

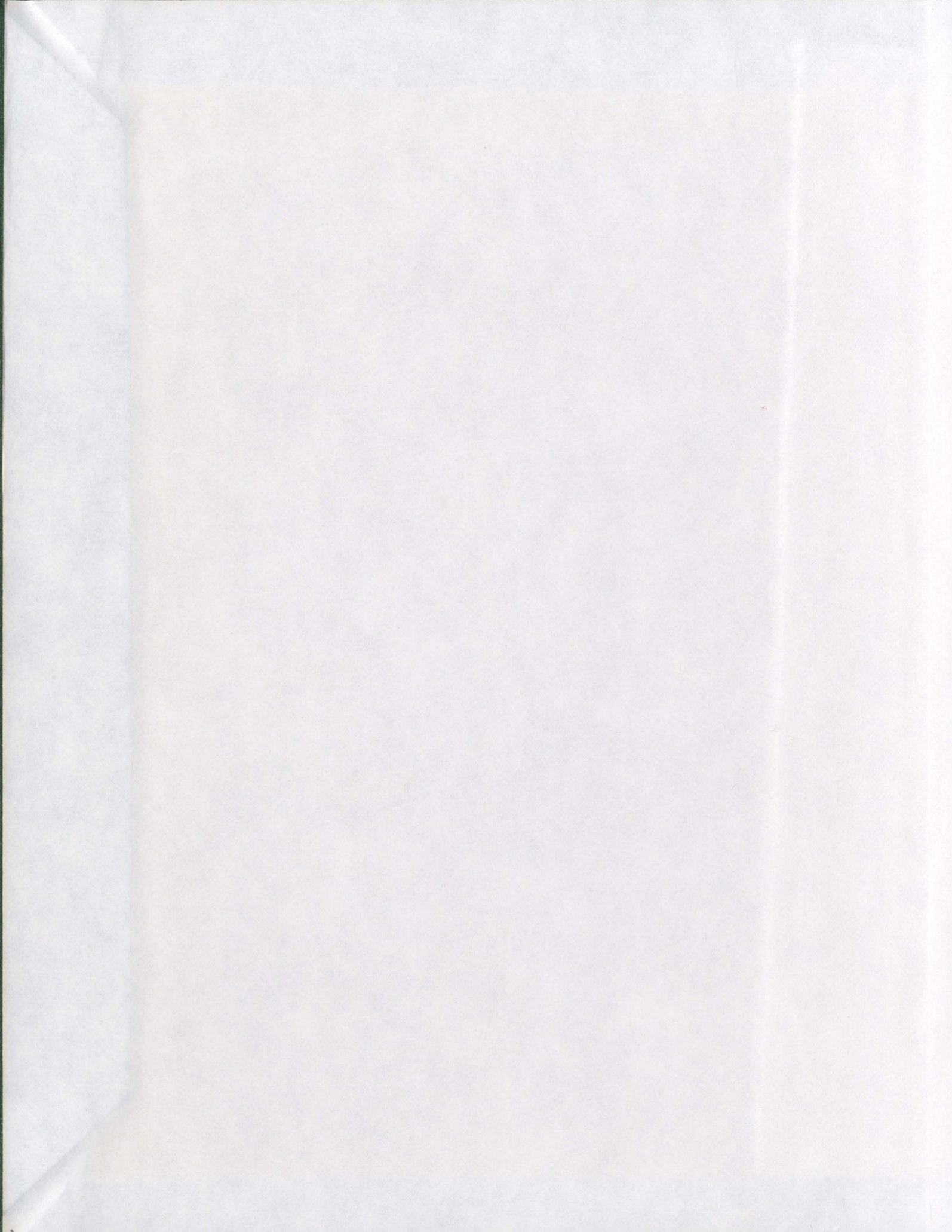
AN ANALYSIS OF SOME OF THE RELATIONSHIPS
BETWEEN MANAGEMENT STYLE OF JUNIOR AND
SENIOR HIGH SCHOOL PRINCIPALS AND TEACHER
JOB SATISFACTION AND PRODUCTIVITY

CENTRE FOR NEWFOUNDLAND STUDIES

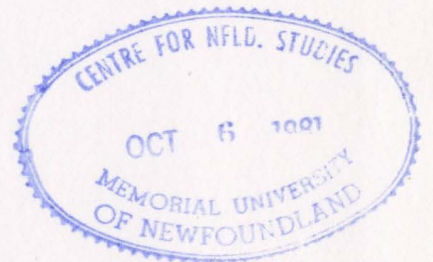
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AN ANALYSIS OF SOME OF THE RELATIONSHIPS BETWEEN
MANAGEMENT STYLE OF JUNIOR AND SENIOR HIGH
SCHOOL PRINCIPALS AND TEACHER JOB
SATISFACTION AND PRODUCTIVITY

by



Ronald Lloyd Ryan, B.Sc., B.Ed.

A Thesis submitted in partial fulfillment
of the requirements for the degree of
Master of Education

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ABSTRACT

The study was conducted to explore the relationship between Teacher-Centered Management Style of junior and senior high school principals and Job Satisfaction and Job Productivity of junior and senior high school teachers.

A three-part questionnaire was hand-delivered to 209 junior and senior high school teachers in 18 of 20 junior and senior high schools in the Grand Falls area of Newfoundland. A total of 177 questionnaires, 84.7 per cent, were completed and returned.

Factor analysis was utilized as a data reduction technique. The variable Job Satisfaction was decomposed into two factors, Teacher Salary Satisfaction and Teacher Satisfaction with the Capabilities of Teacher Colleagues. Similarly, the variable Job Productivity was decomposed into three factors, Intrinsic Commitment to Teaching as a Profession, Job Involvement, and Self-Concept as a Teacher.

Analysis of the data by means of a path analytic model revealed a number of statistically significant relationships. The relationship between Teacher-Centered Management Style of school principals and Teacher Salary Satisfaction was a statistically significant positive one and accounted for about 15 per cent of the variance. The relationship between Teacher-Centered Management Style

and Teacher Satisfaction with the Capabilities of Teacher Colleagues was also a statistically significant positive one, but accounted for less than 10 per cent of the variance of the dependent variable. There was also a statistically significant positive relationship between Teacher-Centered Management Style and Intrinsic Commitment to Teaching as a Profession, but this relationship accounted for less than 6 per cent of the variance.

Statistically significant negative relationships were revealed between Teacher Satisfaction with the Capabilities of Teacher Colleagues and Job Involvement, accounting for less than 4 per cent of the variance, and between Teacher Satisfaction with the Capabilities of Teacher Colleagues and Self-Concept as a Teacher, accounting for less than 3 per cent of the variance.

Because so little of the variance of the dependent variables was accounted for by the independent variables, it was concluded that factors not explored in the study were probably more important determinants of the Job Satisfaction and Job Productivity variables studied.

ACKNOWLEDGEMENTS

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CHAPTER 1

This chapter contains a brief introduction to the study, some historical background, the delimitations within which the research was conducted, and some limitations affecting both the conduct of the research and the utility of the research results. Also included is a brief account of the organization of the thesis.

INTRODUCTION

This study was conducted to explore the nature of the relationships between the professional managerial style of school principals and teacher job satisfaction and productivity.

Schools are complex organizations. Therefore an understanding of the nature of human relationships in organizations is vital if school principals are to create conditions within their schools which will contribute to teachers operating at the highest possible levels of efficiency and effectiveness.

I. BACKGROUND TO THE STUDY

Organizations are not a new phenomenon. The pharaohs used organizations to build the pyramids and the Chinese used organizations to build their Great Wall. Etzioni (1964)

has said that "Our society is an organizational society. We are born in organizations, educated in organizations . . . and when time comes for burial, the largest organization of all--the state--must grant official permission" (p. 1). A similar or stronger statement might be made about the pervasiveness of organizations in society today.

Organizations exist for some specific purpose, often for some form of work. Our heritage has placed a great emphasis upon the virtue of work, and even a cursory review of history will reveal an equally great emphasis on profit seeking. The motive has been an extremely strong one. This motive has prompted the owners and managers of business and industry to place a premium on efficiency--the greatest possible amount of work and profit for the smallest possible input of resources.

This impetus remains to the present time. So strong is it that it has contributed to the birth and development of a new science--the study of organizations. The systematic study of organizations in modern times can be said really to have begun with Max Weber's formulation of the characteristics of an "Ideal Bureaucracy" (Perrow, 1972, p. 4). A number of theorists and researchers were involved in the early years of this study of organizations, but Taylor (1911) and Fayol (1949) were probably foremost in attempts to solve the complex problems of organizations--problems associated with maximizing production and profits,

for example.

It was with higher profits and a more productive work force in mind that the now-famous "Hawthorne Studies" were conducted from 1924 through 1927. The possibility that worker attitudes had something to do with output (one of the conclusions of the Hawthorne Studies) caused researchers like Mayo (1933) and Lewin (1947) to begin studying organizations with a new interest and with new ideas of worker management. They began to piece together the ". . . sordid picture of group pressures, individual competition, falsification, and reprisals" (Perrow, 1972, p. 101).

This research was given additional legitimacy by the demands for unionization, by the growing interest in various humanistic philosophies, and by the demand for rights and the emphasis on individual liberty in the United States.

A number of psychologists began to take an interest in the psychology of organizational behavior. Maslow's "Hierarchy of Needs," McGregor's (1960) "Theory X" and "Theory Y," and the socio-psychological model of Getzels and Guba (1957) were some of the psychological theories which began to provide a new understanding of human behavior and which gave rise to new theories of organizational management.

Just as industry-oriented researchers were conducting sociological and psychological studies with respect to worker response to various management styles and organizational

climates, so were education-oriented researchers placing a parallel emphasis on organizational behavior in the specific context of the school. Industry-based research was revealing that workers wanted to be more involved in the total operation of their workplace while educational researchers were discovering that teachers wanted a greater voice in the operation of their schools. In both situations it was discovered that workers were much more satisfied with their work-situations when they were treated more as individuals than as traditional "cogs in the machine."

It was within this context that this study was conducted. Since research in the industrial setting has indicated that greater job satisfaction and increased productivity are related to worker-centered management style, it seems reasonable to ask whether or not teachers would be more satisfied and more productive if school administrators used a teacher-centered management style. That is, given a teacher-centered management style of school principals, will the teachers experience greater job satisfaction and will they respond with greater productivity than will teachers in schools with management styles which are not teacher-centered?

II. PURPOSE OF THE STUDY

The purpose of the study was to investigate the relationships between management style, job satisfaction, and

job productivity in the Newfoundland educational context. Specifically, the study was intended to explore the possible dependence of job satisfaction and job productivity on management style, as well as to determine if job productivity is a result of job satisfaction.

III. EXPLANATION OF TERMS

Management Style: The particular manner of managers and administrators which is manifested in decisions concerning both task-performance, on the one hand, and interpersonal relations, on the other.

Job Satisfaction: That part of general satisfaction which is dependent on a person's relationships with aspects of his work. Research has indicated that the concept of job satisfaction is difficult to operationalize.

Job Productivity: A measure of the degree to which organizational goals are met, given specific amounts of input of resources. The term is used synonymously with performance and effectiveness in this study.

Research also indicates that this term is difficult to define operationally.

IV. DELIMITATIONS

1. Sample: This study was delimited to junior and senior high school teachers in one area of Newfoundland, who were at school when the researcher called.
2. Time: The data were gathered from teachers over a specific three-day period in March, 1979.
3. Instruments: A three-part multiple-choice questionnaire was the research instrument used.

V. LIMITATIONS

1. Cultural: The research was conducted in a largely rural Newfoundland setting and may reflect some of the social, economic, cultural, and attitudinal factors unique to that setting.
2. Concepts: The concepts named "Satisfaction" and "Productivity" are difficult to operationalize. The extent of that difficulty may limit the generalizability of the research results.
3. Respondents: Individuals were asked to disclose some of their innermost feelings--feelings which may never before have been acknowledged, much less verbalized by or for

them. The results of the study are dependent on the accuracy with which respondents reported their real opinions.

4. Perceptions: Respondents were asked to report their perceptions. The research relied on the assumption that these perceptions were reasonably close to objective reality.

5. Context: The value of the results is dependent on the adequacy of the size and representativeness of the sample.

6. Human Behavior: There is great difficulty in isolating a single determinant variable (or proxy variable), or in isolating the effect of a particular variable in such a complex phenomenon.

While a number of limitations were acknowledged, it was noted that the limitations were not unique to this study. They are limitations which apply to most survey studies.

VI. ORGANIZATION OF THE THESIS

This chapter has included some historical background and the purpose of the study. It has also included some delimitations and limitations. Chapter 2 contains a

review of the theoretical and research literature. Studies pertaining to managerial behavior and worker satisfaction and productivity in the industrial and educational contexts have been reviewed. Chapter 2 also includes a conceptual framework for the research.

The methodology used in the conduct of the research is presented in detail in Chapter 3. Chapter 4 contains a presentation of the research results and some interpretation. Chapter 5 deals with the final conclusions and provides a brief summary of the thesis.

CHAPTER 2

This chapter contains a review of related literature and the conceptual framework for the research. Both theoretical and research literature pertaining to managerial behavior, job satisfaction, and productivity in industrial and educational contexts are reviewed. The conceptual framework contains an argument which provides a perspective for the research and shows how the current research relates to the research that has already taken place.

REVIEW OF RELATED RESEARCH AND CONCEPTUAL FRAMEWORK

While an attempt has been made to organize the literature into separate categories, it has been impossible to adhere strictly to them because of the overlapping nature of the literature.

In reading the literature, one realizes that most researchers assume a more or less causal relationship between leadership style, job satisfaction and worker productivity or performance. Figure 2.1 shows this general assumption.

Literature relating to each of the variables in Figure 2.1 have been reviewed in sections which follow.

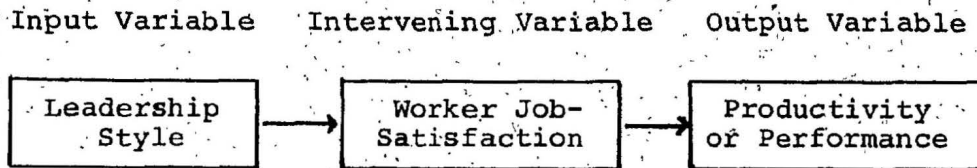


Figure 2.1. Diagram of general assumptions of relationships between three organizational variables.

I. LITERATURE RELATED TO MANAGERIAL LEADERSHIP BEHAVIOR

The literature is not consistent in the use of the terms "management," "administration," "leadership," and "supervision." Some authors (.e.g., Lipham, 1965, p. 122) distinguish between leadership and administration; Sergio-vanni and Starratt (1971) equate the two with supervision. They stated: "The Hemphill-Lipham definition of leadership is more likely to emerge as a result of behaving in a supervisory way . . ." (p. 74). Probably the best definition of school management or school managerial leadership, for present purposes, is that given by Doll (1972). He defined it as:

A function requiring human behaviors which help a school achieve its constantly changing purposes, some of which are oriented toward productivity or task-performance and others of which are oriented toward interpersonal relationships, within the school's own social climate and conditions.
(p. 17)

The research related to job satisfaction, productivity, and other managerial variables has generated many (tentative) conclusions directed toward an understanding of the concept of managerial leadership. Miles (1965) and

McGregor (1971) have provided a useful framework in which to consider much current management theory.

McGregor's Model

Building on Maslow's (1943) work, McGregor (1960) posited a "Theory X" and a "Theory Y." He suggested that, traditionally, managers had been using certain assumptions about employees. These assumptions he called "Theory X." He then advocated new management techniques based on another set of assumptions which he called "Theory Y."

The essence of Theory X and Theory Y is presented in Figure 2.2.

In discussing his theory, McGregor (1943) indicates that behavior is not only a consequence of man's inherent nature, but is a consequence of the nature of organizations, their management philosophy, policies and practices. He takes the position that worker passivity, hostility and refusal to accept responsibility are symptoms of deprivation of social and egoistic needs.

Consistent with Maslow's statement to the effect that a satisfied need is not a motivator of behavior, McGregor (1971) says:

The fact that management has provided for . . . physiological and safety needs [for example, good wages, working conditions, fringe benefits, and steady employment] has shifted the motivational emphasis to the social and perhaps the egoistic needs. Unless there are opportunities . . . [on the job] to satisfy these higher-level needs, people will be deprived; and their behavior will reflect this deprivation. (p. 313)

Theory X

1. The average man is by nature indolent--he works as little as possible.
2. He lacks ambition, dislikes responsibility, prefers to be led.
3. He is inherently self-centered, indifferent to organizational needs.
4. He is by nature resistant to change.
5. He is gullible, not very bright, the ready dupe of the charlatan and the demagogue.

Theory Y

1. People are not by nature passive or resistant to organizational needs. They have become so as a result of experience in organizations.
2. The motivation, the potential for development, the capacity for assuming responsibility, the readiness to direct behavior toward organizational goals are all present in people. It is the responsibility of management to make it possible for people to recognize and develop these human characteristics for themselves.

Figure 2.2. McGregor's Theory X and Theory Y.

From: McGregor (1971), pp. 308-315.

If this is true of mechanical, factory work, how much more so of education and teaching? If the school does not provide opportunities for the professional development of the teachers, they may not be as efficient nor as effective as they otherwise could be, and the education of children will suffer.

Miles' Model

Miles (1965) discusses two different organizational theories or models of organizational behavior: the Human Relations model and the Human Resources model. The Human Relations model (Figure 2.3) is used by managers, according to Miles, to make workers feel that they are important members of the organization. This is seen as diminishing worker resistance to authority and control and as causing morale and performance to improve. The participation itself is seen by managers as a waste of time, but is justified because it leads to a feeling of belonging and participation by employees and results in increased effectiveness and efficiency.

In the Human Resources model (Figure 2.4) organizational members are seen as being underutilized, having at the same time creative potential and the capacity for responsibility and self-direction. According to Miles (1965) the use of this management style should lead to improved satisfaction and morale and hence to a more effective organization.

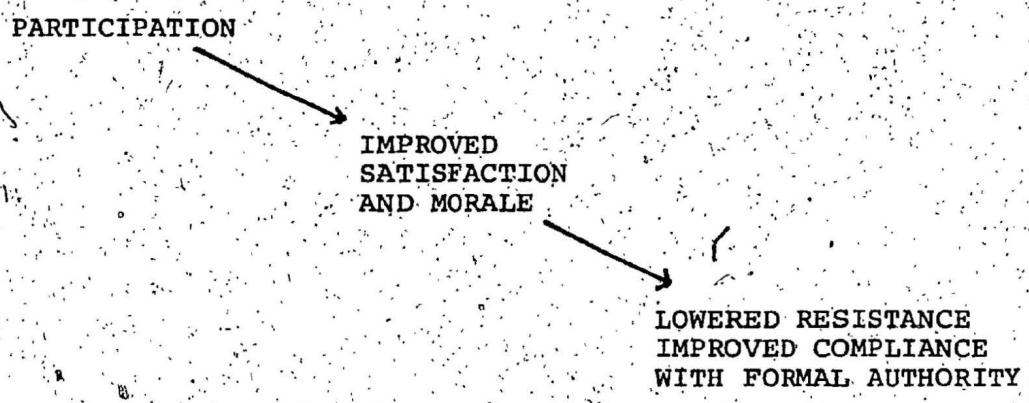


Figure 2.3. Human Relations Model. From Miles (1964), p. 152.

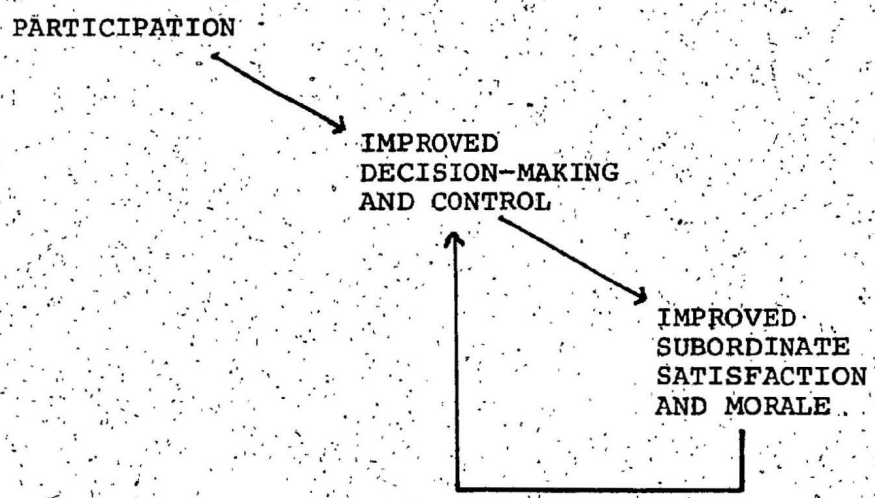


Figure 2.4. Human Resources Model. From Miles (1965), p. 152.

The critical difference in the models is the relationship between satisfaction, morale, and performance. In the Human Relations model, improved satisfaction is posited as leading eventually to improved performance. In the Human Resources model, improved performance is seen as resulting from improved decision-making; satisfaction results from having made a contribution.

The Human Relations approach raises an ethical problem--people are being deliberately manipulated. One would expect that such manipulation would be detected by many workers, in general, and by teachers in particular. The resultant demoralization would likely have a detrimental effect on the school.

The Human Resources model, on the other hand, is consistent with much of the management research which has been conducted in the educational context. Teachers have shown in numerous studies (see Inkpen, 1974, and Ponder and Bulcock, 1976, for example) that they are eager to participate in the shared and co-operative operation of the school.

This two-model assertion of Miles (1965) has been substantiated in research by Yoder (1962) and Haire et al. (1963).

Two of the most notable research efforts in the area of leadership and managerial behavior were conducted at Ohio State and Michigan State Universities. Two categories of leadership behavior and two extreme types of leadership

style emerged from these studies.

