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AN ANALYSIS OF MANAGEMENT TEAM CHARACTERISTICS, EDUCATIONAL CHARACTERISTICS AFFECTING THE QUALITY OF EDUCATION, AND SELECTED COST FACTORS OF MICHIGAN SCHOOL DISTRICTS

By

Donald Richard Miller

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ABSTRACT

AN ANALYSIS OF MANAGEMENT TEAM CHARACTERISTICS, EDUCATIONAL CHARACTERISTICS AFFECTING THE QUALITY OF EDUCATION, AND SELECTED COST FACTORS OF MICHIGAN SCHOOL DISTRICTS

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Purpose, Procedure, and Design

This study was undertaken to identify behavioral characteristics of a management team and to investigate the relationship between these characteristics and factors affecting quality of education. Responses were received from thirty-nine of ninety randomly selected Michigan school systems. These thirty-nine systems did not differ significantly from the fifty-one that did not participate on the four cost variables of size, state equalized valuation per pupil, voted millage for operation, and expenditures per pupil for operation. From the literature forty-five items were derived relating to behavioral characteristics of a management team. These items determined the Administrative Characteristics Survey (ACS) which was administered to 279 administrators in the thirty-nine districts. The Educational Characteristics Criterion (ECC),

a measure of factors affecting the quality of education, was administered to 1,630 teachers in the same thirty-nine districts.

Statistical analysis consisted of a partial correlation technique to investigate the relationships between the ACS and the ECC, controlling for cost factors. The data were analyzed using the school system as the experimental unit. The following hypotheses were tested:

> Hypothesis I. A positive statistical relationship exists between characteristics of a management team and perceptions of factors affecting educational quality.
>
> Hypothesis II. A positive statistical relationship exists between characteristics of a management team and perceptions of factors affecting educational quality, holding cost factors constant.

Correlation coefficients were computed and tested for significance.

Major Findings

The correlation coefficient between the ACS total scores and the ECC total scores across school systems (Hypothesis I) was -.33 which is statistically significant. The partial correlation coefficient for ACS total scores and ECC total scores controlling for cost factors across school systems (Hypothesis II) was -.27 which is not statistically significant and indicates no relationship exists. These findings are contrary to the hypotheses; thus, the hypotheses were rejected.

Conclusions

1. Administrator perceptions of the degree of existence of characteristics of a management team, as measured by the ACS, are inversely related to teacher perceptions of factors affecting educational quality, as measured by the ECC, in Michigan school districts.

2. The reliability of both instruments (.96 for each) is very high.

3. The concept of a management team needs revision and development. The idea of a functioning team is supported in the literature but is not supported by the measures used in this study. Further investigation into the ACS, as it relates to a concept of management team, is warranted.

4. A management team must be defined in terms of two basic types of behavioral characteristics. The first type relates to effective group processes on the managerial level of a school system, measured by the ACS. The second type relates to the emphasis that the group or team places on the real achievement of the school system, not measured by the ACS.

The results of this study demonstrate that the singular emphasis on group processes is not sufficient to be directly related to characteristics perceived by educators as being desirable in promoting educational quality. The ACS was measuring one basic factor which was identified as characteristics of a management team. However, further

consideration of ACS items showed little or no emphasis was placed on "production" characteristics, while major emphasis was placed on group processes and relationships.

The ACS is a valid measure of group processes but not of a concept of team management that presses for organizational excellence. The group characteristics identified in the ACS are necessary for the functioning of a management team; however, the concept of a management team must also include the emphasis on "production" by administrators.

ACKNOWLEDGMENTS

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CHAPTER I

THE PROBLEM

Statement of the Problem

Recent legislation in Michigan, PL 379, has resulted in collective negotiations between school boards and teachers' groups concerning wages, salaries, and working conditions. In trying to keep abreast of the rapid changes that have occurred due to this collective bargaining, administrators have tapped the resources of private enterprise which has considerable experience in the area. At the same time, many administrators have found themselves at a loss to administer agreements which contain, from an administrator's point of view, unmanageable sections. In an effort to implement these provisions administrators have often found themselves working at cross purposes with other administrators. In an effort to develop unity in an administration, administrators have again looked to the private sector in the area of participatory management.

Management Team

This search for unity and involvement in decision-making has resulted in an administrative arrangement called the management team. The concept of a management team has not yet become clear to all who use the term. For the purposes of this study a management team as it relates to educational administration refers to a set of behavioral relationships on the administrative level of a school system that promotes effective group functioning. These relationships--developed from educational and business administration--constitute an operational definition.

Management Team and Quality

One evaluation of a management team can be in terms of the quality of a school system. Does the existence of the factors affecting a management team relate significantly to factors affecting quality? As shown in the literature from the private sector, evaluation of managerial effectiveness can be stated in terms of organizational effectiveness and productivity. It is then quite feasible to evaluate the application of a managerial technique to education in terms of those factors that have been identified as contributing to the quality of education.

Objectives of the Study

The objectives of this study are:

1. To define the management team concept in educational administration terms.

2. To identify the behavioral characteristics of a management team.
3. To determine the degree that the behavioral characteristics of a management team are present in school districts as perceived by the educational administrators of that district.
4. To compare the degree to which the behavioral characteristics of a management team are present in the school districts of Michigan with a measure of the factors influencing the quality of education.

Study Rationale

The term, "management team," has been used in educational administration circles with unclear or conflicting definitions. Some object to the word "management." Others use the term as if it were a panacea for administrative problems. Authoritarians accept the term as a rationale to strengthen their power and authority, while others accept the term as a rationale to transfer their responsibility to a group. It is clear that the time has come to very clearly delimit and define the term, "management team." It is also clear that the rationale for the basic concepts of a management team should be investigated in terms of the theory and practice of educational administration.

For any particular style of management to be justified in its application to education, it must be consistent

with the achievement of the goals of the system. American educational goals include the provision of a quality education for all. This concept is brought forth in recent Supreme Court decisions relating to school segregation which is viewed as a denial of equal opportunity for all to achieve a quality education. Thus, the study of the system of management with respect to the factors affecting the quality of education in a school system is indicated as a measure of organizational effectiveness.

Characteristics of a Management Team

In defining a functioning management team in terms of a set of behavioral characteristics three broad categories emerge. The categories will be useful in the further refinement of the instrument and may be of some diagnostic use. The individual characteristics are listed as items in an instrument, the Administrative Characteristics Survey (ACS), designed to elicit responses from administrators that will indicate to what degree these characteristics are present in a school system.

Quality of Education

The quality of education is not an easy concept to define; there is not widespread agreement concerning the nature of the quality of education. However, several studies have systematically attempted to identify those factors which contribute to the quality of education. The

Educational Characteristics Criterion (ECC) has been developed to measure the degree to which these factors exist in a school system as perceived by teachers, administrators, school board members, and others. The use of the Educational Characteristics Criterion will provide some basis or standard with which to better understand the factors relating to a management team that administrators perceive as being present in a school system. While the Educational Characteristics Criterion does not necessarily measure outcomes, it does measure attitudes and perceptions held by teachers about the factors affecting the quality of education (i.e., the input of a school system). A system of management should, to some extent, affect these perceptions.

Importance of the Study

This study will add to the literature on the management team by trying to establish or deny the relationship of a management team approach to factors affecting quality. The establishment of a link will provide the groundwork necessary to further refine the concept of management team and understand what factors in the school system may possibly be affected by this particular type of management. The failure to establish any relationship will be indicative of the possibility that the concept of management team should be discarded or redefined so that

there is a management organization in a school system that relates in practice to the goals of the organization.

Assumptions and Limitations

Assumptions

1. It is assumed that the administrator responses to the Administrative Characteristics Survey will actually represent their perceptions of the relationships existing in the school system.
2. It is assumed that the school system management team score on the Administrative Characteristics Survey will represent the actual administrative situation in the school system.
3. It is assumed that the Educational Characteristics Criterion actually measures the factors which contribute to the quality of education.
4. It is assumed that teachers will respond to the Educational Characteristics Criterion with their honest perceptions of quality.
5. It is assumed that the school districts from the sample that agree to participate in the study are representative of the population of school districts in the state of Michigan exclusive of the school district of the city of Detroit.

Limitations

1. The research design of this study does not permit any causal relationships to be established. The analysis of the data may yield answers to questions about relationships that may or may not exist.
2. This study is limited to a sample of school districts selected at random from the population of public school districts in the state of Michigan, excluding the school system of the city of Detroit.
3. The study is limited to the extent that the school systems from the sample that agree to participate are representative of the entire sample of Michigan school districts exclusive of the school district of the city of Detroit.

Definition of Terms

Participating School Districts will be those K-12 public school districts in Michigan, excluding the school district of the city of Detroit, that were selected in a random sample and that agreed to participate in this study.

Educational Quality for the purposes of this study will be defined as those attributes of a school system measured by the Educational Characteristics Criterion.[1]

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[1]Maurice D. Pelton, "A National Analysis of Educational Quality as Measured by the Educational

Management-Administration. The term management with respect to educational administration has come to be associated with the managing of the nonprofessional or business aspects of a school system. The term administration has come to be associated with the managing of the professional aspects of a school system including leadership functions, supervisory functions, and personnel administration. For the purposes of this study the terms management and administration will broadly include all aspects of both definitions. The term management team will be synonymous with administrative team and in this context will refer to all the functions necessary to conduct the affairs of a school system both from the business and professional aspect.

Administrator is a certified employee of the school district who has administrative or supervisory responsibilities in that school district.

Teacher is a certified employee of the school district who has students assigned to him for purpose of instruction.[2]

Characteristics Criterion (ECC), Achievement, and Selected Cost Factors" (unpublished Ed.D. dissertation, Michigan State University, 1966), p. 9.

[2] Ibid.

Category Score on the ECC is:

> . . . the sum of the weighted item responses of the ECC included in each of the following categories of educational quality: (1) student's level of knowledge and attitudes, (2) community attitudes, (3) curriculum, (4) use of facilities, (5) socio-cultural composition of the community, (6) administration and supervision, and (7) teacher and teaching methods.[3]

Total Quality Score is the sum of the weighted item responses of a teacher to the ECC.

School System Quality Score is the average of all total quality scores on the ECC for that school system.

Management Team Total Score is the sum of the weighted responses of an administrator to the ACS.

School System Management Team Score is the average of all management team scores on the ACS for the entire school system.

Size of a School System is the number of pupils in that school system as recorded on official membership records for the 1969-70 school year.

Effort of a School System is the amount of total millage voted for operation of that school system for the 1969-70 school year.

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[3] Ibid.

Wealth of a School System is the amount of state equalized valuation per pupil of that school system for the 1969-70 school year.

Expenditures are defined as the dollar amount of money spent per pupil on the operation of the school system for the 1968-69 school year.[4]

Management Team Category Score is the sum of the weighted item responses for the following categories of the ACS: (1) personal and organizational relationships, (2) effective group processes relating to shared decision-making, and (3) effective group processes relating to unity and communication.

Definition of Management Team

For the purposes of this study a clear definition of a management team in school administration is necessary. Broadly conceived to include several concepts, the term, "management team," has come into use without a clear and concise definition.

For example, Lester Anderson has discussed management team in terms of organizational structure being designed to keep communications open in the decision-making process; also, he feels there must be desire of all

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[4]1968-69 figures were used due to the unavailability of 1969-70 figures.

administrators to want a management team.[5] Smith discusses the management team from the principal's point of view. He relates management team to decision-making but not necessarily to organizational structure. He develops the ideas of the responsibilities inherent for principals in shared-decision-making and administrators negotiating, although he feels that negotiations are a last resort that would force the issue of involvement.[6]

A third point of view is put forth by the Michigan Congress of School Administrator Associations which develops a management team concept in terms of extensive job descriptions and involvement in the negotiations process.[7] Still another point of view is expressed by Pino and Johnson as they discuss the administrative team in terms of a team assistant who will free principals from routine matters.[8] Walker discusses the management team by stating

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[5]Lester W. Anderson, "Management Team Concept," Michigan Journal of Secondary Education, X (Spring, 1969), 24-33.

[6]David C. Smith, "The Management Team" (position paper published by the Michigan Association of Elementary School Principals, East Lansing, August 13, 1968).

[7]"Management Team Concept" (position statement published by the Michigan Congress of School Administrator Associations, March 21, 1968).

[8]Edward C. Pino and Wesley Johnson, "Administrative Team: A New Approach to Instructional Leadership," The Clearing House, XLII (May, 1968), 520.

that it will vary in every system, and thus there is no definition for team management.[9] Pinis, as does Smith, discusses team management in terms of involvement of principals.[10]

In reviewing the literature on the topic of a management team several common elements are apparent. These elements can be stated in terms of relationships among administrators. A management team, then, is the existence of a set of administrative relationships in a school system which may be present or absent independently of one another.

A management team varies in degree--not in kind. There may be a greater or lesser degree of the existence of a management team in different school districts. The set of relationships is broad, and this study identifies only some of them. However, for the sake of clarity and understanding, the relationships that determine the existence of a management team are defined as those relationships that are stated in the Administrative Characteristics Survey.

The specific administrative relationships of a management team are derived from the following basic

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[9]Robert W. Walker and Eugene C. Hammel, "Management by Design Using the Team Approach," Michigan School Board Journal, XVI (February, 1969), 12-14.

[10]Fritz Pinis, "The Management Team Concept Myth or Reality," Michigan School Board Journal, XV (January, 1969), 7.

concepts. First, the leadership style of the superintendent of schools must encourage involvement and cooperation on the part of the administrative staff so that personal relationships are established that promote effective group functioning. Investigation into the superintendent's leadership style relating to the degree a management team exists should lead to a more complete understanding of the dynamics of a management team.

The literature from business management on managerial style points out one type of leadership that can be very positive in developing a management team. Blake and Mouton describe five basic types of leadership styles. Each leadership style is characterized by its concern on two different axes of a grid. One axis is identified as "concern for people"; the other axis is "concern for production." One managerial type they describe best typifies the leader most consistent with a management team. This leader successfully maximizes concern for production and concern for people at the same time. The leader would bring personal goals into congruence with organizational goals to the extent that individuals would identify with organizational goals. The leader would set limits broad enough to allow individuals freedom to operate successfully within them. This leader behavior is neither laissez-faire nor autocratic.[11] Blake and Mouton's description of this

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[11]Robert R. Blake and Jane S. Mouton, The Managerial Grid (Houston: Gulf Publishing Company, 1964).

leadership style is similar to the concerns of Halpin and his two basic areas of initiating structure and consideration.[12] Getzels also provided some insight into the question of leadership in his discussion of idiographic and nomothetic dimensions. He states that conflict arises when the idiographic dimension is not compatible with the nomothetic dimension and people feel pulled in two directions.[13] The leadership style, then, of the superintendent is important and must integrate the personal goals of people with the organizational goals if it is to promote positive human relationships and effective group processes.

The second basic concept of a management team is that administrative, organizational, and personal relationships are clearly defined and promote inclusion of all administrators in group processes. This idea refers to situations of respect and trust on the informal level and to discretion on the part of all administrators in their relationships with teachers. The organizational chart is important not for the sake of the organizational relationships it proscribes but for the organizational relationships it describes. The system that has an organizational pattern so that it promotes trust and respect among the

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[12]Andrew W. Halpin, Theory and Research in Administration (New York: Macmillan Co., 1967).

[13]Jacob Getzels, "Administration as a Social Process," in Administrative Theory in Education, ed. by Andrew Halpin (New York: Macmillan Company, 1967).

members of the administrative staff has one very important factor of a management team.

A third concept of a management team is that the administrative staff must function as a highly effective work group either formally or informally with respect to shared decision-making. The team does not have to control the processes of decision-making and policy formation; it must just have a part in them. A team that controlled the decision-making process would in fact be going beyond participatory management to a system that would be dysfunctional. The existence of a high degree of team management due to participation in decision-making does not preclude the need for lines of authority, responsibility, and accountability.

A fourth concept of a management team is that the administrative staff must function as a highly effective work group, either formally or informally with respect to unity and effective communication. The administrators must feel that they are a part of the team that manages the school system; they must not feel that the board of education and superintendent are acting unilaterally. To achieve this unity, communications must be free, fluid, and under no restraint. In some school systems there is virtually no communication on the administrative level except between superior and subordinate. Communication in a highly effective work group must include all members of the group as well as being regular and frank.

Hypotheses to be Tested

General Hypothesis I

A positive statistical relationship exists between characteristics of a management team and perceptions of factors affecting educational quality.

Operational HIa: A positive significant correlation exists between the total scores on the ACS and the total scores on the ECC.

Operational HIb: A positive significant correlation exists between the total score on the ACS and each category score on the ECC.

General Hypothesis II

A positive statistical relationship exists between characteristics of a management team and perceptions of factors affecting educational quality, holding cost factors constant.

Operational HIIa: A positive significant correlation exists between ACS and ECC controlling for the effects of four cost factors.

Operational HIIb: A positive significant relationship exists between ACS and ECC controlling for the effect of the cost factor of number of pupils.

Operational HIIc: A positive significant relationship exists between ACS and ECC controlling for the effect of the cost factor of state equalized valuation per pupil.

Operational HIId: A positive significant statistical relationship exists between ACS and ECC controlling for the effect of the cost factor of voted millage for operation of schools.

Operational HIIe: A positive significant statistical relationship exists between ACS and ECC controlling for the effect of the cost factor of dollars spent per pupil.

Organization of the Remainder of the Thesis

This chapter has developed the problem by stating objectives, developing the rationale, discussing the importance of the study, and stating the assumptions and limitations that must be taken into account. In the definition of terms and statement of hypotheses a more specific attack on the problem was stated.

Chapter II will review the literature pertinent to the problem from three aspects. The first section will deal with specific literature on the management team and school administration; the second section will deal with leadership and organizational styles from the literature outside of educational administration; the third section will review the literature on the ECC.

Chapter III will detail the method of operation for the study. Discussion on sample, statistical methods and design will be included, along with an analysis of the instruments. Chapter IV will present an analysis of the data. Chapter V will consist of summary, conclusions, and recommendations.

CHAPTER II

REVIEW OF THE LITERATURE

This chapter is divided into three sections. The first section deals with current literature concerning the management team and school administration. The second section is concerned with the literature of business management and management of organizations. Studies from the private sector of society will be reviewed, along with pertinent studies from other disciplines. The concept of participatory management and group decision-making, along with the general areas of communications and group unity, will be discussed in this section. The third section reviews the literature on the Educational Characteristics Criterion from the standpoint of the appropriateness of its use in this study.

Related Literature in School Administration

The Michigan Association of Elementary School Principals (MAESP) published a position paper in August, 1968, outlining its position on the management team. This position basically calls for more involvement for elementary principals in the administration of the total

educational system; in addition, it points out that teachers are bargaining with the school board and that principals might be forced into a bargaining position. However, the paper recommends only informal bargaining procedures for administrators unless there is a complete refusal on the part of the superintendent and school board to involve principals to a greater extent in the determination of their professional destiny. The paper does not condone the strike; however, it encourages principals to have a part in the administration of the entire system. The position paper also puts forth the idea that if principals are to have this involvement, they must be willing to accept the responsibility that goes along with it.[1]

In 1968, the MAESP and the Michigan Association of Secondary School Principals (MASSP) jointly published a booklet which states their positions with respect to the management team. The MASSP position states that school boards should work to:

1. Establish a clearly worded, written policy which defines the "career role" of the professional administrator with regard to his function, responsibility, potential as to salary and fringe benefits, his expectations for future advancement, and his personal role with relation to the "total management team."
2. Grant all administrators full recognition as management employees commensurate with other groups providing equal status in the educational structure.

