management team.  
1   2
82. Principals in this district usually leave a management team meeting feeling that they have helped determine the outcome(s) of the meeting.  
1   2
83. I derive great professional satisfaction from my membership on our management team.  
1   2
84. Principals in this district feel informed about and in control of their duties and responsibilities; thus they feel in charge of their buildings.  
1   2
85. Principals in this district feel that they have sufficient influence on the decisions that determine programs and activities in their buildings.  
1   2

IV. Additional Comments (use back of page, if necessary):
Appendix B
Table 11
Distribution of Raw Scores for Management Team Variables
of Status Exchange, Communication, and Trust
(N = 53)

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<td>S.D. = 6.56</td>
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<td>S.D. = 4.76</td>
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<td>Mean = 25.13</td>
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* Values for Status, Communication, and Exchange range from a possibility of 10 (responses of 1 or "strongly agree") to each of the ten items for each variable to 50 (responses of 5 or "strongly disagree") to each of the ten items for each variable. Since Trust has 11 related items, the range is 11-55. Midpoint in the ranges for Status, Communication, and Exchange is 30. Midpoint for Trust is 33.
Table 12
Distribution of Raw Scores for Work Climate Variables
of Involvement, Peer Cohesion, Supervisor Support,
Autonomy, Task Orientation, Work Pressures, Clarity,
Control, Innovation, and Job Satisfaction
(N = 53)

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* Values for the "Work Climate" variables range from a possibility of 9 (responses of 1 or "True" to each of the nine items for each variable) to 18 (responses of 2 or "False" to each of the nine items for each variable). Since Job Satisfaction had only 4 related items, the possible range is 4 to 8. Midpoint for the first nine variables is 13.5. Midpoint for Job Satisfaction is 5.
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Table 12 (continued)
Distribution of Raw Scores for Work Climate Variables
of Involvement, Peer Cohesion, Supervisor Support,
Autonomy, Task Orientation, Work Pressures, Clarity,
Control, Innovation, and Job Satisfaction
(N = 53)

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BIBLIOGRAPHY


Wilson, Carol C. "The Role of the Principal on the Management Team as Perceived by Principals and Superintendents." Dissertation Abstracts International. 40:9 (March 1980), pp. 4843-44A.