The two categories of leadership behavior are "Initiating Structure" and "Consideration," Doll (1972) summarized these categories of behavior as follows:

Initiating Structure Behaviors

- The Leader:
- a) tries out his new ideas with the staff,
 - b) maintains definite standards of performance,
 - c) emphasizes the meeting of deadlines,
 - d) makes sure that his part in the organization is understood by all members,
 - e) lets staff members know what is expected of them,
 - f) sees to it that the work of staff members is coordinated.

Consideration Behaviors

- The Leader:
- a) does little things to make it pleasant to be a member of his staff,
 - b) finds time to listen to staff members,
 - c) is friendly and approachable,
 - d) makes staff members feel at ease when talking with them,
 - e) puts suggestions made by the staff into operation,
 - f) gets staff approval on important matters before going ahead.

(p. 18)

The two contrasting styles of leadership are the "Authoritarian," and the "Participative." The Authoritarian Leadership style (also variously called paternalistic or conservative) is consistent with McGregor's (1943, 1971) "Theory X" and is characterized by defensive management patterns such as centralization of control, formalization of procedures, and role stratification, with an emphasis on production and efficiency.

The Participatory Leadership style is consistent with "Theory Y" (i.e., Human Resources) assumptions and is characterized by high trust and confidence in people. It has a relative emphasis on adaptiveness and job satisfaction.

Sergiovanni and Starratt (1971) give a summary of the theoretical constructs which various theorists have advanced in the area of leadership. This summary is given in Table 2.1.

A number of theorists have proposed models to describe the dimensions of leadership style. Sergiovanni and Starratt (1971), for example, have used the Getzels-Guba (1957) theory to describe a "Social Systems Model" of managerial leadership. They describe four specific leadership styles. The extreme styles are the Nomothetic and the Idiographic; the intermediate styles are the Compromise and Transactional. A description of these styles follows:

1. Nomothetic style: Administrative and supervisory behavior which focuses primarily on the institutional dimension as it seeks to achieve school goals.
2. Compromise style: Administrative and supervisory behavior which focuses "realistically" on achievement of school goals and individual goals in a satisfactory manner.
3. Transactional style: Administrative and supervisory behavior which operates not from the assumption that the two dimensions are in conflict, but rather from the position that they are independent. That is,

TABLE 2.1
SUMMARY OF LEADERSHIP DIMENSIONS

	Concern for People	Concern for Production
Bowers and Seashore	Interaction facilitation	Work facilitation
Hemphill and Coons (1957)	Group--inter- action facilitation behavior	Objective attain- ment behavior
Halpin and Winer (1957)	Consideration	Initiating Structure
Katz et al. (1950)	Employee orientation	Production orientation
Kahn (1958)	Providing need satisfaction	Enabling goal achievement
Mann (1962)	Human relations skills	Administrative skills Technical skills
Likert (1961)	Principle of supportive rela- tionships	Technical knowl- edge, planning, scheduling
Cartwright and Zander (1960)	Group mainte- nance functions	Goal achievement functions
Getzels and Guba (1957)	Idiographic	Nomothetic
Brown (1966)	Person orientation	System orienta- tion
Blake and Mouton (1966)	Concern for people	Concern for production

From: Sergiovanni and Starratt (1971), p. 88.

achievement of school goals depend upon meaningful, individual need satisfaction. Meaningful need satisfaction, at least for professional and semi-professional workers, depends upon achievement of . . . goals. This style seeks to optimize and expand achievement of school goals and individual goals.

4. Idiographic style: Administrative and supervisory behavior which focuses primarily on the individual dimension as it seeks to achieve goals.
(pp. 35-36)

While this Social Systems model is defined in terms of schools, it is easily translated into general organizational terms.

A model which categorizes the situations in which a particular style of leadership would be most effective is Fiedler's (1971) Contingency model. This model shows the relative effectiveness of person-oriented leadership style versus structure or task-oriented leadership style for groups of workers characterized by different combinations of manager-worker personal relationships, task structure, and managerial position power. The essential characteristics of this model are given in Figure 2.5.

In this model, eight group possibilities are identified according to their relative strength on each of three critical dimensions which determine favorableness of a specific leadership style. The group possibilities are arranged in declining order of influence of the leader, with the leader being most influential in cell 1 and least

influential in cell 8. The managerial-leader who is well liked by the group, is working with highly structured tasks and who has strong authority is able to exert strong influence on the group (cell 1). At the other extreme (cell 8) is the managerial-leader who is not well liked, is working in a low-structure task situation and has weak authority. He will not have much influence on the group.

Leader-member relations	Good	Good	Good	Good	Poor	Poor	Poor	Poor
Task structure	Unstructured		Unstructured		Structured		Structured	
Leader power position	Strong	Weak	Strong	Weak	Strong	Weak	Strong	Weak
	1	2	3	4	5	6	7	8

Note: "position power" refers to the amount and kind of authority associated with the leader's organizational role; task-structure refers to the extent to which the tasks are routinized as opposed to being vague; and "leader-member relations" refers to the degree to which group members like and trust the leader.

Figure 2.5. Fiedler Contingency Model. From: Fiedler (1971), p. 477.

Sergiovanni and Starratt (1971) stated: "The Contingency model suggests that task-oriented leaders perform best in situations which provide them with substantial influence and in situations which provide them with very little influence. Relationship-oriented leaders . . . are most effective in mixed situations which afford them moderate influence over the group" (p. 202).

Another situational theory of leadership, similar in some respects to that of Fiedler (1971), is the Path-Goal Theory of Leadership, proposed by House in 1971 and expanded by House and Dessler (1974).

The theory consists of two fundamental propositions, the first of which stated that the leader's function is a supplemental one. The leader is effective to the degree to which he provides subordinates with direction, guidance, support and rewards not otherwise available in the work environment but which are necessary for effective performance. House summarized his first proposition as follows:

. . . the motivational function of the leader consists of increasing personal pay-offs to subordinates for work-goal attainment, and making the path to these pay-offs easier to travel by clarifying it, reducing road blocks and pitfalls, and increasing the opportunities for personal satisfaction en route. (House and Dessler, 1974, p. 31)

House's second fundamental proposition is that the motivational impact of specific leader behaviors is determined by the situation in which the leader operates. He believed that leader behavior is acceptable to subordinates to the extent that it is perceived as being either an immediate or future source of satisfaction. House sees superiors as being only one aspect of workers' environment. The effects of the attempts of leaders to motivate subordinates will depend upon the other parts of the work-environment. According to House, the assessment of environmental factors would make possible the prediction of the

effects that leader behavior would have on worker satisfaction with intrinsic rewards of the job, worker satisfaction with extrinsic rewards associated with the job, worker expectations that their efforts will lead to effective job performance, and the expectations of workers that effective job performance will lead to receipt of rewards.

A fourth model, popular in the literature, is the Continuum of Leader Behavior model. Again two extremes are identified with a variety of intermediate leadership styles possible. This model is given in Figure 2.6.

At one extreme of this continuum is the traditional authoritarian type of managerial behavior characterized by "Theory X" assumptions. The leader who uses this style tells his followers what to do, when to do it, and emphasizes task concerns.

At the other extreme is the participative or democratic leadership style characterized by "Theory Y" assumptions. Here, the leader can share his leadership responsibilities with his subordinates, involving them in task planning and execution while stressing his concern for human relationships.

Sometimes this continuum is extended to the right to include a Laissez Faire leadership style. This style permits all members of the organization to do as they please. It can be argued that this is in essence an absence of leadership rather than a style of leadership.

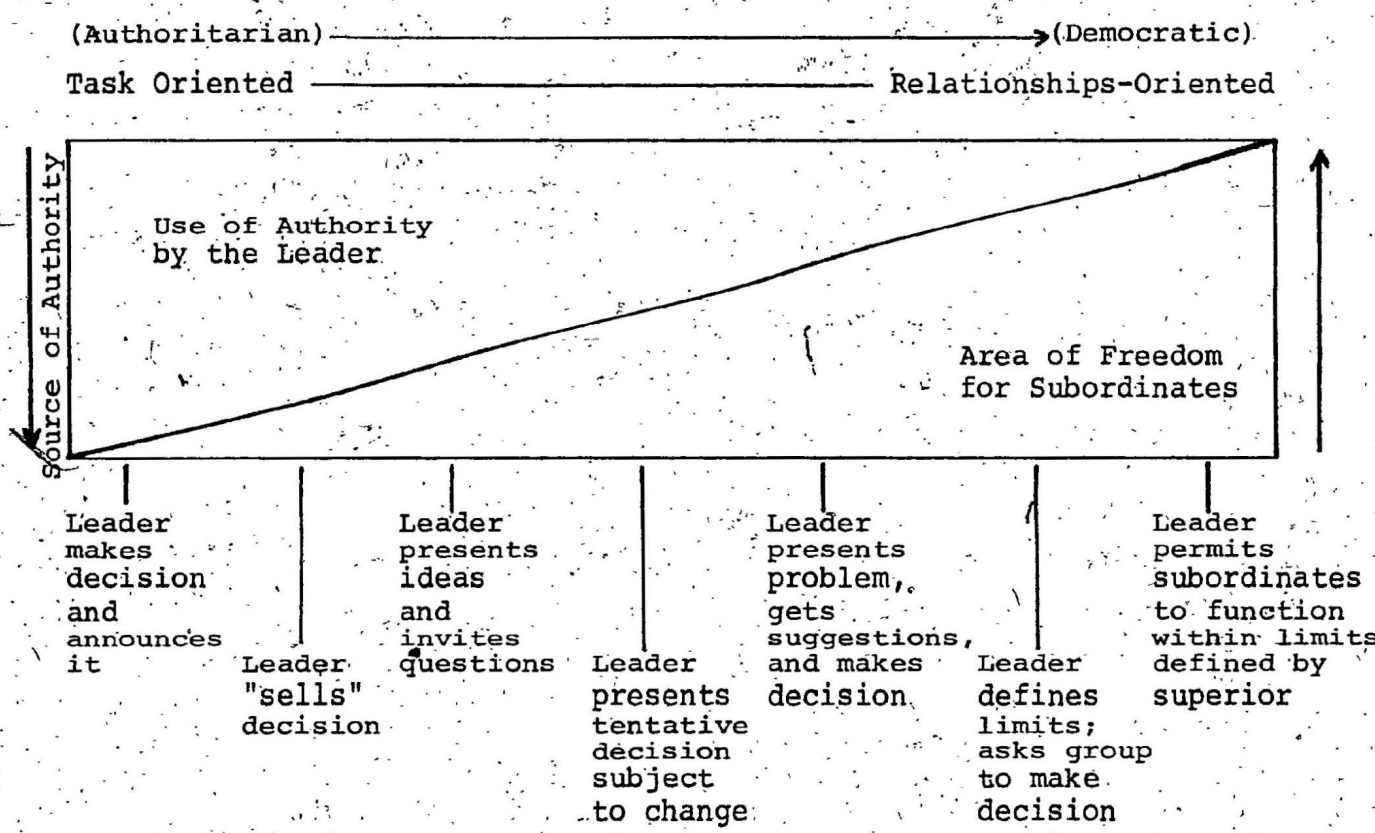


Figure 2.6. Continuum of leader behavior.

From: Hersey and Blanchard (1972), p. 71.

The Continuum of Leader Behavior has particular application to schools because of the great variety of decisional types which exist in the educational setting. In even the most autocratically administered school there will be occasions when the teachers will have to make their own decisions, even if it is only within the confines of their classrooms and teaching assignments. That is, by the very nature of schools, every school leadership can be plotted somewhere on the continuum, rather than being characterized by one of the extremes.

The results of the Ohio State Leadership Studies and the Michigan Leadership Studies indicated that a multi-dimensional model would be useful. (see, for example, Hersey and Blanchard, 1972). The "Leadership Quadrants" was the result. This model depicts leadership as having two distinct dimensions, "Initiating Structure" and "Consideration," rather than having one dimension as in the Leadership Continuum model. The behavior of any leader can be described in terms of both dimensions. When the two dimensions are graphed on orthogonal axes (as in Figure 2.7) different leadership styles can be readily plotted on the resulting grid. Frequently, four extreme leadership styles are defined in terms of this graph (for example, see Sergiovanni and Starratt, 1971). These four, however, are only examples. Any combination is possible.

(low) — Consideration — (high)	high consideration and low structure	high structure and high consideration
	low structure and low consideration	high structure and low consideration
	(low) ————— initiating structure ————— (high)	

Figure 2.7. The Leadership Quadrants.

A refinement of the Leadership Quadrants results in the Managerial Grid. The two dimensions of this model are "concern for production" (tasks) and "concern for people" (relationships). Five different leadership styles are normally defined, but again, these do not exhaust the many possibilities. Hersey and Blanchard (1972) have described them as follows (refer to Figure 2.8):

Impoverishment: exertion of minimum effort to get required work done is appropriate to sustain organization membership.

Country Club: thoughtful attention to needs of people for satisfying relationships leads to a comfortable friendly organization atmosphere and work tempo.

Task: efficiency in operations results from arranging conditions of work in such a way that human elements interfere to a minimum degree.

Middle-of-the-road: adequate organization performance is possible through balancing the necessity to get out work while maintaining morale of people at a satisfactory level.

Team: work accomplished is from committed people; interdependence through a "common stake" in organization purpose leads to relationships of trust and respect. (p. 75)

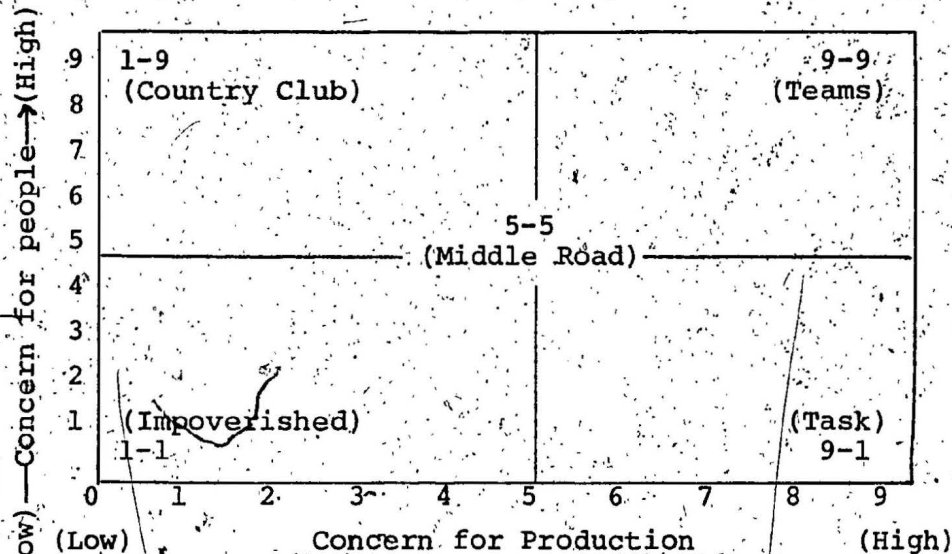


Figure 2.8. The Managerial Grid. From: Hersey and Blanchard, 1972, p. 76.

The Managerial Grid tends to be seen as an attitudinal model which measures the predispositions of the managerial people, while the Leadership Quadrants tends to be seen as a behavioral model, examining managerial behavior as seen by others.

The Leadership Quadrants and the Managerial Grid have applications for schools as well as for industry. Every school administrator's managerial style can be plotted on either graph. Given the information that a particular teacher behavior can be predicted from current organizational theory, then the principal can use these models as guides to the style of leadership behavior he

wishes to pursue.

A number of other leadership models are extant, but probably the most comprehensive leadership model is that of Rensis Likert (1961, 1967), who has described four distinct managerial leadership styles. His four "systems" use six characterizing factors and about 50 sub-factors.

Likert's (1961) System 1 is referred to as exploitive-authoritarian and System 2 as benevolent authoritarian. According to Likert (1961) System 1 and 2 supervisors can expect less group loyalty from subordinates, as well as lower performance goals, less cooperation, more conflict, and less team work. They can also expect poor success in each of the school success variables.

System 3 is referred to as the consultative style and System 4 as the participative style. System 3 characterizes schools moving toward a professional organization. System 4 is the maximizing system of managerial leadership. Supportative relationships, group methods of supervision, Theory Y assumptions, self-control methods, ability authority, and other enlightened practices characterize this system.

According to the theory, when this style of leadership is used, the workers (teachers, in the specific case) react by displaying greater group loyalty, higher performance goals, more teamwork and sharing, less feeling of unreasonable pressure, more favorable

attitudes, and higher levels of motivation for performance.

The extensive variety of theories of administrative behavior emphasizes both the complexity and the relative youth of this field of study. There seems to be no established, universally accepted, theory of administration. What seems to exist, rather, is a number of competing theories, and it is in that context that studies relating to administrative and worker behaviors and responses must be viewed.

II. RELATED STUDIES IN THE BUSINESS-INDUSTRY CONTEXT

Studies Focusing Primarily on Leadership Style

Most of the research tends to measure leadership style in terms of one or more of the models discussed previously. In a review of numerous studies of leadership styles, Likert (1961) concluded that "Supervisors with the best record of performance focus their primary attention on the human aspect of their subordinates' problems . . ." (p. 71), and further ". . . those supervisors whose units have a relatively poor production record tend to concentrate on keeping their subordinates busily engaged in going through a specified work cycle in a prescribed way and at a

satisfactory rate as determined by time standards . . ."

(p. 5).

Likert (1961) is a very strong advocate of people-oriented management. Namely, he has cited several studies to support his thesis. Kahn, in 1956, found that foremen in charge of high producing units are ". . . employee centered" (p. 8), Katz's 1949 study showed a positive relationship between workers' favorable job-related attitudes and workers' perceptions of supervision as interested in the well-being of employees (p. 17), and Morse's (1953) study showed that supervisors whose groups perceive him as "pulling for the group" have higher productivity (p. 18).

Likert (1961) stated: "Consistently, in study after study, the data shows that treating people as 'human beings' rather than as 'cogs in a machine' is a variable highly related to the attitudes and motivations of the subordinate at every level of the organization" (p. 101).

Likert (1961) also reported less absence and less turnover when employees perceive superordinates as showing an interest in them (p. 14), as well as better union-management relations (1967, p. 44).

Other researchers have found that the relationship between leadership style and worker job satisfaction and productivity tends to be somewhat ambivalent.

Fleishman and Harris (1962), from a study in a truck plant, concluded that consideration is positively

related to reduced grievance rates and that within certain limits the organizational structure contributes to workers bringing problems to supervisory attention. However, they concluded that there was no discernible relationship between turnover and organizational structure.

Vroom and Mann (1960) also found that the relationship is not a simple one. They concluded that grouped workers preferred employee-centered supervision while individual workers preferred production-centered supervision.

Because of such conflicting research, Chris Argyris (1971) has taken issue with some of the human relations theory. He stated: "... the opportunity to be apathetic, disinterested, non-involved, could generate strong loyalties within the employees as long as wages, and job security remain high" (p. 255), and "the most crucial needs ... employees report are wages, job security, job control, non-involvement and togetherness, following that order" (p. 256).

Literature Focusing Primarily on Job Satisfaction

Many theorists and researchers, hypothesizing that "job satisfaction" is not simple but is a multifaceted phenomenon, have studied organizational relationships in an attempt to identify some of the determinants of this elusive concept. The efforts of Maslow (1943), Getzels

and Guba (1957), and Herzberg (1959) have been particularly helpful in this respect.

Maslow's approach. Maslow (1943) held that there is a Hierarchy of Needs in the individual--the physiological, safety, love, esteem, and self-actualization needs. The hierarchical nature of these needs implies that the lower order needs (the physiological and safety needs) must be satisfied to some minimum extent before the higher order needs, such as the need for autonomy or the need for self-actualization, come into play.

In addition to his needs formulation, Maslow (1971) made a number of observations relevant to this study:

- a) some people may have a very low level of aspiration, being content to exist at a very low level;
- b) there are many determinants of behavior other than needs and desires. He specifically mentions "ideals" (p. 221);
- c) people who have had their basic needs satisfied for an extended period of time can develop exceptional frustration tolerance. He says: ". . . people who have been secure and strong in the earliest years tend to remain secure and strong thereafter in the face of whatever threatens (p. 221);
- d) a satisfied need is not a motivation of behavior; and
- e) unconscious motivators are generally more important than conscious motivators.

Maslow emphasized that human behavior is caused, such behavior being dependent upon a complex of factors

inherent in, and maybe unique to, the individual. Savage (1968), for example, pointed out that all of a person is involved when a need affects his behavior, and that at any one time a person's behavior may be influenced by several needs.

An individual's attempt to satisfy his needs may be frustrated, in which case the individual will attempt to adjust to the frustration. The adjustment may take a variety of forms, including substitution of goals, aggression, withdrawal, dependence on others, rationalization, repression, projection, and compensation.

The manner in which the worker adjusts to frustration of his goals will influence the organization of which he is a part and will affect the other individuals in the organization.

This understanding of frustration-adjustment is probably more critical within the educational context. Industry may suffer reduction in profits or efficiency, but the result of teacher adjustment to needs-frustration or goal-frustration could have a detrimental impact on the quality of instruction received by the students. That is, the efficient attainment of the primary goal of the school--the education of children--could be prevented.

Getzels and Guba have extended our understanding of human behavior in organizations by explaining such behavior in terms of two dimensions.

The approach of Getzels and Guba. Getzels and Guba (1957) conceived of an organization as a social system containing two independent dimensions--the institutional (or nomothetic) dimension, and the individual (or idiographic) dimension. See Figure 2.9.