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[1]Smith, "The Management Team."

3. Include within the official Board policies a definition of the professional administrator's role with regard to negotiations between the Board and the teaching staff that clearly states:
   a) The full administrative management team should plan continuously with regard to all aspects of negotiations so that all members are constantly informed, involved and consulted.
   b) The principals within the administrative group are fully represented on the actual negotiating team during all bargaining.
   c) The total administrative group should be involved with the interpretation of the completed document so as to be able to work with and implement the conditions of the Master Contract on the job.
   d) The "management team approach" also spells out the rights of principals that will include such rights, benefits and professional status as is enjoyed by his staff; the recognition as an integral part of the educational staff to negotiate at any time with the Superintendent and the Board of Education on the welfare of his own professional situation; and the right to expect the full support of both the Superintendent and the Board from pressure groups and unnecessary harassment within the regular scope of his work.[2]

Accordingly, the MAESP position states:

> This concept requires that the principal recognize the broader responsibility of the superintendent in matters relating to the central office, school district wide needs, and matters relating to the total community. It also demands that the expertise of the principal be recognized. It must be recognized that the principal is the expert generalist who speaks for the school. The role of the principal is to the school community much akin to the role of the superintendent as applied to the total school district.
>
> The management team concept, in order to be meaningful, must be practiced more than it is preached. It requires that all members of the administrative team keep other members of the team informed on matters of mutual concern. Furthermore, the sharing

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[2] Guide Lines for Michigan Principals (pamphlet published by Michigan Association of Elementary School Principals and Michigan Association of Secondary School Principals, July, 1968), p. 50.

> of information should take place before decisions are made and must be implemented at each level by those involved. In short, the management team concept requires a mutual respect among team members and a recognition that they are best equipped to act within their area of responsibility while acknowledging that administrative decisions are implemented at more than one level within a school system.[3]

As a result, the MAESP is on record as endorsing the management team. The following four points show the factors that they feel should be present in a management team:

1. There must be two-way channels of communication from principals and other administrators to the board of education for the purposes of developing procedures for coming to agreement in the determination of salary and working conditions.
2. The roles of each administrator must be written and contractural [sic] with a salary and benefits schedule commensurate with each level of responsibility. Salary and benefits of principals must be substantially higher than that of teachers in order to reflect the responsibilities inherent in their positions.
3. It is essential that elementary principals and other administrators be represented and actively involved with negotiating teams in the negotiations process.
4. Local boards must provide inservice education and training for principals and all administrators to update and improve managerial knowledge and skills to meet the demands for more sophisticated performance on the part of administrators. It is essential that elementary principals be encouraged to attend the state and national meetings of their association.[4]

The Congress of School Administrator Associations was formed as administrator associations disengaged from the Michigan Education Association (M.E.A.) after formal collective bargaining began in Michigan. The Congress has

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[3] Ibid., p. 59.

[4] Ibid., p. 61.

published a position paper of the management team concept which is very similar to the position paper on the two principals' associations. Accordingly, there is one statement in the text of the paper which tends to state the basic belief of all the position papers so far published.

> It is a basic belief of the Michigan Congress of School Administrator Associations that administrators can become more effective through joint participation on local management teams.[5]

Other publications and studies have treated the concept of a management team from an analytical viewpoint. For example, Anderson looks at the management team from four viewpoints: (1) the principals' view, (2) the board of education's view, (3) the superintendent's view, and (4) the legal view. According to this article, management team is dependent on all parties wanting an involvement in policy formation of all levels of the administrative staff. There is some evidence to suggest that possibly some administrators do not want this type of functioning. Anderson also points out that the organizational structure must be designed to keep communications open in the decision-making process.[6]

Based on Anderson's article, a study has emerged from the Metropolitan Detroit Bureau of School Studies, Inc. analyzing patterns of organizational structure. The

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[5]"Management Team Concept," p. 1.

[6]Anderson, "Management Team Concept," pp. 24-33.

questionnaire distributed in this study tries to determine the type of team organization that schools have. The study identified four basic management team patterns of school organizational structure:

1. School districts where the superintendent meets with just one group that includes all the management team members or their representatives were classified as employing "single" management team structure;
2. School districts where the superintendent meets with a group that includes all the management team members or their representatives as well as a group that includes just central administrators were classified as employing "dual" management team patterns of school organizational structure;
3. School districts where the superintendent meets with a group that includes all the management team members or their representatives and one or more other groups that include different segments of the management team members were classified as employing "multiple" management team patterns of school organizational structure; and
4. School districts where the superintendent does not meet with a group that includes all the management team members or their representatives, but meets with one or more groups that include different segments of the management team members were classified as employing "divisional" management team patterns of school organizational structure.[7]

Pino and Johnson, discussing management team from an organizational point of view, support organizational change to allow team management to develop. The key to the organizational design as they describe it would be a

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[7]Metropolitan Detroit Bureau of School Studies, "An Analysis of the Questionnaire, Patterns of School Organizational Structure," Detroit, October, 1969, p. 2. (Mimeographed.)

team assistant concerned with internal administrative functions.[8]

Thus, one basic viewpoint about a management team seems to be firmly established--a management team is a function of organizational structure. However, in most other position papers, a management team has been viewed as a working relationship and not necessarily from the organizational structure point of view. This working relationship concept of the management team in educational administration is that a functioning team would not necessarily be an organizational function but rather a set of behavioral relationships among the members of the administrative staff. Fensch and Wilson develop this idea in terms of a "Superintendency Team" based on administrative relationships and not organizational structure.[9] Walker and Hammer follow this view by describing a team approach in terms of deriving goals and accountability.[10]

In Michigan there seems to be a need for some sort of administrative participatory decision-making in education. A study by Appel points out that "Over half the

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[8]Pino and Johnson, "Administrative Team: New Approach to Instructional Leadership," p. 520.

[9]Edwin A. Fensch and Robert D. Wilson, The Superintendency Team (Columbus, Ohio: Charles E. Merrill Books, 1964).

[10]Walker and Hammel, "Management by Design Using the Team Approach," pp. 12-14.

superintendents assume sole responsibility for the performance of all the management functions."[11] Appel goes on to point out that in almost all school systems the superintendent continues to be a partial administrator in each of his buildings. Most superintendents do not have an organization that fosters participatory decision-making by those affected by the organization. He goes on to conclude that " . . . in all too many instances the system-wide decisions and courses of action taken are determined by a relatively small number of persons at the central office level."[12] This study shows that the larger the number of teachers employed in the school system the greater degree the superintendent shared and assigned management functions.[13]

Openlander discusses the administrative structure in a middle-sized Michigan school district in terms of decentralization rather than a management team. Much of the rationale for decentralization is to diffuse managerial control to the degree that the decision-making process is closer to the point where decisions must be implemented.[14]

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[11]Paul Henry Appel, "A Study of Selected Administrative Principles as They May Be Applied in Certain School Districts in the State of Michigan" (unpublished Ed.D. dissertation, Michigan State University, 1962), p. 152.

[12]Ibid., p. 153. [13]Ibid., p. 154.

[14]Stuart L. Openlander, "The Development of an Administrative Structure in a Middle Sized City School District" (unpublished Ed.D. dissertation, Michigan State University, 1968).

Bringing the decision-making process to the lower levels of the organizational structure is an attempt to accomplish the same result as participatory group decision-making conceived in terms of a management team.

One of the basic reasons for the emergence of the push toward the management team in Michigan has been the inconsistent perceptions of the role of principal. The development of a management team could be the agent to solidify and clarify these role perceptions so that less conflict arises. For example, in a study conducted by Maxwell in Flint, Michigan, principals and teachers did not have similar perceptions of the principals' leader behavior. Using the Organizational Climate Description Questionnaire (OCDQ), Maxwell came to a conclusion that would support the type of leader behavior a principal would be encouraged to exhibit in a management team situation. In schools where the behavior of the principal and the teaching staff were indicative of a balanced blending of the task-needs dimension of organizational behavior, pupil achievement was higher.[15] Thus, it seems that the balance of two basic dimensions of an organization provides the most effective management. Getzels provides the theoretical framework in his model of the

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[15]Robert Earl Maxwell, "Leader Behavior of Principals: A Study in Ten Inner-City Elementary Schools of Flint, Michigan" (unpublished Ed.D. dissertation, Wayne State University, 1967).

two dimensions of an organization--the idiographic and the nomothetic. The successful integration of personal goals and organizational goals is what reduces conflict and allows the system to function.[16]

Egner and Lane point out a distinct need for involvement of building principals in negotiations and decision-making. They state three changes that must come about to affect this involvement:

1. Administrators must accept the fact that the area of unilateral decision-making is over.
2. The future role of the administrator will require a higher level of competence than in the past.
3. There must be a complete reassessment of the roles of board of education, administrator, and teacher.[17]

This study indicates the advocacy for management teams in Michigan today.

It is felt that the fusion of an administrative staff into a team will tend to orient the administration to a "management" position which operates a school system as a business and not as a professional organization. On the other hand, Dill proposes five goals of the decision-making process which take into account the professional nature of an educational organization and, at the same time, proposes one of the basic factors of management team:

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[16]Getzels, "Administration as a Social Process," pp. 150-65.

[17]Joan Roos Egner and Kenneth Lane, "Collective Bargaining and Administrative Prerogatives," Peabody Journal of Education, XLVI (November, 1968), 142.

1. Control goal: Insure that decisions do get made and that, for control purposes, there be someone to talk with when it comes time to evaluate decisions or seek explanations for their results.
2. Motivation goal: Bridge the gap that often exists between making and implementing decisions by making them in ways that make people who will have to carry them out feel identified with their successful implementation.
3. Quality goal: Improve the quality of decisions by involving those who have most to contribute to the decisions.
4. Training goal: Develop skills for handling problems in the men who will move eventually into administrative positions and test for the presence of these skills.
5. Efficiency goal: Get decisions made as quickly and with as little waste of manpower as possible.[18]

Each of these goals is a reason for different degrees of participation in decision-making, but each is also an argument for participation. It is this participation that will take into account the professional nature of the educational enterprise.

Involvement seems to be the key to the establishment of a functioning team on the administrative level. Moody describes how a principal can be "caught in the middle" between the superintendent and the teachers. The role of the principal must change for the administration to function as a unit and maintain consistency in its operation.[19] Egnatoff, discussing principals in

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[18]William R. Dill, "Decision-making," in Behavioral Science and Educational Administration, Part II, ed. by Daniel E. Griffiths (Chicago: University of Chicago Press, 1964), p. 216.

[19]Harold Moody, "Plight of the Principal," The Clearing House, XLII (May, 1968), 542.

Saskatchewan, recognizes this problem and concludes that a greater involvement for principals in the decision-making process of the school system is needed.[20] Taylor and McPherson basically recognize the same problem and recommend that the solution is to decentralize the communication and decision-making processes because the principal must assume the role of a junior superintendent.[21] The significance of this statement is the realization that the principal is not involved in these processes; thus, he cannot function effectively in his position.

Morphet, Johns, and Reller present the findings of Homans' work on groups as it affects educational administration. Three hypotheses are the result of Homans' work and are applicable to group functioning in the educational setting:

1. If the frequency of interaction between two or more persons increases, the degree of their liking for one another will increase, and vice versa.
2. If the interaction between the members of the group are frequent in the external system, sentiments of liking will grow up between them, and these sentiments will lead in turn to further interactions over and above the interactions of the external system.
3. A decrease in the frequency of interaction between the members of a group and outsiders, accompanied by an increase in the strength of their negative

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[20]John G. Egnatoff, "The Changing Status of Saskatchewan's School Principals," Canadian Education and Research Digest, VIII (December, 1968), 354-65.

[21]Lloyd Taylor and Philip McPherson, "The Superintendent and the Principal," The National Elementary Principal, XLVII (May, 1968), 80-84.

> sentiments toward outsiders, will increase the frequency of interaction and the strength of positive sentiments among the members of a group, and vice versa.[22]

One factor originally pointed out by Homans is that " . . . underlying human relationships differ from group to group in degree rather than kind."[23] The significance of this conclusion is that the management team, a set of "human relationships," must vary in degree, not in type or kind. A study of the degree of management team is warranted, rather than a study of the type of team organization. The study of a particular administrative style as it relates to a management team is justified in terms of the effect of the process of administration on the organization.

In the development of a management team one of the important factors that should be influenced is the communications among administrators as well as communications with patrons and the general public. In a Michigan study, Smith comments on the type of communications behavior that was considered most effective. "Personal contacts were considered the most important type of communications

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[22]George C. Homans, The Human Group, cited in Edgar L. Morphet, R. L. Johns, and Theodore L. Reller, Educational Administration: Concepts, Practices and Issues (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1959), p. 89.

[23]Ibid.

contacts with citizens and staff members."[24] Thus, as McLuhan so deftly points out, involvement and face to face communications, or the medium, often is more important than the substance of the message.[25]

The leader behavior of school superintendents has a great effect on the functioning of the school system. Dunn reports that school superintendents do act as instructional leaders in many cases as perceived by superintendents.[26] Cave states that the leader behavior of administrators contributes to the presence of conflict with teachers' unions. He further states that involvement in the critical areas must be established to reduce conflict. While superintendents perceive themselves as instructional leaders, it is the behavior of administrators that contributes to existing conflict; this conflict is precipitating the trend toward more involvement on the managerial levels to reduce conflict. Cave found that the major areas that contribute most to conflict include

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[24]Daniel Otho Smith, "A Study of Certain Communication Processes of Superintendents in the Nine Class A Public Schools in Michigan Education Association Region 10" (unpublished Ph.D. dissertation, Michigan State University, 1965), p. 148.

[25]Marshall McLuhan and Quentin Fiore, The Medium Is the Massage (New York: Bantam Books, 1967).

[26]Bruce J. Dunn, "An Analysis and Identification of Instructional Leadership Acts as Performed and Perceived by the Superintendent of Schools" (unpublished Ed.D. dissertation, Michigan State University, 1964).

consideration, initiation of structure, integration, demand reconciliation, tolerance of freedom, and production emphasis.[27] Leader behavior that successfully copes with these factors will be described later in this chapter.

Conclusion

In conclusion, the essence of a management team can be stated as the group effectiveness of an administrative staff that is based on clarity of administrative roles, shared decision-making, and effective communication leading to unity.

The literature supports the conclusion that involvement in decision-making is necessary in the management of school systems. There is, at present, confusion about the relationships among administrators; the solution to this confusion is involvement. The nature of these relationships is proposed in the several position statements concerning the management team. The degree to which these aspects of "teamness" are present determines the degree of a management team existing in a school system.

Related Literature Outside of Education

John Kenneth Galbraith puts forth an interesting point of view when he states that the top management group

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[27]Raymond David Cave, "A Critical Study of the Leader Behavior of School Administrators in Conflict with Teachers' Unions" (unpublished Ed.D. dissertation, Michigan State University, 1967).

is the single most effective group in a modern corporation. He visualizes the organization of a company as a series of concentric circles of interest. The closer to the center that a group is the more power it wields; the farther away from the center any group is determines the looseness of identification for that group. The closeness of a group to the center helps indicate to what degree the members of that group tend to make the organization's goals their own. Galbraith feels that this conceptual framework is far more accurate in describing actual organizational relationships than is the line staff chart.[28] The conclusions that can be drawn are that the management of an organization is the prime motivating force, and that the more the lower levels of management in the organization are involved in the central aspects of management the more they will identify with the goals of the organization.

In discussing involvement, Mylander describes an executive committee functioning at the duPont Company. He points out that to give managerial decisions respect at lower levels in the organization, the executive committee, with experts from several fields serving on it, never lets a decision be made in ignorance. The executive group should have aspects of a superman--a balance of expertise

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[28]John Kenneth Galbraith, "Motivation and the Technostructure," Personnel Administration, XXXI (November-December, 1968), 4-10.

that will make the group as a whole an expert on everything.[29]

In an attempt to see how such a group might work, McGregor analyzing group functioning, states: " . . . the research evidence indicates quite clearly that skillful and sensitive membership behavior is the real clue to effective group operation."[30] He goes on to list the characteristics of both effective groups and poor groups. The factors of effective and poor groups are listed respectively:

Characteristics of an Effective Group

1. Atmosphere is relaxed, informal working atmosphere--no boredom.
2. Virtually everyone participates in discussion --large amount of discussion which seldom wanders far from topic.
3. Members understand and accept tasks of the group.
4. Members listen to each other! No one is afraid to put forth ideas which have no merit.
5. There will be disagreements.
6. Decisions are reached by a kind of a consensus in which it is clear that everybody is in general agreement. No formal voting. A simple majority does not prevail.
7. There is criticism. It is constructive and frank.
8. People are free in their expressions and feelings. Everyone knows how each other feels. No hidden agendas.
9. When action is taken, clear assignments are made and accepted.
10. There is no power struggle within the group. The chairman does not dominate.

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[29]William H. Mylander, "Management by Executive Committee," Harvard Business Review, XXXIII (May-June, 1955), 51-58.

[30]Douglas McGregor, The Human Side of Enterprise (New York: McGraw-Hill Book Company, Inc., 1960), p. 239.

11. The group discusses group processes.

Characteristics of a Poor Group

1. Group is not involved in its task. Boredom or indifference exists.
2. A few people dominate the discussion. Discussion is usually way off the track.
3. Different people often have different private and personal objectives which are contrary to the functioning purpose of the group.
4. People don't listen to each other. Ideas are ignored. Discussion jumps. Some are afraid to speak out for fear of criticism.
5. Disagreements are not dealt with effectively by the group. They may be suppressed or there may be warfare. Often a vote will be taken. There may be "tyranny of the minority."
6. Action is taken prematurely. Minority often is not committed to decision.
7. Action decisions are unclear. No one knows who is going to do what.
8. The leadership rests with the committee chairman. He sits at the "head to the table."
9. Criticism tends to be destructive. Ideas put forth are clobbered; thus, few are put forth.
10. Personal feelings are hidden.
11. Group maintenance is not discussed.[31]

McGregor discusses two basic theories of management, theory "X" and theory "Y." Theory "X" is predicated on the assumption that work is distasteful, and control and direction must be the main concerns of the managers. Theory "Y" is based on the assumption that people want to work at jobs from which they can derive personal satisfaction. Theory "Y" promotes the integration of organizational and personal goals and is one of the underlying principles upon which the general concept of a management team is based.[32]

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[31] Ibid., pp. 232-38. [32] Ibid., pp. 33-176, passim.

