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ORGANIZATIONAL CLIMATE IN MIDDLE-LEVEL SCHOOLS

By

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ABSTRACT

ORGANIZATIONAL CLIMATE IN MIDDLE-LEVEL SCHOOLS

By

Jennifer Putnam Cheal

The climate of organizations and its relationship to both the quality of production/service outcomes and job satisfaction have received extensive attention in both research and popular literature. During the past 30 years, researchers have explored the organizational climate in industry and business, as well as in colleges, secondary, and elementary schools. In school settings, organizational climate is of interest to administrators, teachers, parents, and students as it has been found to affect many student outcomes, including cognitive and affective behavior, values, and personal growth and satisfaction. However, there is a lack of research measuring the organizational climate of middle-level schools and its relationship to organizational effectiveness and job satisfaction.

Working from the elementary school organizational climate study of Halpin and Croft (1962), the secondary revision undertaken by Kottkamp, Mulhern, and Hoy (1987), the expectancy and motivation research of Miskel (1962), the measurement of social interactions between teachers and students (Willower, Eidell, & Hoy, 1962), and

effective schools literature, the researcher developed an instrument for the measurement of middle-level organizational climate.

Participants for this study were randomly selected from the public middle-level schools in Michigan. Data for the study were collected from the 1,739 individuals representing the 88 middle-level schools that participated in this project.

As a result of numerous factor analyses and reliability analyses, a valid and reliable instrument describing seven dimensions of middle-level school climate was developed. Two dimensions describe the behaviors of the building principal(s) and five pertain to the behavior of the teachers as a group.

Various second-order factor solutions were examined to explore the interrelationships among the seven climate dimensions.

In addition, several relationships involving building teacher age, average teacher experience, building gender composition, and instructional organization were examined to help explain school differences in organizational climate.

Co-directors: **Dr. Frederick Ignatovich**
Dr. Samuel Moore II

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Dr. Frederick Ignatovich, co-chairperson of this study, not only provided intellectual stimulation for this work, but also devoted long hours of personal time to the process of developing and refining the necessary computer programs. There is no question that this study would not have been completed without his tenacious commitment to the statistical precision required in this project.

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF APPENDICES

CHAPTER I

INTRODUCTION

Background

The climate of organizations and its relationship to both the quality of production/service outcomes and job satisfaction have received extensive attention within both research and popular literature (Argyris, 1958; Austin & Garber, 1985; Brookover, Beady, Flood, Schweitzer, & Wisenbaker, 1979; Brookover & Lezotte, 1979; Brookover et al., 1978; Feldvebel, 1964; Lezotte & Passalacqua, 1978; Ouchi & Johnson, 1978; Stevens, 1987). Members within an organization share experiences and assumptions that form the ontological structure of their work place. This commonality serves to influence the individuals' perceptions of what occurs, as well as affecting their behaviors. The extent to which members share certain values and beliefs is central to the concept defined as organizational climate.

During the past 30 years, researchers have explored the organizational climate in industry and business as well as in colleges and secondary and elementary schools. However, there is a lack of research measuring the organizational climate of middle-level schools and its relationship to organizational effectiveness and job satisfaction.

Ongoing theoretical and applied organizational climate research is continuing to make educational leaders aware of how social variables can influence school effectiveness. Within school settings, organizational climate is of interest to administrators, teachers, parents, and students as it has been found to affect many student outcomes including cognitive and affective behavior (Barker, 1963; Brookover et al., 1978; Lezotte & Passalacqua, 1978), values (Vyskocil & Goens, 1979), and the personal growth and satisfaction of students (Coyne, 1975; Vyskocil & Goens, 1979).

Halpin and Croft (1962) were among the first to develop an organizational climate instrument specifically designed for research in a school setting. Through their examination of the literature, Halpin and Croft identified nine components necessary for the identification of an elementary school's climate. Their instrument, however, purports to measure only the social interactions that occur between the teachers and the principal. Through factor-analytic methods using the individual as the unit of analysis, the dimensions of organizational climate present in an elementary school setting are operationalized through eight subtests. Four of the subtests pertain to the characteristics of the teachers as a group and the other four to the characteristics of the principal as a leader. Retaining the individual as the unit of analysis, Halpin and Croft subjected the scores from the eight subtests to a second-order factor analysis, which revealed three underlying factors. These components were used to produce a climate prototype continuum from "open" to "closed."

Concerned with the development of an instrument for the measurement of organizational climate within a secondary school setting, Kottkamp, Mulhern, and Hoy (1987) replicated, with some modifications, the research of Halpin and Croft. Using the secondary school group rather than individuals within the elementary school as the unit of analysis, they replaced, modified, or omitted items from the Organizational Climate Description Questionnaire (OCDQ). In addition to the OCDQ items that measure the social interactions between the principal and teachers, Kottkamp et al. used scales from other researchers to explore relationships between additional variables and their climate subtests. Working from the research of Willower, Eidell, and Hoy (1967), they explored the dimension of social interactions between teachers and their students. In addition, correlations between responses on Miskel's Expectancy Motivation Scale (1982) and the climate subtests identified in the Organizational Climate Description Questionnaire-Revised Secondary (OCDQ-RS) were used to explore the relationship between teachers' expectancy motivation and their school's climate openness score. The research of Kottkamp et al. indicated that secondary schools with more open climates had teachers who had a higher expectancy motivation than secondary schools with less open climates. Also, they found that the more humanistic the pupil-control ideology of teachers in secondary schools, the higher the expectancy motivation of those secondary school teachers.

Through factor-analytic techniques, the dimensions of organizational climate present in secondary school settings were

operationalized through five subtests. Two of the subtests pertain to the characteristics of the principal as a leader and the other three to the teachers as a group.

The five subtests were subjected to a second-order factor analysis, which revealed a two-factor underlying structure. One factor contained two subtests pertaining to the principal and two subtests pertaining to the teachers as a group. Collectively, these four subtests interrelate to form a climate openness scale. The fifth subtest, pertaining to the social interaction of the faculty, emerged as a single independent factor in the second-order solution.

Statement of the Problem

The research of Halpin and Croft (1962) and Kottkamp et al. (1987) has contributed to the understanding of the kinds of behaviors on the part of teachers and principals that are associated with the organizational climate differences found in various elementary and secondary schools.

The problem identified in this study is the lack of comparable organizational climate measurement scales for use in middle-level schools. Due to a lack of research in middle schools, middle-level schools must currently use organizational climate scales developed and tested in the elementary or secondary school setting.

The middle-level school serves children typically between the ages of 10 and 14. This period of human development bridges the gap between elementary childhood and high school adolescence. Educators concerned with this preadolescence stage have recognized that this

unique period of human development is characterized by rapid social, emotional, intellectual, and physical changes (Eichorn, 1968). The need to address this developmental age group was recognized as early as 1888, when secondary education was reorganized by Charles W. Eliot, President of Harvard University. The first junior high school was opened in 1909 in Columbus, Ohio, which paralleled developmental psychologists recognizing the uniqueness of early adolescence and the need for a special program (Klingele, 1979).

This period of rapid maturational development structures the philosophical basis for middle-level schools. Curriculum, instructional strategies, personnel, and structural facilities are developed as an educational program distinct from both the self-contained elementary schools and departmentalized senior high schools.

Middle-level schools are organizational environments as unique as the students they serve. Consequently, this study was based on the assumption that organizational climate scales used in a middle-level setting should be developed and psychometrically defended within the environments they purport to measure.

Purpose of the Study

The writer's primary purpose in this study was to operationalize the construct of climate through the development of an instrument to identify and describe the dimensions that are present in the organizational climate of middle-level schools. Working at the middle-school level, the dimensionality of

organizational climate was explored through a review of the related literature and scales developed by previous researchers.

All 33 items from Kottkamp et al.'s (1987) OCDQ-RS and 13 items common to both Kottkamp et al.'s and Halpin and Croft's (1962) instruments were included in the initial form of this instrument. In addition, the dimensions of pupil control behavior and expectancy and motivation were incorporated by including modified items from Willower's (1967) Pupil Control Ideology Scale and Miskel's (1982) Expectancy Motivation Scale.

Developed from a review of the literature, 64 original items were included for use in the initial form of the middle-level climate survey. These items, not contained in the instruments cited above, were used to represent the dimensions hypothesized to be present in the organizational climate of middle-level schools.

Given an identified dimensionality of middle-level organizational climate, the writer's second purpose in this study was to explore whether or not the various dimensions relate to each other through an examination of a second-order factor solution of organizational climate.

The identification of a defined factor structure also allowed a third research purpose. A stable factor structure permitted a review of various independent variables to explore whether or not they had an influence on the differences found in the dimensions of organizational climate.

Significance of the Study

Using the comprehensive studies of Halpin and Croft (1962), Kottkamp et al. (1987), Miskel (1982), and Willower et al. (1967), along with original items generated from related literature that were designed to address the unique characteristics of middle-level schools, an attempt was made to identify the domain of organizational climate in selected middle-level public schools. It is hoped that this study will contribute to the understanding of the kinds of behaviors on the part of teachers and principals that are associated with the differences found in various middle-level school organizational climates. Definition of these differences could be useful to the research community for comparisons of organizational climate differences in elementary, secondary, and middle-level school settings.

The development of a valid and reliable instrument for the measurement of organizational climate in middle-level schools could be of practical use as applied in middle school settings. Identification, definition, and measurement of organizational climate dimensions will permit practitioners to analyze a school's climate and develop a plan to support change in organizational effectiveness and job satisfaction.

Teacher age, experience, and gender are factors that influence school district issues such as the selection, retention, transfer, and promotion of school personnel. Identified variables that account for differences in the dimensions of organizational climate

will offer additional information for educational leaders responsible for future policies and procedures.