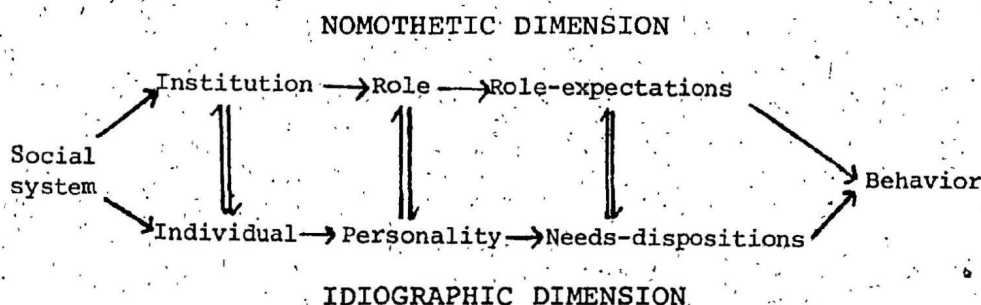


Figure 2.9. General model showing the nomothetic and idiographic dimensions of social behavior. From: Getzels and Guba, 1957, p. 429.

The independent dimensions are assumed to be in constant interaction. The institution attempts to mold the individual to its own processes and goals while the individual attempts to change the institution so that he can realize his goals. Management must realize that just as the institution cannot conform to all of the individual's needs-dispositions, neither can the individual conform to the ideals of the organization, a point also emphasized by Argyris (1971). Therefore, individual behavior in the organization is a matter of compromise between individual and organizational goals. The level of satisfaction which a worker experiences in the organization is probably a function of the degree to which his goals and

aspirations have to be left unsatisfied so that organizational goals can be realized. Job satisfaction is also likely to be a function of the degree to which the worker experiences conflict between his role-expectations, and those role-expectations which the organization has for him.

This matter of worker satisfaction within the organization has been the focus of much thought. Herzberg (1959) was probably foremost, up to his time, in developing a theory of worker satisfaction.

Herzberg's approach. Herzberg (1959) provided considerable insight and understanding into the specific nature of job satisfaction through the formulation of his "Satisfier-Dissatisfier Theory," also called the "Motivation-Hygiene Theory" or, simply, the "Two-Factor Theory."

Herzberg (1971), after extensive research into job satisfaction of Pittsburg engineers and accountants, concluded that there are two sets of job satisfaction factors. The satisfiers (or motivators) contribute to job satisfaction (they help satisfy the need for growth and self-actualization), but their absence does not promote job dissatisfaction. The satisfiers are all "job content" or "job task" factors such as achievement, recognition, work itself, responsibility and advancement.

The dissatisfiers (or hygienes) lead to job dissatisfaction if they are absent (because they help satisfy

the need to avoid unpleasantness), but they do not lead to job satisfaction if they are present. The dissatisfiers are "job context" or "job environment" factors such as organizational policies and administrative practices, job supervision, working conditions, salary, and status.

Herzberg (1971) concluded not only that the factors which made workers happy on the job are not the same as the factors which make people unhappy on the job, but also ". . . the effects of hygiene factors on job attitudes are of a relatively short duration in contrast with the motivator factors, which, three of them at least [work itself, responsibility, and advancement], have long lasting attitude effects" (p. 324).

Subsequent research has tended to support Herzberg's two-factor theory only when the "critical incident" method has been used, suggesting that results may be more a product of method than of actual influential variables on the job.

A number of other satisfaction determinants are emerging from research. For example, Bradford (1976) concluded from a study of postal workers in California that the level of worker satisfaction was dependent in some measure on worker aspirations. Workers with high aspirations are inclined to prefer relaxed work structures, while workers with low aspirations tend to prefer more rigid work structures.

Similarly, Faris (1976), from a study of four American federal agencies, concluded that there are two

sources of job satisfaction--intrinsic satisfaction, provided by some of Herzberg's "motivators" (e.g., meaningful work experiences); and extrinsic satisfaction, derived from perceived success in achievement on the job and advancement through the organization hierarchy. He also concluded that the bureaucratic structures of most organizations limit the degree of job satisfaction which can be derived from these sources.

The studies of Schneider and McNeely also indicated that job satisfaction is a multifaceted entity. Schneider (1977), in a study of the employees of an American utilities company, found that promotion and supervision were the most positive determinants of job satisfaction while bureaucracy was the most negative factor. McNeely (1970), in a mail survey of 250 subjects, found that the organizational structure is only one factor in job satisfaction. He found that satisfied workers tended also to be socially active, interested in political involvement, tended to be more active in voluntary associations, and exhibited greater community interest and involvement.

The nature of job satisfaction appears even more elusive when research indicates a relationship the reverse of that which is normally expected. For example, Hodge (1976) concluded from a study of the retail food industry that a positive relationship existed between managers' supervisory style of structure and job satisfaction, while

a negative relationship existed between managers' supervisory style of consideration and need satisfaction. When considered in the context of the other studies, this finding seems to indicate that some job satisfaction factors may be operable in some work situations but not in others, a not unexpected development if one considers that unique individual needs and drives leads to varying aspiration levels and hence to different occupational choices. One would expect that a particular occupation would be chosen because an individual had unique needs to be satisfied:

Several researchers have attempted to test Herzberg's "two-factor" theory of job satisfaction. Hurlbert's (1970) study, for example, tended to support the Herzberg two-factor theory. He found in a study of British and American salesmen that job dissatisfaction was generated by poor feedback and poor interpersonal relations, and that satisfaction was related to responsibility and the work itself.

Maas' (1968) study of public school teachers in Minneapolis, however, rejected the Herzberg theory. He found that the teachers in his study viewed all the factors as satisfiers.

A number of other studies in the educational context (e.g., Sergiovanni and Starratt, 1971) have used the Herzberg framework and have tended to support the

two-factor hypothesis. While there have been conflicting results from studies of the two-factor theory, Weisenberg (1971) reports "overall support" for it (p. 332).

Studies Focusing Primarily on Productivity and Performance

While the general hypothesis is that job satisfaction is causally related to production and performance, a number of studies indicate otherwise. Likert (1961) says: "It does not follow . . . that . . . productivity and employee satisfaction . . . are always positively related" (p. 19). Apparently there are a number of complicating and intervening variables. Likert (1961) mentions several that have been uncovered by research: "a sense of freedom" (p. 20), "high peer group loyalty" (p. 29), "acceptance of organizational goals" (p. 31), "participation" (p. 34), "supervisor seen as having upward influence" (p. 113), and "manager support of employees" (p. 120).

Even more confusing, some research indicated that the job satisfaction-productivity relationship is the reverse of that normally hypothesized. Lee (1969) in a public utility employee study, concluded that high performance led to high rewards which resulted in higher satisfaction and higher performance. Regarding this relationship Bass (1965) states: "The evidence does not substantiate a link between . . . satisfaction and performance--that is, productivity--unless satisfaction is

dependent upon performance." These findings indicate a much more complicated cyclical type of relationship than has been posited.

Some studies have concentrated specifically on the managerial style-productivity relationship. Abdel-Halim (1971), for example, from a study of managers and employees of a retail drug company, found that participation in decision making has a positive effect on subordinates' job satisfaction and performance, but a positive relationship between organizational control structure and job satisfaction and production was not substantiated.

Similarly, Warrick's (1972) study of leaders and employees in five organizations indicated that democratic leaders had higher employee effectiveness (performance + satisfaction) scores than had directive leaders.

This relationship is found in professional occupations, as well as in the non-professional work situations. Deuton (1976), in a study of professional mental health workers, found positive relationships between managerial initiation of structure and consideration, and job satisfaction and performance.

Some surprising results came from Engel's (1977) study of 385 air force civilian workers. He concluded that the quality of supervision and group cohesiveness had practically no relationship with either the quantity or quality of output. Even more unexpected is the finding

that both quantity and quality of output were inversely related to workers' satisfaction with their jobs.

While these studies indicate that there is a tendency for job satisfaction and productivity to be positively associated with leadership style, the issue is still somewhat clouded. The relevant dimensions of satisfaction and the prime factors affecting the managerial-worker relationship appear not yet to be satisfactorily identified.

III. RELATED STUDIES IN THE EDUCATIONAL CONTEXT

The Concept of Teacher-Centered Management Style

Because of the many terms used in the literature referring to the various functions of the school principal, it is necessary to isolate the specific functions understood to be included in "teacher-centered management style."

The concept of leadership style has been discussed earlier in this chapter. In this study, "teacher-centered management style" is being used with meanings similar to the use of "managerial leadership style" or "leadership style" or "supervision" in relation to industry.

Chung (1970) did an extensive study on the concept of "teacher-centered management style" of school principals and concluded that the following characteristics define this concept: a) much sharing in educational decision-making, b) less administrative routine assigned to

teachers, c) less close supervision, d) supportive behaviors of the professional growth of teachers, e) much personal and considerate relationship, and f) accessible relationships (p. 7).

In a study of 12 elementary schools, Beamer (1969) found that the following additional characteristics of principals tended most to strengthen teacher morale: a) co-operative practices between teachers and principals, and b) recognition of accomplishments.

The Defining Factors of Teacher Job Satisfaction

The term "Teacher Job Satisfaction" has been used by almost all educational researchers cited in this study, but very few have defined what was meant by the concept. However, a number of researchers have attempted to isolate those factors which are the defining characteristics of teacher job satisfaction.

For example, Reinecker (1972), from a study of 634 tenured teachers in Pennsylvania, concluded that these teachers considered intrinsic factors more important as satisfiers than extrinsic factors. (An intrinsic factor might be hierarchical position prestige, for example, while extrinsic factors might be salary, a clean work place, etc.).

Clarke (1976), in a somewhat similar study, concluded that intrinsic factors appear to be related to job

satisfaction and extrinsic factors to job dissatisfaction.

Directed towards the same end, Sergiovanni (1967) conducted a study to test the Herzberg hypothesis. He found that the contributors to job satisfaction were achievement, recognition, and responsibility. Interpersonal relations with students, teachers and peers, supervision, school policy and administration, and personal life were found to be dissatisfiers. There was a difference in the response of tenured and untenured teachers in the areas of interpersonal relations and security.

Wickstrom (1971) also used the Herzberg theory in his study of 373 teachers in Saskatchewan and concluded that the four top-ranking satisfiers were: a) a sense of achievement, b) work itself, c) good interpersonal relations, and d) responsibility. The strongest dissatisfiers were: a) lack of achievement, b) policy and administration, c) working conditions, and d) adverse affects of job on personal life.

Lacy (1968), in a study of 242 Ohio business teachers, discovered numerous other factors related to job satisfaction. The most important, for present purposes, were community characteristics, fringe benefits, administration, salary, class size, teaching load, and helpful supervision.

Other researchers report identifying other factors which have a positive relationship with job satisfaction.

O'Brien (1971), for example, found that the closer the workers' trait structures fitted the organizational climate, the more they were satisfied with their work, and Albright (1971) claims that the type of group structure has a significant effect on job satisfaction and productivity.

It is clear from the studies cited that the concept of job satisfaction is multifaceted and that the determinant factors have not yet been conclusively isolated or categorized. However, the number of times supervision or administration are mentioned in these studies appear to be significant.

Studies Focusing Primarily on Managerial
Style of School Principals and Job
Satisfaction of Teachers.

The hypothesized relationships between management style, job satisfaction, and productivity and performance have implications for education. In this regard, a considerable amount of research data has been produced. That is not to say, however, that the conclusions drawn from this research can be easily generalized.

For this study, a survey was conducted of approximately 40 related research reports, most of which were completed during the last decade. There was in excess of 20 leadership variables, an equal number of satisfaction variables and almost as many instruments used in these studies.

A summary of this body of research is given in Table 2.2.

Table 2.2, while appearing somewhat complex, is an efficient means of emphasizing the extreme complexity of the relationships between management style, job satisfaction, and productivity in the school context. Assuming that the 20 management style variables do represent different aspects of management style, and assuming that the 19 satisfaction variables represent different aspects of job satisfaction, then Table 2.2 displays almost 400 possible relationships between these two variables.

Of the 29 studies relating "management style" and "job satisfaction" variables, 25 of them indicated a positive relationship, one study indicated no discernible relationship, and three studies indicated a negative relationship.

Of the 36 studies relating "job satisfaction" with "management style" variables, 34 indicated a positive relationship, one study indicated a negative relationship, and one study indicated no discernible relationship.

The hypothesis stating a positive relationship between management style and job satisfaction, therefore, seems to have a significant amount of support in the literature.

Most studies tend to support the hypothesis that management style of principals and teacher job-productivity

TABLE 2.2

RESEARCHED RELATIONSHIPS BETWEEN MANAGEMENT STYLE AND JOB SATISFACTION

Management style variables	1	2	3	4	5	6	7	8	9	10	11	12	13
Satisfaction variables													
1. Alienation		1+		1+	1+								
2. Felt participation					1+								
3. TEACHER confidence in principals leadership					1+								
4. ATTITUDE toward principal					1+								
5. Teacher perception of principal's leadership ability	1+						1+						
6. Perception of principal support					1+					1-			
7. Grievances					1+								
8. Disengagement					1-						1-		
9. Trust					1-	1°					1-		
10. Needs satisfaction, self-actualization								1+		1+			
11. Enthusiasm											1+		
12. Loyalty					1+								1+
13. Achievement tendency					1-								
14. Absenteeism					1+								
15. Interpersonal relations						1°			1°				
16. MORALE			1+		2+ 1°								
17. Teacher rating of principal	1+				1°	1+	1+	1+			1+		
18. PROFESSIONAL performance					1+								
19. Job satisfaction			2+	2+	13+		6+		3+	1+	1-	3+	1° 1+

Notes for Table 2.2:

1. The management style variables are represented by numbers in the first row. The numbers represent the following variables:

<ol style="list-style-type: none"> 1. Alienation 2. Centralization of authority 3. Decentralization 4. Rural structure Organizational structure 5. Management style, leadership style, manager behavior, principal support, person-oriented, executive professional leadership, consideration, Likert's system 4 	<ol style="list-style-type: none"> 6. Dogmatism 7. Democracy, Participation 8. Assistance in improving teacher skills 9. Open climate 10. Job characteristics 11. Congruence, consonance 12. Achievement 13. Informal authority
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2. Because of the similarity of the eight variables in number 5, they have been considered together.

3. The cells containing symbols represent relationships studied in the various research projects reviewed. The numeral represents the number of studies, "+" means a positive relationship, "-" represents a negative relationship, and "o" represents no discernible relationship.

Example: Cell A8-B10 contains 1+. This means that one study indicated a positive relationship between "Assistance in improving teacher skills" and "Needs satisfaction, self-actualization." Cell A6-B9 contains 1^o. This means that one study showed no discernible relationship between "Dogmatism" and "Trust."

4. A list of the studies used in constructing this table is given in Appendix D.

are related. For example, Chung (1970), from a study of 499 Michigan teachers, concluded that ". . . a high teacher-centered management style of leadership behavior of public school principals, as perceived by teachers, and high job satisfaction are . . . significantly related" (p. 19).

Similarly, Lambert (1968), in a study of 600 Alabama teachers, concluded that teacher morale and the principal's leadership behavior were significantly and highly related.

Turner's (1968) study also supported this relationship. From his study of teachers of 50 Georgia elementary schools he concluded that job satisfaction correlated significantly with open-climate tendency of the school. Achievement and working conditions were the most important satisfiers in open climate schools; status and personal life were the most dissatisfying factors. In the closed climate schools, characterized by high control and paternalism, the most dissatisfying factors were working conditions, school policy, and administration and supervision.

Also supporting the hypothesis is the study of Holland (1970). His study of Massachusetts educational data and questionnaire responses of principals and teacher association presidents revealed that principals described as exhibiting high degrees of consideration behavior had fewer contract grievances occurring in their schools than had principals described as having low degrees of

consideration behavior. Both groups of principals exhibited high degrees of initiating structure behavior.

In a similar vein, Schroder (1971) found from a study of New Orleans teachers that managerial behavior was significantly related to teacher satisfaction with supervision but was not related to the rate of teacher absenteeism.

While most of the studies cited above seem to indicate a positive relationship between the major variables, one must note that practically all the instruments measured the perceptions of teachers. It should be noted that different groups of teachers within the school may perceive the same principal's behavior differently and may also hold different expectations about how principals should behave.

A number of studies have been conducted to investigate the associations between teacher expectations and teacher satisfaction. Bidwell (1955), for example, found that teacher satisfaction was related to the congruence between their expectations for their administrators and their perceptions of administrative performance.

Sharma (1955) also reported that satisfaction of teachers was related to the extent that teacher expectations were fulfilled; and Chase (1953), from a study of over 2,000 teachers reported a 70 per cent chance that teachers would be enthusiastic about teaching in a school where there was congruence between teacher expectations

regarding the principal's role and their perceptions of the extent that principals fulfilled their roles.

The phenomenon of worker satisfaction and productivity being related to expectations has been extensively explored by Vroom (1964) who states that ". . . expectations . . . are not the only variables involved in determining a person's decision about the amount of effort that he will exert in the performance of his task or job" (p. 196).

A number of studies have indicated a relationship between a worker's perception of himself and his involvement in his job. For example, Thompson's (1969) study at Texas Instruments indicated that an individual's self-perception is a determinant of job satisfaction, and Wurtz (1972) found from a study of 3,000 teachers, supervisors, and administrators that there is a positive relationship between one's job satisfaction and the degree of congruence between one's self-concept and ideal self-concept.

Savage (1968) and Likert (1961) have attempted to explain this phenomenon. Savage (1968) says:

. . . although perceptions can be distressingly accurate, everyone is aware of the frequency with which behavior is misunderstood because of the emotions and needs involved when one perceives the behavior of another and, of course, it is very difficult for a person to view objectively his own behavior. (p. 130)

Likert (1961) explains that:

An individual's reaction to any situation is always a function not of the absolute character of the interaction, but of his perception of it. It is

how he sees things that counts, not objective reality. (p. 102)

Savage (1968) explains further, stating that:

"The lack of congruence may be due to genuine differences in the expectations held for a position, or it may be due to erroneous perceptions" (p. 131).

Either way, what a person perceives as reality is reality for that person and he will behave accordingly. But "reality" may not be the same for the leader or for some other observer.

Studies Focusing Primarily on Productivity and Performance

There appears to have been very little research carried out in the area of productivity and performance in the educational context. Some researchers have treated it as an incidental, but few have attempted to analyze the nature of productivity, the measurements of productivity, or the determinant factors of productivity. Out of the 40 or so studies included in the construction of Table 2.2, only one deliberately investigated teacher productivity and performance.

A number of other studies have included productivity as one of the variables in their investigations, but the results have tended to be inclusive. Parsons (1971), for example, reports ". . . positive relationships between Executive Professional Leadership scores and . . . pupils' learning . . ." (p. 68) and ". . . a professional staff

may perform more, not less, effectively when its administrators attempt to influence it" (p. 69).

In a similar vein, McCauley (1977), from a study of teachers and pupils in New York State schools, determined that administrative processes had an effect on self-actualization of pupils, but McQuillin (1969) found that it was teacher perceptions of principals' system oriented behaviors that was related to higher teacher perceptions of self-effectiveness. This finding tends to cast doubt on the generally accepted positive relationship between teacher-oriented management style and productivity.

Another problematic study was that of Clark (1968). From his study of 2,309 pupils and 87 fifth and sixth grade teachers from 37 Alabama and Georgia schools, he concluded that teacher satisfaction as measured by the teachers is not significantly related to the quality of teacher-pupil relationships as evaluated by the pupils.

In describing his survey of studies into these relationships, Penney (1977) cited five studies relating teacher participation in decision-making with productivity and concluded ". . . the research reveals a relationship between Participatory Decision Making . . . and teacher productivity, although it is by no means clear" (p. 17).

These inconsistencies and inconclusive results appear not to give much support to the hypothesis that satisfied teachers are more productive or that they

perform better than unsatisfied teachers. Bass (1965) highlights the dilemma when he concluded from industry studies that satisfied workers are not necessarily more productive than dissatisfied ones.

Two questions, however, are still left unanswered: a) What are the determinants of productivity? and b) What are the factors that would be used to measure productivity?

It seems appropriate, at this point, to acknowledge that it is not obvious what should be measured. One must recognize that any decision to measure educational productivity will depend, at least in part, on the philosophy and objectives of the school. If student learning is to be considered a part of productivity, for example, then one must also note the possible existence of latent learnings or learnings which cannot be very precisely measured.

Sergiovanni and Starratt (1971) described production as being difficult to operationalize but suggested that it includes such things as number of students graduated, the dropout rate, number of students who go to college, etc. (p. 63). However, Fagan and Ponder (1979) state that "no theories of teaching exist which would translate teacher variables into student performance" (p. 5).

Other researchers and theorists are somewhat puzzled about the determinants of productivity. Hall (1972), for example, states:

The evidence . . . is confounded, unfortunately by the possibility that the workers themselves

may contribute to their greater satisfaction and productivity by their own attitudes and behavior, independent of the leader. They might just be high-producing, positively oriented employees who 'do not require close, autocratic supervision, and therefore it is possible for the supervisor of such employees to be more human relations oriented'.

... While the evidence does suggest that greater productivity is associated with supportive supervision, other studies report no difference or actually more output when autocratic styles are used. ... When workers expect to be supervised in an autocratic style, supportive supervision can be counterproductive and satisfaction-threatening. (p. 250)

Tannenbaum (1971) suggests that there is a weakness in the theory. He states:

One weakness in the hypothesis that associates productivity with satisfaction is the failure to distinguish between satisfaction and motivation. Insofar as his needs are met, a person may be satisfied with his work. But his satisfaction indicates little about his motivation to work-- particularly when his satisfaction does not depend on the amount of effort he puts into his work. (p. 216)

Hence, the questions concerning productivity determinants and measurement remain unanswered, and the relationship between satisfaction and productivity remains elusive.

Related Research in Newfoundland

Several related studies have been conducted in Newfoundland in recent years. Inkpen (1974), from a study of 300 elementary teachers of the province, concluded that "~~the~~ teachers desire a greater role in the decision-making process" (p. 91) and "... desired participation ... varied with the decisional area" (p. 92).

In a similar study of 250 teachers, Ponder and Bulcock (1976) obtained results similar to those obtained by Inkpen (1974).