Very similar to the ideas of McGregor are the factors by Likert that exist when group decision-making is working properly:

> . . . discussion is focused on the decisions to be made. There is a minimum of idle talk. Communication is clear and adequately understood. Important issues are recognized and dealt with. The atmosphere is one of "no nonsense" with emphasis on high productivity, high quality, and low costs. Decisions are reached promptly, clear-cut responsibilities are established, and tasks are performed rapidly and productively. Confidence and trust pervade all aspects of the relationship. The group's capacity for effective problem solving is maintained by examining and dealing with group processes when necessary.[33]

Likert goes on to discuss the linking function of one group to another, with the leader of one group being a member in a higher group with his colleagues and superior. This group method of supervision can have many levels and follow a basic line staff chart. Furthermore, the management team in educational administration is the relationships of team members to the team leader with respect to authority, responsibility and accountability. Likert discusses the leader's relationships to the group:

> The group method of supervision holds the superior fully responsible for the quality of all decisions and for their implementation. He is responsible for building his subordinates into a group which makes the best decisions and carries them out well. <u>The superior is accountable for all decisions, for their execution, and for the results</u>.[34]

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[33]Rensis Likert, <u>The Human Organization</u> (New York: McGraw-Hill Book Co., 1967), pp. 50-51.

[34]<u>Ibid</u>., p. 51.

Likert supports the participative group style of management as opposed to others that he identified. He feels that it is hard to move toward a participative group style of management if the superior acts or continues to act in an authoritarian manner. He, also, states that the management system of an organization is a major factor in determining its productivity, and he supports the idea of the team approach to management as being more productive.[35]

Effective work groups are called by many different names. The term "committee" has come to have a negative connotation. However, Koontz and O'Donnell have listed the reasons for the use of committees on the executive level. Their discussion of the uses of committees closely parallels much of what other authors speak of as group or team functioning. Their reasons for use of a committee are:

1. Group Deliberation and Judgment
2. Fear of Authority
3. Representation of Interested Groups
4. Coordination of Plans and Policies
5. Transmission of Information
6. Consolidation of Authority
7. Motivation Through Participation
8. Avoidance of Action[36]

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[35]Rensis Likert, New Patterns of Management (New York: McGraw-Hill Book Co., Inc., 1961), ch. iii, passim.

[36]Harold Koontz and Cyril O'Donnell, Principles of Management: An Analysis of Managerial Functions (New York: McGraw-Hill Book Co., Inc., 1968), pp. 379-83.

Likewise, the disadvantages of committees are:

1. High Cost in Time and Money
2. Compromise at Least Common Denominator
3. Indecision
4. Tendency to be Self-Destructive
5. Splitting of Responsibility
6. Minority Tyranny[37]

Koontz and O'Donnell in their discussion examine the plural executive as a top management committee.[38] However, their concept of this group is not consistent with the idea of a management team. A management team implies a single responsible executive with a team participating in the management function; however, the plural executive implies a group as the chief executive with no single person responsible.

Dale discusses the merits of committee action versus individual action in a company organizational structure. His conclusions are that committee action is superior in jurisdictional matters or disputes, and individual action is superior in organization planning, execution, and decision-making. He feels that committee action and individual action are approximately equal in the areas of control, innovation, and advisory activities. Dale also lists four major requirements for successful committee operation:

a) Diverse opinions should be integrated.
b) The principles of group effectiveness should be more widely applicable.
c) Committee mechanics should be perfected to the

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[37] Ibid., pp. 383-85. [38] Ibid., p. 385.

point where they serve, rather than impede the work of the committee.

d) Only subjects which can be handled more effectively by groups than by individuals should be selected for committee discussion; the selection of subjects to be assigned to committees requires careful study.[39]

Golembiewski, however, discusses team management from a structural standpoint which he calls "the colleague model," a functional group or team with experts in the necessary areas. Reporting to this team is a series of teams each with a similar array of experts. The lower level team can function under guidelines set forth by the higher level team. None of these teams will act in ignorance, for each will have experts from the necessary areas as their members.[40] The advantage of this type of organizational pattern is that each group is self-sufficient to function independently of the others. Golembiewski points out several aspects of the colleague model. One aspect is that the colleague model tends to provide freedom from jurisdictional "hair-splitting." The disputes that have traditionally arisen over the overlapping of departments will be lessened because the basic unit of organization cuts across department lines and contains members from all departments. This type of organization is not new; it has

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[39]Ernest Dale, Planning and Developing the Company Organization Structure (New York: American Management Association, 1952), p. 167.

[40]Robert T. Golembiewski, Organizing Men and Power: Patterns of Behavior and Line-Staff Models (Chicago: Rand McNally and Co., 1967), ch. v., passim.

been known as project management, program management, or matrix overlay. Thus, the experiences from these past management practices can be used. The colleague model allows functional leadership to evolve. Unity of command on technical matters is present for team members are experts from the necessary technical areas. Finally, effective team performance is the key to making the colleague model work. Golembieswki stresses the point that " . . . no team member should be at the mercy of his team!"[41]

Schultz, discussing the necessary factors for effective group operation, points out that compatible groups will function more effectively than non-compatible groups and that the "focal person" will, to a large extent, determine how the group operates.[42] This finding is applicable to the management team concept of operation with respect to the leader behavior of the superintendent.

Bridges discusses groups and their functioning from the aspect of "hierarchically differentiated" and "hierarchically undifferentiated" groups. The hierarchically differentiated groups, groups of peers, are more productive but less efficient in terms of time than the

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[41] Ibid., p. 136.

[42] William C. Schultz, "What Makes Groups Productive?" Human Relations, VIII (November, 1955), 430-65.

hierarchically undifferentiated groups containing more than one level of an organization.[43]

Gordon, discussing decision-making with respect to group functioning, states:

> . . . democratically led groups in which members were allowed to make decisions about their work activities were significantly different from more leader-centered groups in the following respects:
> a) the members were less aggressive toward each other,
> b) they showed less dependence on the leader,
> c) there was more group initiative to start new work, and
> d) more time was spent in production work.[44]

He points out several factors--feelings of personal inadequacy, fear of evaluation and rejection, reactions to authority, and ego centered participation--acting against effective group functioning. He also points out three barriers to communication--limited face to face contacts, devaluation of worth of other members, and the tendency of an individual to defend his ideas.[45]

In discussing the team approach on the management level, the type of leadership necessary for the team to function hopefully will permeate the organization on all levels. Berelson substantiates this point when he states:

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[43]Edwin M. Bridges, Wayne F. Doyle, and David J. Mahan, "Effects of Hierarchical Differentiation of Group Productivity, Efficiency, and Risk-Taking," Administrative Science Quarterly, XIII (September, 1968), 305-19.

[44]Thomas Gordon, Group-Centered Leadership (Boston: Houghton Mifflin Company, 1955), p. 63.

[45]Ibid., pp. 80-86.

"The leader's style of leadership tends to be influenced by the style in which he himself is led."[46] He also discusses the degree of centralization with respect to the identification of individuals with the goals of the organization.

> The more decentralized the organization with lower units autonomous yet visable to higher ones, the better the identification of the members with the organization is likely to be.[47]

Berelson, also, comments on communication flow in an organization: "The more rigidly or formally organized the hierarchy, the less the upward flow of informal communication."[48] Thus, he makes the case for an organizational structure, providing exemplary leadership, that is decentralized on its lower levels to provide better organizational identification.

Rapoport discusses the basics of game theory in terms of zero sum games and non-zero sum games. A zero sum game is one in which the sum of the outcomes is zero; if one person wins (+1), the other must lose (-1). Thus, the sum of the outcomes: (+1) + (-1) = 0. The non-zero sum game is a situation that may exist where one person may win without the other person losing. The sum of the outcomes may vary and need not equal zero. Thus, it is

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[46]Bernard Berelson and Gary A. Steiner, Human Behavior: An Inventory of Scientific Findings (New York: Harcourt, Brace and World, 1964), p. 376.

[47]Ibid., p. 369.

[48]Ibid., p. 370.

possible in a non-zero sum game for both players to win, (+1) + (+1) = 2, and the sum not equal zero.

Several game types were discussed, but the "Prisoner's Dilemma" demonstrates group processes necessary to maximize outcomes for all players. In the diagram below a non-zero sum game, similar to a social or political situation, is represented with payoffs for player one and player two shown respectively within each cell.

[Non-Zero Sum Game][49]

Player One's Choices	Player Two's Choices: C	Player Two's Choices: D
A	9,9	-10,10
B	10,-10	-9,-9

Player one must choose A or B while player two must choose C or D. For both to win each must <u>trust</u> the other and choose cell (A,C). However, if either wants to try for ten points rather than nine in cell (A,C), then he makes the other choice. However, if both become greedy and try to receive ten points, they both will lose, cell (B,D). The rules for maximizing outcomes are <u>trust</u> and <u>no sellouts</u>.

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[49]Anatol Rapoport, "Critiques of Game Theory," in <u>Modern Systems Research for the Behavioral Scientist</u>, ed. by Walter Buckley (Chicago: Aldine Publishing Co., 1968), pp. 474-89.

This type of situation has direct application to group functioning. It is possible to maximize outcomes, for example, if only one man is promoted. The goal of group functioning is to operate in a non-zero sum game atmosphere and to successfully maximize outcomes.

Pigors and Myers discuss the particular case of managing the "professional" in the organization. They feel that the "professional" needs more participation in the affairs of the organization.

> As a number of research studies have shown, creative scientists and engineers tend to think in terms of career development, with the regard of their peers outside the organization often more important to them than internal managerial approval. They resent the requirements of conformity and desire more participation in solving research and engineering problems as colleagues and not as subordinates. Indeed, these aspirations may be true of professionally trained people generally.[50]

Sampson, describing managerial functioning, states, "With increased specialization there is greater acceptance of group management as the only effective way to get the total job done."[51] He also states, "We can best see the importance of groups when we think about the fundamental individuality of man. Groups are necessary to man's individualness; he achieves his individuality as part of a

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[50]Paul Pigors and Charles Myers, Personnel Administration: A Point of View and a Method (New York: McGraw-Hill Book Company, 1965), p. 15.

[51]Robert C. Sampson, Managing the Managers: A Realistic Approach to Applying the Behavioral Sciences (New York: McGraw-Hill Book Company, 1965), p. 229.

group."[52] Sampson goes on to discuss an "engineering management system" versus a "management behavioral system." He states, " . . . the measure of managing is the proper use of power."[53] He also points out that for proper management to exist the following changes must not occur:

> Human relations becomes paternalism.
> Motivating becomes manipulating.
> Communications becomes convincing.
> Counseling becomes appraising.
> Coaching becomes telling.
> Leadership becomes bossing.
> Cooperation becomes conformity.
> Loyalty becomes personal devotion.[54]

Tannenbaum puts forth the idea that participation results in greater productivity with little or no loss of power or influence by management. He feels that participatory management is appropriate to management's function in an organization. "Paradoxically, through participation management increases its control by giving up some of its authority."[55]

The idea of the managerial grid is developed by Blake and Mouton. On this two dimensional grid two aspects of management are represented, concern for people and concern for production. Five managerial styles are described

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[52] Ibid., p. 215.

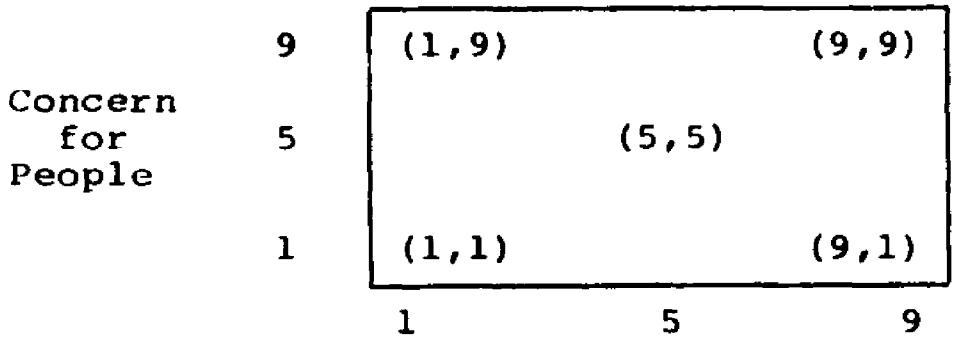
[53] Ibid., p. 10.

[54] Ibid., p. 4.

[55] Arnold S. Tannenbaum, Social Psychology of the Work Organization (Belmont, Calif.: Wadsworth Publishing Company, Inc., 1966), p. 99.

depending on the position on the grid with respect to the two variables.[56] The following is a representation of a grid and the positions:

The Managerial Grid[57]



There are five polar positions. The (9,1) position represents the hard boiled autocrat; he feels that production is important, and he has little concern for people. The (1,9) manager feels that the organization must run smoothly at any cost; people must be happy. Thus, the (1,9) has little concern for the goals of the organization. The (1,1) type manager does just enough to keep from getting fired. The (5,5) type manager is called "the great compromiser." He tries to manipulate both concerns, production and people, by using compromise to solve conflicts. The (9,9) manager type is described as a democratic leader;

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[56]Robert R. Blake and Jane S. Mouton, The Managerial Grid (Houston: Gulf Publishing Company, 1964), p. 8.

[57]Ibid., p. 10.

this leadership style will promote the effective functioning of a management team. However, he does not compromise the two concerns; he integrates them. Blake describes the (9,9) managerial type in terms of behavior with respect to six elements:

> Element A Decisions . . . I place a high value on getting sound creative decisions that result in understanding and agreement.
> Element B Convictions . . . I listen for and seek out ideas, opinions, and attitudes different from my own. I have clear convictions but respond to sound ideas by changing my mind.
> Element C Conflict . . . When conflict arises, I try to identify reasons for it and to resolve underlying causes.
> Element D Emotions (Temper) . . . When aroused, I contain myself, though my impatience is visible.
> Element E Humor . . . My humor fits the situation and gives perspective; I retain a sense of humor even under pressure.
> Element F Effort . . . I exert vigorous effort and others join in.[58]

He goes on to describe the other managerial positions in these terms. The main conclusion that can be drawn is that the managerial type that is necessary to exert leadership for a management team must be a positive dynamic type of leadership that seeks to successfully integrate (not compromise) the goals of people with the goals of the organization.

Blake and Mouton develop the methods and procedures for working with a group of executives in an attempt to develop (9,9) type leaders.[59] Blake, Avis and Mouton

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[58] Ibid., pp. 3-4.

[59] Blake and Mouton, Corporate Excellence Through Grid Organization Development.

describe a dynamic corporation organization along with methods and procedures for a corporation to evolve.[60] This text provides a model for present and future organizational structure, and the concepts discussed are very relevant to educational administration.

Halpin discusses open and closed climates in relationship to organizational variables and leader behavior. His Leadership Behavior Description Questionnaire (LBDQ) measures the degree to which each of two aspects of leader behavior, initiating structure and consideration, is reported as being present in the leadership of a particular administrator.[61] These two aspects are quite similar to the two concerns of Blake and Mouton. Getzels also has developed two basic dimensions of organizational functioning that he calls the nomothetic and the idiographic. These two dimensions are basically the same as those stated above.[62]

Mullen has conducted a case study of three managers in an insurance company, each having a different personality type. The analysis of their functioning provides an insight

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[60]Robert R. Blake, Warren E. Avis, and Jane S. Mouton, Corporate Darwinism: An Evolutionary Perspective on Organizing Work in the Dynamic Corporation (Houston: Gulf Publishing Company, 1966).

[61]Halpin, Theory and Research in Administration.

[62]Getzels, "Administration as a Social Process," p. 152.

into how the laissez-faire and authoritarian personalities react in managerial positions with respect to their superiors and their subordinates.[63] Executive Evaluation in the Corporation discusses an "excellently-managed" company from the standpoint of interaction on executive levels. One significant factor that comes to light, and that is not widely practiced in educational administration, is the emphasis on the training of a successor by the executive himself.[64]

In discussing media, McLuhan demonstrates that involvement is the key to effective communications. Media are extensions of ourselves; thus, we must be truly involved with the process to understand it.[65] McLuhan's ideas have current application, for he points out that the world of electric circuitry is involving us all in the affairs of the world.[66] Involvement is the temper of the times; we are all becoming involved, and we all expect to be involved.

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[63]James H. Mullen, Personality and Productivity in Management (New York: Columbia University Press, 1966).

[64]American Institute of Management Incorporated, Executive Evaluation in the Corporation (New York: American Institute of Management Incorporated, 1959).

[65]Marshall McLuhan, Understanding Media: The Extensions of Man (New York: McGraw-Hill Book Company, 1964).

[66]McLuhan, The Medium Is the Massage.

Possibly Barnard has supplied the basic definition of what the group process develops. "A group is evidently a number of persons plus some interrelationships or interactions to be determined."[67] The system of interactions is what must be considered the advantage of the effective work group.

Conclusion

Involvement is the key to effective group functioning on the managerial level. Reeves offers three propositions that relate to staffing and directly speak to the topics discussed in this section.

> A. The effectiveness of personnel management tends to be related directly to the extent to which provision is made for employee participation in both planning and management activities within the employees' sphere of endeavor. . . .
> D. The effectiveness of personnel management tends to be related directly to the extent to which the promotion of the best qualified persons are made without decreasing the morale of the others. . . .
> F. The effectiveness of personnel management tends to be related directly to opportunities provided for personnel to internalize and identify their personal goals with those of the organization.[68]

Thus, proposition "A" relates directly to participatory management; proposition "D" relates to the discussion on

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[67]Chester I. Barnard, The Functions of the Executive (Cambridge, Mass.: Harvard University Press, 1938), p. 69.

[68]Floyd Reeves, "Selected Principles for Consideration as Principles Relating to Staffing," East Lansing, April 3, 1967. (Mimeographed.)

game theory; and, proposition "F" is related to the theoretical positions of Getzels, Halpin, and Blake.

Related Literature Concerning the Educational Characteristics Criterion

The Educational Characteristics Criterion (ECC) has been developed as a measure of factors contributing to the quality of education. However, the quality of education, or the quality of the educational system, is a difficult concept to define. If quality of education is defined as the level of achievement of students as they progress through the system, then an achievement test would be the appropriate measure of quality. However, a definition of quality of education cannot be stated in such narrow terms if education is to consist of anything but the achievement of the basic academic skills. In a society changing as rapidly as ours, so narrow a definition cannot be accepted. Kraft states a concept of quality that is the basis of the formulation of the ECC: "The concept of quality is a relative one which exists more in the mind of an individual than it does in a particular program."[69] Thus, the idea of quality being measured by attitudes toward education and the educational characteristics of a school system is established.

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[69]Leonard Kraft, "The Perceptions Held by Professors of Education, Professors in Areas Other Than Education and School Board Members on Ninety Factors Which May or May Not Affect the Quality of an Educational Program" (unpublished Ed.D. dissertation, Michigan State University, 1962), p. 3.

Berg develops this idea into a rationale for the form and substance of the ECC.

> Educational quality may be defined as those educational characteristics of a school district, both school and community, which are perceived by educational authorities as being effective in accomplishing the purposes of American public school education. Quality is perceived differently by each individual because of goals, values, and experiences. Because of the lack of commonality in the effect of these influential factors on individual perception, there is difficulty in establishing a generally acceptable definition of educational quality among educators and laymen. For the purposes of this study the educational characteristics of school districts that are used as a definition of quality are those for which there have been established a significantly high agreement among specialists in educational programs. It is assumed that certificated personnel may perceive accurately the educational characteristics of their school district. Agreement regarding educational quality is expected from certificated school personnel who have a generally similar frame of reference in terms of training and professional expectations.[70]

Thus, a survey of the certificated personnel of a school district concerning the characteristics of both school and community is established as a basis for estimating the quality of a school district.