Teaming as an instructional strategy has been identified as an important factor in determining an effective middle school program (Romano, Georgiady, & Heald, 1973). A comparison of the different instructional arrangements in middle-level schools and their relationship to the dimensions of organizational climate could serve to disclose an additional rationale in support of various organizational strategies.

Research Questions

I. a. What are the number of dimensions present in the organizational climate of middle-level schools?

b. What are the qualities of the climate dimensions that are identified to be present in middle-level school settings?

Working from the related literature, seven dimensions were hypothesized to represent the organizational climate in middle-level school settings. The following descriptions define the seven concepts and structure the organization of the items chosen to represent the various dimensions.

Dimension I: Principal(s) efforts to control the internal functioning of their school through the coordination of work. This dimension describes actions by the principal(s) that are interpreted by the faculty as controlling and authoritarian in nature.

Dimension II: Interactions between the building principal(s) and the instructional staff that serve to create a climate that is perceived to be a cooperative working environment by the faculty.

Dimension III: Interactions between the teachers and their students that indicate the degree of control exerted over the student population. This dimension measures the faculty's perception of the level of control needed to maintain an educationally conducive climate.

Dimension IV: The faculty's force of motivation toward their school's academic orientation to student achievement. This dimension was measured through the faculty's perception of expectancy, instrumentality, and valence as rewards for their collective efforts.

Dimension V: The faculty's perceptions of their colleagues' attitudes toward their professional relationships. This dimension reflects the staff's interpretations of the professional attitudes and actions of their peers.

Dimension VI: Teachers' close social relationships among faculty members. This dimension reflects the teachers' perception of personal social interactions among staff members.

Dimension VII: The physical and material aspects of an organization as perceived by the faculty.

II. a. If through statistical procedures the dimensions of organizational climate can be defined, will they reduce to a second-order factor solution?

b. If the dimensions do reduce to a second-order factor solution, what are the qualities of this underlying structure?

III. If, once again, the dimensions of organizational climate can be defined, do the independent variables of teacher age, teacher experience, teacher gender, and instructional organization account for differences in organizational climate in middle-level schools?

a. What effect does the average age of a teaching staff have on the dimensions of organizational climate in a middle-level school?

b. What effect does the level of years of experience have on the various dimensions of organizational climate in a middle-level school setting?

c. What effect does the percentage of faculty gender have on the dimensions of organizational climate in a middle-level school?

d. What effect does the instructional organization of a middle-level school have on the dimensions of organizational climate?

Procedural Design

Working from a review of the research literature, seven dimensions were identified to serve as the structural base for the development of an instrument to measure organizational climate in middle-level settings. Drawing from the research of Halpin and Croft (1962), Kottkamp et al. (1987), Willower et al. (1967), and

Miskel (1982), as well as additional related literature, items were modified and created to represent each of the seven identified climate dimensions.

A panel of middle-level expert judges assisted in the field testing and content validity of the preliminary form of the survey. Following a modification of the survey instrument, a revised survey form was developed for use in this research. Two hundred thirty-five middle-level schools in Michigan were randomly selected to participate in this study and asked to respond to the Middle School Organizational Climate Survey-Initial Form (MSOCS-IF). The data for this study were obtained through a series of mailed-survey procedures. The data were subjected to numerous clerical and analytical procedures before arriving at final identification of climate dimensions.

Limitations of the Study

The population for this study was defined as the middle-level schools in Michigan. Although the sample was randomly drawn from the Michigan population, participation in this research study was voluntary and, therefore, subject to a degree of self-selection.

To provide for consistency in this study, standardized procedures were defined for the administration of the climate survey. However, completion and collection of the survey instruments were accomplished at the building level and were subject to indeterminate modifications.

No attempt was made to verify the percentage of building staff members who did not participate in this study or who may have chosen to respond in an unauthentic manner to the survey items.

Definition of Terms

Organizational climate. The interrelatedness of situational and personnel factors within an organization, which creates an internal working environment. The construct of climate is defined through the perceptions of the workers functioning within the organization.

Middle-level school. A public educational institution that draws its median membership from the 10- to 14-year-old population.

Middle-level student. A student in the pre-adolescence stage of development often referred to as "transescence." Eichorn (1968) defined transescence as follows:

> Transescence is the stage of development which begins prior to the onset of puberty and extends through the early stages of adolescence. Since puberty does not occur precisely at the same chronological age in human development, the transescent designation is based on the changes that appear prior to the puberty cycle to the time when the body gains a practical degree of stabilization over these complex changes. (p. 11)

Organizational Climate Description Questionnaire (OCDQ). Developed by Halpin and Croft (1962), this is one of the first organizational climate instruments specifically designed for research in a school setting. This instrument purports to measure the social interactions that occur between the teachers and the principal in an elementary school.

Organizational Climate Description Questionnaire-Revised Secondary (OCDQ-RS). Instrument used in a replication of the study of Halpin and Croft using the secondary school as the unit of study. Kottkamp et al. (1987) also explored the social interactions between teachers and their students and the relationship between academic expectancy/motivation and organizational climate.

Pupil control behavior (PCB). A research study by Willower et al. (1967) that adopted a complex topography for the measurement of student control that uses a continuum ranging from "custodialism" at one end to "humanism" at the other extreme.

Expectancy and Motivation Scale. Measurement scale developed by Miskel (1982), which uses the aggregate expectancy motivation of faculty members to characterize the academic orientation of that school.

Independent variable of instructional organization. Organization of students for the purpose of instructional services. Each middle-level school was assigned an aggregate score based on its level of participation in the following organizational strategies:

1. Self-contained classroom--one teacher and one group of students for all academic subjects for an extended period of time.

2. Departmentalized--one teacher instructs different groups of students in his/her area of certification for a discrete period of time.

3. Teaming--two or more teachers together plan, teach, and evaluate a selected number of students.

Independent variable of teacher age. Computation of average teacher age for each of the middle-level buildings to examine the relationship between organizational climate dimensions and the average age of the faculty.

Independent variable of teacher experience. Computation of average number of years of teaching experience for each of the middle-level schools to examine the relationship between organizational climate and the level of years of faculty experience.

Independent variable of teacher gender. Computation of the percentage of building faculty gender for use in the examination of the relationship between organizational climate dimensions and faculty gender percentage.

Organization of the Dissertation

This study is organized into five chapters. Chapter I served as an introduction and rationale, as well as outlining a brief overview of the report. The relevant literature and research that served as the conceptual framework for this study are reviewed in Chapter II. The climate instrument design and the methodology used in collecting and analyzing the data for this research project are discussed in Chapter III. The study findings are presented in Chapter IV. In Chapter V, closure is brought to this project through a summary discussion of the findings, and implications and recommendations for future research.

CHAPTER II

REVIEW OF RELEVANT LITERATURE AND RESEARCH

Introduction

The concept of organizational climate has been a concern of both organizational theorists and practitioners for the past 30 years. A common theme throughout the various climate research disciplines is the agreement that climate is an abstract, individual perception that may occur at an organizational, group, and/or individual level (Field & Abelson, 1982). Tagiuri (1968) proposed a definition that is suitable for use within the various disciplines studying the effects of organizational climate:

> Climate is the relatively enduring quality of the internal environment of an organization that (a) is experienced by its members, (b) influences their behavior, and (c) can be described in terms of the values of a particular set of characteristics (or attributes) of the organization. (p. 27)

Indeed, studying human behavior in any organizational setting demands "ordering and conceptualizing a buzzing confusion of simultaneously existing, multilevel, mutually interacting variables" (Argyris, 1958, p. 501).

Conceptual Development of Organizational Climate

Early behavioral psychologists explained human activity simply through the chained association of a stimulus to a response. Stimulus-response psychology, however, tends to assimilate the

entire environment into the term "stimulus," consequently taking many environmental features for granted. Yet many aspects of the environment, when singled out for attention, are not assimilable into any proper definition of "stimulus."

Concerned with a clearer analysis of the components that created the stimulus environment, early research by Lewin and Tolman began an examination of the intrapersonal segment of a stimulus experience. Later, searching within as well as outside the individual for explanations of behavior, psychologists used the term "ecological environment" to describe the summation of events in which a behavior is involved. The ecological environment presents an array of events that interact and transform into an ordered output or response. Furthermore, Barker (1963) stated that the ecological environment does not demand a particular behavior, but that it is, rather, permissive, supportive, or resistive to the resulting response behavior. The events in the environment were now seen to imply a triggering function for the response, as in stimulating, evoking, or instigating the resultant behavior.

Neurophysiologists and contemporary psychologists began to identify the brain as the selector of the stimuli that caused the response behavior. With this theory, dispositions of personality, combined with specific and transient situational influences, were believed to determine the direction, vigor, and persistence of action (Atkinson & Cartwright, 1964).

The concept of organizational climate began to take shape as psychologists and sociologists continued their evaluations of the

objective physical and social environments in which individuals were immersed.

Organizational Climate Research

Early organizational climate research, from which school climate research has evolved, began in industrial and business settings. Argyris (1958), in his case study of interpersonal relations in a bank, pointed to the pervasive influences of an organizational environment, particularly on employee morale, productivity, and turnover. Researchers agreed that the working environment had an important influence on employees, but developed divergent theories on both the underlying concepts and measurement techniques to be employed.

While business and industry were focusing on situational characteristics that affected individual behavior, educators were still preoccupied with differences within the individual. The 1960s, however, brought greater awareness that schools were not providing an equal education for all children. Whether individual differences were attributed to genetic or environmental factors, researchers consistently disclosed that schools had little effect on achievement when social class was held constant. Schools appeared unable to overcome initial individual learner differences in students who attended different schools.