Penney (1977) conducted a study of 280 high school teachers in 25 Newfoundland schools. He attempted to identify the relationship between teacher participation in school decision-making and teacher perception of job satisfaction and productivity. The study failed to establish a positive relationship between participation and productivity or between job satisfaction and productivity.

IV. CONCEPTUAL FRAMEWORK

A "systems approach" was taken in the construction of the conceptual framework for this study. This is consistent with the trend that has developed in recent years in the study of organizations. Whereas the early concepts of organizations were conceived of in mechanistic terms, with its model being the machine with a relatively simple "cause and effect" nature, the current trend is to approach the study of organizations organically. In this approach, the organization is perceived as being in some way analogous to a living organism having a complex, changeable, active, dynamic nature with feedback mechanisms and identifiable parts. There is a realization implicit in this approach that practically every act must be analyzed in a multidimensional manner because its relationship with

the rest of the organization is multifaceted and changeable.

A system, in the present sense, is a set of forces or factors which are more closely related to each other than they are related to forces or factors in the external environment of the system.

A system has a number of characteristics. Lundberg (1971) provides the following four characteristics as minimal:

1. There are a number of parts.
2. These parts are related to one another in an independent fashion.
3. The interrelated parts exist in an environment which is more or less complex.
4. The parts exhibit an ordered pattern of activity (not random) which is congruent with achieving certain systems ends. (p. 533)

In order to systematize organizational understanding Scott and Mitchell (1972) suggest that the following five questions be answered:

1. What are the strategic parts?
2. What is the nature of their mutual interdependence?
3. What are the main processes?
4. Which processes link the parts and facilitate their adjustment to each other?
5. What are the goals sought by the system?
(p. 55)

Likert (1967) suggests that the following factors must be addressed in attempting to understand any organizational system: behavior of leaders, motivation of members, communication processes, decision-making processes, goal-setting processes, the forms of control, and productivity (p. 25).

An organization consists of many aspects, forces and factors. It is affected by environmental forces--human, technological, social, and organizational--which provide four major organizational "inputs." These inputs influence, if not determine, managerial style and other human behavior in the organization, and to the extent that they are influential, they determine the organization's internal success in terms of output (i.e., productivity and individual satisfaction).

These factors are shown in Figure 2.10 in dynamic relationship. This model emphasizes that organizational relationships are not simplistic, but are extremely complex.

The Conceptual Link

Theory and research indicate that people have a variety of needs. It seems reasonable to assume that people will be satisfied to the extent that their needs are met.

Research indicates that individual behavior is caused. Since individuals have unique personalities and histories, one would expect that needs-disposition will vary with the individual. Hence, it would be expected that individual behavior would vary. This is not to suggest that the individual is necessarily aware of the nature of his needs-dispositions, nor of the stimuli which will produce particular behavioral reactions in the specific case. Neither might the individual be aware of the nature

THE ORGANIZATIONAL SYSTEM

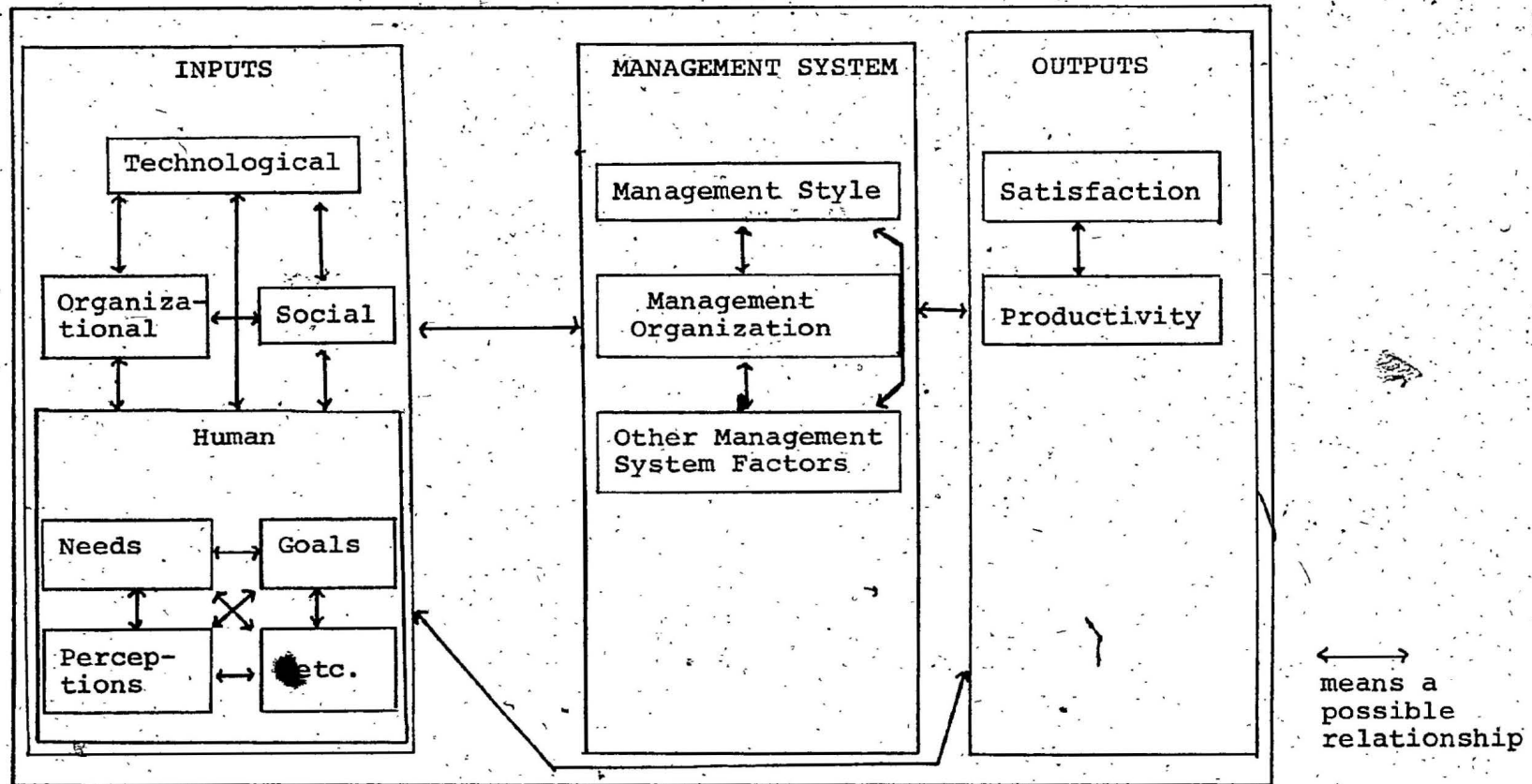


Figure 2.10. A framework for understanding human behavior in organizations: A systems model. Adapted from Seiler (1971), p. 527.

of the reactive behavior.

However, people in general tend to react in a rather consistent manner, so much so that ~~two~~ sciences, psychology and sociology, are founded on the assumption that behavior is not erratic in the general case.

It is assumed that teachers will bring into the educational organization social and psychological needs somewhat similar to the needs of other workers in industrial, business, and non-educational service organizations. Some of these needs are desire for acceptance, approval, recognition, and power; the desire to undertake significant and important tasks; and the need for self-fulfillment. Workers (and teachers in the specific case) also have a desire for professional growth and want to sustain a sense of importance and personal worth. March and Simon (1958) state that ". . . individuals seek to satisfy personal needs through the medium of the job" (p. 77).

While it is realized that the school situation is different from most other workplaces (a statement that could be made about practically any workplace), it is assumed that most of the theories of organizational behavior apply to some extent. However, it is realized that the uniqueness of the school environment may mean that there are some more or less minor discrepancies in the descriptive ability of these theories relative to how well they are able to describe the non-educational workplace.

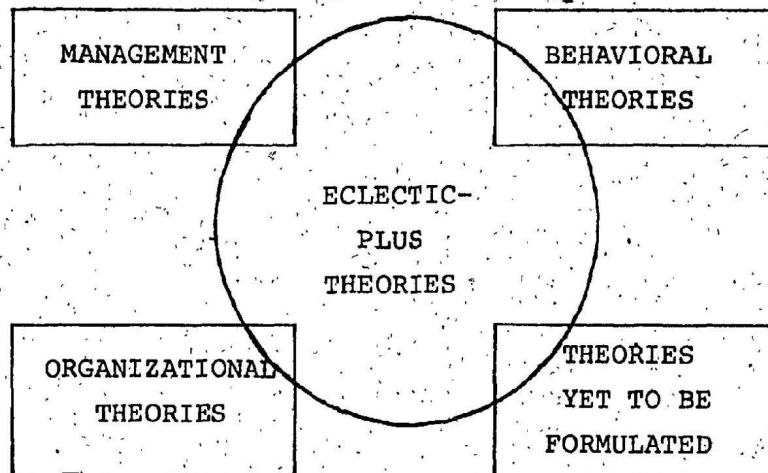
It is not suggested that any specific theory sufficiently describes behavior in any particular work-situation. One would suspect, however, that each of the theories has an element of truth or descriptive ability for most organizational work settings, and for the educational work-situation in particular by virtue of the fact that these theories deal with people in organizations, and schools are not different in that respect.

Hence, it is suggested that an Eclectic-Plus Theory of behavior would be the optimum theory for any particular work context. This theory is given as a model in Figure 2.11.

It seems reasonable to assume that teacher behavioral reactions will be comparable to the appropriate parallel behavioral reactions of other workers, given a stimulus with a comparable perception value.

It also seems reasonable to assume that an industrial managerial style could be translated into a parallel managerial style in the educational context.

Then, given a worker-centered managerial behavior in the non-educational context and the parallel teacher-centered managerial behavior of a principal, one would assume that the non-teacher and the teacher would each perceive his respective superior's behavior in a comparable manner, in general, and that their respective behaviors would have the same value within their own unique contexts.



Note: The "eclectic" part represents the applicable nature of extant theories; the "plus" represents an as yet unknown quantity--new understandings from theories yet to be formulated.

Figure 2.11. The Eclectic-Plus Theory of human behavior in the organizational setting.

The research into the relationships between managerial style and job satisfaction in education, business, and industry tends to support these assumptions.

The concept of teacher productivity has received very little study, while industrial productivity has been consistently studied for decades, resulting in some positive, if tenuous, relationships.

Given the foregoing discussion, it seems reasonable to conclude that since research has established that greater productivity is positively associated with worker-centered management style in industry, then the appropriate translation, teacher-centered management style of principals, will be associated positively with greater teacher productivity. That is, if a particular style of management will motivate industrial and other non-teacher workers, then the appropriate translation of that management style to the school context should so motivate teachers.

V. SUMMARY

This review has included literature on many aspects of human behavior in organizations. Probably the most that can be said is that some relationships may have been identified but there is so little conclusive evidence that most relationships must still be stated as conjectures, speculations, or hypotheses.

In particular, it has been more or less concluded that some relationships exist between the variables most relevant to this study--management style, job satisfaction, and productivity.

However, the questions of causality among these variables have not been satisfactorily answered. Because of the inconclusive nature of the research which has been completed, there is an obvious need for additional research.

While this study was directed toward the isolation of some of the associations between the variables mentioned, it was acknowledged that human behavior in organizations is a very complex field for research and that any generalizations would have to be tentative and very carefully constructed.

CHAPTER 3

This chapter contains an account of the methodology used in the research. Included is a description of the population and sample, the instruments, and the results of the factor analysis procedures. Described also is the basic path analysis model which was used in the interpretation of the research results.

METHODOLOGY

I. STATEMENT OF THE PROBLEM

This study was conducted in order to investigate some of the relationships between management-style, job satisfaction, and job productivity in Newfoundland educational settings. In particular, the purpose of the study was to answer the following questions:

1. What is the nature of the relationship between Teacher-Centered Management Style and Teacher Job Satisfaction as perceived by teachers?
2. What is the nature of the relationship between Teacher-Centered Management Style and Teacher Productivity, as perceived by teachers?
3. What is the nature of relationship between Teacher Job Satisfaction and Teacher Productivity as perceived by teachers?

II. POPULATION AND SAMPLE

As a representative sample of Newfoundland and Labrador junior and senior high school teachers, those teachers of grades seven to eleven in the schools of the Grand Falls area were selected. This area, defined for present purposes, included all schools teaching grades seven to eleven from Botwood in the south, to Baie Verte in the north.

This area contains 15 junior and senior high schools and five all-grade schools with grades seven to eleven. Approximately 225 junior and senior high school teachers were in the sample area.

This sample contains schools of all major religious groups having schools in the province--Integrated, Pentecostal and Roman Catholic.

The people of this area are engaged in occupations typical of the province. Buchans, for example, is a mining town; King's Point is a farming area; Pilley's Island is in a community-cluster where fishing is a major occupation; Grand Falls is a manufacturing center; Springdale is primarily a service town; and many of the communities represented are typical Newfoundland outports. In all, students from 30 communities attend the schools represented in this sample.

There is a rural-urban mix as well. The twin-towns of Grand Falls-Windsor have a combined population in excess

of 15,000. At the other extreme are communities such as Middle Arm, which has a population of approximately 300.

This area also contains a broad range of socio-economic levels, ranging from unskilled workers to the higher professional levels.

It was for these reasons that this area seemed to be typical of the province, and because of these reasons it was felt that the conclusions drawn from this study could be generalizable to the total teacher population of the province.

Each of the four school superintendents in the Grand Falls area were contacted and permission was obtained to approach the respective schools. The school principals of the schools were then approached and permission was obtained to survey 18 of the 20 schools in the sample.

A copy of the questionnaire was hand-delivered to the teachers who were given a brief verbal rationale for the study and were requested to complete the questionnaire.

There were exceptions to this general procedure. In four of the schools it was necessary to leave the questionnaires to be distributed by the administrators of the schools.

The questionnaires were collected later on the same day, or on the following days.

A total of 209 questionnaires were delivered, of which 177 were completed and returned--a response rate of 84.7 per cent.

structure, and the organizational structure are for most purposes comparable from school to school, at least when the study is confined to the general North American public school context.

In spite of the obvious difficulties, which have been alluded to in the "Limitations" section, the questionnaire survey has been consistently used and does have considerable merit. The method is "realistic"; it takes place within the organizational context; data on many aspects of actual performance is obtained; actual tasks and goals are subjected to scrutiny. Many varieties of complex behavior can be "observed" and much of the reported performance can be subjected to analysis. The data gathering is relatively efficient and the method lends itself to quantification.

Probably the strongest attribute of the survey method is the fact that it is

. . . a powerful tool for comparisons--among individuals, between groups and between organizations. A large number of people can be subjected to precisely the same set of objective stimuli making possible a wide range of comparisons.

(Whyte, 1963, p. 54)

The survey questionnaire used in this study consisted of three instruments:

- (a) the Teacher-Centered Management Style Questionnaire, Instrument 1;
- (b) the Teacher Perception of Job Satisfaction Questionnaire, Instrument 2; and
- (c) the Teacher Perception of Productivity Questionnaire, Instrument 3.

All three instruments were subjected to factor analysis, a statistical procedure explicated by such people as Harman (1967) and Rummel (1970). This procedure is used to analyze a set of observations from their intercorrelations to determine whether the variations represented can be adequately accounted for by a number of basic categories smaller than that with which the investigation started. The procedure facilitates the explanation of data obtained by a large number of "a priori" measures in terms of a smaller number of reference variables. That is, factor analysis is a data reduction technique. Through factor analysis one seeks to identify the traits which items measure in common and which result in their intercorrelations.

In mathematical terms, a factor is that vector which best fits the plots of the data in n-dimensional space. This means, for example, that a set of data that can be adequately described by two factors, can be meaningfully plotted on a two-dimensional grid. (A set of data which required more than three factors to be described would be difficult to visualize geometrically).

The factors can be submitted (i.e., mathematically manipulated) to orthogonal or oblique rotations. This means that the grid axes are "rotated" around the grid origin to obtain a better "fit" for the data. If the axes of the grid are kept at 90° , the rotations are said to be orthogonal; if the axes are not kept orthogonal, then the rotations are said to be oblique.

A number of factor variable methods and rotation methods can be employed. In the present case the method employed was that statistical manipulative (algebraic) procedure called principal component analysis with oblique rotations. Principal component analysis differs from principal factor analysis primarily in that in the former no particular assumptions about the underlying structure of the variables are necessary. One simply seeks that particular linear combination of variables that will account for the optimum amount of variance.

The Teacher-Centered Management Style Questionnaire

The Teacher-Centered Management Style questionnaire was developed at the Institute for Social Research at the University of Michigan, and was used, originally, by Chung (1968) as part of a study for a doctoral thesis. In the present instance, the original 16-item instrument was administered. The complete instrument is given in Appendix A.

The directions of this instrument instructed the subjects to indicate the response most adequately describing how they felt about each item. Responses were coded as follows:

- 1 almost always
- 2 often
- 3 sometimes
- 4 very seldom

In order to make the data compatible with the other data in the study, items 1 to 9, 12, and 15 were recorded as follows:

- 1 very seldom
- 2 sometimes
- 3 often
- 4 almost always

The data were then subjected to factor analysis with oblique rotations, using the SPSS computer package (Nie, et al., 1975).

The factor analysis results were examined and items that did not load substantially on either factor were deleted.¹

The remaining items were re-submitted to factor analysis in an attempt to obtain "cleaner" factors. The correlations among the 12 remaining items are shown in Table 3.1.

The results of the factor analysis, which is based on the correlations of Table 3.1, are presented in Tables 3.2, 3.3, 3.4, 3.5, and 3.6.

Table 3.2 contains the unrotated factor matrix. The columns define the factors, the rows refer to the variables. The intersection of the row and column contains the loading for the row variable on the column factor. The two independent sets of relationships in the data, as shown in Table 3.2, may be considered as manifesting two different kinds of influences on the data or as presenting two categories by which the data may be classified. The first

¹The literature on Factor Analysis suggests a factor loading cut-off of .30 on significant items.

TABLE 3.1
CORRELATION COEFFICIENTS FOR MANAGEMENT STYLE VARIABLES

	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12
M1*	1.000	.514	.429	.318	.547	.398	.258	.352	.312	-.154	.281	.250
M2		1.000	.524	.515	.484	.426	.404	.518	.371	-.229	.362	.254
M3			1.000	.408	.355	.405	.359	.498	.360	-.279	.148	.070
M4				1.000	.388	.386	.203	.328	.218	.091	.267	.130
M5					1.000	.507	.319	.404	.273	-.076	.280	.350
M6						1.000	.547	.452	.420	-.288	.127	.143
M7							1.000	.381	.451	-.317	.127	.032
M8								1.000	.479	-.265	.203	.139
M9									1.000	-.477	.083	.053
M10										1.000	.232	.162
M11											1.000	.340
M12												1.000
Mean	2.41	2.46	2.49	3.07	2.76	3.01	2.95	2.68	2.99	2.83	3.16	3.51
S.D.	.93	1.11	1.03	1.02	1.05	.92	1.08	.94	.99	.94	.99	.94
N	177	175	175	175	177	176	175	177	176	177	176	173

*These variable numbers refer to items from Instrument 1.

unrotated factor represents the strongest pattern of the relationships in the data; the second represents the next strongest pattern that is independent of the first. Each factor represents a pattern of relationships among the data that is independent of the other patterns.

TABLE 3.2

UNROTATED FACTOR MATRIX FOR MANAGEMENT STYLE VARIABLES

Variables	Factor 1	Factor 2	Communality
M1*	.627	.184	.427
M2	.765	.149	.607
M3	.645	-.074	.421
M4	.538	.158	.314
M5	.660	.258	.502
M6	.686	-.115	.483
M7	.576	-.306	.426
M8	.670	-.074	.454
M9	.586	-.328	.451
M10	-.372	.619	.522
M11	.323	.533	.388
M12	.265	.446	.269
Eigenvalues	4.025	1.239	
Per cent of Variance	76.5	23.5	

*These variable numbers refer to items from Instrument 1.

The amount of variation in the data described decreases successively with each factor; the first factor contains the greatest amount of variation, the last factor

the least amount of variation.

The column in Table 3.2 headed Community indicates the total variance accounted for by the combination of all the factors. This value indicates the amount of variance of a variable that is accounted for by the factors.

The two factors reported in Table 3.2 were rotated obliquely in order to achieve a simpler and theoretically more meaningful factor pattern.

Oblique rotation is justified on the grounds that it probably cannot be assumed that the variables related to aspects of human behavior, such as worker-oriented administrative behavior, are independent of each other. In any case, if the relationships are in fact uncorrelated, then orthogonal factors will result from oblique rotations. Oblique rotation has been consistently used with all factor analyses in this research.

The factor pattern which resulted from the oblique rotation of the factors in Table 3.2 is shown in Table 3.3. This matrix was examined by columns in order to interpret the meaningful content of the factors. The parameters in the table define the patterns of the data and give a measure of the degree of involvement of each variable in the pattern.

TABLE 3.3

ROTATED FACTOR PATTERN OF MANAGEMENT STYLE VARIABLES

Variables	Factor 1	Factor 2
M1*	.482	.350
M2	.624	.353
M3	.620	.100
M4	.413	.301
M5	.477	.432
M6	.677	.071
M7	.667	-.147
M8	.643	.107
M9	.687	-.166
M10	-.630	.511
M11	.042	.613
M12	.030	.512

*These variable numbers refer to items from Instrument 1.

The factor structure matrix (Table 3.4) gives the correlation of each item with each factor. The loadings are strictly interpretable as correlations. The factor structure is used in identifying variables most highly involved in a factor.

In order to construct meaningful composite scores representing the factors, factor score coefficients had to be calculated. They are reported in Table 3.5.