Particular items on such a survey to determine factors affecting quality have been established and researched along with related cost-factors in five different studies. Kraft started with ninety items, identified by

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[70]Arthur D. Berg, "The Determination of the Discrimination and Reliability Indices of the Educational Characteristics Criterion with Implications Concerning Educational Cost-Quality Relationships" (unpublished Ph.D. dissertation, Michigan State University, 1962), pp. 4-5.

Rudman,[71] thought to be related to quality and attempted to achieve agreement among professors and school board members.[72] Berg reduced the list of items, based on Kraft's findings, to fifty-six and determined the discrimination and reliability indices in a Michigan study. He, also, established the basic cost-quality relationships for the instrument now called the ECC.[73] Mueller, in a national study, compared responses to the ECC from teachers and administrators with respect to the same identified cost factors. He found that there was substantial disagreement in teacher perceptions and administrator perceptions. He suggests that possibly the higher administrator perceptions of quality are due to the higher degree of identification with organizational goals of the administrator. "The extent of projection of 'self' into the rating of school district quality could affect the objectivity of the perceptions."[74] It seems reasonable to achieve a more

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[71]Herbert C. Rudman, author of the ECC, developed the original items for the instrument and directed the research in its development.

[72]Kraft, "The Perceptions Held by Professors of Education, Professors in Areas Other than Education, and School Board Members on Ninety Factors which May or May Not Affect the Quality of an Educational Program," p. 4.

[73]Berg, "The Determination of the Discrimination and the Reliability Indices of the Educational Characteristics Criterion with Implications Concerning Educational Cost-Quality Relationships," p. 1.

[74]VanDyck Mueller, "A Study of the Relationships Between Teacher-Administrator Perceptions of Educational

accurate measure of factors affecting school system quality by considering only the perceptions of teachers.

Springer, using a fifty-five item ECC, in a Michigan study, attempted to predict school achievement as measured by the Stanford Achievement Test from scores on the ECC. Springer found high agreement between teacher and administrator responses to the ECC. His study reports a positive, but not significant, correlation between the ECC and school achievement. He states that administrators' scores are better predictors of achievement than are teachers' scores.[75]

Pelton in a national study, similar to Springer's Michigan study, found that "There is a positive relationship between administrator and teacher perceptions of characteristics of quality education as measured by the Educational Characteristics Criterion (ECC)."[76] He further concludes that "The evidence that has been accumulated in

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Quality as Measured by the Educational Characteristics Criterion (ECC) and Selected Cost Factors" (unpublished Ed.D. dissertation, Michigan State University, 1964), p. 183.

[75]Owen Springer, "A Study of the Relationships Between the Educational Characteristics Criterion (ECC), the Stanford Achievement Test, and Selected Cost Factors" (unpublished Ed.D. dissertation, Michigan State University, 1964), pp. 102-07.

[76]Pelton, "A National Analysis of Educational Quality as Measured by the Educational Characteristics Criterion, ECC, Achievement, and Selected Cost Factors," p. 96.

the present study and earlier ones seem to justify the conclusion that, in general, teachers and administrators do perceive the characteristics of quality education in the same way."[77] Pelton states that no judgment can be made at this time concerning the relationship between cost factors and the ECC scores.[78]

Conclusion

The ECC seems to be a reliable and valid instrument to administer to the teachers of a school system for the purpose of determining the degree to which certain factors thought to affect the quality of education are present. Also, there seems to be evidence to suggest that cost factors should be taken into account when using the ECC.

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[77] Ibid., p. 97.

[78] Ibid., p. 99.

CHAPTER III

METHODS AND PROCEDURES

The purpose of this study is to investigate the relationships between perceptions of characteristics identified with a management team, measured by the Administrative Characteristics Survey (ACS), and perceptions of factors affecting quality as measured by the Educational Characteristics Criterion (ECC).

Instrumentation

Administrative Characteristics Survey (ACS)

In the development of the Administrative Characteristics Survey a review of the literature led to the determination of three basic concepts identified with a management team. As a result, fifteen items were selected as factors for each concept of a management team. This procedure resulted in forty-five items being included in a preliminary instrument called the Management Team Characteristics Survey (MTCS). In a pilot study, the MTCS was administered to nine professors of educational administration and one professor of sociology to determine the

degree that the forty-five items were related to a management team in a public school system. The overall response to the MTCS indicated that the instrument as a whole was "somewhat related" to a management team in a school system. The range of possible responses on the MTCS was "highly related," "somewhat related," "slightly related," and "not related." The respective weights of the responses were four, three, two, and one. Table 1 reports the mean responses of professors to the MTCS items. Thirteen items had means below 3.00. All items, according to this survey, achieved a rating of "slightly related" or better. There was space on the questionnaire for the professors to add any suggestions for consideration as items; however, none were suggested.

The items are designed to relate to one of three categories, and each category represents one basic concept. These categories with respective items are listed below:

I. Personal and Organizational Relationships

3. There is mutual respect among all administrators.
4. An attitude is present that each administrator is best equipped to function in his own area.
6. Responsibility of all administrators is clearly defined.
8. The school board provides extensive inservice education concerned with administrative relationships.

TABLE 1.--Mean responses to MTCS by item.

	Item	Item Mean
1.	All administrators keep each other informed on matters of mutual concern.	3.70
2.	Information is available to administrators before decisions are made.	3.78
3.	There is mutual respect among all administrators.	3.50
4.	An attitude is present that each administrator is best equipped to function in his own area.	3.00
5.	Knowledge that administrative decisions are implemented at more than one level in a school system is present in all administrators.	3.40
6.	Responsibility of all administrators is clearly defined.	3.40
7.	All administrators are represented or actively involved with the management negotiating team in the negotiations process.	3.33
8.	The school board provides extensive in-service education concerned with administrative relationships.	3.00
9.	The administrative staff meets frequently.	3.50
10.	There is recognition of the status of administrators by their superiors.	2.50
11.	The administrative staff in no way infringes on any administrator's right to make decisions necessary to perform his job as defined in his job description.	2.70
12.	There is a unity of command in the school system.	3.33
13.	At administrative staff meetings discussion is focused on decisions to be made.	3.78

TABLE 1.--Continued.

	Item	Item Mean
14.	The superintendent accepts individual responsibility for all group decisions that are made as well as for their implementation.	2.88
15.	Group processes are discussed when necessary at administrative staff meetings.	3.22
16.	Communication among administrators is broadly conceived to include discussion and persuasion as well as occasional edict.	3.55
17.	Leadership is conceived of as shared decision making as opposed to "one-way management."	3.22
18.	The superintendent encourages autonomous action on the part of principals with respect to individual schools.	3.00
19.	There is a willingness to change when a need is perceived as opposed to a demand for change for the sake of similarity.	3.33
20.	All administrative staff members are involved in policy decisions concerning administration of the budget.	3.33
21.	Loyalty is based on the perceived goals of the entire school system rather than to some individual or group.	3.55
22.	The school board encourages shared decision making among all members of the administrative staff.	3.22
23.	Communication among administrative staff members is clear and understood.	3.78
24.	Each administrative staff member has a clear overall view of the entire educational program.	3.11
25.	All administrators are consulted when possible before major decisions are made on a system-wide basis.	3.80

TABLE 1.--Continued.

	Item	Item Mean
26.	Administrators in the system do not tend to form cliques.	3.00
27.	All administrators in the system have specific job descriptions.	3.00
28.	There are clearly defined lines of accountability.	3.30
29.	All administrators are involved in determining their own salary and working conditions.	2.60
30.	All administrators are involved in determining their own job description.	3.30
31.	Members of the administrative staff never make decisions or participate in activities that overlap on another administrator's area of responsibility.	2.20
32.	Few if any decisions are made in the school system that must be modified after they are implemented to fit particular circumstances.	2.00
33.	The school board provides extensive in-service education for all administrators concerning collective bargaining.	1.90
34.	All administrative staff members are welcome at school board meetings.	2.90
35.	There is a high probability that any administrator who possesses the requisite skills and so desires can become a member of the school board's bargaining team.	2.30
36.	Administrative staff meetings are never dominated by one person's ideas or by one person's talking.	3.11
37.	At administrative staff meetings anyone may disagree with the superintendent without fear of retribution.	3.67

TABLE 1.--Continued.

	Item	Item Mean
38.	All administrators can justify to the public decisions with which they personally disagree.	2.67
39.	There is a strong feeling in all administrators to support policies or decisions that they must implement and which were made over their objections.	3.44
40.	The school board supports the idea that all administrators are managers and not teachers.	2.67
41.	All administrators feel that they represent the management to the teachers.	2.78
42.	All administrators are treated impartially by other administrators.	2.33
43.	All administrators are included in some level of administrative staff meetings.	3.55
44.	All administrators subordinate to the superintendent take the responsibility for the decisions that they make.	3.33
45.	There is respect for personal qualities of administrators by their superiors.	3.22

10. There is recognition of the status of administrators by their superiors.
11. The administrative staff in no way infringes on any administrator's right to make decisions necessary to perform his job description.
18. The superintendent encourages autonomous action on the part of principals with respect to individual schools.
21. Loyalty is based on the perceived goals of the entire school system rather than to some individual or group.
26. Administrators in the system do not tend to form cliques.
27. All administrators in the system have specific job descriptions.
28. There are clearly defined lines of accountability.
37. At administrative staff meetings anyone may disagree with the superintendent without fear of retribution.
42. All administrators are treated impartially by other administrators.
44. All administrators subordinate to the superintendent take the responsibility for the decisions that they make.
45. There is respect for personal qualities of administrators by their superiors.

II. Effective Group Processes Relating to Shared Decision-Making

7. All administrators are represented or actively involved with the management negotiating team in the negotiations process.

9. The administrative staff meets frequently.

13. At administrative staff meetings discussion is focused on decisions to be made.

14. The superintendent accepts individual responsibility for all group decisions that are made as well as for their implementation.

15. Group processes are discussed when necessary at administrative staff meetings.

17. Leadership is conceived of as shared decision-making as opposed to "one-way" management.

19. There is a willingness to change when a need is perceived as opposed to a demand for change for the sake of similarity.

20. All administrative staff members are involved in policy decisions concerning administration of the budget.

22. The school board encourages shared decision making among all members of the administrative staff.

25. All administrators are consulted when possible before major decisions are made on a system-wide basis.

29. All administrators are involved in determining their own salary and working conditions.

30. All administrators are involved in determining their own job description.

31. Members of the administrative staff never make decisions or participate in activities that overlap on another administrator's area of responsibility.

36. Administrative staff meetings are never dominated by one person's ideas or by one person's talking.

43. All administrators are included in some level of administrative staff meetings.

III. Effective Group Processes Relating to Unity and Communication

1. All administrators keep each other informed on matters of mutual concern.

2. Information is available to administrators before decisions are made.

5. Knowledge that administrative decisions are implemented at more than one level in a school system is present in all administrators.

12. There is a unity of command in the school system.

16. Communication among administrators is broadly conceived to include discussion and persuasion as well as occasional edict.

23. Communication among administrative staff members is clear and understood.
24. Each administrative staff member has a clear overall view of the entire educational program.
32. Few if any decisions are made in the school system that must be modified after they are implemented to fit particular circumstances.
33. The school board provides extensive in-service education for all administrators concerning collective bargaining.
34. All administrative staff members are welcome at school board meetings.
35. There is a high probability that any administrator who possesses the requisite skills and so desires can become a member of the school board's bargaining team.
38. All administrators can justify to the public decisions with which they personally disagree.
39. There is a strong feeling in all administrators to support policies or decisions that they must implement and which were made over their objections.
40. The school board supports the idea that all administrators are managers and not teachers.
41. All administrators feel that they represent the management to the teachers.

Table 2 reports the category breakdown of the mean item responses. Note that each category and the total all exceed a mean score of 3.00.

TABLE 2.--Mean responses to MTCS by category.

	Category 1 Relation-ships	Category 2 Shared Decision-Making	Category 3 Unity and Communication	Total
$\bar{X}$	3.10	3.23	3.02	3.12

A slight discrepancy may be apparent due to the fact that some respondents did not respond to every item. Calculations were based on mean item responses.

A one-way analysis of variance was performed to determine if any of the three categories were felt to be significantly less related to a management team than the others. The null hypothesis that there is no significant difference in the mean item scores of the three categories of the MTCS was tested (Table 3).

An "F" statistic of .67 was not large enough to reject the null hypothesis at the .01 or .05 level of significance. Therefore, the null hypothesis was accepted; there is no significant difference in the mean item scores of the three categories. Due to the fact that there was no significant difference in the perception of the three categories as they related to a management team, the items

and categories were retained with only minor changes in wording to improve clarity.

TABLE 3.--Analysis of variance for MTCS by category score.[a]

Sources of Variation	Degrees of Freedom	Sums of Squares	Mean Squares	F
Between	2	.32	.16	.67
Within	42	9.93	.24	. .
Total	44	10.25	. .	. .

[a] HO: $\bar{X}_1 = \bar{X}_2 = \bar{X}_3$ HA: $\bar{X}_1 \neq \bar{X}_2 \neq \bar{X}_3$

$\alpha = .01$ If HO is false then $F \geq 5.18$
$\alpha = .05$ If HO is false then $F \geq 3.23$

This evidence seems to suggest that the categories are measuring the same basic concept, the existence of characteristics of a management team. However, the items are designed to measure what is theorized as three separate aspects of a management team. Thus, the categories were retained until more evidence concerning the actual administration could be obtained. The forty-five items, put into a separate form, constitute the Administrative Characteristics Survey (ACS).

The Administrative Characteristics Survey was administered to 279 school administrators in Michigan during the course of the study. As a result, these data were analyzed to determine reliability. A reliability coefficient was computed from an analysis of variance with

school systems as one variable and items on the ACS as the other variable. The formula for the reliability coefficient is:

$$r = \frac{\left[\begin{array}{c}\text{mean square} \\ \text{school systems}\end{array} - \begin{array}{c}\text{mean square} \\ \text{interaction}\end{array}\right]}{\begin{array}{c}\text{mean square} \\ \text{school systems}\end{array}}$$

In the case of ACS "r" = .96.

The standard error is computed by the formula:

$$Se \text{ (STD. error)} = \left[\begin{array}{c}\text{mean square} \\ \text{school systems}\end{array}\right] \sqrt{1-r}$$

$$Se = .87.$$

Thus, the ACS has a high reliability coefficient based on this administration of the instrument.

The data were also analyzed using the Computer Institute for Social Science Research (CISSR) factor analysis program on the control data 6500 computer. The CISSR IDCORR program on the control data 3600 computer was used in order to construct a correlation matrix which took into account missing data. This correlation matrix was then used as input for the CISSR factor analysis (Factor AA) program. Results of the factor analysis show that the ACS is basically unidimensional; the ACS is basically measuring one attribute. There seemed to be no pattern of relationships that identified subtests.

Conclusion on Reliability and Structure of ACS

The ACS appears to be measuring one basic concept reliably. The items derived from the literature were selected to pertain to a management team. The analysis of the pilot project to determine if professors also identified these items with a management team seemed to support the conclusion. The ACS has high reliability, .96, is unidimensional, and is most likely valid.

Educational Characteristics Criterion (ECC)

The ECC was developed by Dr. Herbert C. Rudman as an instrument to measure the characteristics which affect the quality of education either directly or indirectly. The factors identified by Rudman were further refined by Kraft taking into account the perceptions of professors and school board members to determine their validity as items.[1] Several other studies developed the instrument now called the ECC. Berg determined the reliability and discrimination indices for the ECC. He found the reliability of the ECC when administered to teachers to be .89.[2]

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[1]Kraft, "The Perceptions Held by Professors of Education, Professors in Areas Other than Education, and School Board Members on Ninety Factors Which May or May Not Affect the Quality of an Educational Program."

[2]Berg, "The Determination of the Discrimination and Reliability Indices of the Educational Characteristics Criterion with Implications Concerning Educational Cost-Quality Relationships," p. 174.

The ECC has fifty-five items distributed in seven categories. The items by category are:

I. Student's Level of Knowledge and Attitudes

8. Students show a positive attitude toward scholastic work.
9. Students evidence accurate knowledge of self.
16. Students are knowledgeable about the educational and social opportunities available to them.
51. Pupils consider an academic grade of at least "B" to be the norm for academic achievement.
52. The professional staff of the schools in the community consider an academic grade of at least "B" to be the norm for academic achievement.
54. Parents and patrons in the community consider an academic grade of at least "B" to be the norm for academic achievement.

II. Community Attitudes

21. Parents and patrons (those residents of a school district without school-age children) are highly knowledgeable about education.
27. Citizens are highly organized to discuss school problems.
28. The perceptions of parents and patrons concerning the purposes of education are consistent and clear.
29. The local newspaper has shown a high interest in local school affairs.

30. There is no lag between the values taught in the school and what is practiced in the community.
36. A high percentage of the electorate in the community vote in school elections.
37. There are outstanding community leaders in this community who exhibit great interest in school affairs.
39. The community exhibits a great concern for the development of aesthetic and artistic interests.
40. A two-way communication channel readily exists between the home and the school.
45. The parents in this community expect their children to perform their share of family chores.
53. A high value is placed on education by the parents and patrons (those residents of a school district without school-age children) of the community.
55. Parents condone or encourage early dating for their children.

III. Curriculum

4. Teachers perceive a coherent and coordinated structure to the educational program.
5. Concensus exists among the staff concerning the goals of the educational program.

6. A structure has been developed that permits continual curriculum improvement.

15. A great variety of instructional materials are presently used in the classrooms.

17. A complete comprehensive testing program including intelligence and achievement testing is available in the schools.

IV. Use of Facilities

32. The physical facilities of the school system (buildings and equipment) are completely adequate.

V. Socio-cultural Composition of the Community

25. The social status of teachers is very high in this community.

34. Cultural experiences are readily available in the community.

38. This is a highly stable community which does not have too many people leaving.

41. A high percentage of high school students own personal cars.

42. A high percentage of homes own television sets.

44. A high degree of ethnic, racial, and religious homogeneity exists among the local population.

46. This community is composed of people who are predominantly Protestant.

47. The community is composed of people who are predominantly Catholic.

48. This community is composed of people who are predominantly Jewish.
49. The population of this community is equally divided between Protestants and Catholics.
50. One or two ethnic groups comprise the largest number of residents in the community.

VI. Administration and Supervision

10. Professional staff of the school system are involved in in-service education.
22. Lay members of the community are highly involved in the planning of educational goals with the school staff.
23. Regulations governing student conduct are highly explicit and detailed.
26. Regulations governing personnel policies are highly explicit and detailed.
35. Teachers' judgments are almost always used in the determination of educational policies.

VII. Teacher and Teaching Methods

1. Teachers have intimate knowledge of children.
2. Teaching practices reflect concern for individual differences.
3. Teaching practices reflect a knowledge of individual differences.
7. Evidence exists of instructional and/or curricular experimentation.