The Civil Rights Act of 1964 initiated the reevaluation of American education. The Coleman Report (1966), along with federal evaluations of the 1965 compensatory education programs, provided

evidence that challenged the "individual-differences" theory. Gradually, educational researchers shifted their causal assumptions away from the psychology of individual differences--the problem is within the student--to the school as a uniquely functioning social system--why do some schools function better than others? (Austin & Garber, 1985).

One important long-term finding of the Coleman Report was that resources expended in a school do not have as much influence on achievement as the social-psychological processes and norms that characterize interactions between staff and students within the school. One of the first attempts to study the school social system rather than the educability of individual students was the work on school climate. Early instrument development in school climate was found to be closely linked to the instruments and theory in organizational climate research of business and industry (Anderson, 1982).

Major Organizational Climate Measurement Instruments in K-12 School Settings

In an analysis of the recurring pattern of relationships that emerged from the organizational climate literature, Tagiuri (1968) identified four major dimensions he found present in the environmental quality of an organization. This organizing taxonomy includes the following dimensions:

a. Ecology--the physical and material aspects;

b. Milieu--the social dimension concerned with the presence of persons and groups;

c. Social system--the social dimension concerned with the patterned relationships of persons and groups; and

d. Culture--the social dimension concerned with belief systems, values, cognitive structures, and meaning. (pp. 21-22)

The major organizational climate measurement instruments used in K-12 school settings have been sorted into Tagiuri's organizing scheme and listed in Appendix A as analyzed by Anderson (1982) and Mulhern (1984).

Anderson (1982) found the topology formed by these broad environmental dimensions to be a useful organizing device in the delineation of school climate literature, although she cautioned that the assignment criteria may be somewhat arbitrary. Tagiuri's dimensions are perhaps too broad to be precisely defined in an operational sense, and some of the dimensions seem to overlap considerably. Still, the pattern of relationships of the factors measured by major climate instruments does appear to be heavily weighted conceptually in the direction of social system and cultural constructs. Anderson (1982) found that most instruments used to measure organizational climate in schools are really designed to address a limited number of variables within the broad social systems and cultural dimensions of the school organization.

Halpin and Croft (1962) were among the first to develop an organizational climate instrument specifically designed for research in a school setting. Indeed, the influence of the Organizational Climate Description Questionnaire (OCDQ) has been

widely recognized by researchers, reviewers, and practitioners (Brown & House, 1967; Thomas, 1976).

In the early 1960s, Halpin and Croft began a preliminary study to describe and differentiate the organizational climates of elementary schools. They identified numerous components necessary for identification of a school's climate: the socioeconomic status of the school's patrons, the biographical and personality characteristics of the principal and teachers, the "quality" of the students, the attitudes of parents toward the school, the school's physical plant, the teachers' salary schedule, the educational and administrative policies of the school district, the location of the school, and especially the social interactions that occur between the teachers and the principal. In developing their survey instrument, Halpin and Croft (1962) stated that, in their context, organizational climate referred "exclusively to the social interaction between the principal and teachers--to the social component of the organizational climate" (p. 9).

Through their examination of the literature preceding the construction of the OCDQ, Halpin and Croft selected three schemata, which they used for classifying the attributes of leadership and group behavior. The OCDQ items then were generated to reflect categories represented by one of three basic taxonomies commonly used for classifying group phenomena.

The first group of classifications used the following originators for group interactions:

1. Interactions determined primarily by the leader's behavior;

2. Behavior attributable to characteristics of the group qua group;

3. Interactions determined by procedures or by actions of an executive in a position hierarchically superior to the leader himself (e.g., the superintendent and the Board of Education limit the principal's range of decisions); and

4. Interactions determined primarily and hence associated directly with the "personality" assets and liabilities of the individual. (Halpin & Croft, 1962, p. 19)

A second means for classification was based on the "effectiveness" and "ineffectiveness" of the group. Four "ideal types" of organizations were defined through the following categories: (a) the effective organization, (b) the social-needs-oriented organization, (c) the task-oriented organization, and (d) the ineffective organization.

The third and final basis for classifying group interactions concerned the relationship between the social needs of the individual and the social control imposed on him/her as a member of a group. To become a member of a group, an individual must sacrifice some measure of freedom. A balance between the satisfaction of an individual's social needs and the organization's requirements for social control is created. Individuals submit to social controls that are inherent in the group arrangement and that are frequently reinforced by the norms of the culture. Halpin and Croft (1962) identified the need to account for the balance maintained between the satisfaction of the individual's social needs and the organization's requirements for social control as one of the

conditions for formulating constructs associated with organizational climates.

As their strategy for constructing the OCDQ, Halpin and Croft collected items that represented all the categories encompassed by these three ways of classifying group phenomena. Items were then classified based on how well they fit into the cells of each of the three taxonomies described above. Much of the work of assigning items to the "correct" cell was done on an intuitive, common-sense basis. Several preliminary instruments were constructed and tested in different samples of schools, and item clusters were reviewed to determine to what extent dominant clusters were consonant with any one or more of the guiding taxonomies. Through this process, items were selected for more rigorous testing. Thus a combination of inductive and deductive methods was used to assemble items for the survey instrument, and these items did, in fact, yield eight subtests that were "verified" by factor analysis before the construction of a final instrument (Halpin & Croft, 1962).

The eight dimensions of organizational climate that correspond to the eight subtests of the OCDQ include four dimensions of teacher behavior and four dimensions of principal behavior:

Teachers' Behavior

1. Disengagement refers to the teacher's tendency to be just panning the motions in regard to a task-oriented situation.

2. Hindrance refers to the teachers' perception that the principal is burdening them with unnecessary "busy work." The teachers perceive that the principal is hindering rather than facilitating their work.

3. Esprit refers to the morale of the staff.

4. Intimacy refers to the teachers' enjoyment of friendly social relations with each other.

Principal's Behavior

5. Aloofness refers to behavior by the principal that is characterized as formal and impersonal.

6. Production Emphasis refers to behavior by the principal that is characterized by close supervision of the staff in a one-way communication manner.

7. Thrust refers to behavior by the principal that is characterized by his/her attempts to motivate through personal example.

8. Consideration refers to behavior by the principal that is characterized by attempts to do personal favors.

Retaining the individual as the unit of analysis, the eight subtests were subjected to a second-order factor analysis to see which subtests clustered together. Through this second-order factor analysis procedure, Halpin and Croft (1962) determined that a three-factor solution best represented the underlying structure of the eight subtests. The subtests of Intimacy and Consideration merged to form the factor Social Needs, which represents individual social relationships. Factor two describes behaviors of the group and contains the subtests Esprit and Thrust. Halpin and Croft called this second factor Esprit. The third factor describes social control as exerted by the principal and is composed of the leader subtests Aloofness and Production Emphasis. This third and final factor was entitled Social Control.

Shifting to the school as the unit of analysis, a climate prototype continuum was created for use with the OCDQ. Working from the second-order factor structure described above, school profile scores were standardized and subjected to a three-factor solution as determined by the three factors identified in the second-order factor solution.

Halpin and Croft (1962) found six major patterns of factor loadings among the profiles and then categorized each school profile with respect to one of these six patterns. The six patterns were named and ranked to create a climate prototype continuum that ranges from "open" on one end to "closed" at the other extreme.

Much criticism has been generated toward the reliability and validity of the open/closed continuum used in the OCDQ (Thomas, 1976; Watkins, 1968). In fact, Halpin and Croft (1962) themselves admitted the limitations of their scale:

> We have said that these climates have been ranked in respect to Openness versus Closedness. But we fully recognize how crude this ranking is. As is the case in most methods of ranking or scaling, we are much more confident about the climates described at each end of this listing than we are about those described in between. (p. 78)

The OCDQ has also received much recent criticism for confounding school (between-group) and individual (within-group) differences (Sirotnik, 1980). The between-group differences are estimated by group means, whereas the within-group differences are estimated by the deviation of an individual's score from the group mean. This issue is discussed in some detail later in this chapter.

According to Brown and House (1967), more than 100 studies on the OCDQ were completed between 1963 and 1967 alone. Indeed, extensive use of the OCDQ in various K-12 settings subsequently led educators to question the validity of the instrument at the high school and junior high levels. In schools that had instructional staffs of more than 25, it was found that the OCDQ was not a suitable measure of organizational climate (Carver & Sergiovanni, 1969; Hoy & Clover, 1986; Watkins, 168).

Based on the three major flaws described above and the many changes that have occurred in the staffing, curriculum, and demographic components of American schools in the 26 years since the OCDQ was developed, a secondary revision was undertaken by Kottkamp et al. in 1987. The purpose in developing the Organizational Climate Description Questionnaire-Revised Secondary (OCDQ-RS) was to:

1. Replicate the OCDQ research using a sample of secondary schools in New Jersey;

2. Expand the scope of the modified organizational climate instrument to include a component for investigating the social interactions between teachers and their students;

3. Identify the academic orientation of each school in terms of expectancy motivation and investigate the relationship between expectancy motivation and the relative openness of school climate; and

4. Investigate the relationship between the expectancy motivation of schools and social interactions that most directly reflect teachers' attitudes toward their students. (Mulhern, 1984, p. 8)

As their strategy for constructing the OCDQ-RS, Kottkamp et al. (1987) reviewed the original 64 items of the OCDQ (Halpin & Croft,

1962). Those items judged to be inappropriate for use in secondary schools or found to have poor measurement characteristics were eliminated or modified. As a result of the application of factor-analytic techniques to assess factor patterns and construct validity and the systematic calculation of alpha coefficients to assess reliability, the preliminary form of the OCDQ-RS was revised through elimination and regrouping of items to produce the final instrument form. The resultant OCDQ-RS contains 33 items that correspond to the following five subtests reflecting two dimensions of principal behavior and three dimensions of teacher behavior:

Principal Behavior

1. Principal Support Behavior--Principal works hard, sets example, uses constructive criticism, and is concerned about personal and professional welfare of the staff.