By use of the SPSS computer programs, a factor correlation matrix was computed for each set of factors. This correlation provided, simply, a measure of the correlation of the factors and are to be interpreted strictly as

TABLE 3.4

74

ROTATED FACTOR STRUCTURE OF MANAGEMENT STYLE VARIABLES

Variables	Factor 1	Factor 2
M1*	.557	.452
M2	.699	.485
M3	.641	.232
M4	.477	.388
M5	.568	.533
M6	.692	.214
M7	.636	-.006
M8	.666	.243
M9	.652	-.020
M10	-.522	.378
M11	.171	.622
M12	.139	.518

*These variable numbers refer to items from Instrument 1.

TABLE 3.5

FACTOR SCORE COEFFICIENTS OF MANAGEMENT STYLE VARIABLES

Variables	Factor 1	Factor 2
M1*	.087	.138
M2	.196	.233
M3	.135	.022
M4	.058	.087
M5	.110	.228
M6	.178	.019
M7	.144	-.104
M8	.144	.021
M9	.166	-.089
M10	-.185	.321
M11	-.012	.269
M12	-.013	.183

*These variable numbers refer to items from Instrument 1.

a correlation (i.e., the closer the correlation is to 0, the more independent the factors). The matrix is given in Table 3.6.

TABLE 3.6
FACTOR CORRELATIONS OF MANAGEMENT STYLE FACTORS

	Factor 1	Factor 2
Factor 1	1.000	.211
Factor 2		1.000

Since Factor 1 accounted for 76 per cent of the variance, it was decided that it was an adequate measure of Teacher-Centered Management Style. The nine items which comprise the first factor, in order of magnitude are:

<u>Item No.</u>	<u>Factor Loading</u>	<u>Content</u>
M9	.687	The principal brings educational literature and conferences to attention of teachers.
M6	.677	Principal encourages and supports new ways of teaching.
M7	.667	Principal encourages continued professional training.
M8	.643	Principal has ample time for conversation with teachers.
M2	.624	Principal demonstrates warm personal interest in teachers.
M3	.620	Principal helps teacher deal with classroom problems.
M1	.482	Principal seeks suggestions from teachers.
M5	.477	Principal consults teachers before making major school decision.
M4	.413	Teacher feels it is alright to ask principal for help.

These nine items seem to reflect aspects of interpersonal relations. A high score on this factor would indicate a teacher who felt that he had a good personal relationship with his principal. Alternately, a high composite score by a high school faculty would indicate that the principal had been successful in establishing a good personal relationship with his faculty as a whole.

The reliability coefficient of Factor 1, as calculated by Cronbach's Alpha formula, was .86 (Cronbach, 1951).

The composite scores used in subsequent analysis were weighted Z-scores. The general formula used was

$\sum g_i (V_i - \bar{X}_i) / \sigma_i$, where

- i is the variable designation,
- V_i is the obtained score,
- g_i is the factor score coefficient,
- \bar{X}_i is the mean score, and
- σ_i is the standard deviation.

The composite variable used for Teacher-Centered Management Style was:

$$\begin{aligned} \text{MANAGEMENT} = & (.087 (M1 - 2.41)/.93) + (.195 (M2 - 2.45)/1.11) \\ & + (.135 (M3 - 2.49)/1.03) + (.058 (M4 - 3.07)/1.02) \\ & + (.110 (M5 - 2.76)/1.05) + (.178 (M6 - 3.01)/.92) \\ & + (.144 (M7 - 2.95)/1.08) + (.144 (M8 - 2.68)/.94) \\ & + (.166 (M9 - 2.99)/.99) \end{aligned}$$

The Teacher Perception of Job Satisfaction
Questionnaire

This seven-item questionnaire was developed by Penney (1978) at Memorial University of Newfoundland. It is given in its entirety in Appendix B.

For this instrument, the respondents were instructed to indicate the response which most adequately described their feelings about the items. Responses were coded as follows:

- 1 very satisfied
- 2 satisfied
- 3 slightly dissatisfied
- 4 very dissatisfied.

In order to make the data compatible with the other data in the study, the responses were recorded as follows:

- 1 very dissatisfied
- 2 slightly dissatisfied
- 3 satisfied
- 4 very satisfied.

The data were subjected to factor analysis using principal component analysis and oblique rotations. The results of the initial factor analysis were examined and items that did not load substantially on the factors were deleted. Table 3.7 contains the correlation matrix of the remaining five Satisfaction variables.

These five Satisfaction variables were re-submitted to factor analysis. The results of the second factor

analysis are presented in Tables 3.8 to 3.12. Table 3.9 contains the unrotated factor matrix. Tables 3.9, 3.10, and 3.11 contain, respectively, the rotated factor pattern, the rotated factor structure, and the factor score coefficients of the Satisfaction variables. Table 3.12 contains the factor correlation matrix.

The unrotated factors reported in Table 3.8 were rotated obliquely in order to achieve a simpler factor pattern. The factor pattern which resulted from this oblique rotation is shown in Table 3.9.

Reliability coefficients computed by Cronbach's Alpha formula (Cronbach, 1951) for "Satisfaction" factors were as follows:

<u>Factor</u>	<u>Reliability</u>
Factor 1 (Items S1, S2)	.45
Factor 2 (Items S4, S5, S6)	.58

Factor 1 was designated Teacher Salary Satisfaction. The two items which comprised this factor, in order of magnitude are:

<u>Item No.</u>	<u>Factor Loading</u>	<u>Content</u>
S2	.769	Chances of receiving salary increases without promotion.
S1	.378	Top salary available to teachers.

These two items undoubtedly reflect teacher satisfaction with salary. A high score on this factor would indicate high teacher satisfaction with salary.

TABLE 3.7

CORRELATION COEFFICIENTS FOR SATISFACTION VARIABLES

	S1	S2	S4	S5	S6
S1*	1.000	.287	.036	-.097	-.037
S2		1.000	.033	.246	.124
S3			1.000	.218	.543
S5				1.000	.209
S6					1.000
Mean	2.17	2.09	2.66	2.19	2.55
S.D.	.80	.84	.65	.76	.67
N	176	169	174	175	176

*These variable numbers refer to items from Instrument 2.

TABLE 3.8

UNROTATED FACTOR MATRIX FOR SATISFACTION VARIABLES

Variables	Factor 1.	Factor 2	Communality
S1*	.125	.349	.138
S2	.361	.680	.593
S4	.682	-.275	.540
S5	.367	.161	.161
S6	.703	-.230	.547
Eigenvalues	1.240	.739	
Per cent of Variance	62.7	37.3	

*These variable numbers refer to items from Instrument 3.

TABLE 3.9
 ROTATED FACTOR PATTERN OF SATISFACTION VARIABLES

Variables	Factor 1	Factor 2
S1*	-.052	.378
S2	.005	.769
S4	.745	-.070
S5	.255	.264
S6	.743	-.020

*These variable numbers refer to items from Instrument 2.

TABLE 3.10
 ROTATED FACTOR STRUCTURE OF SATISFACTION VARIABLES

Variables	Factor 1	Factor 2
S1*	.021	.368
S2	.152	.770
S4	.732	.073
S5	.306	.313
S6	.739	.122

*These variable numbers refer to items from Instrument 2.

TABLE 3.11

FACTOR SCORE COEFFICIENTS OF SATISFACTION VARIABLES

Variables	Factor 1	Factor 2
S1*	-.005	.156
S2	.058	.694
S4	.457	.012
S5	.096	.123
S6	.464	.010

*These variable numbers refer to items from Instrument 2.

TABLE 3.12

FACTOR CORRELATIONS OF SATISFACTION FACTORS

	Factor 1	Factor 2
Factor 1	1.000	.192
Factor 2		1.000

Factor 2 was designated Teacher Satisfaction with the Capabilities of Teacher Colleagues. The three items which comprised this factor, in order of magnitude are:

Item No.	Factor Loading	Content
S4	.745	Capabilities of most teachers.
S6	.743	Level of professional standards maintained by most teachers.
S5	.255	Possibilities for advancement to positions of greater responsibility.

These three items seem to reflect the degree of satisfaction which a teacher experiences relative to his perception of the capabilities of his teaching colleagues. A high positive score on these items would indicate that the teacher was very satisfied with the professional capabilities of the teachers whom he knows.

For subsequent analysis, weighted Z-scores were utilized. The composite variables using the factor score coefficients, were as follows:

$$\begin{aligned} \text{SALARY} &= (.156 (S1 - 2.17)/.8) + (.694 (S2 - 2.09)/.84) \\ \text{CAPABILITIES} &= (.457 (S4 - 2.65)/.8) + (.095 (S5 - 2.19)/.76) \\ &\quad + (.464 (S6 - 2.54)/.67) \end{aligned}$$

The Teacher Perception of Productivity Questionnaire

As was indicated in the Review of Related Literature and Research relative to job productivity, it is not obvious what should be measured as indicators of productivity. However there is considerable precedent for the use of measurements of attitudes and perceptions (see, for example, Sharma, (1955), Lickert (1961), Thompson (1969), and McCauley (1977)).

While acknowledging that there was a variety of views concerning the measurement of job productivity, it was decided to use the teachers' avowed perceptions of aspects of their own productivity as proxies for actual productivity.

A questionnaire developed by Penney (1977) was used to assess the teachers' perception of productivity. The questionnaire is given in Appendix C.

The original questionnaire consisted of 22 items. The data were submitted to principal component analysis with oblique rotation. The results were examined and those items not loading substantially on any factor were deleted. Table 3.13 contains the correlation matrix of the remaining 14 Productivity variables.

These 14 items were re-subjected to factor analysis. The results of the second factor analysis is presented in Tables 3.14 to 3.18. Table 3.14 contains the unrotated factor matrix. Tables 3.15, 3.16, and 3.17 contain, respectively, the rotated factor pattern, the rotated factor structure, and the factor score coefficients of the Productivity variables. Table 3.18 contains the factor correlation matrix.

On examination of the Productivity factors, it was concluded that Factor 2 (teacher perceptions of union affiliation) consisting of items P21 and P22, was measuring a structure that appeared not to deal directly with teachers' perception of their productivity. Hence, Factor 2 was dropped from subsequent analysis.

Factor 1 was designated Intrinsic Commitment to Teaching as a Profession. The seven items of which it was comprised, in order of magnitude, are:

TABLE 3.13

CORRELATION COEFFICIENTS FOR PRODUCTIVITY VARIABLES

	P1*	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	P19	P21	P22
P1*	1.000	.329	.252	.459	.109	.020	.268	.176	.203	.140	.086	.179	.098	.034	-.050	-.161
P3		1.000	.348	.441	.335	.151	.399	.312	.173	.273	-.039	.118	.044	.111	-.091	-.147
P4			1.000	.340	.066	.012	.152	.326	.050	.143	.124	.248	.175	-.036	-.033	-.123
P5				1.000	.227	-.011	.218	.234	.055	.134	-.091	.269	.242	.068	-.051	-.180
P6					1.000	.246	.517	.368	.385	.279	.081	-.076	-.004	.342	-.070	-.008
P7						1.000	.402	.246	.338	.213	.066	.070	.140	.328	-.005	-.022
P8							1.000	.392	.450	.402	.159	.658	.106	.313	-.046	-.070
P9								1.000	.310	.349	.085	.064	.025	.323	-.066	-.176
P10									1.000	.274	.046	-.092	.039	.314	.133	.054
P11										1.000	.030	.067	.049	.251	-.012	-.205
P12											1.000	.368	.219	.104	-.135	-.141
P13												1.000	.274	-.019	-.223	-.224
P14													1.000	.002	-.131	-.081
P19														1.000	-.088	.026
P21															1.000	.505
P22																1.000
Mean	3.49	3.68	3.65	3.50	2.56	2.86	2.90	3.46	2.62	2.61	1.33	1.80	2.49	2.62	2.96	2.19
S.D.	.70	.75	1.22	.66	1.02	.85	.84	.72	.94	.88	.52	.68	.70	.60	.70	.85
N	168	175	172	171	176	174	177	177	177	176	172	174	173	173	176	176

*These variable numbers refer to items from Instrument 3.

TABLE 3.14
UNROTATED FACTOR MATRIX FOR PRODUCTIVITY VARIABLES

Variables	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
P1*	.424	-.216	.275	-.014	.302
P3	.587	-.096	.287	-.211	.481
P4	.376	-.284	.252	.051	.288
P5	.507	-.355	.406	.015	.549
P6	.566	.290	-.058	-.104	.418
P7	.398	.271	-.233	.179	.318
P8	.719	.236	-.092	.032	.582
P9	.589	.089	-.035	-.094	.365
P10	.480	.399	-.043	.070	.396
P11	.489	.109	-.094	-.104	.270
P12	.217	-.243	-.241	.370	.301
P13	.248	-.533	-.105	.371	.494
P14	.205	-.262	-.048	.302	.204
P19	.393	.338	-.165	.099	.306
P21	-.142	.450	.413	.254	.458
P22	-.267	.501	.355	.362	.579
Eigen- values	3.132	1.634	.860	.687	
Per cent of Variance	49.6	25.9	13.6	10.9	

*These variable numbers refer to items from Instrument 3.

TABLE 3.15

ROTATED FACTOR PATTERN OF PRODUCTIVITY VARIABLES

Variables	Factor 1	Factor 2	Factor 3	Factor 4
P1*	.041	.008	.528	.049
P3	.218	-.078	.591	-.160
P4	-.024	.009	.504	.136
P5	-.044	.035	.735	.105
P6	.601	-.047	.112	-.126
P7	.560	.037	-.147	.164
P8	.695	-.029	.158	.046
P9	.479	-.126	.219	-.040
P10	.614	.141	.025	-.028
P11	.446	-.148	.113	-.053
P12	.114	-.064	-.063	.525
P13	-.109	-.117	.183	.610
P14	.009	.011	.118	.417
P19	.567	.062	-.105	.046
P21	.032	.675	.105	-.084
P22	.008	.749	-.037	-.007

*These variable numbers refer to items from Instrument 3.

TABLE 3.16
 ROTATED FACTOR STRUCTURE OF PRODUCTIVITY VARIABLES

Variables	Factor 1	Factor 2	Factor 3	Factor 4
P1*	.188	-.147	.546	.147
P3	.374	-.212	.642	-.022
P4	.122	-.154	.520	.225
P5	.162	-.183	.733	.230
P6	.627	-.079	.267	-.060
P7	.527	.013	.026	.162
P8	.742	-.116	.365	.122
P9	.543	-.199	.376	.056
P10	.613	.110	.151	-.018
P11	.481	-.188	.264	.026
P12	.131	-.168	.081	.534
P13	-.017	-.295	.296	.662
P14	.066	-.112	.194	.437
P19	.438	.052	.042	.047
P21	.023	.664	-.082	-.212
P22	-.040	.760	-.236	-.178

*These variable numbers refer to items from Instrument 3.

TABLE 3.17

FACTOR SCORE COEFFICIENTS OF PRODUCTIVITY VARIABLES

Variables	Factor 1	Factor 2	Factor 3	Factor 4
P1*	-.005	.000	.166	-.010
P3	.057	-.063	.278	-.142
P4	-.012	-.011	.173	.069
P5	-.035	.009	.403	.079
P6	.187	-.034	.015	-.078
P7	.159	.026	-.069	.101
P8	.321	-.026	.077	.061
P9	.149	-.057	.086	-.024
P10	.197	.076	.009	-.001
P11	.109	-.047	.034	-.029
P12	.031	-.016	-.027	.283
P13	-.032	-.073	.076	.455
P14	.006	.002	.020	.197
P19	.174	.031	-.059	.034
P21	.021	.354	.030	-.061
P22	.002	.527	-.045	.005

*These variable numbers refer to items from Instrument 3.

TABLE 3.18

FACTOR CORRELATIONS OF PRODUCTIVITY FACTORS

	Factor 1	Factor 2	Factor 3	Factor 4
Factor 1	1.000	-.050	.274	.059
Factor 2		1.000	-.268	-.220
Factor 3			1.000	.183
Factor 4				1.000

<u>Item No.</u>	<u>Factor Loading</u>	<u>Content</u>
P8	.695	Teaching as a satisfying aspect of life.
P10	.614	Regret at entering teaching.
P6	.601	Inheritance of money.
P19	.567	Evaluation of teaching as a profession.
P7	.560	Willingness for one's child to become a teacher.
P9	.479	Teaching only a way to make money.
P11	.446	Spare time activities more important.

These seven items all seem to reflect teacher feelings about commitment to teaching. Positive scores on this factor would indicate that a teacher had a strong commitment to be a teacher.

The reliability coefficient for these items, computed using Cronbach's Alpha formula, was .77 (Cronbach, 1951).

The composite variable used in subsequent calculations was constructed from weighted Z-scores, the weights being the factor score coefficients. The formula was as follows:

$$\begin{aligned} \text{COMMITMENT} = & (.187 (P6 - 2.56)/1.02) + (.159 (P7 - 2.87)/.85) \\ & + (.321 (P8 - 2.9)/.84) + (.149 (P9 - 3.46)/.72) \\ & + (.197 (P10 - 2.62)/.94) + (.109 (P11 - 2.61)/.88) \\ & + (.174 (P19 - 2.62)/.6). \end{aligned}$$

Factor 3 was designated Job Involvement. The following are the four items which loaded significantly on this factor:

<u>Item No.</u>	<u>Factor Loading</u>	<u>Content</u>
P5	.735	How hard one works relative to other teachers.
P3	.591	Extent to which is involved in job.
P1	.528	Time spent at preparation.
P4	.504	Amount of extra work for school.

These four items all reflect the amount of effort which a teacher expends in activities which are school-related. A high score by a teacher on this factor would indicate that a teacher perceives himself as being highly involved in his job.

A reliability coefficient for these items was computed using Cronbach's Alpha formula. The resultant coefficient was .64 (Cronbach, 1951).

The composite variable constructed from weighted Z-scores, used in subsequent analysis was as follows:

$$\text{INVOLVEMENT} = (.166 (P1 - 3.49)/.7) + (.278 (P3 - 3.68)/.75) + (.173 (P4 - 3.64)/1.22) + (.403 (P5 - 3.5)/.66).$$

Factor 4 was designated Self-Concept as a Teacher.

The following three items loaded significantly on this factor:

<u>Item No.</u>	<u>Factor Loading</u>	<u>Content</u>
P13	.610	Teacher qualifications compared with those of superiors.
P12	.525	Academic background compared with that of university professors.
P14	.417	Knowledge of subject area as compared with colleagues.

These three items all seem to reflect how a teacher thinks of himself in relation to his colleagues. A high positive score on this factor would indicate that a teacher had a very high professional self-concept.

The reliability coefficient of Factor 4, computed with Cronbach's Alpha formula was .54 (Cronbach, 1951).

The composite variable used in subsequent analysis was:

$$\text{SELF-CONCEPT} = (.283 (P35 - 1.33)/.52) + (.455 (P36 - 1.8)/.68) + (.197 (P37 - 2.49)/.7)$$

IV. THE PATH ANALYTIC MODEL

While the general implicitly-assumed model of causation in many job satisfaction-productivity studies is as shown in Figure 3.1, the possibility has to be considered that management style may have a direct relationship with productivity in addition to and independent of the effect mediated through job satisfaction. The model which takes this possibility into account, the model used in this study, is given in Figure 3.2.

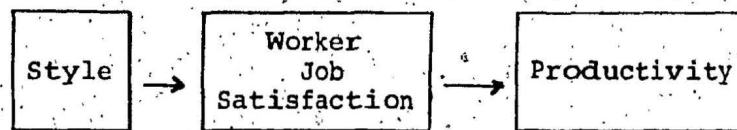


Figure 3.1. Basic model of relationship between management variables.

It must also be acknowledged that satisfaction and productivity may have a reciprocal relationship. However, a study of this possible relationship was considered to be beyond the scope of this study.

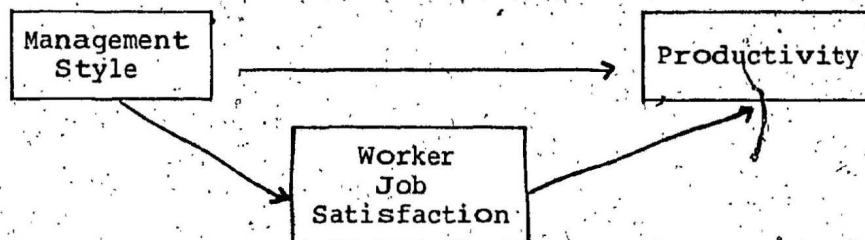
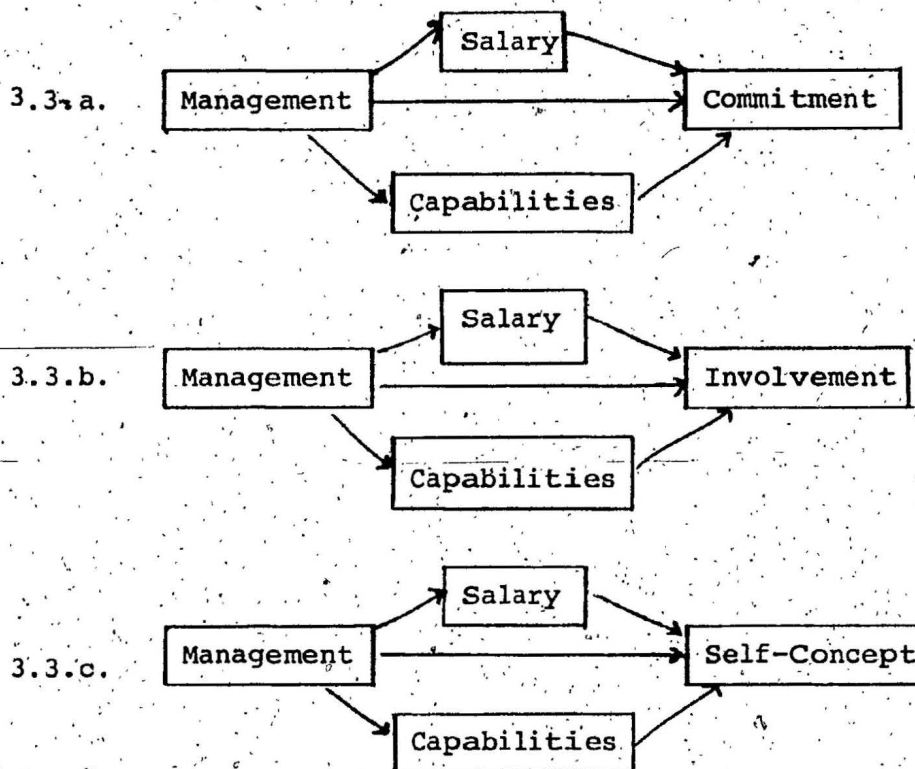


Figure 3.2. Revised basic model of relationships between management variables.