11. Teachers thoroughly understand the information gathered on students and use this information to make sound educational decisions.
12. All teachers are certified to teach at the grade level or subject they are now teaching.
13. Teachers have complete freedom to teach what they consider to be important.
14. A great variety of instructional techniques are presently used in the classrooms.
18. Teachers often avail themselves of professional help.
19. Complete freedom is granted to students to investigate any local, state, national, or international issue.
20. Availability to students of materials that reflect all shades of political and sociological points of view.
24. High degree of teacher participation in social and political activities of the community.
31. There exists a high level of cooperation among the teachers of the staff.
33. The community and its residents are used for instructional purposes.
43. A great deal of homework is assigned to students.

In the course of this study the ECC was administered to 1,630 teachers in Michigan. These data were then analyzed to determine reliability. A reliability coefficient was computed from an analysis of variance with school systems as one variable and items on the ECC as the other variable. The formula for the reliability coefficient is:

$$r = \frac{\left[\begin{matrix}\text{mean square} \\ \text{school systems}\end{matrix}\right] - \left[\begin{matrix}\text{mean square} \\ \text{interaction}\end{matrix}\right]}{\begin{matrix}\text{mean square} \\ \text{school systems}\end{matrix}}$$

In the case of the ECC "r" = .96.

The standard error is computed by the formula:

$$\text{Se (STD. Error)} = \left[\begin{matrix}\text{mean square} \\ \text{school systems}\end{matrix}\right] \sqrt{1-r}$$

$$\text{Se} = .37.$$

Thus, the ECC with a reliability coefficient of .96 has a high reliability based on this administration of the instrument.

The data were also analyzed using the CISSR factor analysis program on the control data 6500 computer. First, the raw data were submitted to the CISSR IDCORR program on the control data 3600 computer. This program produced a correlation matrix for the items on the ECC taking into account missing data. This correlation matrix was the input for the CISSR factor analysis (Factor AA) program.

The factor analysis of the ECC showed one basic factor was being measured, and several subordinate factors were also being measured. The results of the factor analysis confirmed the high reliability of the ECC. No conclusions about subtests could be drawn from this factor analysis.

Conclusions on Reliability and Structure of ECC

The reliability of the ECC, .96, based on this administration of the instrument, confirms the finding of Berg that the reliability of the ECC is high based on teacher responses. Berg reported a reliability coefficient of .89.[3]

The factor analysis generally confirms the high reliability of the ECC although only general trends are evident. The ECC is a highly reliable and stable instrument measuring one general factor.

Procedures

Sample

The experimental unit for this study is the school system. The population was defined as all K-12 public school systems in Michigan excluding the school system of the city of Detroit. From the Department of Education, a list of 527 K-12 school districts was obtained and the

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[3] Ibid.

systems were numbered. A point was randomly picked in the table of random numbers. Proceeding down that column and up the next, three digit numerals were selected. If the numbers were smaller than 528, then the school system with the numeral selected was included in the sample. If the number was 528 or larger, it was disregarded. If a number occurred more than once, it was disregarded. This procedure continued until a sample of ninety school systems was selected.

Each of these ninety school systems was asked if they would participate in the study. Ninety systems were selected to ensure a participating sample of between twenty and sixty systems.

Mailing Procedures

On February 13, 1970, a letter, stating the purpose of the study and outlining what was needed from each system for data collection, was mailed to the superintendent of each school district in the sample. Included in this letter was a copy of each instrument, a letter of endorsement for the study from the Michigan Congress of School Administrator Associations, and a return post card for each school district to indicate if they would be willing to participate. On February 27, 1970, a follow-up card was sent to each district not yet heard from indicating that the terminal date for acceptance into the study would be

March 6, 1970. As a result, thirty-nine systems responded favorably and were included in the study.

As soon as possible after receiving their acceptance, the thirty-nine school systems that responded favorably were provided with the necessary numbers of ECC and ACS questionnaires. For the purpose of this study a mean score on the ECC for a school system was needed. Therefore, in school systems having over 100 teachers a random sample of 60 teachers was selected to respond to the ECC. In the one school system with over 1,000 teachers a random sample of 100 teachers was taken. The samples were selected by taking every Nth name on an alphabetical list of the entire teaching staff of the school district. "N" was determined for the school district as satisfying: $N \times 60 \geq$ Number of Teachers in System. Thus, each teacher had an equal chance of being selected in the sample. In school systems with 100 or less teachers all were asked to respond to the ECC. All administrators were asked to respond to the ACS in all systems.

Characteristics of Systems Not Participating

An analysis of school systems not participating was made to determine if there was any systematic difference from the schools that did participate in the study. A listing of characteristics of schools participating and not participating is included in Appendices G and H.

The data for comparison are based on the four cost factors used in the study. Table 4 provides the means for each group on each variable.

TABLE 4.--Means on four cost variables of school systems participating and school systems not participating.

	School Systems Participating	School Systems Not Participating
Size	3275.64	3563.37
SEV/Pupil	$13,962.76	$15,908.77
Voted Millage	12.32	12.89
Exp/Pupil	$638.90	$641.06

A one-way analysis of variance was performed comparing the two groups of school systems on each of the four cost variables. The null hypothesis was stated that the groups did not vary significantly on each of the four cost factors. Following are the ANOVA tables for the four analyses:

TABLE 5.--Analysis of variance for participating and non-participating school systems by size.[a]

Sources of Variation	Degrees of Freedom	Sums of Squares	Mean Squares	F
Between Groups	1	1829646.39	1829646.39	.09
Within Groups	88	1868231186.49	21229899.85	. .
Total	89	1870060832.90	. .	. .

[a] HO: $S_1 = S_2$ HA: $S_1 \neq S_2$

TABLE 6.--Analysis of variance for participating and non-participating school systems by state equalized valuation per pupil.[a]

Sources of Variation	Degrees of Freedom	Sums of Squares	Mean Squares	F
Between Groups	1	83692659.8	83692659.8	1.3
Within Groups	88	5388565816.0	61233702.4	. .
Total	89	5472258475.8	. .	. .

[a] HO: $S_1 = S_2$ HA: $S_1 \neq S_2$

$\alpha = .05$ Reject HO if "F" $\geq$ 4.00

TABLE 7.--Analysis of variance for participating and non-participating school systems by voted millage.[a]

Sources of Variation	Degrees of Freedom	Sums of Squares	Mean Squares	F
Between Groups	1	7.33	7.33	.32
Within Groups	88	2033.03	23.10	. .
Total	89	2056.13	. .	. .

[a] HO: $S_1 = S_2$ HA: $S_1 \neq S_2$

$\alpha = .05$ Reject HO if "F" $\geq$ 4.00

TABLE 8.--Analysis of variance for participating and non-participating school systems by expenditures per pupil.[a]

Sources of Variation	Degrees of Freedom	Sums of Squares	Mean Squares	F
Between Groups	1	106.38	106.38	.01
Within Groups	88	786148.52	8933.51	. .
Total	89	786254.90	. .	. .

[a] HO: $S_1 = S_2$ HA: $S_1 \neq S_2$

$\alpha = .05$ Reject HO if "F" ≥ 4.00

In all four analyses "F" was not large enough to reject the null hypotheses; therefore, the null hypotheses are accepted.

It may be concluded since the school systems that did participate do not vary significantly from the school systems that did not participate the participating systems do represent the population to the same degree that the sample represents the population. The results of this study then are applicable to the school systems of the state of Michigan excluding the city of Detroit.

Data Collection

Questionnaires were mailed to seventeen school systems with instructions for distribution and stamped self-addressed mailing containers for return. Questionnaires were delivered to twenty-two school systems. In eight of these systems, a stamped addressed mailing

container was provided for the system to return the data by mail; in the other fourteen systems, the questionnaires were picked up. With only one exception questionnaires were delivered to systems in which a sample was taken. In all systems where the questionnaires were delivered the procedures for their distribution were explained to the person responsible within the system. A total of 2,074 ECC's and 375 ACS's were distributed to thirty-nine school districts. Every system that agreed to participate returned data. Table 9 reports the data distribution and return.

Cost data were collected from the Michigan Department of Education. Size in pupils was taken from the official membership reports of the school system to the state. Voted millage was taken from the reports of intermediate districts to the state and reported to two decimal places. State equalized valuation was also taken from the reports of the intermediate districts and was divided by the number of pupils and reported to two decimal places. Dollars spent for operation was taken from the 1968-69 annual financial report of the school system, divided by the number of pupils for 1968-69 and reported to two decimal places.

Treatment of Data

As the data were collected and returned by mail, the systems and questionnaires within systems were coded

TABLE 9.--Number and percentage of responses.

School System	ECC's Sent	ECC's Returned	Percentage Returned	ACS's Sent	ACS's Returned	Percentage Returned
1	26	13	50.00	3	1	33.33
2	60	50	83.33	10	10	100.00
3	60	58	96.66	14	13	92.86
4	37	27	72.97	3	3	100.00
5	52	50	96.15	3	3	100.00
6	60	52	86.67	22	20	90.91
7	60	35	58.33	7	5	71.43
8	60	46	76.67	10	10	100.00
9	25	19	76.00	3	2	66.67
10	56	47	83.93	3	2	66.67
11	60	57	95.00	8	8	100.00
12	55	42	76.36	3	3	100.00
13	60	53	88.33	7	6	85.71
14	48	34	70.83	3	3	100.00
15	86	69	80.23	7	7	100.00
16	60	47	78.33	8	8	100.00
17	32	30	93.75	3	3	100.00
18	100	57	57.00	78	46	58.97
19	60	23	38.33	12	8	66.67
20	60	43	71.67	16	12	75.00
21	28	28	100.00	4	4	100.00

TABLE 9.--Continued.

School System	ECC's Sent	ECC's Returned	Percentage Returned	ACS's Sent	ACS's Returned	Percentage Returned
22	60	42	70.00	3	3	100.00
23	60	57	95.00	25	22	88.00
24	68	64	94.12	6	6	100.00
25	23	22	95.65	3	3	100.00
26	65	41	63.08	4	4	100.00
27	69	47	68.12	6	4	66.67
28	80	63	78.75	6	6	100.00
29	60	46	76.67	7	6	85.71
30	60	51	85.00	15	10	66.67
31	30	24	80.00	3	3	100.00
32	100	53	53.00	6	5	83.33
33	48	33	68.75	4	4	100.00
34	58	45	77.59	4	4	100.00
35	34	20	58.82	2	2	100.00
36	80	55	68.75	4	1	25.00
37	60	44	73.33	11	10	90.91
38	60	27	45.00	6	6	100.00
39	19	16	84.21	3	3	100.00
Total	2179	1630	74.80	345	279	80.87

by number and the responses were transferred to IBM 555 optical scan sheets. Each sheet was coded to indicate ACS or ECC. The optical scan sheets were machine scored, and cards were punched from them by Evaluation Services at Michigan State University. The IBM cards received were printed and the printout was checked for errors in the cards. These card decks were used as input for a summary data program which summarized category and total scores for each school system. These data were punched on separate cards. The summary data deck and the cost data deck were used for the stat series least squares (LS) program on the CDC 3600 computer.

From the raw data input the CISSR IDCORR program punched a correlation matrix for each instrument. These matrices were input into the CISSR FACTOR Analysis (Factor AA) program. A set of item mean scores from the raw data input were used to run the respective reliability routines from a program supplied by research consultants in the College of Education.

CHAPTER IV

PRESENTATION AND ANALYSIS OF DATA

In analyzing the data, each hypothesis was tested to determine if the data supported that particular hypothesis. The comparisons were based on a least squares solution to a basic correlation regression problem. Following is each hypothesis and the data for testing that hypothesis.

General Hypothesis I

> A positive statistical relationship exists between characteristics of a management team and perceptions of factors affecting educational quality.

Two operational hypotheses were tested which relate to general hypothesis I. Each of the hypotheses will be treated separately.

> Operational HIa. A positive significant statistical correlation exists between total scores on the ACS and total scores on the ECC.

The correlation coefficient for ACS total scores and ECC total scores is -.33. Using $\alpha = .05$ for significance this correlation is significant. This finding indicates that the relationship between ACS total school system

scores and ECC total school system scores is inverse. The size of the correlation coefficient, -.33, is of such a magnitude that there are only five chances out of 100 that this inverse statistical relationship is by chance. Therefore, there is a probability of .95 that some systematic relationship exists. This finding is opposite than hypothesized; the negative value of the correlation was not hypothesized. However, the statistical relationship, -.33, is not large enough to be meaningful in terms of the amount of variance in the ECC for which it accounts, 10.89 per cent. Thus, the ACS is inversely related to the ECC but not strongly inversely related. The hypothesized result has not been achieved; therefore, it must be concluded that HIa is rejected.

> Operational HIb. A positive significant statistical correlation exists between the total scores on the ACS and each category score on the ECC.

Table 10 presents the correlation coefficients between the ACS total scores and each category of the ECC.

The correlations are all negative in sign and three are significant at the .05 level. Three categories: (1) students' level of knowledge and attitudes, (2) curriculum, and (5) socio-cultural composition of the community, are significantly correlated with the ACS total score. The lowest negative correlation is between ACS total score and ECC category four. This category, use of facilities, contains only one item and any relationship concerning

category four must be interpreted carefully. It is interesting to note that the negative sign holds for all correlations reported although it is not significant in all cases.

TABLE 10.--Correlation coefficients between ACS total scores and ECC category scores.

	ACS Total	Significant at $\alpha = .05$
ECC-1 (Students' Knowledge)	-.33	Sig.
ECC-2 (Community Attitudes)	-.32	Sig.
ECC-3 (Curriculum)	-.28	N.S.
ECC-4 (Facilities)	-.18	N.S.
ECC-5 (Community Composition)	-.37	Sig.
ECC-6 (Administration)	-.22	N.S.
ECC-7 (Teaching Methods)	-.25	N.S.

The evidence does not support HIb. HIb is rejected due to all negative correlation coefficients, three of which are significant, in the analysis of thirty-nine systems.

Conclusion

It must be concluded that the relationship between the ACS and the ECC, based on common correlations, is inverse or negative. Four of these eight negative correlation coefficients are large enough to be significant at the .05 level. These statistical data do not support

general hypothesis I; in fact, they refute it. The lack of evidence to substantiate general hypothesis I is not surprising for intervening cost variables are reported in the literature on the ECC to have some effect on the ECC. However, the significant negative correlations were not expected; they are indicative of some relationship that is in existence.

General hypothesis I is rejected as are both of its operational hypotheses.

General Hypothesis II

> A positive statistical relationship exists between characteristics of a management team and perceptions of factors affecting educational quality, holding cost factors constant.

Five operational hypotheses were tested which relate to general hypothesis II. Each operational hypothesis will be treated separately.

> Operational IIIa. A positive statistical significant correlation exists between ACS and ECC controlling for the effects of four cost factors.

A partial correlation coefficient of -.27 was computed for ACS controlling for the four cost factors together. This coefficient is negative and not significant at the .05 level.

Table 11 presents the partial correlation coefficients between each subtest of the ECC and ACS total scores controlling for the four cost factors.

TABLE 11.--Partial correlation coefficients between ACS total scores and ECC category scores controlling for cost factors.

	ACS Total	Significance Level $\alpha = .05$
ECC-1 (Students' Knowledge)	-.29	N.S.
ECC-2 (Community Attitudes)	-.28	N.S.
ECC-3 (Curriculum)	-.20	N.S.
ECC-4 (Facilities)	-.11	N.S.
ECC-5 (Community Composition)	-.27	N.S.
ECC-6 (Administration)	-.15	N.S.
ECC-7 (Teaching Methods	-.20	N.S.

Each partial correlation coefficient has a negative sign; none are significant. Thus, no statistical relationship exists. This analysis controls for the effects of four cost factors. These cost factors were identified in previous studies as affecting ECC scores. The result of this analysis shows that with the cost factors being controlled the same conclusion about the relationship between the ACS and ECC holds true. That relationship is that ACS and ECC are not positively related. However, the sizes of the negative correlation coefficients are not large enough to be significant at the .05 level of significance. Yet the relationships are all negative in sign and in the relative magnitudes as the relationships in general hypothesis I where cost factors were not controlled. No

statement can be made about significant inverse relationships when all four cost factors are controlled. The fact that no statistical relationships were obtained when positive significant relationships were hypothesized is significant to the extent that HIIa must be rejected.

> Operational HIIb. A positive significant statistical relationship exists between ACS and ECC controlling for the effects of the cost factor of number of pupils enrolled in the district.

Table 12 reports the partial correlation coefficients between ACS total scores and ECC total and subscores controlling for the cost factor of size of the school district.

TABLE 12.--Partial correlation coefficients between ACS total scores and ECC scores controlling for size of the school district.

	ACS Total	Significance Level $\alpha = .05$
ECC Total	-.26	N.S.
ECC-1 (Students' Knowledge)	-.29	N.S.
ECC-2 (Community Attitudes)	-.27	N.S.
ECC-3 (Curriculum)	-.21	N.S.
ECC-4 (Facilities)	-.11	N.S.
ECC-5 (Community Composition)	-.29	N.S.
ECC-6 (Administration)	-.17	N.S.
ECC-7 (Teaching Methods)	-.18	N.S.

It was felt by this investigator that the size of a school system might be the most significant of the cost variables in this study. As the group becomes larger, it is more difficult to have effective group functioning. In very large systems the effect of size could be indicative of relationships that are more impersonal and thus work against a functioning management team.

The partial correlation coefficients as reported in Table 12 indicate no relationship between ACS and ECC when cost factors are controlled. Even though the partial correlation coefficients are still negative in sign none are significant. The effect of controlling for size compares the ACS and ECC on the basis of all school systems being the same size. A result of this comparison shows that the partial correlation coefficients are all negative in sign but less negative than were the partial correlation coefficients when size was not controlled. These data do not permit the acceptance of HIIb.

> Operational HIIc. A positive significant relationship exists between ACS and ECC controlling for the effect of the cost factor of state equalized valuation per pupil.

Table 13 consists of partial correlation coefficients between the ACS total scores and the ECC total and subscores controlling for the state equalized valuation per pupil.

TABLE 13.--Partial correlation coefficients between ACS total scores and ECC scores controlling for state equalized valuation per pupil.

	ACS Total	Significance Level $\alpha = .05$
ECC Total	-.34	Sig.
ECC-1 (Students' Knowledge)	-.33	Sig.
ECC-2 (Community Attitudes)	-.34	Sig.
ECC-3 (Curriculum)	-.28	N.S.
ECC-4 (Facilities)	-.19	N.S.
ECC-5 (Community Composition)	-.36	Sig.
ECC-6 (Administration)	-.22	N.S.
ECC-7 (Teaching Methods)	-.28	N.S.

Controlling the variable of state equalized valuation per pupil allows comparison of ACS and ECC scores on the basis of all school systems having the same state equalized valuation per pupil. The results of this comparison are virtually the same as if this factor was not controlled. All partial correlations are negative in sign, and four of the eight comparisons are significantly negative at the .05 level. These same four comparisons were significant when no cost variables were controlled. As a result of this comparison, it must be concluded that controlling for state equalized valuation per pupil does not affect the relationship; it is consistently negative. Thus, HIIc is rejected.

Operational HIId. A positive significant statistical relationship exists between ACS and ECC controlling for the effect of the cost factor of voted millage for operation of schools.

Table 14 presents partial correlation coefficients between the ACS total scores and the ECC total and subscores controlling for the cost variable of voted millage.