2. Principal Control Behavior--Principal is autocratic, domineering and supervises staff closely.

Teacher Behavior

3. Teacher Engagement Behavior--Teachers are enthusiastic, have a positive attitude toward work, and respect each other and their students.

4. Teacher Frustration Behavior--Teachers are frustrated by interference of nonteaching responsibilities and administrative paperwork and are hostile toward each other.

5. Teacher Intimacy Behavior--Teachers socialize with each other and share personal closeness. (Mulhern, 1984, pp. 62-65)

Following the work of Halpin and Croft (1962), Kottkamp et al. (1987) subjected their five subtests to a second-order factor solution. Their research, however, revealed a two-factor solution.

The first factor contained the subtests of Principal Support Behavior, Principal Control Behavior, Teacher Engagement Behavior, and Teacher Frustration Behavior. The second factor was the single subtest for Teacher Intimacy Behavior.

After calculating a standardized subtest score for each school, Kottkamp et al. developed an openness score, working from the four subtests contained in the first factor. The positive subtests of Principal Support Behavior and Teacher Engagement were summed, and the two negative subtests of Principal Control Behavior and Teacher Frustration were subtracted to produce a standardized openness score. The dimension described by the subtest Teacher Intimacy Behavior addressed staff interaction associated with social need satisfaction and did not contribute to the formula used to determine the openness continuum.

The four dimensions described by the subtests included within the openness continuum appear to assess the relative satisfaction of staff regarding both task achievement and social needs. This finding was consistent with the conceptualization of openness as described by Halpin and Croft (1962).

> The Open Climate describes an energetic, lively organization which is moving toward its goals, and which provides satisfaction for the group members' special needs. Satisfaction regarding both social needs and task achievement appears to be readily attainable by faculty members. The principal sets an example by working hard himself/herself and provides both professional direction and personal support to the staff. Leadership acts emerge appropriately from both the leader and the group. A characteristic of this climate is the authenticity of the behavior that occurs among all the organization members. Schools with open climates tend to have high scores on Principal Support and Teacher Engagement and low scores on Principal Control and Teacher Frustration.

> The Closed Climate is characterized by a high degree of frustration on the part of members of the organization. The organization is not "moving." Teacher Engagement is low because the group members secure neither social needs satisfaction nor the satisfaction that comes with task achievement. The members' behavior can be construed as "inauthentic," indeed the organization seems to be stagnant. Schools with closed climates tend to have high scores on Principal Control and Teacher Frustration and low scores on Principal Support and Teacher Engagement. (Mulhern, 1984, pp. 100-101)

Unit of Analysis

In his review of the unit-of-analysis "problem" for the study and psychometric phases of climate instrument development, Sirotnik (1980) described three data-analysis procedures that yield different operational and statistical results. **Total analysis** involves computing relationships between the variables across individuals while ignoring possibly relevant grouping factors. Another individually based approach, **within analysis**, holds group differences constant by computing correlations across individuals within each group separately and then "averaging" these correlations across groups for a pooled-within analysis. The **between analysis** uses the group as the unit of analysis. Within each group, variable means across individuals are determined before correlations are computed across groups. A between-group analysis tends to produce constructs that are sensitive to between-group differences.

Anderson (1982), Austin and Garber (1985), Burstein (1980), and Sirotnik (1980) cautioned that researchers must select their data-analysis procedure by coordinating the rationale for psychometric analyses with the intention for subsequent field applications. In

his review of organizational climate measurement instruments, Sirotnik found 60% of the instruments used total analysis in the psychometric phase of development but employed a between-group analysis for field application of the instrument. Used in this manner, total-analysis construction confounded between and within effects as well as confounding person and group variances. In conclusion, Sirotnik indicated that the appropriate unit of analysis for the construction of an organizational climate instrument is the group, not the individual.

Conceptual Framework for Middle-Level Climate

A review of the organizational climate literature revealed a pattern of relationships of recurring components throughout the many disciplines studying the effects of organizational climate. The seven dimensions identified for operationalization in this research study are outlined below. Following their introduction, each dimension is, in turn, identified and defined.

Dimension I: Principal(s) efforts to control the internal functioning of their school through the coordination of work. This dimension describes actions by the principal(s) that are interpreted by the faculty as controlling and authoritarian in nature.

Dimension II: Interactions between the building principal(s) and the instructional staff that serve to create a climate that is perceived to be a cooperative working environment by the faculty.

Dimension III: Interactions between the teachers and their students that indicate the degree of control exerted over the

student population. This dimension measures the faculty's perception of the level of control needed to maintain an educationally conducive climate.

Dimension IV: The faculty's force of motivation toward their school's academic orientation to student achievement. This dimension was measured through the faculty's perception of expectancy, instrumentality, and valence as rewards for their collective efforts.

Dimension V: The faculty's perceptions of their colleagues' attitudes toward their professional relationships. This dimension reflects the staff's interpretations of the professional attitudes and actions of their peers.

Dimension VI: Teachers' close social relationships among faculty members. This dimension reflects the teachers' perception of personal social interactions among staff members.

Dimension VII: The physical and material aspects of an organization as perceived by the faculty.

Dimension I

Over the past 20 years, it has become common in educational and organizational literature to describe school systems as loosely coupled, weakly controlled organizations (Bidwell, 1966; Meyer & Rowan, 1978; Tyler, 1985; Weick, 1966). Many researchers have attempted to define and explain the internal functioning of educational institutions and collectively have suggested that managers coordinate the school's symbolic environment instead of the

technical core (Bidwell, 1966; Burlingame, 1981; Meyer & Rowan, 1978; Weick, 1966). Teacher-preparation programs provide a similar curriculum core that serves to promote common professional norms. Strengthened by common socialization experiences of the instructional staff, administrators promote key values and themes that serve to define the building organizational environment but leave the technical activities of classroom teaching to the judgment of individual teachers.

In the exploration of coupling and control in educational organizations, Gamoran and Dreeben (1986) reported that coupling in educational institutions was accomplished through the coordination of work. Even though administration has an acknowledged effect on technical work through the regulation of resource flow, the coordination of activity is accomplished through important internal linkages that enable teachers to perform their tasks. These routine linkages work to create common experiences and expectations that form the internal environment of the individual work place.

Principals' efforts to control the internal functioning of their school through the coordination of work are hypothesized to be one dimension present in the organizational climate of a middle school building.

Dimension II

In The Human Side of Enterprise, McGregor (1960) developed what he called the "managerial climate," defined in terms of the manifestations of the assumptions of management.

> The day-by-day behavior of the immediate superior and of other significant people in the managerial organization communicates something about their assumptions concerning management which is of fundamental significance. Many behavioral manifestations of managerial attitude create what is often referred to as the psychological climate of the relationship. (pp. 133-134)

The relationship between administrators and teachers can influence a school's climate for achievement. Isolation of teachers and the absence of collegiality can be detrimental, while rapport with and a positive perception of the principal as leader can improve climate and subsequent student achievement (Bell, 1979; Breckenridge, 1976; Ellett & Wallberg, 1979). Anderson (1982) and Feldvebel (1964) supported these findings and suggested that teachers' perceptions of the principal as hindering them in their work (burdening them with unnecessary jobs) are correlated significantly with lower student achievement. Feldvebel and Anderson, who cited numerous dissertation studies using the OCDQ, all reported a significant relationship between teacher perception of principal consideration and student achievement.

Staff participation and leadership in decision making appear as important social system variables in the educational literature. Ellett and Wallberg (1979) found a significant relationship between staff participation and student achievement in a study of teacher and student perceptions of school climate. Group decision making was related to achievement by Rutter, Maughan, Mortimore, Ouston, and Smith (1979) and to coherence in Wynne's (1980) observational research in the schools. Similarly, in a Phi Delta Kappa (1980) study, it was discovered that there was a consistent pattern of

staff involvement in decision making in high-achieving elementary schools, along with high consideration given to teachers by the administration.

Good communication, coupled with an atmosphere of trust and mutual respect, is closely related to staff participation and leadership. Writing about the effects of collective bargaining on climate, Vyskocil and Goens (1979) argued that qualities of trust, respect, and care were necessary for a positive climate. In his extensive study of the nation's schools, Silberman (1970) related qualities of trust and caring to student achievement as well.

The interactions between the building principal(s) and the teaching staff that serve to create a supportive working environment were hypothesized to be a measurable dimension in middle-level organizational climate.

Dimension III

Willower et al. (1967) found control to be one of the internal linkages present in service organizations. Public schools, along with prisons and mental hospitals, fall into a category where the organization has no control over client selection and clients have no choice concerning their participation. Control, then, is seen as a central element in the internal linkages of public schools and implies a requirement for and restraints on behavior. Two levels of control have been found to be internal linkages in any school environment: (a) administration as managers of teachers and (b) management of teachers over students. In Dimensions I and II, the

administrator was described as a manager of teachers. Teachers as managers of their students is the concept to be discussed in Dimension III.

Student management is insured through a system of rewards, penalties, or sanctions. Sanctions may be primarily punitive, using devices such as coercion, ridicule, and the withholding of rewards. Or they may be nonpunitive, based on the understanding, emphasizing appeal to the individual's sense of right and wrong and self-discipline rather than imposed external discipline.