As has been indicated earlier in this chapter, Management Style has been operationalized as a unidimensional structure. Job Satisfaction was composed of two dimensions, Teacher Salary Satisfaction and Teacher Satisfaction with the Capabilities of Teacher Colleagues, while Job Productivity was found to be composed of three dimensions, Intrinsic Commitment to Teaching as a Profession, Job Involvement, and Self-Concept as a Teacher.

The factor analysis led to the conclusion that at least three models should be investigated. Those models are shown in Figure 3.3.



The designations used in the models are as follows:

MANAGEMENT = Teacher-oriented management style.

SALARY = Teacher satisfaction with salary.

CAPABILITIES = Teacher satisfaction with the capabilities of other teachers.

COMMITMENT = Intrinsic commitment to teaching as a profession.

INVOLVEMENT = Job Involvement.

SELF-CONCEPT = Self-concept as a teacher.

All six variables are measures of the perceptions of teachers as recorded by teachers on the instruments already described.

Figure 3.3. Derivative models of management relationships.

The procedure used in the quantification of the causal model is a generalization of step-wise multiple regression to systems of causal relations, known as Path Analysis. According to Wright (1921), path analysis is

. . . a method of measuring the direct influence along each separate path in . . . a system and thus of finding the degree to which variation of a given effect is determined by each particular cause. The method depends on the combination of knowledge of the degree of correlation among the variables in a system with such knowledge as may be possessed of the causal relations. (p. 557)

Causation, in the path analysis sense, has been operationally defined by Kim and Kohout (1975) as follows: "X₁ is a cause of X₀, if and only if X₀ can be changed by manipulating X₁ and X₁ alone (p. 384). Causation, in this sense, implies that particular kind of prediction which implies the notion of possible manipulation.

Assumptions of Path Analysis

The causal system is assumed to be linear, additive and unidirectional.

1. A system's being linear implies that change in one variable always occurs as a linear function of change in other variables. That is, in an ideal experiment the relationship between the manipulated changes in the independent variable (X₁, above) and relevant changes in the dependent variable (X₀, above) must be a linear function of the form $X_0 = C_{01}X_1$, where C₀₁, the linear causal effect coefficient, is a constant standing for the magnitude

of change in X_0 for a unit change in X_1 .

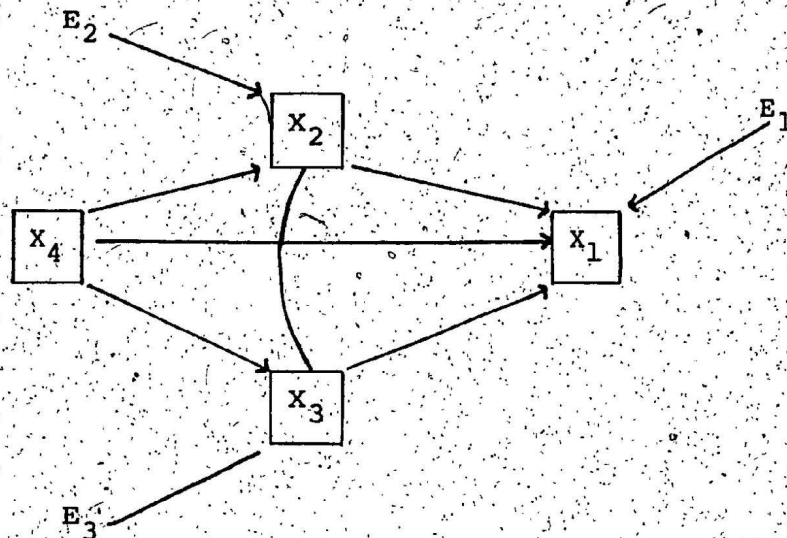
2. A unidirectional (or asymmetrical) relationship is one which is characterized by one-way causation. That is, a weak causal ordering exists between the independent variable (say, X_k) and the dependent variable (say, X_1). X_k may (or may not) affect X_1 , but X_1 cannot affect X_k . For example, in the present case, it was assumed that management style was not a function of job satisfaction nor of productivity.
3. A system's being additive simply means that any effect on the dependent variable may be attributable to more than one independent variable.

There are four other assumptions as listed by Fagan (1974, p. 34):

4. The causal priorities in the model are as they have been argued for.
5. The measuring instruments used to obtain the data have high reliability.
6. All the system inputs have been specified so that they can be considered explicitly in the analysis.
7. The usual assumptions of multiple linear regression are met. See Johnson (1963, pp. 106-108) or Heise (1969, pp. 44-57) for a statement of these assumptions.

The Path Model

The general model used in the present instance is based on the four-variable path model of Kim and Johout (1975). It is given in Figure 3.4.



X_4 = Teacher-Centered Management Style.

X_3 = Teacher Satisfaction with the Capabilities of Teacher Colleagues.

X_2 = Teacher Salary Satisfaction.

X_1 = A Productivity variable.

Figure 3.4. General path model for four school management variables.

In the system of relationships as presented in Figure 3.4, the total variation of the predetermined variable, X_4 , is assumed to be caused by variables outside the set under consideration. Variables outside the model are referred to as exogenous variables. The remaining variables

are considered endogenous, and, in contrast to the exogenous variables, the total variation of the endogenous variables is assumed to be completely determined by some linear combination of variables in the model. When the variation of a particular endogenous variable is not completely accounted for by prior measured variables, a residual (error) variable is introduced to account for the variance of the endogenous variables not explained by measured variables within the model. The magnitude of the path coefficient for the residual (error) variable is calculated by the formula $E = \sqrt{1 - R^2}$, where R^2 is the amount of variance accounted for (Land, 1969, p. 20).

In the models used in this study, the path coefficients are Standardized Partial Regression Coefficients based on product-moment correlations according to the path analysis techniques of Kim and Johout (1975) and Asher (1976).

The path model presented in this study is drawn according to the following conventions:

1. The causal relations among the variables are represented by unidirectional arrows extending from each determining variable to each variable depending on it.
2. Residual variables are represented by single headed arrows leading from the residual variable to the dependent variable. The residual variables have not been measured.

3. Where no causative relationship is assumed to exist, a curved headless line has been drawn between the variables.

V. SUMMARY

This chapter has presented a detailed account of the methodology utilized in the conduct of the research. Included has been descriptions of the population and sample, the research instruments used, and the details of the factor analysis procedures utilized in data reduction. Also included has been a description of the theoretical path analysis model which was used in the interpretation of the research results.

Chapter 4 contains a presentation of the results of the research along with a discussion.

CHAPTER 4

This chapter contains a presentation of the results of the study into school management, satisfaction, and productivity relationships. Path analysis was the method used to interpret the research results.

PRESENTATION AND DISCUSSION OF RESULTS

The purpose of this study was to investigate the relationships between the management style of junior and senior high school principals, teacher job satisfaction, and teacher productivity.

Three general questions provided the initial impetus for this study (see page 62). From these questions, eleven specific questions were formulated to guide the investigation. These questions were as follows:

1. What is the relationship between Teacher-Centered Management Style and Teacher Salary Satisfaction?
2. What is the relationship between Teacher-Centered Management Style and Teacher Satisfaction with the Capabilities of Teacher Colleagues?
3. What is the relationship between Teacher-Centered Management Style and Intrinsic Commitment to Teaching as a Profession?

4. What is the relationship between Teacher-Centered Management Style and Job Involvement?
5. What is the relationship between Teacher-Centered Management Style and Self-Concept as a Teacher?
6. What is the relationship between Teacher Salary Satisfaction and Intrinsic Commitment to Teaching as a Profession?
7. What is the relationship between Teacher Salary Satisfaction and Job Involvement?
8. What is the relationship between Teacher Salary Satisfaction and Self-Concept as a Teacher?
9. What is the relationship between Teacher Satisfaction with the Capabilities of Teacher Colleagues and Intrinsic Commitment to Teaching as a Profession?
10. What is the relationship between Teacher Satisfaction with the Capabilities of Teacher Colleagues and Job Involvement?
11. What is the relationship between Teacher Satisfaction with the Capabilities of Teacher Colleagues and Self-Concept as a Teacher?

A concise method of examining these multiple relationships is path analysis, a statistical procedure based on multiple linear regression analysis. By means of the regression procedure, the relationships under consideration were investigated.

The correlation coefficients among the variables on which the analysis was based are shown in Table 4.1 and

TABLE 4.1

CORRELATION COEFFICIENTS OF MANAGEMENT, SATISFACTION, AND PRODUCTIVITY VARIABLES

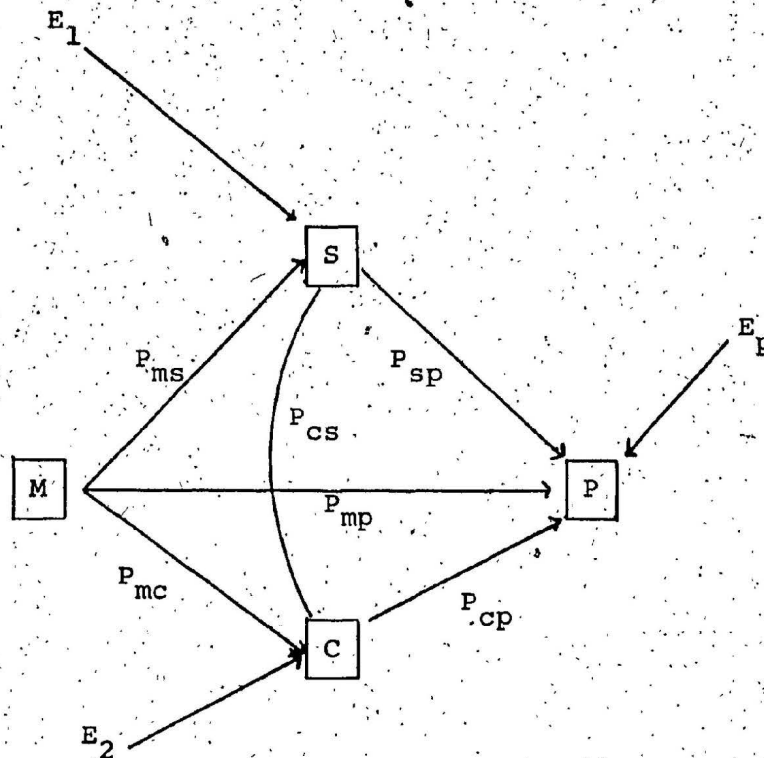
	Management Style	Salary Satisfaction	Teacher Capabilities Satisfaction	Intrinsic Commitment	Job Involvement	Self-Concept	Mean	S.D.
Management Style	1.000	.383	.313	.319	.038	-.127	.039	.82
Salary Satisfaction		1.000	.143	.217	.105	-.123	-.026	.76
Teacher Capabilities Satisfaction			1.000	.065	-.144	-.215	-.018	.86
Intrinsic Commitment				1.000	.345	.121	.023	.88
Job Involvement					1.000	.263	.034	.78
Self-Concept						1.000	.023	.71

indicate that the relationships among the six variables in this study tend to be relatively weak. Even the correlations among variables supposedly measuring similar constructs seem small. The largest among the "productivity" variables, for example, is only .345.

I. QUANTIFICATION OF THE PATH ANALYTIC MODEL

The basic path analytic model used in the interpretation of the results of this study is given in Figure 4.1. Basically, three models will be quantified. There are three independent variables and three dependent variables. The three models will contain the same independent variables, but different dependent variables.

The parameters, represented in the basic model (Figure 4.1) in the general form P_{xy} , will be BETA coefficients, with the exception of P_{ms} , P_{mc} , and P_{cs} , which are simple correlation coefficients. The BETA coefficients are standardized regression coefficients, which are to be distinguished from unstandardized regression coefficients which may take practically any value, and may be interpreted as a measure of the influence of the independent variable upon the dependent variable being considered. (For example, the unstandardized regression coefficient for the relationship between Management Style and Teacher Salary Satisfaction is .353. This may be interpreted as a .353 unit increase in Teacher Salary Satisfaction associated with each unit increase of Teacher-Centered Management Style.) A table of



M = Teacher-Centered Management Style
 S = Teacher Salary Satisfaction
 C = Teacher Satisfaction with the Capabilities of Teacher Colleagues
 P = Productivity variable. (In the path analytic models used subsequently, the three productivity factors occupy this position consecutively).

Figure 4.1. Basic path analytic model of relationships between school management variables.

unstandardized regression coefficients for the variables in this study is given in Appendix E.

Since different metrics have been used to measure the various variables, it is difficult to determine from unstandardized coefficients the relative importance of the individual independent variables on the dependent variables. The standardized BETA coefficients yield this kind of information. That is, the standardized BETA coefficients are "relative" measures which allow comparison of the effects of more than one independent variable on a particular dependent variable; they represent the relative importance of an independent variable in accounting for the variance of a dependent variable, when the other variables are statistically controlled. The standardized (BETA) coefficients may take values from -1 to +1.

The overall accuracy of any multiple regression prediction is reflected by the R^2 , the proportion of variance of the dependent variable explained by all of the independent variables. The R^2 is used in the calculation of the Error Coefficient, a measure of the proportion of variance of the dependent variable which is accounted for by variables outside the model (i.e., variables which have not been subject to investigation in the study). This parameter appears in the models attached to the arrow from E pointing toward the variable representation. This component is calculated by the formula

$$E = \sqrt{1 - R^2} \quad (\text{SPSS, 1975}).$$

The statistical significance of the relationships was determined by use of the F-ratio,

$$F = \frac{\text{Regression Mean Square}}{\text{Residual Mean Square}}$$

the data for which was obtained from analysis of variance data, a by-product of the multiple regression procedure in the SPSS program. Statistical significance is indicated in the models by an asterisk (*) representing $p < .01$.

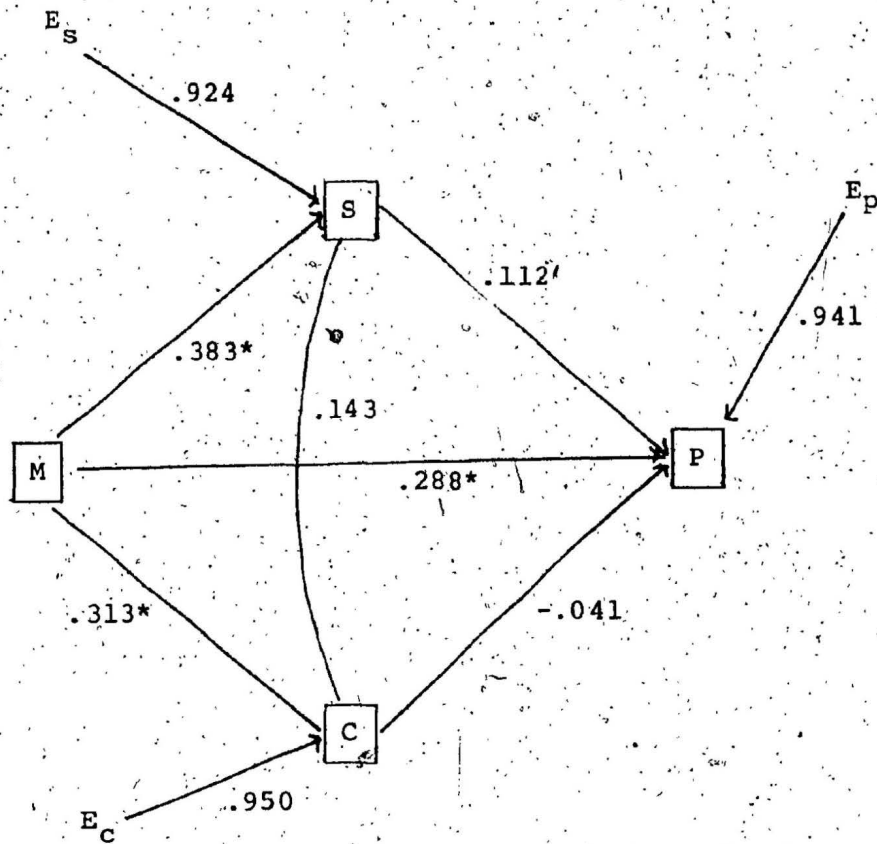
II. THE RELATIONSHIPS BETWEEN TEACHER-CENTERED MANAGEMENT STYLE AND TEACHER SALARY SATISFACTION

This relationship is common to all the models presented in this chapter and will be discussed only here.

The Path coefficient for the relationships between Teacher-Centered Management Style and Teacher Salary Satisfaction is shown in Figure 4.2 as .383, a quantity which indicates a statistically significant relationship ($p < .01$) between these two variables.

This result may be interpreted as high-school principals' management style having a positive (direct) relationship with teachers' satisfaction with their salary.

This is not an unexpected result. It is intuitively acceptable that if a teacher perceives his principal as being teacher-oriented and as exhibiting the kinds of administrative behaviors which make the teacher feel comfortable, then the teacher will be more satisfied, generally, than otherwise would be the case. Specifically, it seems



M = Teacher-Centered Management Style
 S = Teacher Salary Satisfaction
 C = Teacher Satisfaction with the Capabilities of
 Teacher Colleagues.
 P = Intrinsic Commitment to Teaching
 * = Statistical significance ($p < .01$)

Figure 4.2. Path Analytic Model of relationships between management style, job satisfaction, and commitment to teaching.

reasonable that given certain comfortable job characteristics, such as teacher-oriented management style, then a teacher would more likely be satisfied with his salary than if significant job characteristics were disagreeable. A person might, in fact, leave a high-paying job in disagreeable surroundings and seek a job with more agreeable aspects, even though the salary might be lower.

However, in the present case, less than 15 per cent of the variance of Teacher Salary-Satisfaction was accounted for by Teacher-Centered Management Style; much of the variance was accounted for by variables outside the model.

It was concluded, therefore, that while there seemed to be a clear indication that Teacher-Centered Management Style was associated with Teacher Salary Satisfaction, a number of other factors not included in the model were probably more important.

While it would be expected that the management style of a principal would have an influence on job satisfaction of teachers, that influence appeared to be overshadowed by the large proportion of the variance accounted for by factors outside the model, factors whose investigation was beyond the scope of this study.

Some of these variables might be factors external to the school environment. For example, the degree to which a teacher could "make ends meet," or the rate at which he could build a savings account, etc., might reasonably be

expected to be highly correlated with his satisfaction with his salary.

If, as has been suggested here, satisfaction with salary is a function of satisfaction in general, then other elements of a teacher's personal life may have a significant effect, as Sergiovanni's (1967) study indicates.

Variables internal to the school may also have a positive relationship with a teacher's overall satisfaction, in general, and with his salary satisfaction in particular. Such factors as a feeling of personal success and seeing students achieve might be related to a teacher's perception of himself as being satisfied, and might account for a considerable portion of the unexplained variance in the model. The studies of Sergiovanni (1967) and Wickstrom (1971) indicate that a feeling of achievement, and pleasing relationships with colleagues are factors significantly related to teacher satisfaction. Relationships with colleagues was also a satisfaction determinant according to Mason's (1961) study, while Lacy's (1968) study indicated that teaching load was a variable highly related to teacher satisfaction.

These variables were not included in the current study since the research had to be kept within certain manageable bounds. In a sense, this study can be viewed as one of model building. From a study of extant theory and a review of the literature, the basic model that has been described was developed. The model has proven to be inadequate to describe the relationships under study. Therefore,

additional variables are discussed, variables whose study was beyond the scope of this investigation, but which might be incorporated in a revised model for subsequent investigation in future research.

III. THE RELATIONSHIP BETWEEN TEACHER-CENTERED MANAGEMENT STYLE AND TEACHER SATISFACTION WITH THE CAPABILITIES OF TEACHER COLLEAGUES

This model is common to all models presented in this chapter and will be discussed only here.

The Path coefficient for the relationship between Teacher-Centered Management Style and Teacher Satisfaction with the Capabilities of Teacher Colleagues was .313 (see Figure 4.2), a quantity which represents a statistically significant relationship ($p < .01$).

Given a principal's management style which a teacher perceives as being teacher-oriented, then it seems reasonable that the teacher would perceive his colleagues more favorably than if the teacher interpreted his principal's management-style as not being teacher-oriented. That is, if certain significant job characteristics are perceived as being agreeable, then feelings of bitterness, unhappiness, etc., are unlikely to develop in the healthy individual. The world in general, and the capabilities of colleagues, in particular, would seem more favorable through a filter of general content, than through one of discontent.

However, less than 10 per cent of the variance of Teacher Satisfaction with the Capabilities of Teacher Colleagues is accounted for by Teacher-Centered Management Style. That is, more than 90 per cent of the variance of Teacher Satisfaction with the Capabilities of Teacher Colleagues is accounted for by variables outside the model, the consideration of which was beyond the scope of this study.

Some of these variables might be external to the school. One would expect, for example, that an unhappy marriage or a lack of friends would have a detrimental effect on how one would perceive his level of general satisfaction, and his job satisfaction in particular. Alternately, pleasant out-of-school relationships would normally be expected to contribute to, or be associated with, in-school satisfaction. The studies of Sergiovanni (1967), Reinecker (1972), and Clarke (1976) would seem to support this assessment. The studies of Lacy (1968) and McNeely (1970) also indicate that community factors such as social activity, political involvement, voluntary activity, and general community interest and involvement were highly related to the job satisfaction of teachers.