TABLE 14.--Partial correlation coefficients between ACS total scores and ECC scores controlling for voted millage for operation.

	ACS Total	Significance Level $\alpha = .05$
ECC Total	-.30	N.S.
ECC-1 (Students' Knowledge)	-.31	N.S.
ECC-2 (Community Attitudes)	-.30	N.S.
ECC-3 (Curriculum)	-.26	N.S.
ECC-4 (Facilities)	-.15	N.S.
ECC-5 (Community Composition)	-.35	Sig.
ECC-6 (Administration)	-.19	N.S.
ECC-7 (Teaching Methods)	-.23	N.S.

When voted millage per pupil is controlled, the effect is that all school systems are compared on the basis of having an equal voted millage per pupil. In other words, each community is compared on the basis of putting forth an equal effort to supply local revenue per pupil. The effort or voted millage per pupil factor results, with one exception, in partial correlations that

show no relationship but are negative in sign. The comparison of ECC subtest five, socio-cultural composition of the community, and the ACS total is negatively significant at the .05 level. Due to the fact that no significant positive relationship is evident, HIId is rejected.

> Operational HIIe. A positive significant statistical relationship exists between ACS and ECC controlling for the effect of the cost factor of dollars spent per pupil.

Table 15 presents partial correlation coefficients between the ACS total scores and the ECC total and subscores controlling for the cost factor of expenditure per pupil.

TABLE 15.--Partial correlation coefficients between ACS total scores and ECC scores controlling for expenditures per pupil.

	ACS Total	Significance Level $\alpha = .05$
ECC Total	-.30	N.S.
ECC-1 (Students' Knowledge)	-.30	N.S.
ECC-2 (Community Attitudes)	-.30	N.S.
ECC-3 (Curriculum)	-.26	N.S.
ECC-4 (Facilities)	-.14	N.S.
ECC-5 (Community Composition)	-.34	Sig.
ECC-6 (Administration)	-.19	N.S.
ECC-7 (Teaching Methods)	-.22	N.S.

Expenditure per pupil relates directly to the monetary resources a school system puts forth in the operation of the school system. This cost factor has often been used as a measure of quality. The effect of controlling for expenditures per pupil compares the school systems on the basis of the same amount per pupil being spent. The results of the analysis show that all comparisons, with one exception, controlling for expenditures per pupil show no relationship but are negative in sign. The comparison of ACS total and ECC subtest five, socio-cultural composition of the community, is negatively significant. Due to the fact that no significant positive relationship was evident, HIIe is rejected.

A correlation matrix was constructed showing relationships between the major variables, Table 16. It can be seen that all the cost factors with the exception of state equalized valuation per pupil are negatively correlated with the ACS but are not large enough to establish a relationship, and conversely all cost factors are positively correlated with the ECC two of which are significant at the .05 level, voted millage and expenditure per pupil.

The correlational relationships reported in Table 16 between the ECC and cost factors establish positive relationships between the ECC and voted millage and the ECC and expenditures per pupil.

TABLE 16.--Simple correlations between major variables.

	ECC Tot	ACS Tot	Size	SEV/Pup	Vot Mill
ACS Tot	-.33*	1.00			
Size	.30	-.30	1.00		
SEV/Pup	.09	.09	.16	1.00	
Vot Mill	.36*	-.13	.06	-.39*	1.00
Exp/Pup	.39*	-.14	.44*	.36*	.16

*Significant at $\alpha = .05$.

There is a significantly strong negative correlation between state equalized valuation per pupil and voted millage. This relationship is expected for those school systems with high ability do not need to put forth high effort to achieve necessary operating funds. Conversely, systems with low ability often have to have high millage rates to compensate for the lack of wealth.

Table 16, also, reports that size and expenditure per pupil are positively significantly correlated and state equalized valuation per pupil and expenditure per pupil are positively correlated at the .05 level. These relationships appear to be reasonable for both size and wealth can vary positively with expenditures.

In an effort to determine the strength of predictability of ECC scores from ACS scores plus cost variables, regression was computed and its significance was

determined. Table 17 reports the significance levels for regression.

Thus, it may be concluded that there is significant predictability of ECC total scores from ACS scores in combination with cost variables except in the case where state equalized valuation per pupil is in combination with ACS total score. Seventeen of forty possible combinations showed significant predictability at the .05 level. This finding indicates the existence of a significant predictive relationship between the variables. These relationships are predictable from the correlations between the ECC and the cost variables and the ACS and the cost variables.

In an attempt to ascertain if the inverse relationship between the ACS and the ECC, as reported under general hypotheses I and II, also exists in systems that rank high and low on the cost variables, an additional analysis was performed. The cost data were analyzed to determine which systems fell in the top and bottom quartiles on three of the four cost variables. As a result of this analysis, four systems--systems three, six, eighteen, and thirty--satisfied the conditions for the high quartile, and four systems--systems four, twenty-one, thirty-five, and thirty-nine--satisfied the conditions for the low quartile. The relationships between ECC and ACS were computed in the same manner--a least squares correlation--as they were in the whole group analyses.

TABLE 17.--Significance levels of regression between ACS and ECC scores controlling for cost factors.

	ECC Total	ECC-1 Stud. Know.	ECC-2 Comm. Att.	ECC-3 Curricu-lum	ECC-4 Facili-ties	ECC-5 Comm. Comp.	ECC-6 Admin.	ECC-7 Teach. Meth.
ACS Total + All 4 Cost Factors	.02*	.18	.02*	.12	.11	.01*	.27	.04*
ACS Total + Voted Millage	.01*	.07	.02*	.04*	.20	.002*	.10	.08
ACS Total + SEV/ Pupil	.10	.11	.10	.23	.35	.07	.42	.01*
ACS Total + EXP/ Pupil	.01*	.04*	.01*	.11	.03*	.01*	.14	.03*
ACS Total + Size	.05*	.12	.07	.09	.24	.02*	.29	.11

*Significant at .05 level.

No specific conclusions can be drawn from these quartile analyses due to the small number of systems (four) in each group. However, some statistically significant relationships were evident. These significant relationships were basically in the low quartile when voted millage and expenditures per pupil were controlled. The conclusion to be drawn from this post hoc analysis is that further investigation into the relationships between ACS and ECC based on quartile groupings of school systems might provide different results than this study provided.

The size of the school system may be a variable that interacts differently in the relationship between ACS and ECC in high and low quartile systems. It may well be that the ACS is more valid in one size school system than in another based on its relationship to the ECC.

Conclusion

General hypothesis II investigates the relationships in thirty-nine school systems between the ACS and ECC controlling for four cost factors. The cost factor of size was expected to be a significant factor in explaining the negative correlations. When size was controlled, no relationship was evident. Each analysis, controlling one cost factor, failed to achieve significance with the exception of the analysis controlling for SEV per pupil. This analysis was significant at the .05 level. The

partial correlations which controlled for the cost factors reduced significance levels to the extent that no relationship was evident.

General hypothesis II stated that there was a significant positive relationship between the ACS and the ECC controlling for the effect of the four cost factors. Each of the five operational hypotheses was rejected on the basis of the analyses of these data. Therefore, general hypothesis II is rejected.

Conclusion

Each hypothesis presented required a significant positive relationship in order to be substantiated. In the whole group analyses not only were these significant positive relationships nonexistent, but the only relationships evident were significantly negative at the .05 level. These findings are quite startling, to say the least. In trying to determine what factors could possibly have caused this apparent reversal of expected outcomes, several tentative explanations are put forth and discussed in Chapter V.

The data were further analyzed on the basis of high and low quartile rankings on the group of cost factors. Two groups of four systems were defined--one group represented the high quartile group; the other represented the low quartile group. The results of these analyses were not consistent with the whole group analyses. The negative relationships, evident in the whole group analyses, were

not evident in the quartile group analyses. Within each quartile group, some positive significant relationships were evident. The significance of these findings is that the whole group analyses do not necessarily describe the total relationship between the ACS and ECC.

It is possible, as one explanation of the findings of the whole group analyses, that the perceptions of administrators about the degree of existence of a management team are, in fact, inversely proportional to the perceptions of teachers about the factors identified as affecting school system quality. However, while this may appear to be the case, the preponderance of evidence from the literature, as well as the results from the quartile group analyses, will not permit the acceptance of the negative relationship based only on the evidence from this study. While the results do not support the acceptance of the inverse relationship between the ECC and the ACS, they also do not support the hypotheses to the level needed for acceptance. Therefore, all hypotheses are rejected based on the data from this study. More research with varying designs is indicated to fully understand the nature of the relationships between these variables.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

This study was undertaken to identify the behavioral characteristics of a management team and to investigate the relationships between the perceptions of those characteristics and the perceptions of factors affecting school system quality. An instrument, the Administrative Characteristics Survey (ACS), was developed to measure the degree of existence of the characteristics of a management team in Michigan school districts. The Educational Characteristics Criterion (ECC) was used to measure the perceptions of teachers relating to factors affecting quality. Responses were received from thirty-nine of ninety randomly selected Michigan school districts. The thirty-nine districts that participated did not differ significantly from the fifty-one that did not participate on the four cost variables of size, SEV per pupil, voted millage for operation, and expenditure per pupil.

Measures of management team characteristics were obtained from an administration of the ACS to 279 public

school administrators in the thirty-nine participating school districts. Likewise measures of factors affecting quality of education were obtained from an administration of the ECC to 1,630 teachers in the thirty-nine participating school districts. Cost data were obtained from the Michigan Department of Education. Based on this administration, the ACS showed high unidimensionality; a reliability coefficient of .96 was computed. The ECC showed one fairly high factor and several other factors with moderate loadings. The ECC also had a reliability coefficient of .96.

The data were analyzed using the school system as the experimental unit. The following two general hypotheses were proposed:

I. A positive statistical relationship exists between characteristics of a management team and educational quality.

II. A positive statistical relationship exists between characteristics of a management team and educational quality, holding cost factors constant.

These hypotheses were tested using a multiple regression method. The level of significance used to test the hypotheses was set at .05. All correlations between the ACS and the ECC were negative. The correlation between ACS total score and ECC total score was -.33 which is significant at the .05 level. There was no substantial difference in the magnitude or sign of the correlations when cost factors were controlled; however, controlling

for cost factors did reduce significance levels to the point, in many cases, where no relationships existed.

There was evidence of significant regression between ACS and ECC scores when cost factors were used with ACS scores to predict ECC scores. This finding indicated predictability of ECC scores from ACS scores plus cost variables.

In an attempt to determine if there was some possible relationship present that was not evident from the analyses performed, four school systems were identified as being high on the cost variables and four systems were identified as being low on the cost variables. Both of these groups were analyzed to determine if the same relationships held. There was no correlation in either group based on these quartile analyses. When cost factors were controlled, some relationships were evident; however, any conclusions concerning them are very tentative due to the small number of systems in each group.

Conclusions

1. Both the ECC and the ACS are highly reliable instruments as evidenced by their reliability coefficients (.96 in each case) and the factor analysis. The ACS is reliably measuring one basic factor which is consistent with the literature that states that group processes differ in degree, not in type or kind. The ECC is reliably measuring one basic factor and several subordinate factors. Thus,

both instruments should be considered as wholes while interpreting results of this study.

The validity of the ECC was established by Kraft[1] as a measure of factors affecting the quality of education. Several other studies have supplied evidence supporting the validity of the ECC.

The validity of the ACS was primarily established by choosing items that were identified in the literature as relating to a management team. These items were submitted to professors for their opinions on the relatedness of the items to a management team. While a few items were rated low by the professors, the entire set of items was found to be related to a management team. The low items were not excluded from the analysis due to the relatively high reliability and unidimensional aspect of the ACS which indicated that the ACS was measuring primarily one factor.

It appears that the ACS is a valid measure of a management team. However, some questions have arisen about its validity. One question pertains to the theoretical positions of Blake, Halpin, and Getzels in describing the two basic dimensions of an organization. Management team was defined as an integration of the concern for people with the concern for production aspects of managerial functioning. Based on the finding of the high

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[1]Kraft, "The Perceptions Held by Professors of Education, Professors in Areas Other Than Education, and School Board Members on Ninety Factors Which May or May Not Affect the Quality of an Educational Program."

unidimensional aspect of the ACS, as well as a thorough review of the items on the ACS, it is possible that concern for production was not tested. If this tentative conclusion is true, then the ACS is not a valid measure of a management team when a management team is defined in terms of Blake's (9,9) type managerial style. The ACS, in fact, would be measuring the (1,9) managerial style. The inverse relationship between the ACS and ECC would be consistent with Blake's analysis of managerial types and organizational effectiveness.[2]

In support of this explanation the literature in education on a management team does not deal with production emphasis. The major position papers on a management team in school administration all have been published since 1955. Due to this recency, the concept of a management team has not become clear; lack of clear definition may have excluded items identified with concern for production from consideration as characteristics of a management team to comprise the ACS. The concept of a management team needs to be further researched and refined to the extent that it is positively related to the function of the public schools--providing a quality education.

2. There exists in school systems in Michigan an inverse relationship between perceived management team characteristics, as measured by the ACS, and perceived

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[2]Blake and Mouton, Corporate Excellence Through Grid Organization Development, p. 15.

factors of school systems that are identified as affecting quality, as measured by the ECC. The evidence in this study supports the conclusion that this relationship is affected by controlling for cost factors. However, cost factors did not change the results enough to establish a positive relationship.

The methods used in the study do not permit any causal relationships to be established. It was assumed in this study that administrator responses to the ACS would actually represent their perceptions of the relationships existing in the school system. It is difficult to determine if this assumption has been met. One explanation of the negative relationship is that administrators in school systems perceived to have factors related to quality may tend to respond to the ACS in an honest, self-critical manner resulting in relatively low scores. At the same time, administrators in low quality systems may respond to the ACS in a defensive manner resulting in relative high scores. If the responses were biased in this manner, then they were consistently biased. The reliability was quite high on the ACS, .96, indicating that each respondent within a school system was responding consistently. This possible bias affecting the administration of the instrument by changing the basis for response could possibly alter the results and conclusions of this study substantially.

The inverse relationship in this study is between the variables of ACS and ECC. This inverse relationship between perceptions of characteristics of a management team and perceptions of factors affecting quality is only to the extent that the ACS and ECC are accurate and valid perceptions of the respondents.

3. Based on the literature in the fields of education and business management and the results of this research, a definition of a management team is emerging along with relationships that affect this definition. Two basic concepts of a management team have evolved as a result. The first concept is that to have a functioning management team, the administrative staff of a school system must function as a highly effective work group. There must be free and open communication, unity, trust, respect, and clearly understood relationships. Most of the literature on a management team has focused on this aspect of a management team, and its value was, more or less, understood. However, the results of this study have demonstrated that there is no positive relationship between this perceived group effectiveness on the administrative level and perceptions of teachers of factors affecting the quality of education. In fact, there is some evidence that an inverse relationship may exist.

It is necessary to examine the literature of business management to develop a second basic concept of a management team. This second concept relating to a

management team is that there must exist in the attitudes and managerial style of the particular administrators of a school system the drive for excellence in achievement in the teaching-learning process.

In other words, there must be an emphasis throughout the administration of the school system on the attainment of the educational goals. This emphasis is not mentioned in the educational administration literature concerning a management team. Thus, the definition of a management team is a set of behavioral relationships among administrators who function as a highly effective work group and strive diligently toward accomplishing the task of the education of children.

Blake and Mouton describe "What Organization Members Report to Be Important Managerial Elements In a 9,9 Work Culture."

> Managers:
> --Have clear, forthright, and unobstructed communication with their bosses, colleagues, and subordinates
> --Fully commit their energies to accomplishing that part of organization objectives for which they are responsible
> --Confront disagreement and interpersonal conflict squarely, whether with another person or as a member of a work team
> --Search for and find valid solutions to problems
> --Experiment for innovative and creative solutions
> --Accept nothing less than excellence of results
> --Achieve effective coordination of effort through high quality teamwork
> --Use critique of operational problems as the basis for learning
> --Continuously revise the culture of the organization so its elements support problem solving instead of hampering it. (No practice is sacred just because it is old. No pronouncement is sacrosanct just because

somebody spoke it.)
--Have a sense of personal purpose because the organization purposes and financial and program objectives are clear
--Expect thoroughness of study and preparation as the basis of participation
--Use knowledge and facts objectively as the basis for decision making[3]

As can be seen from these elements, some relate directly to aspects tested by the ACS while others speak directly to the emphasis on production by managers. The emphasis on production is seen by Blake and Mouton as being a necessary element in achieving organizational excellence. They define an "excellent corporation" in terms of business management. "An excellent corporation is able to achieve and sustain an outstandingly high return on investment over long periods of time."[4]

They further state:

> . . . "return on investment" conveys the concept of return on assets employed including outside financing. This concept of return on investment is an index of the effectiveness with which a corporation employs the assets available to it. The way in which this measurement is applied must be defined concretely to fit the requirement of a particular corporation. Service corporations and non-industrial organizations, such as government organizations, do not have such an index but often do have or can develop quantitative indexes that are equally useful for measuring organization achievement.

Thus, to examine an educational system in terms of organizational excellence a measure of inputs is needed,

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[3] Ibid., p. 32.

[4] Ibid., p. 2.

[5] Ibid., p. 11.

the ECC, to determine investment as well as a measure of returns on that investment.

The two basic behavioral concepts of a management team are the perceived degree of group effectiveness, as measured by the ACS, and the concern and drive for educational excellence on the part of the administrators, not measured by the ACS. In terms of the educational characteristics, identified in the ECC and perceived by teachers, the part of a management team that has been measured is not positively related to those perceptions.

4. Assuming that the ACS and ECC elicited valid responses from respondents concerning their perceptions of the actual characteristics of school systems, and in an effort to more completely explain the apparent inverse relationship of the ACS to the ECC, several propositions are put forth. The first proposition must be the obvious one that there is an inverse relationship between a management team and school system quality. This explanation would imply that a management team, as defined by the ACS, is not related to quality in any positive manner.

However, this explanation is not consistent with the literature from education or business. Further analysis of possible relationships must be investigated. In closely examining the instruments used in this study, along with the literature that accompanies them, two statements can be made about what the instruments measure in terms of inputs and outputs of an organization.

1. The ECC measures perceptions of inputs.
2. The ACS measures perceptions of the degree to which those inputs are effectively used in a management team style.

In these terms, the statistical data from this study state the higher the level of perceptions of inputs to a school system, the lower the degree to which they are perceived as being effectively used in a management team style; the lower the level of perceptions of inputs, the higher the effective level of use of those inputs is perceived in a management team style.

According to Argyris, organizational effectiveness can be stated in terms of the relative levels of inputs to outputs.

> An organization increases in effectiveness as it obtains: (a) increasing outputs with constant or decreasing inputs, or (b) constant outputs with decreasing inputs, and (c) is able to accomplish this in such a way that it can continue to do so.[6]

If the degree of management team (measured by the ACS) is the degree of use of those inputs, then the inverse relationship could possibly be explained in terms of the perceived level of inputs of a school system (measured by the ECC) interacting with the perceived management team effort needed (measured by the ACS) to obtain an acceptable level of output. The lower the level of inputs (assuming

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[6]Chris Argyris, Integrating the Individual and the Organization (New York: John Wiley and Sons, Inc., 1964), p. 123.

a constant output is desired), the higher the level of management team functioning or effort is required. The higher the level of inputs that exists, the lower the level of management team effort is needed to produce the acceptable output.