As organizational climate literature has evolved, findings have supported the hypothesis that the internal linkage of teacher interactions with students is an important dimension in school climate. Willower et al. (1967) adopted a complex topography for the measurement of student control that used a continuum ranging from "custodialism" at one extreme to "humanism" at the other end. The prototype for the custodial orientation describes an educator who perceives students as irresponsible and undisciplined persons who must be controlled through punitive measures. Consistent with McGregor's (1960) Theory X, teachers holding a custodial orientation view the school organization as an autocratic institution in which students are expected to accept the decisions of teachers without question and relationships with students are maintained on an impersonal basis.

The Theory Y prototype conceives of the school as an educational community in which members learn through participatory

activity rather than the passive absorption of facts. The humanistic teacher believes that through personal relationships and the positive aspects of friendship and respect, students will develop self-disciplining behavior.

Willower et al. (1967) determined that pupil control problems were found to play a major part in teacher-teacher and teacher-administrator relationships. Pupil control was found to be important in both the structural and the normative aspects of the school culture.

In each of the schools that participated in the OCDQ-RS study (Kottkamp et al., 1987), one of three instruments was completed by a different randomly selected group of teachers. Data regarding organizational climate, pupil control ideology (Willower et al., 1967), and expectancy motivation (Miskel, 1982) were collected on separate survey instruments.

The 20-item Pupil Control Ideology (PCI) form developed by Willower et al. (1967) was administered to ascertain a measure of the pupil control orientation of the staff of each school. Willower et al. reported the reliability and validity of the PCI form and concluded that the instrument was relatively reliable and valid. In their work, application of the Spearman-Brown formula yielded corrected reliability coefficients ranging from .91 to .95. Mulhern (1984) used the school mean PCI score as a measure of pupil control orientation in each school and found the alpha reliability coefficient for the PCI form to be .77.

In addition to Halpin's eight OCDQ subtests, 15 items from the PCI form (Willower et al., 1967) were modified to reflect teacher behavior and were then included as a subtest in the preliminary form of the OCDQ-RS.

Factor analysis and reliability studies led Kottkamp et al. (1987) to the formation of a subtest for teacher engagement behavior that was composed of items from both the initial Esprit and Pupil Control Behavior subtests. The five Pupil Control Behavior items that converged with original Esprit items to form the Teacher Engagement Behavior subtest were used as a measure of pupil control behavior. Kottkamp et al. hypothesized that the perceptions of a school's faculty regarding the pupil control behavior of teachers are a dependable index of the "real" behavior and that the pupil control ideology of teachers will reflect how teachers behave with regard to pupil control. Mean pupil control ideology (PCI) scores that were obtained from the random sampling yielded a correlation coefficient of .44 with mean pupil control behavior (PCB) scores and indicated that the more humanistic the pupil control ideology of teachers in secondary schools, the more humanistic the pupil control behavior of those teachers.

Mulhern (1984) reported alpha reliability coefficients of .74 and .64 for the PCB measure in the two subsets of their sample population and admitted that more work is needed to refine this measure. He reported that the instrument used to gather information regarding pupil control ideology was designed to elicit individual personal perceptions, whereas the instrument used to describe pupil

control behavior was designed to assess perceptions of the behavior of the group. This individual versus group inconsistency is likely to have obscured the correlational test applied to the data. Kottkamp et al. (1987) further suggested that additional items be written and perhaps combined with the five items they used in the OCDQ-RS to explore further the concept of teacher-student control linkages.

Dimension IV

Expectancy has long been incorporated into cognitive approaches to motivation and can be used to explain the emergence of both teacher and student behavior (Litwin & Stringer, 1968). Vroom (1964) developed the first explicit formulation of expectancy theory applied to organizational behavior. Although variations on the model exist, most conceptualizations employ the concepts of expectancy, valence, and instrumentality.

Expectancy refers to the subjective probability between behavior and performance levels. Expectancy is high if an educator believes that high effort will yield outcomes such as high student achievement and positive attitudes. **Valence** refers to the attractiveness or desirability of a reward for an individual. Academic achievement and positive attitudes of students hold high valences for most teachers. **Instrumentality** refers to the perceived probability that a reward with a valence will be coming, after a given level of performance. If teachers think that high student

achievement and positive attitudes in their classrooms are likely to result in their being rewarded, instrumentality is high.

Teacher expectation for student academic performance is gaining support as an influential factor in the motivation of academic achievement levels. The work of Rosenthal and Jacobson (1968) supporting the positive relationship between teacher expectations and student achievement was given much early attention and later considerable criticism regarding their methodology and theoretical foundation. Since that time, expectancy effects on student performance have been found to be significant in a number of studies (Brookover et al., 1977; Brookover & Lezotte, 1979; Cooper, 1979; Meichenbaum, Bowers, & Ross, 1969; Rothbart, Dalfen, & Barrett, 1971; Schneider, Glasheen, & Hadley, 1979). Researchers in several studies have found a relationship between high expectations and high achievement, which is a stronger relationship than that which exists for race or socioeconomic status and achievement (Brookover et al., 1979; Brookover & Lezotte, 1979; Schneider et al., 1979; Weber, 1971). High expectations of administrators for staff also are related to student outcomes (Brookover et al., 1979; Brookover & Lezotte, 1979; Edmonds, 1979; Phi Delta Kappa, 1980). An academic emphasis usually accompanies high expectations for student achievement and is related to student performance and to student aspirations (Brookover et al., 1978; Brookover & Lezotte, 1979; Edmonds, 1979; Weber, 1971).

Anderson (1982) reported that the level of expectation teachers and administrators hold for each other and especially for students

is the attitude most frequently associated with climate and student outcomes. Anderson's review of the literature included the observation that the staff in high-achieving schools consistently "manifest attitudes of confidence that students will be able to succeed academically" (p. 403). Teacher commitment to improve students' academic performance has been established as a significant variable in school climate, as measured usually by student perception that teachers care (Brookover et al., 1979; Brookover & Lezotte, 1979; Phi Delta Kappa, 1980). These studies and others (Maxwell, 1967) also have related the expectancy motivation variable to student achievement.

Based on a cognitive approach to motivation, Miskel (1982) found a high correlation between expectancy climate and his school-effectiveness criteria. The aggregate expectancy motivation of faculty members of a particular school was used to characterize the academic orientation of that school.

The Miskel motivation and reward instrument requires that subjects respond to valence items in terms of "importance of reward" and instrumentality items in terms of "likelihood of getting reward" on a five-point Likert scale ranging from "very unlikely" to "very likely." The expectancy measure is also on a five-point scale ranging from "strongly agree" to "strongly disagree." The focus of the expectancy measure emphasizes student achievement as an indicator of attainment of educational goals. Miskel, Bloom, and McDonald (1982) completed a review of their instrument in terms of

content, construct, convergent, and predictive validity, as well as internal consistency and test-retest reliability. In their study, Miskel et al. found the alpha coefficients for reliability to be .79 for the valence scale, .83 for the instrumentality scale, and .71 for the expectancy scale.

Kottkamp et al. (1987) attempted to investigate the relationship between the openness of school climate and expectancy motivation. The random assignment of Miskel's (1982) expectancy motivation scale to one-third of the surveyed building staff yielded evidence that schools with supportive principals and with engaged teachers who were not frustrated tended to have teachers with generally more positive expectations regarding the value of teacher initiative and hard work. The high level of satisfaction from reaching task objectives that is characteristic of the open climate apparently has considerable valence value to teachers, and the optimistic outlook toward work sustained by engaged teachers is likely to be reflected in the belief that most students can learn and that hard work on the part of the teacher will facilitate that learning.

In their study, Kottkamp et al. (1987) found the alpha coefficients to be .75 for the valence scale, .83 for the instrumentality scale, and .73 for the expectancy scale. From their research, Mulhern (1984) reported that mean pupil control ideology scores correlated significantly and in a positive direction with mean pupil control behavior scores: $r = .44$, $p < .01$. They also concluded that mean pupil control ideology scores correlated

significantly and in a positive direction with mean expectancy motivation scores: $r = .40$, $p < .01$.

The researchers cautioned about interpretation of their data due to the confounding of the unit of measurement used in their climate instrument (perceptions of the behavior of the group) and expectancy motivation (aggregate individual perceptions). Even within the limitations cited, the milieu dimension of group expectancy motivation appears to warrant inclusion as a dimension of climate in middle-level schools.

Dimension V

Tagiuri's (1968) milieu factor, which is concerned with patterned relationships of persons and groups, includes several teacher-teacher relationship dimensions. A group characteristic found to be present in both the OCDQ and the OCDQ-RS was teacher morale. Ellet and Walberg (1979) reported that teacher attitude toward work correlated with school climate as perceived by elementary students. They also reported a significant relationship between teacher morale and both attendance and achievement for elementary and secondary students. Using interviews in addition to questionnaires, Brookover and Lezotte (1979) noted the same relationship in eight elementary schools.

In the OCDQ, Halpin and Croft (1962) defined the dimension of Esprit. This subtest included statements that described teacher morale as teachers feeling that their social needs are being satisfied, while at the same time enjoying a sense of accomplishment

in their job. In the OCDQ-RS, Kottkamp et al. (1987) defined two dimensions that reflected teacher-teacher professional relationships. Teacher Engagement Behavior described teachers who are enthusiastic and have a positive attitude toward work, and Teacher Frustration Behavior described teachers who are hostile toward each other.

Indeed, teacher morale has shown a consistent association with school climate, in that teachers who express satisfaction with school tend to perceive the school climate as being more positive (Kalis, 1980). Many researchers also have reported a relationship between teacher morale and student attendance and achievement (Brookover & Lezotte, 1979). Teachers' perceptions of their colleagues' attitudes toward their professional relationships are hypothesized to be a measurable dimension of middle-level organizational climate.