School-specific variables, other than those mentioned in the previous section, which might influence a teacher's feelings of satisfaction with the capabilities of his colleagues might include the employment climate. If lay-offs were in the offing because of declining enrolments,

for example (a condition current when the data for this study were collected), then a teacher who felt insecure about his job might feel rather bitter and defensive and might rationalize or come to terms with himself by choosing to see himself as being victimized and as being just as good as, or better than, his colleagues.

Alternately, if a teacher had no immediate reason to feel threatened, then one would expect him not to require the same rationalization. Instead he should be much more comfortable with himself and should perceive his colleagues in a much more favorable manner.

The presence or absence of personal psychological or social problems which were manifested in unfavorable or pleasant relationships with students and colleagues would be expected to have a positive association with feelings of dissatisfaction or satisfaction.

The study of Kuhlen (1963), for example, indicated that individuals with strong autonomy needs would likely be extremely frustrated in schools which did not allow for sufficient personal or professional freedom. Greenfield (1973) suggested that it is not necessarily end-product goals satisfaction, but rather process goals satisfaction (for example, the way people behave toward each other in schools), which determine teacher job satisfaction. He says,

... People seem to want . . . that schools should reflect the values that are central and meaningful in their lives . . . only in such forms can they participate comfortably in them. (p. 33)

Studies by Chase (1953), Bidwell (1955), and Sharma (1955) all supported this observation. They indicated that job satisfaction of teachers was highly related to the congruence between teacher expectations and their perceptions of the reality of their school situations. Related to these findings is the finding by Thompson (1969) and Wurtz (1972) that teacher job satisfaction was highly related to teacher self-concept.

In the Newfoundland context, Penney (1977) found that there was a positive relationship between job satisfaction and teacher participation in significant school decisions.

In conclusion, then, it would have to be noted that while the relationship between Teacher-Centered Management Style and Teacher Satisfaction with the Capabilities of Teacher Colleagues is a statistically significant positive one, it accounts for so little of the variance that anything but a very tentative statement of causation would not be defensible. A positive relationship seems to exist between the two variables, but other studies have shown that many other variables are positively related to teacher job satisfaction. Teacher-Centered Management Style is but one factor in teacher job satisfaction, and possibly a minor if not an unimportant one.

IV. THE RELATIONSHIPS BETWEEN TEACHER-CENTERED MANAGEMENT STYLE, SALARY SATISFACTION, SATISFACTION WITH COLLEAGUE CAPABILITIES AND INTRINSIC COMMITMENT TO TEACHING AS A PROFESSION

The relationship between Teacher-Centered Management Style and the productivity variable, Intrinsic Commitment to Teaching as a Profession, was made complex by the intervening satisfaction variables, Teacher Salary Satisfaction and Teacher Satisfaction with the Capabilities of Teacher Colleagues. These relationships were interpreted by means of the Path Analysis Model given in Figure 4.2.

Figure 4.2 shows $\beta_{sp} = .122$, $\beta_{mp} = .288$, and $\beta_{cp} = -.041$. Of the three relationships represented only that between Teacher-Centered Management Style and Intrinsic Commitment to Teaching as a Profession is statistically significant ($p < .01$).

However, the effects of all three independent variables account for very little of the total variance of Intrinsic Commitment to Teaching as a Profession. That is, more than 94 per cent of the variance of that productivity variable is accounted for by variables outside the model, variables whose investigation was beyond the scope of this study.

While the proportion of variance accounted for is not large, Asher (1976) cautioned that "... we should not impose unrealistically stringent criteria in assessing the goodness of [a] ... model" (p. 3).

The results, briefly summarized, are as follows:

1. There is a positive relationship between Teacher-Centered Management Style and Intrinsic Commitment to Teaching as a Profession ($p < .01$).
2. There is no direct statistically significant relationship between Teacher Salary Satisfaction and Intrinsic Commitment to Teaching as a Profession ($p > .05$).
3. There is no direct statistically significant relationship between Teacher Satisfaction with the Capabilities of Teacher Colleagues and Intrinsic Commitment to Teaching as a Profession ($p > .05$).

These results indicate that, in general, if a teacher perceives his principal as exhibiting teacher-centered management behavior, then the teacher will have a higher commitment to teaching as a profession. These results do not support the general thesis that increased productivity is associated with increased satisfaction. Specifically, these results do not support the assumption that an increase in Teacher Job Satisfaction will result in an increase in Intrinsic Commitment to Teaching as a Profession.

It is intuitively acceptable that a positive relationship exists between Teacher-Centered Management Style and Intrinsic Commitment to Teaching as a Profession. If a worker, generally, perceives himself as having a relaxed relationship with his superordinate, then one would expect that the worker would experience a higher level of loyalty,

at least to that part of his job represented by the superordinate in question. In the particular case, a teacher would be expected to experience feelings of loyalty and commitment to his school and profession if he perceived his principal as exhibiting behavior which takes the teacher-as-person into consideration, an assessment which is supported by the study of Harap (1959).

However, because so little of the variance of Intrinsic Commitment to Teaching as a Profession is accounted for by the independent variables of the model, a problem of interpretation exists. What are the variables which would explain a teacher's having a commitment to teaching as a profession despite the management style of his principal?

One explanation might be "because that person chose to become a teacher." Just as a person chooses to become a priest, or a doctor, or a nurse, and enters his profession with his commitment already intact, so might most teachers enter teaching with a strong desire to teach. The commitment to teaching may be formed long before the person actually becomes a teacher. In such a case, the particular style of the principal would not be very important. That is, a person with particular needs to be satisfied may choose to become a teacher because teaching itself may be seen as a means to satisfy these needs. Greenfield (1973) seemed to be suggesting such a phenomenon when he stated:

Evidence of goal accomplishment or lack of it may . . . be a matter of indifference to [teachers], whereas their need to believe is paramount . . .

their need, that is, to believe that what they do in school is right and good. (p. 35)

Mitchell's (1968) study in Alberta also suggested that teachers see their work as being intrinsically rewarding, and even though they might be unhappy about particular aspects of their job, this unhappiness or dissatisfaction does not reduce commitment.

Another factor which might be operating is that, regardless of the management orientation of the principal, the teacher spends the largest portion of his time in interaction with his pupils, not with the principal; and the teacher expends most of his energy in meeting the needs of the pupils, not in satisfying the demands of administrators. Furthermore, the classroom may have an isolating effect on the teacher. It is possible that whatever the particular style of the principal, there is so little interaction with a school's faculty, that the style is not particularly important to teachers. Much administration takes place "behind the scenes" and affects the teachers directly only on relatively rare occasions.

O'Brien (1971) and Albrook (1971) found from their studies that the structure of informal groups and how well a teacher "fitted in" was an important factor in teacher satisfaction. Mason (1961) also found that relations with colleagues was one of the most important sources of teacher satisfaction. In the present case, the explanation might be that if a teacher can commiserate in a

sympathetic faculty-lounge environment, then the griping could act as a catharsis, purging any bile that existed because of administrative procedures, and allowing the teacher to return to his class with his commitment intact.

While the relationship between Teacher-Centered Management Style and Intrinsic Commitment to Teaching as a Profession is statistically significant ($p < .01$), the small amount of variance accounted for and the variety of other variables documented as being associated with teacher satisfaction lead to the conclusion that Teacher-Centered Management Style is only one (probably relative unimportant) factor influencing teacher commitment to the teaching profession.

The lack of significant relationships between the satisfaction variables and Intrinsic Commitment to Teaching as a Profession appears inconsistent with the general model which hypothesizes productivity to be positively related to job satisfaction. The finding is consistent, however, with some research in both educational and industrial contexts.

Penney's (1977) study in the Newfoundland education context failed to establish any clear relationship between teacher job satisfaction and productivity. Since the Penney (1977) scales were used in this study, it would have to be concluded that, at least to the extent that these constructs are being measured by the instruments used, there is no significant relationship between teacher job satisfaction and teacher productivity in the Newfoundland context. This

conclusion is supported in the general educational context by Clarke's (1968) study and in the industrial context by the study of Bass (1965).

Greenfield (1973) also seemed to be hypothesizing a similar situation in his statement:

... we should not believe that people are invariably satisfied as long as end-point goals are being achieved nor that end-point goals are being achieved as long as people are satisfied (p. 33)

If productivity is not the result of job satisfaction, as the basic model (p. 92) suggests it should be, then what can explain the existence of high commitment to teaching in the absence of high job satisfaction?

As indicated previously, it seems plausible that a person enters teaching with commitments already formed. That is, of the commitment that exists, the major portion of it existed prior to a person's becoming a teacher. The peculiar needs of a person may cause him to become a teacher, and his level of job satisfaction--either with salary or with colleague capabilities--may have little effect on job commitment, either to reduce it or to increase it.

The relationships which exist may remain concealed because the nature of the variables which exist in actuality may not yet have been discovered. The present phenomenon may be a manifestation of a Herzberg-type Two-Factor (or multi-factor) Theory (1971), but in a productivity rather than in satisfaction context. That is, Teacher-Centered Management Style may be the sort of factor which contributes to higher

commitment if it is present, but does not lead to lack of commitment if it is absent. On the other hand, Salary Satisfaction and Teacher Satisfaction with Capabilities of Teacher Colleagues may be the kind of factors which might lead to a lack of commitment if they are absent (teachers have withdrawn services and have gone on strike), but do not lead to increased commitment if they are present.

If this is the case, then one would not expect a significant increase in commitment even if teachers were highly satisfied with salary or with colleague capabilities.

There is also the possibility that if a teacher were dissatisfied with the capabilities of his colleagues, then he might increase his commitment to teaching--assuming a "someone has to do the job" attitude. Alternately, if a teacher were satisfied with the capabilities of his colleagues, he might not see the necessity of his being so highly committed, and might experience a decrease in commitment, by virtue of the fact that his services were not then as vital, relatively, as they were in the alternate situation. That is, a negative (or inverse) relationship may exist between certain satisfaction variables and productivity, a phenomenon which may be suggested by the negative relationship between Teacher Satisfaction with the Capabilities of Teacher Colleagues and Intrinsic Commitment to Teaching as a Profession in the present model.

It would have to be concluded, then, that while this research has failed to establish any significant relationships

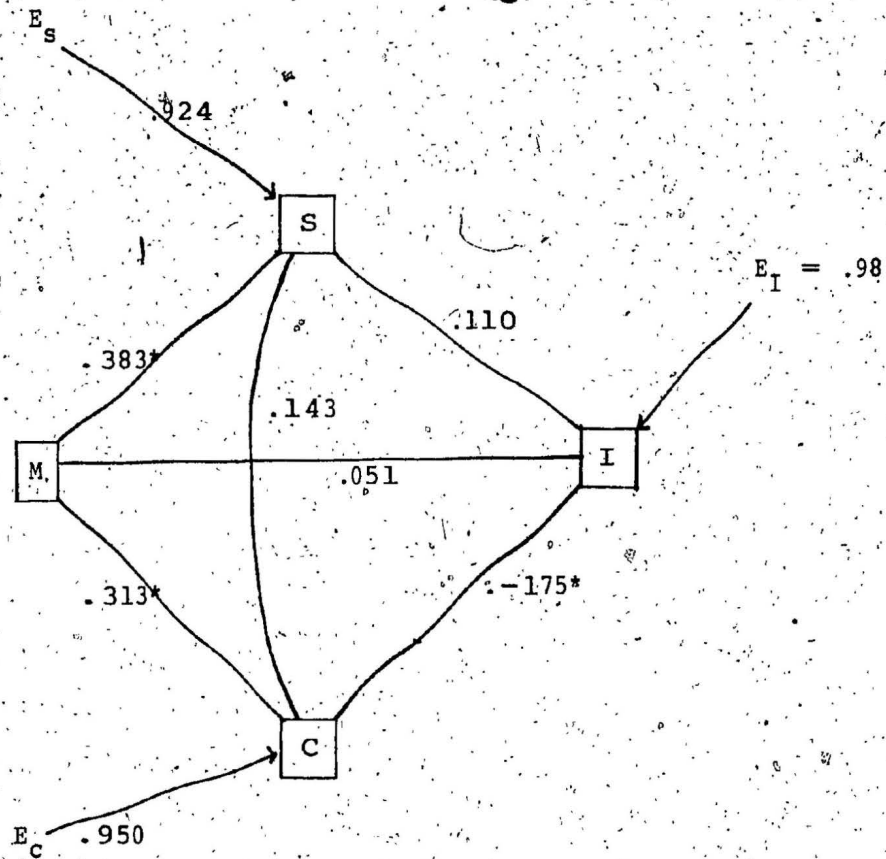
between satisfaction variables and Intrinsic Commitment to Teaching as a Profession, it is possible that relationships or associations much more complex than has been hypothesized exist between these variables.

V. THE RELATIONSHIPS BETWEEN TEACHER-CENTERED MANAGEMENT STYLE, TEACHER SALARY SATISFACTION, SATISFACTION WITH COLLEAGUE CAPABILITIES AND JOB INVOLVEMENT

The relationships between Teacher-Centered Management Style, Job Satisfaction and Job Involvement were interpreted by utilizing the Path Analysis Model given in Figure 4.3.

It will be noted from Figure 4.3 that the BETA coefficients of the relationship between Teacher-Centered Management Style and Job Involvement, .051, and between Teacher Salary Satisfaction and Job Involvement, .110, are relatively small, indicative of weak associations between the variables. In fact, neither of the relationships is statistically significant (i.e., $p > .05$). Only the relationship between Teacher Satisfaction with the Capabilities of Teacher Colleagues and Job Involvement is statistically significant ($p < .01$) with a BETA coefficient of $-.175$.

This BETA coefficient might be interpreted as indicating that as a teacher becomes more satisfied with the capabilities of his professional colleagues, the less involved in his job he perceives himself to be. However, it was felt that since perceptions of teachers were measured,



M = Teacher-Centered Management Style.
 S = Teacher Salary Satisfaction.
 C = Satisfaction with Capabilities of Teacher Colleagues.
 I = Job Involvement.
 * = Statistical significance ($p < .01$)

$$E_I = \sqrt{1 - R^2} = \sqrt{1 - .039} = .98.$$

Figure 4.3. Path Analysis Model of Management Style, Job Satisfaction and Job Involvement Relationships.

this finding does not necessarily indicate that as teachers become more satisfied, they become less involved in their job.

The negative relationship between the satisfaction variable and the productivity variable is not a unique finding. The studies of Likert (1961), Bass (1965), and Lee (1969) also produced similar results.

Any conclusions drawn from the present findings, however, must be made tentatively since less than 4 per cent of the variance of Job Involvement was accounted for by the independent variables in the model. That is, more than 96 per cent of the variance of Job Involvement was accounted for by associations with factors outside the model.

Nevertheless, in view of the preceding discussions, and considering the high significance level ($p < .01$), one can suggest with some confidence that a curious phenomenon has been manifested by this study. There are at least two possibilities. Firstly, when a teacher perceives a colleague as being capable, then he allows himself to become less involved since he perceives himself as not being as vital to the business of education as he was when he perceived his colleagues to be less capable. Secondly, one must admit of the possibility that in spite of the fact that the teacher perceives himself as being less involved, he is only less involved relative to the involvement of the teachers whose capabilities now appear more positive, and

the teacher is not less involved, absolutely, at all. Since one might ordinarily expect a more capable teacher to be more involved, a perception of more capability might be a concomitant of a perception of greater involvement. Hence, a teacher, while not reducing his own involvement, might perceive himself as being less involved by virtue of the fact that more capable teachers seem more involved.

Bearing in mind that 96 per cent of the variance of Job Involvement is accounted for by variables outside the model, it is necessary to seek explanations for high Job Involvement in areas which were outside the scope of this study.

It is again being suggested that teachers, generally, enter teaching with an expectation and a willingness to be highly involved in their jobs--"teaching is that kind of job." Watson's (1969) explanation of particular teacher traits seems to support this assessment. He states:

There is reason to believe that people who choose occupations which try to inculcate higher standards in others (clergymen, teachers, law officers) are persons with extra strong superego components. They take pride in making severe demands on themselves and on others. They bitterly resist any change they conceive to be a relaxing of the firmest discipline and the highest expectations of perfections in performance. (p. 492)

It is also possible that if a person enters teaching with a strong commitment and propensity for job involvement in place, and if first experiences are successful, then other variables may have little, if any, effect. Watson

(1969) states that, "The way in which the organism [e.g., a teacher] first successfully copes with a situation sets a pattern which is usually persistent" (p. 498).

Several factors, other than satisfaction, were found by Likert (1961) to be highly associated with productivity in the industrial context. He lists, for example, high peer group loyalty (p. 29) and participation in decision-making (p. 34). The latter factor has also been found to significantly relate to productivity in the educational context by a number of researchers, including Miklos (1970) and MacKay (1964).

Little of the variance of Job Involvement was accounted for by the variables in the model of this study (Satisfaction with the Capabilities of Teacher Colleagues accounted for less than 3 per cent). Other factors have been isolated, and have been identified by other researchers as being highly associated with Job Involvement. Therefore, it was concluded that even though Teacher Satisfaction with the Capabilities of Teacher Colleagues was significantly related to Job Involvement, teacher job satisfaction is probably a minor determinant of job productivity if, in fact, it is a determinant at all. The relationships which do exist may be the reverse that originally posited. That is, it may be Job Involvement which is contributing to Job Satisfaction, as studies by Bass (1965) and Lee (1969) seem to indicate. It would appear that no substantial associations have been isolated between these variables in this

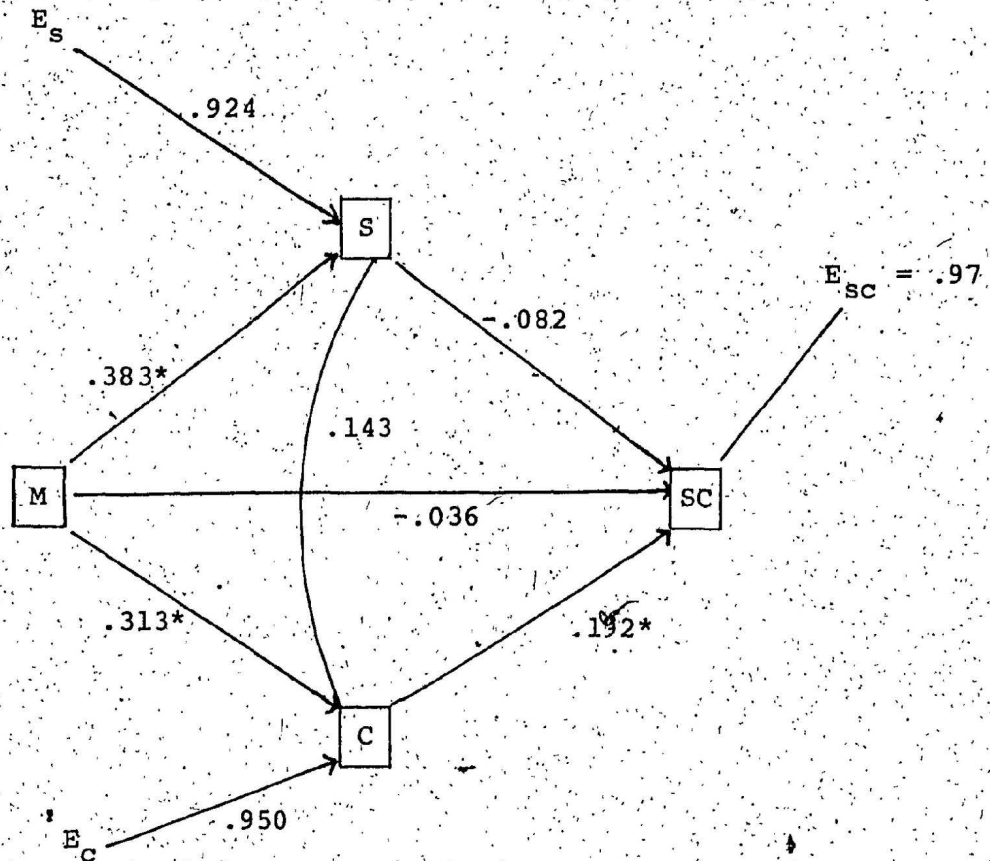
study.

VI. THE RELATIONSHIPS BETWEEN MANAGEMENT STYLE, SALARY
SATISFACTION, SATISFACTION WITH COLLEAGUE
CAPABILITIES AND SELF-CONCEPT

The relationships between the independent variables Teacher-Centered Management Style, Salary Satisfaction and Satisfaction with Colleague Capabilities, and the dependent variable Self-Concept as a Teacher were interpreted with the aid of the Path Analysis Model shown in Figure 4.4.

The relationship between Teacher-Centered Management Style and Self-Concept as a Teacher has a Path coefficient of $-.036$, while the Path coefficients for the Teacher Salary Satisfaction-Self-Concept as a Teacher relationship and the Teacher Satisfaction with the Capabilities of Teacher Colleagues-Self-Concept as a Teacher relationship are $-.082$ and $-.192$, respectively. The very small coefficients are indicative of very weak associations between the variables. All coefficients are negative, but only the relationship between Teacher Satisfaction with the Capabilities of Teacher Colleagues and Self-Concept as a Teacher is statistically significant ($p < .01$).

Since Satisfaction with the Capabilities of Teacher Colleagues is a Satisfaction variable, and Self-Concept as a Teacher a Productivity variable, this association may be interpreted as a negative (or inverse) relationship between Job Satisfaction and Job Productivity, a result consistent



M = Teacher-Centered Management Style
 S = Teacher Salary Satisfaction
 C = Satisfaction with the Capabilities of Teacher Colleagues
 SC = Self-Concept as a Teacher
 * = Statistical significance ($p < .01$)

$$E_{SC} = \sqrt{1 - R^2} = \sqrt{1 - .056} = .97.$$

Figure 4.4. Path Analysis Model of Management Style, Satisfaction, and Self-Concept as a Teacher.

with the results of Engel's (1977) study which indicated that both quantity and quality of output were inversely related to worker job satisfaction.