It is very possible that such a situation exists in the public schools of Michigan. If this is the case, then the ACS is a positive factor relating to a quality school system but does not coexist with high input systems due to the relative ease in these systems in achieving the necessary levels of education to satisfy the parents and patrons of the school district.

This analysis would suggest that a management team style of administration is effective in increasing the relative difference between input and output in a school system and would also suggest that a management team style of administration is only employed when relative pressure is brought to bear on the school system to increase output. However, this cause and effect relationship is only speculative due to the limitations of the design of this study. While this argument seems reasonable, it is specious, at best. However, it is one explanation of the inverse relationship that bears investigation. If this relationship is the case, the high input systems could improve output by an increase in team management while the low input systems would have to look for an increase in inputs to improve the level of education.

5. The quartile analysis seemed to indicate that in the high and low quartile groups no basic relationship existed. With only four systems in each group, it is not possible to draw any valid conclusions about the relationship between ACS and ECC in those groups. However, the general conclusions from those analyses seem to indicate that a fruitful line of investigation might be to study the relationship between factors affecting quality and characteristics of a management team in a cost-factor structured relationship. This method of analysis may indicate possible relationships that are not evident from the design in this study.

The analysis based on the quartile groupings must be interpreted with care. Only four school systems comprised each group which allowed only two degrees of freedom for the analyses. In the cases where cost factors were controlled, the analyses were based on only one degree of freedom. As a result, the partial correlation coefficients would have to be .99 to be significant at the .05 level and .98 to be significant at the .10 level.

In some cases, based on these criteria, significance was achieved. However, the interpretation of that statistical significance must be very tentative. The only statement that can be made is that there is possible evidence that in school systems grouped homogeneously on the basis of the cost factors, the relationship between ACS and

ECC may vary from the relationship of the two factors across all systems.

In making this statement, the conclusion must be that more studies are needed to investigate the actual relationships within different subgroups. It was interesting to note that some of the relationships varied on the basis of the quartile analyses. The ACS and ECC were actually correlated positively in some cases. While no definite statements can be made about this variance, the probability of the correlations varying from consistently negative to significantly positive is very low.

6. The relationship of the perceived degree of a functioning management team that exists in a school system to the size of that school system is worthy of exploration. In larger school systems there is a proportionally larger administrative staff than in smaller school systems. In Michigan the size of administrative groups varies from two to several hundred administrators. Consistent with the conclusion that group processes vary in degree, not in type or kind, is the conclusion that as the size of the group passes a certain upward limit, the ability of that group to function effectively is impaired.

As organizations increase in size, they become more complex. They employ more administrators which means that there are more possible relationships between administrators. As the number of people in a group increases arithmetically, the number of possible relationships

increases geometrically. To successfully cope with this type of a situation the concept of span of control has been employed.

Span of control refers to the number of people directly supervised by one administrator. As the span of control of an administrator increases beyond a certain point, his effectiveness diminishes. As this development occurs, the tendency is to initiate intermediate administrative levels so that the span of control of any particular administrator stays within limits that promote his effective functioning. However, as the number of levels increases, the number of administrators increases and the administration becomes more departmentalized. In a medium or large school system it might prove more valuable to identify work groups on the administrative level and measure the degree of team management within those groups. The relationship of the factors affecting quality, as perceived by the teachers that come under the jurisdiction of that particular group, would be the proper unit of analysis.

In a medium or large school system it seems that a departmentalized administrative staff, as a whole, would score low on the ACS, for the perceptions of administrators would be low in relation to the entire administrative team. These same systems generally score high on the ECC, for their size permits more effective use of their resources.

It is possible that group functioning within departments may be very high--a situation which is not tested by the ACS.

Implications

It is evident from the results and conclusions of this study that a management team, as described in the recent literature in education, is not a panacea for all administrative problems. For a functioning management team to be justified, its relationship to the quality of education must be determined and analyzed. A management team, as defined by the ACS in general, is not sufficiently related to factors affecting the quality of education. This conclusion implies that to improve the administration of a school system in the direction indicated by the ACS does not necessarily indicate that the school system will improve in quality.

A redefinition of a management team in educational terms is necessary. This redefinition should take into account the need for an emphasis to be placed on excellence in the teaching-learning process of the school system.

The need for the development of the management team is still evident in Michigan. Principals' groups in some school systems are being forced into a formal collective bargaining position with boards of education. This development has the effect of damaging the unity of the entire administrative staff, as well as hampering effective

communication and trust on the administrative levels. However, the type of a management team necessary is one which not only deals with administrative relationships but also has a strong orientation toward achieving excellence both on group and individual levels.

A management team may be more or less effective in different systems based on the wealth, size, effort expended, or money spent in those systems. A management team approach may not be as effective or valid in different types of systems. Certainly this possible variance in effectiveness should be thoroughly investigated. It is also possible that this type of a study could indicate the need for possible consolidation or decentralization of existing school systems to provide for their most effective management.

Effective management of school systems must result in a high level of education for all, and to achieve this a study of inputs and what happens to those inputs is necessary. A management team type of administrative organization is one particular way of handling the inputs.

Even though the perceptions of the degree of existence of a management team are not positively related to the perceptions of educational factors of school systems in Michigan, there may be other justifications for the existence of a management team in school administration. However, any justification of the use of a management team, based on its relationship to the factors identified in the

ECC or the cost variables identified in this study, is invalid.

Recommendations

1. Further definition of a management team in behavioral terms is needed in the field of education. There should be a complete and explicit set of behavioral characteristics spelled out to exactly define a management team. These characteristics should be positive contributors to more effective management of the school system in terms of the success of the teaching-learning process.

2. Further investigation into the relationships between the ECC and the ACS is needed. The quartile groupings should be the basis for another study which uses more systems to investigate the relationships within and between these homogeneous groupings. The evidence of this study seems to suggest that the inverse relationships do not necessarily hold for the low quartile systems.

3. The ACS should be further modified to include some measure of concern for production on the part of administrators. This change may provide a better measure of the effectiveness of the team than does the present form of the ACS. One shortcoming of the present instrument is that it is possible for a school system to rate high on all factors tested in the ACS and at the same time have the administrators of the district not press for excellence in the system.

4. Some study to establish further the validity of the ACS would aid greatly in the interpretation of this study. While it is felt that the ACS is a generally valid measure of the characteristics of a management team, there is some doubt specifically in the area of concern for production.

5. A study should be undertaken to determine what characteristics of a school system and a community coexist with a functioning management team. These factors or characteristics could be causes, as well as results, of a management team. Specifically, the leadership styles of the superintendent and his team members would provide an interesting area for investigation as these leadership styles should be directly related to the functioning of a management team. Halpin's Leader Behavior Description Questionnaire, LBDQ, might provide some basis for that analysis. Blake and Mouton provide a Self-Assessment of Managerial Style that also might provide the basic starting point of analysis for a single administrative staff and its development into a functioning management team.

6. It is recommended that some studies be conducted in states other than Michigan where the administrators may not be as concerned with a management team and the terminology surrounding it. There may be some relationships that would be reported more accurately in such studies.

7. Some investigation might prove fruitful into the delimitation of actual management teams in school systems and the functioning characteristics of those teams with respect to various factors. One specific factor that might shed light on the characteristics of a team would be the size of the team itself. What is the maximum size of a management team? Can more than one level of team function effectively within a school system? Is decentralization of large systems, based on the effective size of management team units, indicated? These questions might be answered by an in depth study of several management teams selectively chosen.

8. An investigation into the relationship of a refined concept of a management team, including the concern for production and the achievement rates or net achievement of students as one measure of the quality of education, might provide interesting results. It is possible that systems that have low levels of education may have different rates of learning and, thus, be related to a management team differently than systems with higher learning levels.

BIBLIOGRAPHY

BIBLIOGRAPHY

A. Books

Alexis, Marcus, and Wilson, Charles Z. Organization Decision Making. Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1967.

American Institute of Management Incorporated. Executive Evaluation in the Corporation. New York: American Institute of Management Incorporated, 1959.

Argyris, Chris. Integrating the Individual and the Organization. New York: John Wiley and Sons, Inc., 1964.

Barnard, Chester I. The Functions of the Executive. Cambridge, Mass.: Harvard University Press, 1938.

Berelson, Bernard, and Steiner, Gary A. Human Behavior: An Inventory of Scientific Findings. New York: Harcourt, Brace & World, 1964.

Blake, Robert R.; Avis, Warren E.; and Mouton, Jane S. Corporate Darwinism: An Evolutionary Perspective on Organizing Work in the Dynamic Corporation. Houston, Texas: Gulf Publishing Company, 1966.

Blake, Robert R., and Mouton, Jane Syrgley. Corporate Excellence Through Grid Organization Development. Houston, Texas: Gulf Publishing Company, 1968.

_____. The Managerial Grid. Houston, Texas: Gulf Publishing Company, 1964.

Carlson, Richard O. Executive Succession and Organizational Change. Chicago: University of Chicago, 1962.

Dale, Ernest. Management: Theory and Practice. 2nd ed. New York: McGraw-Hill Book Company, 1969.

Dale, Ernest. Planning and Developing the Company Organization Structure. New York: American Management Association, 1952.

Dill, William R. "Decision-making." Behavioral Science and Educational Administration, Part II. Edited by Daniel E. Griffiths. Chicago: University of Chicago Press, 1964.

Fensch, Edwin A., and Wilson, Robert E. The Superintendency Team. Columbus, Ohio: Charles E. Merrill Books, 1964.

Getzels, Jacob. "Administration as a Social Process." Administrative Theory in Education. Edited by Andrew Halpin. New York: Macmillan Company, 1967.

Golembiewski, Robert T. Organizing Men and Power: Patterns of Behavior and Line-Staff Models. Chicago: Rand McNally Company, 1967.

Gordon, Thomas. Group-Centered Leadership. Boston: Houghton Mifflin Company, 1955.

Gordon, William J. J. Synectics: The Development of Creative Capacity. New York: Macmillan Company, 1961.

Griffiths, Daniel E., ed. Behavioral Science and Educational Administration: Part II. Chicago: University of Chicago Press, 1964.

Halpin, Andrew W. Theory and Research in Administration. New York: The Macmillan Company, 1967.

James, H. Thomas; Gulick, Luther; Houle, Cyril O.; Macy, John W., Jr.; Turner, Joseph L.; and Wallace, S. Rains. Excellence in Administration: The Dynamics of Leadership. Stanford, Calif.: Stanford University, 1962.

Jensen, Theodore J., and Clark, David L. Educational Administration. New York: Center for Applied Research in Education, Inc., 1964.

Koontz, Harold, and O'Donnell, Cyril, eds. Management: A Book of Readings. 2nd ed. New York: McGraw-Hill Book Company, 1968.

_____. Principles of Management: An Analysis of Managerial Functions. New York: McGraw-Hill Book Company, 1968.

Likert, Rensis. The Human Organization. New York: McGraw-Hill Book Company, 1967.

_____. New Patterns of Management. New York: McGraw-Hill Book Company, Inc., 1961.

McGregor, Douglas. The Human Side of Enterprise. New York: McGraw-Hill Book Company, Inc., 1960.

McLuhan, Marshall, and Fiore, Quentin. The Medium Is the Massage. New York: Bantam Books, 1967.

McLuhan, Marshall. Understanding Media: The Extensions of Man. New York: McGraw-Hill Book Company, 1964.

Moore, Franklin G., ed. A Management Sourcebook. New York: Harper & Row, 1964.

Morphet, Edgar L.; Johns, R. L.; and Reller, Theodore L. Educational Administration: Concepts, Practices, and Issues. Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1959.

Mort, Paul R., and Furno, Orlando F. Theory and Synthesis of a Sequential Simplex: A Model for Assessing the Effectiveness of Administrative Policies. New York: Columbia University, 1960.

Mullen, James H. Personality and Productivity in Management. New York: Columbia University Press, 1966.

Pigors, Paul; Myers, Charles A.; and Malm, F. T. Management of Human Resources. New York: McGraw-Hill Book Company, 1959.

Pigors, Paul, and Myers, Charles. Personnel Administration: A Point of View and a Method. New York: McGraw-Hill Book Company, 1965.

Rapoport, Anatol. "Critiques of Game Theory." Modern Systems Research for the Behavioral Scientist. Edited by Walter Buckley. Chicago: Alding Publishing Company, 1968.

Sampson, Robert C. Managing the Managers: A Realistic Approach to Applying the Behavioral Sciences. New York: McGraw-Hill Book Company, 1965.

Tannenbaum, Arnold S. Social Psychology of the Work Organization. Belmont, Calif.: Wadsworth Publishing Company, Inc., 1966.

Wadia, Maneck S. The Nature and Scope of Management. Chicago: Scott, Foresman and Company, 1966.

B. Periodicals

Anderson, Lester W. "Management Team Concept." Michigan Journal of Secondary Education, X (Spring, 1969), 24-33.

Bridges, Edwin M.; Doyle, Wayne F.; and Mahan, David J. "Effects of Hierarchical Differentiation on Group Productivity, Efficiency, and Risk Taking." Administrative Science Quarterly, XIII (September, 1968), 305-19.

Egnatoff, John G. "The Changing Status of Saskatchewan's School Principals." Canadian Education and Research Digest, VIII (December, 1968), 354-65.

Egner, Joan Roos, and Lane, Kenneth. "Collective Bargaining and Administrative Prerogatives." Peabody Journal of Education, XLVI (November, 1968), 142.

Galbraith, John Kenneth. "Motivation and the Technostructure." Personnel Administration, XXXI (November-December, 1968), 4-10.

Keltner, John W. "Communication and the Labor-Management Mediation Process: Some Aspects and Hypotheses." Journal of Communication, XV (June, 1965), 64-80.

Moody, Harold. "Plight of the Principal." The Clearing House, XLII (May, 1968), 542.

Mylander, William H. "Management by Executive Committee." Harvard Business Review, XXXIII (May-June, 1955), 51-58.

Pinis, Fritz. "The Management Team Concept Myth or Reality." Michigan School Board Journal, XV (January, 1969), 7.

Pino, Edward C., and Johnson, Wesley. "Administrative Team: A New Approach to Instructional Leadership." The Clearing House, XLII (May, 1968), 520.

Schultz, William C. "What Makes Groups Productive?" Human Relations, VIII (November, 1955), 430-65.

Taylor, Lloyd, and McPherson, Philip. "The Superintendent and the Principal." The National Elementary Principal, XLVII (May, 1968), 80-84.

Terrien, Frederic W., and Mills, Donald L. "The Effects of Changing Size Upon the Internal Structure of Organizations." American Sociological Review, XX (February, 1955), 11-13.

Walker, Robert W., and Hammel, Eugene C. "Management by Design Using the Team Approach." Michigan School Board Journal, XVI (February, 1969), 12-14.

C. Unpublished Doctoral Dissertations

Appel, Paul Henry. "A Study of Selected Administrative Principles as They May Be Applied in Certain School Districts in the State of Michigan." Unpublished Ed.D. dissertation, Michigan State University, 1962.

Berg, Arthur D. "The Determination of the Discrimination and the Reliability Indices of the Educational Characteristics Criterion with Implications Concerning Educational Cost-Quality Relationships." Unpublished Ph.D. dissertation, Michigan State University, 1962.

Cave, Raymond David. "A Critical Study of the Leader Behavior of School Administrators in Conflict with Teachers' Unions." Unpublished Ed.D. dissertation, Michigan State University, 1967.

Dunn, Bruce J. "An Analysis and Identification of Instructional Leadership Acts as Performed and Perceived by the Superintendent of Schools." Unpublished Ed.D. dissertation, Michigan State University, 1964.

Eberlein, E. Larry. "The Relationship Between School Climate and Edwards' Manifest Needs of the Elementary School Teacher." Unpublished Ph.D. dissertation, Michigan State University, 1967.

Kraft, Leonard Edward. "The Perceptions Held by Professors of Education, Professors in Areas Other than Education, and School Board Members on Ninety Factors which May or May Not Affect the Quality of an Educational Program." Unpublished Ed.D. dissertation, Michigan State University, 1962.

Maxwell, Robert Earl. "Leader Behavior of Principals: A Study in Ten Inner-City Elementary Schools of Flint, Michigan." Unpublished Ed.D. dissertation, Wayne State University, 1967.

Mueller, VanDyck. "A Study of the Relationships Between Teacher-Administrator Perceptions of Educational Quality as Measured by the Educational Characteristics Criterion, (ECC), and Selected Cost Factors." Unpublished Ed.D. dissertation, Michigan State University, 1964.

Openlander, Stuart L. "The Development of an Administrative Structure in a Middle Sized City School District." Unpublished Ed.D. dissertation, Michigan State University, 1968.

Pelton, Maurice D. "A National Analysis of Educational Quality as Measured by the Educational Characteristics Criterion (ECC), Achievement, and Selected Cost Factors." Unpublished Ed.D. dissertation, Michigan State University, 1966.

Scott, Walter W. "A Study of Preparation Programs in School Administration as Affected by Collective Negotiations." Unpublished Ph.D. dissertation, Michigan State University, 1966.

Smith, Daniel Otho. "A Study of Certain Communication Processes of Superintendents in Nine Class A Public School Systems in Michigan Education Association Region 10." Unpublished Ph.D. dissertation, Michigan State University, 1965.

Springer, Owen. "A Study of the Relationships Between the Educational Characteristics Criterion (ECC), the Stanford Achievement Test, and Selected Cost Factors." Unpublished Ed.D. dissertation, Michigan State University, 1964.

D. Other Sources

Guide Lines for Michigan Principals. Pamphlet published by Michigan Association of Elementary School Principals and Michigan Association of Secondary School Principals, July, 1968.

"Management Team Concept." Position statement published by the Michigan Congress of School Administrator Associations, March 21, 1968.

Metropolitan Detroit Bureau of School Studies, Inc. "An Analysis of the Questionnaire, Patterns of School Organizational Structure," Detroit, October, 1969. (Mimeographed.)

Metropolitan Detroit Bureau of School Studies, Inc. "The Management Team Concept in School Administration: An Annotated Bibliography of Selected Literature," Detroit, September, 1969. (Mimeographed.)

Reeves, Floyd. "Selected Principles for Consideration as Principles Relating to Staffing," East Lansing, April 3, 1967. (Mimeographed.)

Smith, David C. "The Management Team." Position paper published by the Michigan Association of Elementary School Principals, East Lansing, August 13, 1968.

APPENDICES

APPENDIX A

LETTER SENT TO SUPERINTENDENTS INVITING PARTICIPATION IN THE STUDY

MICHIGAN STATE UNIVERSITY EAST LANSING · MICHIGAN 48823

COLLEGE OF EDUCATION · DEPARTMENT OF ADMINISTRATION AND HIGHER EDUCATION

ERICKSON HALL

I am presently directing a research project at Michigan State University. This project will investigate the relationship that exists between specific administrative characteristics and those educational characteristics of a school system which contribute to educational quality. Your school system is one of ninety K-12 public school systems in the State of Michigan selected to participate in this study. These ninety school systems will be coded by number and no references to school district names will appear in the research report.