Dimension VI

Another dimension suggested as an important climate variable is teachers' social relationships with other teachers. Rutter et al. (1979) and a Phi Delta Kappa (1980) study indicated that in exemplary schools, teacher-teacher cooperation and concern were high. Wynne (1980) found that a positive school climate was associated with the amount of socialization among faculty.

In the second-order factor analysis of climate subtests, Halpin and Croft (1962) found the dimension of Intimacy (teachers' social relationships) loaded primarily on the factor of Social Needs and

had a loading close to zero on the factor of Social Control. This pattern led Halpin and Croft to conclude that Intimacy was a relatively "pure" measure of behavior, which was oriented to social needs.

Following the work of Halpin and Croft (1962), Kottkamp et al. (1987) completed a second-order factor analysis of their five climate subtests and found two distinct factors. The first factor seemed to assess the relative satisfaction of staff regarding both task achievement and social needs and included the four subtests of Principal Support Behavior, Principal Control Behavior, Teacher Engagement Behavior, and Teacher Frustration Behavior. The second factor appeared to address only staff interactions associated with social need satisfaction and included only the single subtest for Teacher Intimacy Behavior.

Even though evidence has suggested that the degree to which teachers socialize on a personal level really does not seem to affect their work relationships or professional attitudes consistently, personal friendliness among teachers has been found to be an independent but consistent subtest in elementary and secondary school climates and should be included in the measurement of middle-level organizational climate.

Dimension VII

Tagiuri's (1968) fourth taxonomy dimension of ecology describes the physical and material aspects of an organization. Anderson (1982) reported that most ecology variables have shown low or

inconsistent relationships with student outcomes. No relationship has been documented between the age of a building and student outcomes, although Rutter et al. (1979) and a Phi Delta Kappa (1980) study of eight high-achieving schools both reported that the decoration and care of the school and classrooms were associated with higher student achievement. In a comparison study of inner-city academically successful versus unsuccessful schools, Weber (1971) concluded that the successful schools had eight factors in common that were not usually present in unsuccessful inner-city schools, including "a safe and orderly atmosphere" (p. 25).

Edmonds (1979) summarized effective schools research literature and defined those school variables over which a school has control and that may influence student achievement. Effective schools were found to have a blend of specific variables that can positively influence successful student performance, including "a school climate which is orderly without being rigid, quiet without being oppressive, and conducive to the instructional business at hand" (p. 17). Although schools differ, and therefore reflect climate factors in different ways, research has indicated that effective schools consistently include (a) quiet and clean physical appearance, (b) little evidence of vandalism, and (c) repairs to the physical plant showing evidence of being completed promptly, preserving a cared-for appearance (Roueche & Baker, 1986). The physical and material aspects of a middle-level organization were the seventh and final dimension identified for measurement in this study.

To operationalize these seven dimensions hypothesized to be present in the climate of middle-level organizations, it is necessary to develop a psychometrically defensible measurement instrument. Drawing from her review of the climate literature, Anderson (1982) identified the following critical issues regarding the difficulty of portraying organizational climate realistically: (a) climate as a reflection of organizational versus individual attributes, (b) the validity of perceptual versus objective climate measures, and (c) the distinction between perception and attitude. These issues were considered in the development of a climate instrument as it was designed to record individuals' attitudes toward their internal working environment.

Attitude Inventories

Individual members of an organization record their perceptions of the internal climate through written responses entered on an attitude inventory. Attitude, the final product of the socialization process, is believed to significantly influence an individual's responses to a situation, other persons, and groups of persons. If the attitude of a person toward a given object(s) is known, it can be used in conjunction with situational and other dispositional variables to predict and explain reactions of the person to that class of objects. To the extent that principles governing the change of attitudes are known, they may be used to manipulate the individual's reactions to relevant objects (Shaw & Wright, 1967). It is not surprising, then, that the study of

attitudes continues to occupy prominent importance in social psychology.

Social theorists have presented varying definitions of the term "attitude." Shaw and Wright (1967) synthesized a definition of attitude into the following statement:

> A relatively enduring system of evaluative, affective reactions based upon and reflecting the evaluative concepts or beliefs which have been learned about the characteristics of a social object or class of social objects. As an affective reaction, it is a covert or implicit response. It is a drive-producing response which elicits motives and thus gives rise to overt behavior. The evaluative reaction is based upon conception of the referent in terms of facilitation or inhibition of attainment of already-existing goals. Attitude scales measure only one dimension of the affective reactions: positivity-negativity. (p. 11)

An attitude is a characteristic that implies a type of relationship between the person and specific aspects of his/her environment. Attitudes differ from values, motives, opinions, habits, concepts, beliefs, and traits in that they possess an evaluative function. An attitude is a set of affective reactions toward an attitude object, derived from the beliefs that the individual has concerning the object. This motivates the individual to behave in a certain manner toward the attitude object. Although closely related to attitude, neither the propositions that the individual accepts about the objects/beliefs nor the action tendencies are a part of the attitude itself (Shaw & Wright, 1967). Attitudes have been found to (a) be learned responses, (b) be relatively stable, (c) have a specific referent, (d) vary in direction and intensity, and (e) possess varying degrees of definitiveness.

An attitude scale purports to measure the acceptance of evaluative statements about the attitude object. The attitude toward the object is inferred from the statements endorsed by the subject, based on the summary evaluation of the nature of the characteristics attributed to the object as measured on a positive/ negative scale.

The development of an instrument for the measurement of organizational climate in middle school settings through the individual responses gathered on an attitude inventory is detailed in Chapter III.

Organizational Climate Relative to Selected Independent Variables

The four independent variables of (a) average teacher age, (b) average years of teacher experience, (c) teacher gender composition, and (d) instructional organization were used to examine the differences in the organizational climate dimensions that were determined in this study. The age, years of experience, and gender of an individual are all personnel variables that often factor into district policy decisions. Research that identifies personnel factors that can explain differences in organizational climate would assist educational leaders in the discussion of issues related to district policy and procedure.

Middle-level schools organize their students into self-contained classrooms, departmentalized courses, interdepartmental teams, or a combination of these various instructional strategies.

Exploration of the relationships among the various organizational strategies and climate dimensions identified in this study would be of interest to educational leaders concerned with middle-level schools.

Teacher Age and Teacher Experience

Demographic studies have indicated that Michigan classroom teachers are an aging population group. In an analysis of future statewide enrollment and staffing demands, Ignatovich (1985) reported that an 18% decrease in student population from the 1978-1979 to 1983-84 academic years was paralleled by a 14.8% decline in teacher population. This five-year period of enrollment decline was brought about by weak economic conditions and has had a lasting effect on the profile of Michigan teachers. During this period, the median age of secondary classroom teachers increased from 35.3 to 40.2 years, with the percentage of teachers between the ages of 40 and 54 increasing from 28.5% to 42.8% of the total population. The decrease in teachers during this period can be realized in part by the retirement of 59% of those 55 years and over, the layoff or leaving of 15% of those under 29, and the leaving/layoff/retirement of 11% between the ages of 30 and 54.

Based on age-category survival rates, Ignatovich (1985) projected estimates for student enrollment and classroom teacher demands for the 1988-1989 school year. A continuing decline in student enrollment will parallel teacher attrition as the aging work force moves toward retirement. The 1988-1989 school year (the year

of this study) is projected as the beginning of a modest teacher replacement rate (3.0%) as teacher attrition exceeds the number of lost positions due primarily to a continued enrollment decline.

In her study on the relationship of personal teacher variables to the indicators of job-related stress, Gould (1985) found that younger teachers in comparison with older ones tended to hold perceptions indicating both a greater amount of emotional exhaustion and a higher degree of depersonalization but a stronger sense of personal accomplishment. The highest means on all six criteria for job-related stress occurred for either the 23- to 34-year-old or the 35- to 40-year-old group.

The relationship(s) between teacher age and teacher experience and the organizational climate factors found in this study might offer additional insight into the staffing policies of school districts as they address future personnel issues.

Teacher Gender

The teaching profession has traditionally been staffed by a majority percentage of women, although there is currently a modest increase in the number of men entering the profession (Nelson, 1985).

Sex-role socialization has been identified as a leading factor in the occupational selection of teaching by women. Teaching has been described as a "natural" career that allows the balance of family and home life. Miller (1986) suggested that being a teacher allows many women to transfer their socially internalized

expectations of themselves as nurturing females into their professional role.

The effects of the female-dominated classrooms have been evidenced by research on gender-related teacher differences in schools. Male students have been socialized to be more active, assertive, independent, and demanding of the teacher's time and attention. Brophy and Good (1974) speculated that high-achieving males assert themselves by dominating class discussions, answering questions without being recognized, and demanding recognition. Low-achieving males generally misbehave and challenge the teacher for attention by violating classroom rules and norms. Because the prior sex-role socialization of the female teacher is often incompatible with the socialization of the male student, the female teacher responds reactively by giving a disproportionate amount of quantitative and qualitative feedback to males (Irvine, 1985).

The effects of this dissimilar and often discordant sex-role socialization are evident in the research exploring teacher gender and the predictors of job stress (Litt & Turk, 1985). Perlin and Schooler (1978) reported that males were better able to use coping strategies to reduce the effect of work stressors. Gould (1985) indicated that female teachers in comparison with male teachers tended to register significantly lower perceptions of depersonalization and a higher degree of personal accomplishment on the job. In the same study, Gould found that both male and female teachers who furnished instruction at grades four to eight could be anticipated to demonstrate perceptions of slightly greater emotional exhaustion

and somewhat higher degrees of depersonalization than those teachers providing instruction at the lower grade levels.