This negative association might be partially explained by the professional isolation which has accompanied the increase in teacher qualifications in Newfoundland and Labrador in recent years. Formerly, a teacher usually taught many subjects and was seen by students as somewhat of an expert in many fields. Now, however, most teachers have a specialty and devote most of their time to their special subject area. Therefore teachers are not as conversant with as many subject areas as they once were and it would be expected that this might contribute to a lower self-concept.

At the same time, it could be argued that teachers with higher qualifications would be expected to have a higher self-concept, since, presumably, they would have more confidence in themselves than formerly, at least in their special subject area. Therefore, with respect to the effect of this variable, only the most tentative conclusions can be drawn.

One could speculate as well, that the abandonment of rigid discipline in schools, resulting in teachers having less authority, might be contributing to a lower teacher self-concept.

However, the relationship under discussion accounted for very little of the variance of Self-Concept as a Teacher.

Therefore there must exist, maybe internal as well as external to the school, other factors which are more influential in determining Self-Concept as a Teacher than is Teacher Satisfaction with the Capabilities of Teacher Colleagues. More than 97 per cent of the variance of Self-Concept as a Teacher is accounted for by associations with factors external to the model. (The study of these factors was beyond the scope of this study).

One factor external to the school which seems to be sustaining a high teacher self-concept is the high regard which teachers still enjoy in Newfoundland. Warren (1978) as a result of his recent study, states: "The public generally have a continuing confidence in their educational system and widespread support for it" (p. 82), and further, "Generally, the public have high esteem for teachers and teaching" (p. 85).

An in-school factor might be that students in this province, generally, still seem to have a very high respect for their teachers, regardless of the specifics of the teachers' responsibilities.

Probably one of the strongest factors in sustaining a strong teacher self-concept is that practically every teacher is better educated than formerly, and undoubtedly perceives himself as being better equipped to do his job. One would expect that this factor and the other factors mentioned might be much more important in contributing to a

high teacher self-concept than Satisfaction with the Capabilities of Teacher Colleagues.

It would have to be concluded, then, that even though it is a statistically significant factor, Satisfaction with the Capabilities of Teacher Colleagues is probably relatively unimportant as a determinant of teacher self-concept.

VII. SUMMARY AND CONCLUSIONS

A summary of relationships examined in this study is presented in Table 4.2.

In spite of the fact that five of the eleven associations examined proved to be statistically significant, very little of the variance of the dependent variables was accounted for. This led to the conclusion that this study did not uncover a great deal of new information about the nature of the relationships between management style, job satisfaction, and productivity, except insofar as it indicated that some relationships strongly suggested by the literature may not, in fact, exist, at least in this province.

The results tended to confirm, however, studies in both the industrial and educational contexts which have indicated a positive relationship between management variables and job satisfaction. The present results have not, however, supported the thesis that greater job satisfaction leads to greater productivity. In fact, the results of

TABLE 4.2

SUMMARY OF THE RELATIONSHIPS BETWEEN MANAGEMENT STYLE,
JOB SATISFACTION AND PRODUCTIVITY VARIABLES

Independent Variable	Dependent Variable	Relationship: Positive or Negative?	Statistically Significant?
MANAGEMENT	SALARY	Positive	Yes
MANAGEMENT	CAPABILITIES	Positive	Yes
MANAGEMENT	COMMITMENT	Positive	Yes
SALARY	COMMITMENT	Positive	No
CAPABILITIES	COMMITMENT	Negative	No
MANAGEMENT	INVOLVEMENT	Positive	No
SALARY	INVOLVEMENT	Positive	No
CAPABILITIES	INVOLVEMENT	Negative	Yes
MANAGEMENT	SELF-CONCEPT	Negative	No
SALARY	SELF-CONCEPT	Negative	No
CAPABILITIES	SELF-CONCEPT	Negative	Yes

MANAGEMENT = Teacher-Centered Management Style
 SALARY = Teacher Salary Satisfaction
 CAPABILITIES = Teacher Satisfaction with the Capabilities of Teacher Colleagues
 COMMITMENT = Intrinsic Commitment to Teaching as a Profession
 INVOLVEMENT = Job Involvement
 SELF-CONCEPT = Self-Concept as a Teacher

this study indicate that job satisfaction is inversely related to productivity, a finding which is supported by some studies in the industrial context (e.g., Engel, 1977).

The findings of this study could be tentatively interpreted as indicating that satisfied teachers are not as productive as unsatisfied teachers. This interpretation would be consistent with the thesis that satisfied teachers may become complacent, that satisfied teachers may not be prompted to be as involved as are dissatisfied teachers.

The results probably do not mean, however, that in order to have more productive teachers it is a simple matter of ensuring that teachers are dissatisfied; it is likely much more complex than that. The results may be some manifestation of the effect hypothesized by Herzberg (1959) in his Two-Factor Theory, but probably in a more complex way than even Herzberg anticipated. One can speculate that there are, in fact, at least two kinds of satisfaction which have to be considered--personal satisfaction (roughly akin to Herzberg's Hygienes), and professional satisfaction (approximating Herzberg's Motivators). The optimum conditions for maximum productivity may be when teachers are personally satisfied, but professionally unsatisfied. The professional dissatisfaction may be the factor which will keep a professional conscience active, prevent complacency, and cause teachers to maintain their commitment and maximize their involvement.

The speculated existence of different kinds of satisfaction variables has considerable support from the literature. Reinecher (1972) and Clarke (1976), for example, identified "intrinsic" and "extrinsic" satisfaction factors, while Mitchell (1968), from some studies in Alberta, identified Career, Professional, and Work satisfaction variables.

While the theory posits that it is satisfaction which spurs people to action, it is intuitively acceptable that it may be dissatisfaction which is the primary driving force in people. For example, it seems illogical that people would seek, collect, and store food if they had no concept of the possible dissatisfaction of hunger; it is only when one is aware of the possibility of that dissatisfaction occurring, or when one has had the experience, does it seem logical to engage in the activity of ensuring a food supply. That is, it is dissatisfaction which provides the impetus for action, for productivity, not satisfaction. This would be consistent with Maslow's (1943) contention that a satisfied need is not a motivator of behavior.

It has been suggested earlier in this study that a particular kind of person chooses to become a teacher. If unique needs and drives contribute to the decision to make education a career, then it seems to follow logically that teaching itself, the commitment, the involvement, will be satisfying, as Mitchell's (1968) study seems to indicate. If the relationship is in the productivity → satisfaction

direction, as studies by Bass (1965), Lee (1969), and Wickstrom (1971) suggested it might be, then productivity cannot be expected to be dependent on satisfaction, but satisfaction on productivity.

Unlike the assumptions under which most studies seem to have been conducted (this study included), it may be necessary to assume that dissatisfaction of a particular type is not necessarily undesirable. That is, it may be advisable to conduct studies and develop theory without the automatic assumption that teacher satisfaction is intrinsically a good thing.

While the results have been interpreted and speculations advanced to explain the peculiarities discovered, it has to be emphasized that the raw data for this study were the perceptions of teachers. It is necessary to query whether, in fact, it is valid to make the assumption that people's perceptions are accurate enough to be accepted as "actuality." It is not being suggested, however, that the value of measuring perceptions be belittled since research in the management field of industry and education, as well as in other fields of both contexts, continue to rely heavily on this technique. The recommendations of the Coleman Report (1966), for example, are based on results which are derived from raw data which are largely perceptual in nature.

The instrumentation for this and similar studies may be crude. It has been acknowledged that it is not clear

what should be utilized as adequate indicators of satisfaction or productivity. It is not even clear whether it makes sense to talk about measuring something as vague as satisfaction, which may be a different entity for each individual. Even if the factors which should be measured are known, there may still exist problems in ensuring that the proper instruments are used to yield the desired information.

Since the study was based on extant theory about the relationships between the variables studied, and since the instrumentation was similar to that of most research in this field of study, it would have to be concluded that the problematic nature of the results indicates that either there are problems with the theory, as Tannenbaum (1971) contended, or the instruments and procedures are inadequate, or both the theory and the instrumentation are faulty.

It may be concluded, therefore, that either or both of the theory and the instrumentation needs to be modified. It may be that extant theory and methods are overly simplistic and not sufficiently discriminate to detect the subtleties and complexities of human interaction.

This assessment would be supported by Ponder (1977) who stated:

Further, since the technology for the analysis of human interaction is either too imprecise or the nuances of human behavior are too subtle to be detected, it appears unlikely that we can untie the Gordian knot, at least for the present. (p. 6)

CHAPTER 5

This chapter contains a summary of the purpose of the study and a summary of the methodology used in the conduct of the study. Also presented is a summary of the results of the study, along with some conclusions. The chapter concludes with some suggested areas in which further research might be conducted.

SUMMARY, CONCLUSIONS, RECOMMENDATIONS FOR FURTHER RESEARCH

I. PURPOSE OF THE STUDY

This study was conducted to investigate the relationships between certain management, satisfaction, and productivity variables in junior and senior high schools in Newfoundland. While many studies have been conducted in the management field of education, very few of them have investigated the relationships associated with job productivity.

In Newfoundland, studies by Inkpen (1974), Ponder (1974), Ponder and Bulcock (1975), and Penney (1977) were conducted to investigate the relationships between various management and satisfaction variables in educational settings. The present study could be considered as continuing the general theme of these Newfoundland studies.

The focus of the study was the investigation of some of the relationships between the following educational variables in the Newfoundland context: Teacher-Centered Management Style, Teacher Job Satisfaction, and Teacher Productivity. A series of eleven specific questions were used as guides for the analysis and interpretation of the results.

II. METHODOLOGY

The teachers of twenty schools in the Grand Falls area of the province were selected as the sample for this study. The administrators of eighteen of the twenty schools permitted the questionnaire survey to be conducted, and 177 of the 209 teachers in these schools (84.7 per cent) responded.

The raw data were coded for use in computed programs, Factor analysis was used as a data reduction technique, and multiple regression analysis teamed with path analysis was the statistical technique used to interpret the results.

III. THE RESULTS OF THE STUDY

The main results produced were the following:

1. There is a statistically significant positive relationship between Teacher-Centered Management Style and Teacher Salary Satisfaction.
2. There is a statistically significant positive relationship between Teacher-Centered Management Style

and Teacher Satisfaction with the Capabilities of Teacher Colleagues.

3. There is a statistically significant positive relationship between Teacher-Centered Management Style and Intrinsic Commitment to Teaching as a profession.
4. There is a statistically significant negative relationship between Teacher Satisfaction with the Capabilities of Teacher Colleagues and Job Involvement.
5. There is a statistically significant negative relationship between Teacher Satisfaction with the Capabilities of Teacher Colleagues and Self-Concept as a Teacher.

IV. CONCLUSIONS

Some of the relationships examined in this study were statistically significant, but because of the very small amount of the variance of the dependent variables that was accounted for by variables in the study, it was concluded that very little new information was uncovered by this research.

Speculation about the variables which could have contributed to the problematic results led to the further conclusion that both the theory and the instrumentation are probably not sufficiently discriminatory and that further research in the school management field should be conducted.

under different assumptions than have past studies in this field:

V. RECOMMENDATIONS FOR FURTHER RESEARCH

1. The concept of "Satisfaction" is not sufficiently clarified, and the determinants of "Satisfaction" have not been adequately isolated or identified. This is a field which needs to be researched in order to facilitate more conclusive studies of the nature of the study reported in this thesis.

2. The concept of "Productivity," like the concept of "Satisfaction," needs to be clarified, and research needs to be conducted to isolate and identify its determinant variables.

3. It has been suggested in this thesis that the level of commitment and the level of job involvement of teachers are largely determined prior to a person's actual entry into teaching as a career. A longitudinal "Commitment to Teaching" study, conducted with high school students who show an interest in teaching, along with follow-up studies with these people until they have been teaching for some time, should be a fruitful area of study.

4. A study researching the possibility that two kinds of satisfaction variables--personal and professional--are factors in educational settings would help clarify much of the confusing and conflicting research results in this area. The possibility that optimum conditions exist

when one factor is satisfied and one dissatisfied offers possibilities of valuable insight for school management.

5. A "Two-Factor Productivity Theory" similar to Herzberg's (1959) "Two-Factor Theory" of satisfaction should provide scope for some rather interesting and valuable research.

6. It was suggested several times throughout this thesis that productivity may lead to satisfaction, rather than vice versa. A study of relationships, the converse of relationships studied in this thesis, might clarify the directionality of the relationships among satisfaction and productivity variables..

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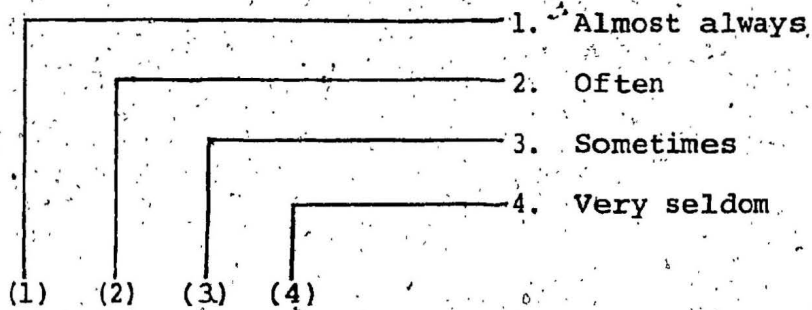
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APPENDIX A

TEACHER-CENTERED MANAGEMENT STYLE QUESTIONNAIRE

Please answer the question, "How do you feel", for each of the items below. Indicating your choice by marking an X over the appropriate number according to the following scale:



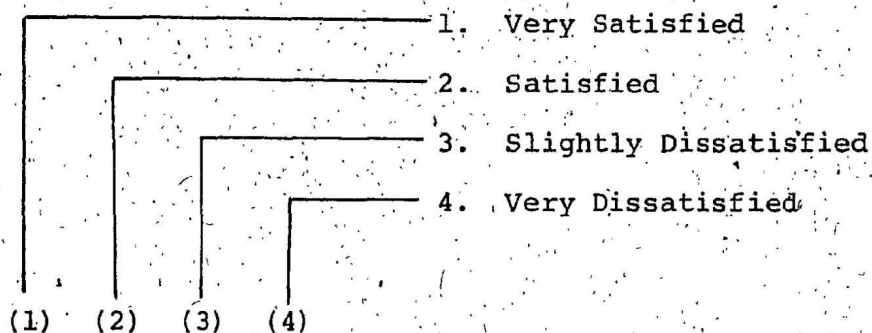
- | | | | | | | |
|----|--|-----|-----|-----|-----|---|
| 1. | The principal seeks suggestions from you as a teacher | (1) | (2) | (3) | (4) | 1 |
| 2. | The principal demonstrates a warm personal interest in you | (1) | (2) | (3) | (4) | 2 |
| 3. | The principal helps you deal with your classroom problems | (1) | (2) | (3) | (4) | 3 |
| 4. | You feel that it is alright to ask the principal for help | (1) | (2) | (3) | (4) | 4 |
| 5. | The principal consults with teachers before making major decisions at school | (1) | (2) | (3) | (4) | 5 |
| 6. | The principal encourages and supports new ways of teaching | (1) | (2) | (3) | (4) | 6 |

7. The principal encourages continued professional training (1) (2) (3) (4) 7
8. The principal has ample time for conversation with you (1) (2) (3) (4) 8
9. The principal brings educational literature, conferences, etc. to the attention of teachers (1) (2) (3) (4) 9
10. The principal checks closely on your classroom performance (1) (2) (3) (4) 10
11. Relationships between the principal and you are formal (1) (2) (3) (4) 11
12. The principals calls you by your first names (1) (2) (3) (4) 12
13. The principal does most of the talking in staff meetings (1) (2) (3) (4) 13
14. Routine administrative duties interfere with your teaching (1) (2) (3) (4) 14
15. The principal allows you to violate minor rules (1) (2) (3) (4) 15
16. Staff meetings are used for administrative matters only (1) (2) (3) (4) 16

APPENDIX B

TEACHER PERCEPTION OF JOB SATISFACTION QUESTIONNAIRE

Please answer the question, "How do you feel", for each of the items found below. Indicate your choice by marking an X over the appropriate number according to the following scale:



1. The top salary available to teachers, .. (1) (2) (3) (4) ¹⁷
2. My chances for receiving salary increases without promotion..... (1) (2) (3) (4) ¹⁸
3. Amount of progress which I am making in my professional career..... (1) (2) (3) (4) ¹⁹
4. The capabilities of most of the people who are in teaching..... (1) (2) (3) (4) ²⁰
5. The possibilities for a teacher advancing to a position of greater responsibility in teaching..... (1) (2) (3) (4) ²¹
6. The level of professional standards maintained by most teachers..... (1) (2) (3) (4) ²²
7. The academic performance of the students in my present school..... (1) (2) (3) (4) ²³

APPENDIX C

TEACHER PERCEPTION OF PRODUCTIVITY QUESTIONNAIRE

Please indicate my marking an X in the bracket opposite your choice of response.

1. In an average week the number of hours I spend at preparation, at evaluation and advising students as compared to the time spent by other teachers is:

	24
Much less than others	(1)
A little less than others	(2)
About the same as others	(3)
A little more than most others	(4)
Much more than others	(5)

2. The amount of time I spend reading professional material in an effort to develop new ideas to use in my classroom as compared with other teachers is:

	25
Much less than others	(1)
A little less than others	(2)
About the same as others	(3)
A little more than others	(4)
Much more than others	(5)

3. Some people are completely involved in their job - they are absorbed in it night and day. For others, their job is simply one of several interests. How involved do you feel in your job?

	26
Very little involved; my other interests are more absorbing	(1)
Slightly involved	(2)
Moderately involved; my job and my other interests are equally absorbing to me	(3)
Strongly involved	(4)
Very strongly involved	(5)

APPENDIX D

The studies surveyed in the construction of Table 2,
P. 44.

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APPENDIX E

UNSTANDARDIZED REGRESSION COEFFICIENTS OF MANAGEMENT, SATISFACTION
AND PRODUCTIVITY VARIABLES

Independent Variables	Dependent Variables				Self- Concept
	Salary	Capabilities	Professional	Involvement	
MANAGEMENT	.353	.330	.309	.483 ⁻⁰¹	-.306 ⁻⁰¹
SALARY			.130	.114	-.767 ⁻⁰¹
CAPABILITIES			-.418 ⁻⁰¹	-.159	-.157

MANAGEMENT = Teacher-Centered Management Style

SALARY = Teacher Salary Satisfaction

CAPABILITIES = Teacher Satisfaction with the Capabilities of Teacher Colleagues

PROFESSIONAL = Intrinsic Commitment to Teaching as a Profession

INVOLVEMENT = Job Involvement

SELF-CONCEPT = Self-Concept as a Teacher

APPENDIX F

STANDARDIZED BETA COEFFICIENTS OF MANAGEMENT, SATISFACTION,
AND PRODUCTIVITY VARIABLES

Independent Variables	Dependent Variables				
	Salary	Capabilities	Professional	Involvement*	Self-Concept
MANAGEMENT	.383	.313	.288	.051	-.036
SALARY			.112	.110	-.082
CAPABILITIES			-.041	-.175	-.192

MANAGEMENT = Teacher-Centered Management Style
 SALARY = Teacher Salary Satisfaction
 CAPABILITIES = Teacher Satisfaction with the Capabilities of Teacher Colleagues
 PROFESSIONAL = Intrinsic Commitment to Teaching as a Profession
 INVOLVEMENT = Job Involvement
 SELF-CONCEPT = Self-Concept as a Teacher

APPENDIX G
MULTIPLE REGRESSION DATA

Independent Variable	Multiple R	R Square	R Square Change	Simple R	B	BETA	Standard Error B	F-Ratio
Dependent Variable = SALARY								
MANAGEMENT	.3833	.1469	.1469	.3833	.3532	.3833	.0717	24.28
Constant					-.39214460-01			
Dependent Variable = CAPABILITY								
MANAGEMENT	.3134	.0982	.0982	.3134	.3298	.3134	.0842	15.36
Constant					-.3064509D-01			
Dependent Variable = INVOLVEMENT								
MANAGEMENT	.0380	.0014	.0014	.0380	.4835 ⁻⁰¹	.0508	.089	.293
SALARY	.1046	.0109	.0095	.1045	.1138	.1102	.093	1.496
CAPABILITY	.1966	.0386	.0277	-.1437	-.1587	-.1754	.079	4.007
Constant					.32682 D-01			
Dependent Variable = PROFESSIONAL								
MANAGEMENT	.3187	.1016	.1016	.3187	.3088	.2885	.096	10.243
SALARY	.3349	.1121	.0106	.2171	.1302	.1124	.100	1.690
CAPABILITY	.3371	.1137	.0015	.0654	-.4179 ⁻⁰¹	-.0411	.086	.238
Constant					.131379 D-01			
Dependent Variable = SELF-CONCEPT								
MANAGEMENT	.1273	.0162	.0162	-.1273	-.3057 ⁻⁰¹	-.0355	.080	.146
SALARY	.1508	.0228	.0065	-.1235	-.7686 ⁻⁰¹	-.0824	.083	.851
CAPABILITY	.2367	.0560	.0333	-.2151	-.1571	-.1922	.071	4.901
Constant					.19285 D-01			

APPENDIX H

R² VALUES OF MANAGEMENT STYLE, SATISFACTION, PRODUCTIVITY RELATIONSHIPS

<u>Independent Variables</u>	<u>Dependent Variables</u>			
	<u>Salary Satisfaction</u>	<u>Satisfaction with Colleague Capabilities</u>	<u>Commitment</u>	<u>Self-Concept</u>
Management Style	.147	.098	-	-
Management Style, Salary Satisfaction, and Satisfaction with Colleague Capabilities			.114	.039
				.056



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