The data collection will consist of two phases:

1. Each classroom teacher will be asked to complete the Educational Characteristics Criterion (ECC) and return it to the superintendent's office to be mailed back to Michigan State University. The ECC requires about 30 minutes to administer.

2. Each administrative staff member will be asked to complete the Administrative Characteristics Survey (ACS) and return it to the superintendent's office to be mailed back to Michigan State University. The ACS requires about 20 minutes to administer.

If you are willing to take part in this study, you will be supplied with all of the necessary forms, envelopes, and stamped self-addressed mailing containers.

If you so desire, an abstract of the results of the study will be made available to you at the conclusion of the study. It would be greatly appreciated if you would fill out the attached card and return it in the mail.

I hope that you will be willing to cooperate with us in this endeavor. The impact of administrative climate upon educational quality has often been talked about, but seldom researched. The results of this study should go a long way towards clarifying the administrator's effect on education.

Cordially yours,

Herbert C. Rudman,
Professor of Education

APPENDIX B

LETTER OF ENDORSEMENT FROM THE MICHIGAN CONGRESS OF SCHOOL ADMINISTRATOR ASSOCIATIONS

MICHIGAN CONGRESS of SCHOOL ADMINISTRATOR ASSOCIATION

Boone Hall, Room 129
Eastern Michigan University
Ypsilanti, Michigan 48197
Ex. - Sec. Elven E. Duvall
313-483-6100

February 11, 1970

Dear Superintendent:

The Michigan Congress of School Administrator Association endorses the need for research in the area of management team concept. One such study directed by Dr. Herbert Rudman is investigating the administrative characteristics of school districts as they relate to factors affecting quality. The Congress encourages your cooperation as a participant in this endeavor, for it will add to the knowledge in the area and help develop the position of the Congress.

Sincerely,

Elven E. Duvall
Executive Secreta

EED/njc

APPENDIX C

INSTRUCTIONS FOR RESPONDING TO THE ADMINISTRATIVE CHARACTERISTICS SURVEY (ACS)

INSTRUCTIONS FOR RESPONDING TO THE ADMINISTRATIVE CHARACTERISTICS SURVEY

1. Your participation as a respondent to the Administrative Charact istics Survey (ACS) within the sample of cooperating Michigan Sc Districts is greatly appreciated.

2. It is important that your responses to the ACS represent your ow individual perceptions; therefore, it is recommended that you c plete the ACS without prior discussion with other administrators preferably in private and quiet surroundings. All information w be treated confidentially and anonymously. Approximate responde time is twenty minutes; however, there is no time limit.

3. Use pencil and mark with firm pressure ON the number representin the characteristic that you perceive. Relate the statements to your school system.

4. Example of marking one item:

Factors	Most Characteristic	Somewhat -	Slightly -	Least -
1. All administrators keep each other informed on matters of mutual concern.	4	3	X	1

(Note: The "X" on the "2" will indicate that your perception of the statement is that it is "slightly characteristic" of your school system.)

5. Upon completion of your responses to all ACS items, place the AC and this instruction sheet in the envelope and SEAL the envelope flap. Do not put your name or other markings on the ACS or envelope.

6. Return the envelope with the enclosed ACS to the collection poin prescribed by the superintendent. It is highly desired that you complete the ACS at your very earliest opportunity and return it within 24 hours, and if delayed, within 48 hours.

APPENDIX D

ADMINISTRATIVE CHARACTERISTICS SURVEY (ACS)

Factors	Most Characteristic	Usually Characteristic	Seldom Characteristic	Least Characteristic
1. All administrators keep each other informed on matters of mutual concern.	4	3	2	1
2. Information is available to administrators before decisions are made.	4	3	2	1
3. There is mutual respect among all administrators.	4	3	2	1
4. An attitude is present that each administrator is best equipped to function in his own area.	4	3	2	1
5. Knowledge that administrative decisions are implemented at more than one level in a school system is present in all administrators.	4	3	2	1
6. Responsibility of all administrators is clearly defined.	4	3	2	1
7. All administrators are represented or actively involved with the management negotiating team in the negotiations process.	4	3	2	1
8. The school board provides extensive in-service education concerned with administrative relationships.	4	3	2	1
9. The administrative staff meets frequently.	4	3	2	
10. There is recognition of the status of administrators by their superiors.	4	3	2	
11. The administrative staff in no way infringes on any administrator's right to make decisions necessary to perform his job as defined in his job description.	4	3	2	

Factors	Most Characteristic	Usually Characteristic	Seldom Characteristic	Least Characteristic
12. There is a unity of command in the school system.	4	3	2	1
13. At administrative staff meetings discussion is focused on decisions to be made.	4	3	2	1
14. The superintendent accepts individual responsibility for all group decisions that are made as well as for their implementation.	4	3	2	1
15. Group processes are discussed when necessary at administrative staff meetings.	4	3	2	1
16. Communication among administrators is broadly conceived to include discussion and persuasion as well as occasional edict.	4	3	2	1
17. Leadership is conceived of as shared decision making as opposed to "one-way management."	4	3	2	1
18. The superintendent encourages autonomous action on the part of principals with respect to individual schools.	4	3	2	1
19. There is a willingness to change when a need is perceived as opposed to a demand for change for the sake of similarity.	4	3	2	1
20. All administrative staff members are involved in policy decisions concerning administration of the budget.	4	3	2	1
21. Loyalty is based on the perceived goals of the entire school system rather than to some individual or group.	4	3	2	1
22. The school board encourages shared decision making among all members of the administrative staff.	4	3	2	1
23. Communication among administrative staff members is clear and understood.	4	3	2	1

Factors	Most Characteristic	Usually Characteristic	Seldom Characteristic	Least Characteristic
24. Each administrative staff member has a clear over-all view of the entire educational program.	4	3	2	1
25. All administrators are consulted when possible before major decisions are made on a system-wide basis.	4	3	2	1
26. Administrators in the system do not tend to form cliques.	4	3	2	1
27. All administrators in the system have specific job descriptions.	4	3	2	1
28. There are clearly defined lines of accountability.	4	3	2	1
29. All administrators are involved in determining their own salary and working conditions.	4	3	2	1
30. All administrators are involved in determining their own job descriptions.	4	3	2	1
31. Members of the administrative staff never make decisions or participate in activities that overlap on another administrator's area of responsibility.	4	3	2	1
32. Few if any decisions are made in the school system that must be modified after they are implemented to fit particular circumstances.	4	3	2	1
33. The school board provides extensive in-service education for all administrators concerning collective bargaining.	4	3	2	1
34. All administrative staff members are welcome at school board meetings.	4	3	2	1
35. There is a high probability that any administrator who possesses the requisite skills and so desires can become a member of the school board's bargaining team.	4	3	2	1

Factors	Most Characteristic	Usually Characteristic	Seldom Characteristic	Least Characteristic
36. Administrative staff meetings are <u>never</u> dominated by one person's ideas or by one person's talking.	4	3	2	1
37. At administrative staff meetings anyone may disagree with the superintendent without fear of retribution.	4	3	2	1
38. All administrators can justify to the public decisions with which they personally disagree.	4	3	2	1
39. There is a strong feeling in all administrators to support policies or decisions that they must implement and which were made over their objections.	4	3	2	1
40. The school board supports the idea that all administrators are managers and not teachers.	4	3	2	1
41. All administrators feel that they represent the management to the teachers.	4	3	2	1
42. All administrators are treated impartially by other administrators.	4	3	2	1
43 All administrators are included in some level of administrative staff meetings.	4	3	2	1
44. All administrators subordinate to the superintendent take the responsibility for the decisions that they make.	4	3	2	1
45. There is respect for personal qualities of administrators by their superiors.	4	3	2	1

APPENDIX E

INSTRUCTIONS FOR RESPONDING TO THE EDUCATIONAL CHARACTERISTICS CRITERION (ECC)

INSTRUCTIONS FOR RESPONDING TO THE EDUCATIONAL CHARACTERISTICS CRITERION

1. Your participation as a respondent to the Educational Characteristics Criterion (ECC) within the sample of cooperating Michigan School Districts is greatly appreciated.

2. It is important that your responses to the ECC represent your own individual perceptions; therefore it is recommended that you complete the ECC without prior discussion with other faculty members, preferably in private and quiet surroundings. All information will be treated confidentially and anonymously. Approximate respondent time is thirty minutes; however there is no time limit

3. Use pencil and mark with firm pressure ON the number representing the characteristic that you perceive. Relate the statements to your building experience.

4. Example of marking one item:

Factor	Most Characteristic	Somewhat -	Slightly -	Least -
1. Teachers have intimate knowledge of children.	4	3	X	1

(Note: The "X" on the "2" will indicate that your perception of the statement is that it is "slightly characteristic" of your building situation.)

5. Upon completion of your responses to all ECC items, place the ECC and this instruction sheet in the envelope and SEAL the envelope flap. Do not put your name or other markings on the ECC or envelope.

6. Return the envelope with enclosed ECC to your building principal or to the collection point prescribed by the principal or the superintendent. It is highly desired that you complete the ECC at your very earliest opportunity and return it within 24 hours, and if delayed, within 48 hours.

APPENDIX F

EDUCATIONAL CHARACTERISTICS CRITERION (ECC)

EDUCATIONAL CHARACTERISTICS CRITERION

Herbert C. Rudman
Michigan State University

	Factor	Most Characteristic	Somewhat Characteristic	Slightly Characteristic	Least Characteristic
1.	Teachers have intimate knowledge of children.	4	3	2	1
2.	Teaching practices reflect concern for individual differences.	4	3	2	1
3.	Teaching practices reflect a knowledge of individual differences.	4	3	2	1
4.	Teachers perceive a coherent and coordinated structure to the educational program.	4	3	2	1
5.	Concensus exists among the staff concerning the goals of the educational program.	4	3	2	1
6.	A structure has been developed that permits continual curriculum improvement.	4	3	2	1
7.	Evidence exists of instructional and/or curricular experimentation.	4	3	2	1
8.	Students show a positive attitude toward scholastic work.	4	3	2	1
9.	Students evidence accurate knowledge of self.	4	3	2	1
10.	Professional staff of the school system are involved in in-service education.	4	3	2	1
11.	Teachers thoroughly understand the information gathered on students and use this information to make sound educational decisions.	4	3	2	1
12.	All teachers are certified to teach at the grade level or subject they are now teaching.	4	3	2	1
13.	Teachers have complete freedom to				

	Factor	Most Characteristic	Somewhat Characteristic	Slightly Characteristic	Least
14.	A great variety of instructional techniques are presently used in the classrooms.	4	3	2	
15.	A great variety of instructional materials are presently used in the classrooms.	4	3	2	
16.	Students are knowledgeable about the educational and social opportunities available to them.	4	3	2	
17.	A complete comprehensive testing program including intelligence and achievement testing is available in the schools.	4	3	2	
18.	Teachers often avail themselves of professional help.	4	3	2	
19.	Complete freedom is granted to students to investigate any local, state, national or international issue.	4	3	2	
20.	Availability to students of materials that reflect all shades of political and sociological points of view.	4	3	2	
21.	Parents and patrons (those residents of a school district without school-age children) are highly knowledgeable about education.	4	3	2	
22.	Lay members of the community are highly involved in the planning of educational goals with the school staff.	4	3	2	
23.	Regulations governing student conduct are highly explicit and detailed.	4	3	2	
24.	High degree of teacher participation in social and political activities of the community.	4	3	2	
25.	The social status of teachers is very high in this community.	4	3	2	
26.	Regulations governing personnel policies are highly explicit and detailed.	4	3	2	

	Factor	Most Characteristi	Somewha Characteristi	Slightl Characteristi	Least Characteri
27.	Citizens are highly organized to discuss school problems.	4	3	2	1
28.	The perceptions of parents and patrons concerning the purposes of education are consistent and clear.	4	3	2	1
29.	The local newspaper has shown a high interest in local school affairs.	4	3	2	1
30.	There is no lag between the values taught in the school and what is practiced in the community.	4	3	2	1
31.	There exists a high level of cooperation among the teachers of the staff.	4	3	2	1
32.	The physical facilities of the school system (buildings and equipment) are completely adequate.	4	3	2	1
33.	The community and its residents are used for instructional purposes.	4	3	2	1
34.	Cultural experiences are readily available in the community.	4	3	2	1
35.	Teachers' judgments are almost always used in the determination of educational policies.	4	3	2	1
36.	A high percentage of the electorate in the community vote in school elections.	4	3	2	1
37.	There are outstanding community leaders in this community who exhibit great interest in school affairs.	4	3	2	1
38.	This is a highly stable community which does not have too many people leaving.	4	3	2	1
39.	The community exhibits a great concern for the development of aesthetic and artistic interests.	4	3	2	1
40.	A two-way communication channel readily exists between the home and the school.	4	3	2	1
41.	A high percentage of high school students own personal cars.	4	3	2	1
42.	A high percentage of homes own	4	3	2	1

	Factor	Most Characteristic	Somewhat Characteristic	Slightly Characteristic	Least
43.	A great deal of homework is assigned to students.	4	3	2	
44.	A high degree of ethnic, racial and religious homogeneity exists among the local population.	4	3	2	
45.	The parents in this community expect their children to perform their share of family chores.	4	3	2	
46.	This community is composed of people who are predominantly Protestant.	4	3	2	
47.	This community is composed of people who are predominantly Catholic.	4	3	2	
48.	This community is composed of people who are predominantly Jewish.	4	3	2	
49.	The population of this community is equally divided between Protestants and Catholics.	4	3	2	
50.	One or two ethnic groups comprise the largest number of residents in the community.	4	3	2	
51.	Pupils consider an academic grade of at least "B" to be the norm for academic achievement.	4	3	2	
52.	The professional staff of the schools in the community consider an academic grade of at least "B" to be the norm for academic achievement.	4	3	2	
53.	A high value is placed on education by the parents and patrons (those residents of a school district without school-age children) of the community.	4	3	2	
54.	Parents and patrons in the community consider an academic grade of at least "B" to be the norm for academic achievement.	4	3	2	
55.	Parents condone or encourage early dating for their children.	4	3	2	

APPENDIX G

CHARACTERISTICS OF PARTICIPATING SAMPLE SCHOOL DISTRICTS

TABLE G-1.--Characteristics of participating schools.

System	Size	SEV Per Pupil	Voted Millage	Expenditure Per Pupil
1	629	$ 9443.95	12.25	$639.92
2	4154	16538.14	8.50	561.72
3	4362	21039.22	15.00	859.55
4	891	8136.69	9.00	604.87
5	1240	8832.81	15.00	623.26
6	6715	12899.30	19.50	669.33
7	2920	13463.41	16.35	615.57
8	3883	14545.07	12.00	657.14
9	703	7492.53	15.00	634.33
10	1308	23458.60	8.20	602.68
11	2503	10728.40	14.00	526.58
12	1181	13230.99	18.50	734.81
13	2455	12599.08	14.00	619.75
14	1087	11525.58	12.00	571.23
15	2062	17069.45	13.00	627.56
16	4070	10898.56	12.00	608.91
17	806	13166.80	13.00	614.67
18	35363	19809.93	10.00	842.82
19	3435	9315.06	17.00	638.77
20	5528	15981.98	14.00	595.52
21	725	12955.57	10.00	538.43

TABLE G-1.--Continued.

System	Size	SEV Per Pupil	Voted Millage	Expenditure Per Pupil
22	1500	$18792.44	13.00	$640.76
23	8974	10246.73	16.00	606.55
24	1716	9966.05	12.00	600.04
25	600	12914.72	15.50	594.36
26	1440	7398.99	17.00	635.25
27	1712	15835.75	10.00	576.65
28	1984	10018.93	9.00	599.65
29	3588	8986.92	13.40	669.99
30	5842	20146.79	19.13	863.29
31	663	22869.05	8.00	472.44
32	2462	8667.20	13.00	612.53
33	1295	12860.74	5.50	554.84
34	1336	36898.17	3.50	668.41
35	877	13138.14	10.00	591.21
36	1865	11928.87	11.00	583.63
37	3187	8613.99	13.00	560.22
38	2347	23130.15	7.50	654.07
39	342	9002.87	5.50	775.84
Totals	127750	$544547.61	480.33	$24917.15
$\bar{X}$	3275.64	$13962.76	12.32	$638.90

APPENDIX H

CHARACTERISTICS OF NON-PARTICIPATING SAMPLE SCHOOL DISTRICTS

TABLE H-1.--Characteristics of non-participating schools.

System	1969-70 Size	SEV Per Pupil	Voted Millage	Expenditures Per Pupil
1	390	$ 4751.67	10.00	$643.15
2	173	9316.06	15.00	617.62
3	2134	50327.69	5.00	683.55
4	4573	14640.31	10.00	657.52
5	67	36925.37	4.00	444.64
6	704	23705.33	9.00	669.96
7	3747	12773.75	9.00	590.85
8	3775	8984.70	5.00	533.50
9	723	8793.98	15.00	476.99
10	9015	26665.77	13.00	771.63
11	2376	15337.44	11.00	606.01
12	6478	11752.43	17.75	667.14
13	793	8924.88	25.00	681.85
14	2735	14241.38	12.60	663.71
15	1275	11673.98	15.50	659.50
16	1203	11771.49	12.50	649.45
17	3432	11127.98	16.50	575.72
18	1076	16668.64	3.00	648.69
19	1571	7531.74	12.50	577.33
20	6143	11849.37	11.00	578.88
21	1163	12471.36	9.00	551.79

TABLE H-1.--Continued.

System	1969-70 Size	SEV Per Pupil	Voted Millage	Expenditures Per Pupil
22	2123	$17132.93	12.00	$601.17
23	2227	13801.20	16.00	654.19
24	1782	11541.82	9.00	610.31
25	3784	13104.17	15.00	653.55
26	2411	12226.25	15.00	596.14
27	4237	11331.29	10.00	649.71
28	6370	12172.43	19.97	602.32
29	1750	6832.37	7.00	577.67
30	16367	23520.29	15.00	786.12
31	4716	8821.10	22.00	695.30
32	6014	24534.86	17.00	848.77
33	5421	11123.50	10.00	612.22
34	18505	11448.60	15.00	627.59
35	498	37078.01	16.00	1065.65
36	503	20882.26	7.75	560.55
37	480	38167.63	8.00	842.67
38	329	17757.93	10.50	565.84
39	3492	16733.86	7.00	558.86
40	1387	24943.59	6.95	644.79
41	3504	13470.63	8.00	574.07
42	2015	10082.85	12.00	552.39

TABLE H-1.--Continued.

System	1969-70 Size	SEV Per Pupil	Voted Millage	Expenditures Per Pupil
43	2496	$19523.61	10.98	$599.26
44	5630	7546.53	19.00	524.30
45	4808	6612.38	17.00	669.94
46	9710	11436.60	29.00	713.61
47	8499	19670.32	16.50	762.51
48	2741	14656.25	22.00	687.66
49	3120	19521.92	20.00	793.33
50	2332	8625.42	16.00	539.47
51	935	16811.34	6.50	583.39
Totals	181732	$811347.25	657.20	$32702.82
$\bar{X}$	3563.37	$15908.77	12.89	$641.06