The exploration of the relationship(s) between teacher gender and the climate factors identified in this study might provide additional insight for educational leaders involved with personnel issues.

Instructional Organization

The Commission on the Reorganization of Secondary Education in 1918 specifically recommended "junior and senior periods" of secondary education. Junior high schools were designated as a bridge from the self-contained classrooms of the elementary school to the departmentalized structuring of the senior high school. Indeed, the establishment of the middle school was an attempt to create a richer curriculum than the elementary school can offer and a more personal atmosphere than the high school is able to develop (Alexander, 1988).

In response to these two major philosophical goals underlying the middle school concept, the use of interdisciplinary teams as an instructional organization strategy has evolved. The interdisciplinary team is a group of two to four teachers who work cooperatively with an identified group of students for all basic curricular instruction. This design allows the staff to use the subject matter within and across subject lines and to focus on some other organizing center such as personal and social concerns. Understanding the unique developmental needs of middle school students, the

interdisciplinary team design connects the curricular content to the social and emotional needs of the students. The team of teachers can facilitate a guidance and counseling support network with the "family" of students they cooperatively instruct (Batezel, 1973; Lawhead, 1973; Levy, 1988).

This cooperative networking of teachers also provides a peer support group and addresses the professional isolation so often identified by teachers. Isolation is a structural component of both the elementary self-contained and secondary departmentalized curricular organization and has been identified as a source of individual teacher frustration and negative building climate (Gould, 1988; Jordell, 1987).

Numerous studies of exemplary middle schools identified buildings where faculty and curricular schedules were organized into interdisciplinary teams (Alexander, 1988; Alexander & George, 1981; Valentine, 1984). In addition, interdepartmental teaming has been identified as a significant factor in determining an effective middle school program (Romano et al., 1973). An exploration of the difference among the instructional organizations of a school and the dimensions of organizational climate would be of interest of instructional leaders concerned with curricular and staffing decisions relative to middle-level schools.

Chapter Summary

The concept of organizational climate has been an area of concern for research in numerous settings. The evolution of

organizational climate and the major measurement instruments developed for use in elementary and secondary school settings were discussed in this chapter. Drawing from a discussion of the related literature, seven dimensions were defined and described to operationalize the construct of organizational climate in middle-level school settings.

Teacher age, years of teacher experience, teacher gender, and instructional organization were discussed as independent variables that have a potential effect on policy and procedure issues of importance to educational leaders. These variables and their relationship to middle-level organizational climate were addressed in this study.

The recording of climate perceptions through a written response on an attitude inventory was discussed as the methodology of collecting the data that were used in this study. The development of this measurement instrument, determination of the population sample, and collection of the data are discussed in Chapter III.

CHAPTER III

METHODOLOGY

Instrument Development

As developed from the related literature in Chapter II, seven dimensions were identified and hypothesized to represent the organizational climate of middle-level schools. The following descriptions define the seven constructs and served as the structure for the selection of items to represent the various dimensions.

Dimension I: Principal(s) efforts to control the internal functioning of their school through the coordination of work. This dimension describes actions by the principal(s) that are interpreted by the faculty as controlling and authoritarian in nature.

Dimension II: Interactions between the building principal(s) and the instructional staff that serve to create a climate that is perceived to be a cooperative working environment by the faculty.

Dimension III: Interactions between the teachers and their students that indicate the degree of control exerted over the student population. This dimension measures the faculty's perception of the level of control needed to maintain an educationally conducive climate.

Dimension IV: The faculty's force of motivation toward their school's academic orientation to student achievement. This

dimension was measured through the faculty's perception of expectancy, instrumentality, and valence as rewards for their collective efforts.

Dimension V: The faculty's perceptions of their colleagues' attitudes toward their professional relationships. This dimension reflects the staff's interpretations of the professional attitudes and actions of their peers.

Dimension VI: Teachers' close social relationships among faculty members. This dimension reflects the teachers' perception of personal social interactions among staff members.

Dimension VII: The physical and material aspects of an organization as perceived by the faculty.

Field Test of Preliminary Instrument

Survey items were generated to represent the various dimensions of middle-level organizational climate as described by the definitions above. Numerous items were selected and modified from the measurement instruments of Kottkamp et al. (1987), Willower et al. (1967), and Miskel (1982) to represent the hypothesized dimensions. Additional items not contained in the measurement instruments cited above were created primarily from a review of effective schools research.

Effective schools have been found to have a blend of specific variables believed to positively influence student behavior, including strong leadership; high expectations for all students; an orderly, relatively quiet, and pleasant atmosphere; and a strong

emphasis on the mastery and measurement of reading skills (Edmonds, 1979). Original items generated from this broad body of literature were used to (a) augment dimensions identified both in this study and by the researchers listed above and (b) represent the new organizational climate dimensions identified for measurement in this study.

In summary, 75 items were compiled to represent the seven dimensions hypothesized to operationalize the organizational climate of middle-level schools. The following names and summary descriptions were assigned to the dimensions, based on a review of the content of the items included in each respective dimension.

Dimension I: Organizational Structural Linkages. Principals' efforts to control the internal functioning of their school through the coordination of work.

Dimension II: Managerial Control--Administration/Teachers. Interactions between the building principal(s) and the teaching staff that serve to create the working environment.

Dimension III: Managerial Control--Teacher/Students. Interactions between the teachers and their students that indicate the degree of control exerted over the student population.

Dimension IV: Physical Building Environment. Physical indications of an orderly environment conducive to the educational process.

Dimension V: Expectancy and Motivation. Faculty's force of motivation toward their school's academic orientation of student achievement.

Dimension VI: Teacher Professional Behaviors. Teachers' perceptions of their colleagues' attitudes toward their professional relationships.

Dimension VII: Teacher Social Needs. Teachers' socializing on a personal level, which is not necessarily associated with task accomplishment.

An independent panel of judges (Appendix B) was asked to participate in the field testing of the middle-level climate survey instrument by reviewing this initial list of 75 proposed items. Judges were recommended from their active participation in the Michigan Association of Middle School Educators (MAMSE) (Appendix C) and selected based on their interest, expertise, and experience working with middle-level schools.

Each judge received a copy of the survey items, sorted into the seven respective dimensions. However, to reduce the possibility of response bias, the original source of the items was not disclosed. The judges were asked to analyze each individual item following the format below:

1. Evaluate whether the item represents the variable category as described.

2. Evaluate whether the item reflects an important aspect of middle-level schools.

3. Evaluate whether the item is clear and concise in its wording.

4. Indicate any further questions and/or areas that should be included in an inventory of middle-level organizational climate.

Of the total panel of judges, 59% chose to respond to the item analysis and assist in the content validity of the climate items. As a result of the field testing, the following decisions were made to assist in the content and clarity of the middle-level organizational climate instrument.

It was determined that any change in the wording of an item taken from a previous measurement instrument could, in some unmeasurable way, be violating the item's original intention. Consequently, all items from other authors were returned to their original wording.

Both selected items from previous instruments and original items had been chosen for use in the preliminary form of the climate instrument. Item revision was considered if 40% or more of the judges identified an item for review. Following this criterion, several of the original items were reworded and three additional items were created as a result of the field testing. Relative to the selected items from previous instruments, the decision was made that research instruments must be used in their entirety to maintain their theoretical and statistical integrity. This decision necessarily added items to the survey instrument, but the potential psychometric trade-offs were believed to outweigh the negative possibilities associated with such a lengthy measurement instrument.

Middle-Level Climate Survey--Initial Form

Working from the revisions cited above, the Middle-Level Climate Survey--Initial Form was developed. All original items from

the Rutgers Secondary School Climate Inventory-Final Form (Mulhern, 1984), Pupil Control Ideology Form (Willower et al., 1967), and Expectancy Motivation Scale (Miskel, 1982) were used in the development of the initial form of the middle-level climate instrument. In summary, all 33 items from the OCDQ-RS, including 13 items that are common to both the OCDQ-RS and the OCDQ, along with all 20 statements from the Pupil Control Ideology Form and all 15 items from the Expectancy Motivation Scale were incorporated into this instrument. Permission to use items from the above instruments was granted by each of their respective authors (Appendix D).

To maintain the psychometric integrity of the original instruments, the survey items were used in their basic original form. However, pronouns were changed to reference the group rather than the individual perception, gender biases were eliminated, and "principal" was expanded to include all building principals. Items from the PCI (Willower et al., 1967) were modified to reflect perceptions of behavior rather than ideology, and statements from the Expectancy Motivation Scale (Miskel, 1982) were restated to reflect a group reference rather than an individual perception. To reduce the potential of response patterns, attempts were made to vary the response set with intermittent negative qualifiers.

For example, the following was an original Expectancy Motivation Scale item:

Having positive relationships with students.

This item was modified into the following statement:

It is NOT important that our staff has positive relationships with students.

The modification represented an attempt to state the item as a group reference with a negative modifier while maintaining the integrity of the original statement.

In addition to the 68 items from the previous research instruments, 34 survey items were generated from both a review of the effective schools literature discussed previously and feedback from the panel of judges. One item originally from the OCDQ-RS was inadvertently listed twice. In total, 103 items were assembled to create the climate instrument administered to the teachers and principals of schools participating in this study. This climate instrument is referred to as the Middle School Organizational Climate Survey-Initial Form (MSOCS-IF) and can be reviewed in Appendix E.

The instrument consisted of brief statements describing situations and events that, at times, may occur in middle-level schools. Faculty members were asked to indicate on a Likert-type scale "the response that most nearly reflects your personal opinion of YOUR SCHOOL." Each respondent was asked to "mark your best response to EVERY statement" using the following scale:

Rarely Occurs
Sometimes Occurs
Often Occurs
Very Often Occurs

The survey instrument was produced at Michigan State University with the cooperation of the Computer Laboratory and the University Printing Office. It was determined that a survey instrument with

the items and corresponding Likert scale contained on one form would facilitate both data collection and the scoring of data.

Before this survey instrument was distributed, application was made to the Michigan State University Committee on Research Involving Human Subjects. The committee reviewed the research protocol and granted approval as the rights and welfare of human subjects appeared to be protected (Appendix F).

Sampling Procedures

The population identified for this study was the public schools in Michigan that serve students between the ages of 10 and 14. The sampling frame used in this project was the 1989 Michigan Education Directory, which lists all K-12 public and private educational institutions in Michigan. Each of the 606 educational institutions identified as a public middle-level school was assigned a three-digit reference number. A cross-sectional research design was used to select 130 sampling units from a random numbers table. Evaluation of the return response rate indicated the necessity to increase the sample size. A second random selection resulted in an additional 105 schools. In all, 235 Michigan middle-level schools were selected to participate in this study.

The middle-level schools were chosen through a cluster sampling survey design with individual teachers and building administrators as the target sampling element.

Data Collection

The district superintendents from 235 randomly chosen middle-level schools were sent a cover letter from the Executive Director of the Michigan Association of School Administrators and a letter of transmittal, which explained the purpose of the study (Appendix G). A copy of the survey instrument was included for the superintendents' review (Appendix H), and a return post card was included, asking for the superintendents' response as indicated below:

____ Yes, you may send further information to the building principal seeking his/her willingness to participate in this study.

____ Please send me a copy of the results of this study.

____ Please call me to answer further questions I have regarding this study.

____ No, our middle school will not participate in this study for the following reason: _____

Superintendents who did not respond within ten days were sent a follow-up letter of transmittal (Appendix I) along with another copy of the survey instrument and return post card. Nonresponse after another ten days resulted in a follow-up telephone call to the superintendent.

Of the total sample, 82% of the superintendents or their designees responded with a written or verbal communication. Reasons most often cited for nonparticipation included (a) time constraints of the faculty to other commitments and (b) similarity of the study to the school-improvement program in which many buildings were currently engaged.

Following authorization to contact the district middle school, the researcher sent the building principal a packet including a cover letter from the Executive Director and Assistant Director for Middle Level of the Michigan Association of Secondary School Principals, a letter of transmittal, and a copy of the survey instrument (Appendix J). Principals were given five working days to contact the researcher with questions or to decline participation in the study. If no contact was made, a package of materials was mailed to the school. This packet included:

1. Directions for administering the survey instrument.

2. Cover letter, survey, and post card requesting research results for each teacher and principal.

3. Addressed/stamped return envelope for teacher responses.

4. Cover letter, survey form, and separate return envelope for building principal(s) (Appendix K).

Procedures for administering the survey instrument were standardized to reduce the possibility of invalid responses. The primary approach for survey completion was to distribute and collect all teacher instruments at a faculty meeting. Principals were asked to be absent from the room while the teachers completed and collected their surveys. In several cases, survey instruments were handed out at faculty meetings and collected by a staff member over a period of approximately one week.

No attempt was made to verify the percentage of building staff members who did not participate in the study, e.g., those who were absent from school or had extracurricular obligations. In total,

1,749 middle-level faculty members chose to participate in this study.

Schools whose completed packet was not returned within a reasonable length of time were sent a reminder post card (Appendix L).

Sample Returns

Of the 235 middle-level schools randomly selected for this research project, 39.6% participated in this study, yielding 1,749 sampling units. Although the sample was randomly drawn from the Michigan population, participation in this research study was voluntary; therefore, the pool of respondents must be defined. The degree to which one may generalize the results of this study back to the population must be qualified through a comparison analysis of the participants and nonparticipants in the random sample. Two hundred thirty-five sampling units were selected for this study. However, four units were removed from the final sample because they had been incorrectly identified as middle-level schools in the sampling frame.

The following demographic factors were used in the definition and comparison of the participants and nonparticipants from the random sample: (a) school building membership, (b) professional instructional staff membership, (c) teacher/pupil ratio, (d) State Equalized Valuation per state aid member, (e) community type (where the middle-level school is located), (f) median household income, and (g) student achievement: math scores, reading scores, and science scores.

A t-test analysis of the data indicated with 95% confidence that there was no statistically significant difference between the school membership size of sample schools that participated in this study and those schools that did not participate (see Table 3.1).

Table 3.1.--School building membership.[a]

Building Membership	N	Mean	S.D.	Std. Error
Sample participant	92	495.370	235.761	24.580
Nonparticipant	139	530.453	240.807	20.425
		t-Value	df	
Pooled variance estimate		-1.09	229	

[a]The number of pupils legally enrolled in the school district building at the close of school on the fourth Friday following Labor Day of the school year. The count includes prorated portions of instructional time spent by private school pupils in the public school district (Michigan Department of Education, 1989b).

A t-test analysis of the data indicated with 95% accuracy that there was no statistically significant difference between the number of teachers assigned to a middle-level building of sample schools that participated in this study and those sample schools that did not participate (see Table 3.2).

A t-test analysis of the data indicated with 95% confidence that there was no statistically significant difference between the teacher/student ratio of sample schools that participated in this study and those sample schools that did not participate (see Table 3.3).

Table 3.2.--Professional instructional staff membership.[a]

Professional Staff Membership	N	Mean	S.D.	Std. Error
Sample participant	92	34.380	16.088	1.677
Nonparticipant	139	35.950	14.595	1.238
		t-Value	df	
Pooled variance estimate		-0.77	229	

[a]The number of professional staff assigned to the middle-level building (Michigan Department of Education, 1989b).

Table 3.3.--Teacher/student ratio.[a]

Teacher/Student Ratio	N	Mean	S.D.	Std. Error
Sample participant	92	14.639	2.940	0.306
Nonparticipant	139	14.714	2.833	0.240
		t-Value	df	
Pooled variance estimate		-0.19	229	

[a]Average number of students per teacher in each middle-level school. This number was computed for each building from data generated from the racial/ethnic census by building (Michigan State Department of Education, 1989b).

A t-test analysis of the data indicated with 95% confidence that there was no statistically significant difference between the State Equalized Valuation of sample participants and nonparticipants (see Table 3.4).

Table 3.4.--State Equalized Valuation (SEV) per state aid member.[a]

SEV	N	Mean	S.D.	Std. Error
Sample participant	92	77359.391	51682.121	5388.234
Nonparticipant	139	68961.216	48232.186	4091.001
		t-Value	df	
Pooled variance estimate		1.26	229	

[a]The SEV figure represents a calculation made by dividing the taxable value of real estate and personal property (assessed value as finally equalized by the State Tax Commission) in the district by the number of pupils legally enrolled at the close of school on the fourth Friday following Labor Day of the school year (Michigan Department of Education, 1987).

Sample frequency and participant frequency of schools in each community type (where the middle-level school is located) are shown in Table 3.5. The community types are defined as follows (State of Michigan, 1988-1989):

Type I: Metropolitan Core--One or more adjacent cities with a population of 50,000 or more that serve as the economic focal point of their environs.

Type II: City--Community of 10,000 to 50,000 that serves as the economic focal point of its environs.

Type III: Town--community of 2,500 to 10,000 that serves as the economic focal point of its environs.

Type IV: Urban Fringe--A community of any population size that has as its economic focal point a metropolitan core or a city.

Type V: Rural Community--A community of less than 2,500.

Table 3.5.--Community type.

Community Type[a]	Sample Frequency	Participant Frequency
I	21.2%	18.4%
II	6.1%	35.7%
III	15.6%	44.4%
IV	29.0%	50.7%
V	28.1%	43.1%

Source: Michigan Department of Education, 1989c.

The chi-square distribution chart (Table 3.6) indicated with 95% confidence that there was no statistically significant difference in the distribution of the five community types of the sample and the distribution of the community types of schools that participated in this study.

Table 3.6.--Chi-square distribution by community type.

Comm. Type	Sample Number	Observed Freq.	Expected Freq.	Diff. (O-E)	Square Diff.	$(O-E)^2/E$
I	49	9	19.50	-10.50	110.25	5.650
II	14	5	5.61	- 0.61	0.37	0.066
III	36	16	14.35	1.65	2.72	0.189
IV	67	34	26.68	7.32	53.58	2.008
V	65	28	25.85	2.15	4.62	0.178
Total	231	92			X^2 =	8.091

Source: State of Michigan, 1984.

A t-test analysis of the data indicated with 95% confidence that there was no statistically significant difference between the

median household income of sample participants and nonparticipants (see Table 3.7).

Table 3.7.--Median household income.[a]

Median Income	N	Mean	S.D.	Std. Error
Sample participant	92	20029.565	5664.834	590.600
Nonparticipant	139	18749.295	5741.806	487.014
		t-Value	df	
Pooled variance estimate		1.67	229	

[a]Based on the 1979 reported income for all persons 14 or older. Household income includes the income of everyone in the household (State of Michigan, 1984).

T-tests were performed to discover whether there were statistically significant differences in seventh-grade Michigan Educational Assessment Program (MEAP) scores between sample schools that participated in the study and those that did not participate. The MEAP contains objective-referenced sets of items measuring selected essential performance objectives in the subject areas of math, reading, and science. In this research project, MEAP scores are reported from Category 4, which includes those students who passed more than three-quarters of the skills. Students attaining enough skills to be in Category 4 are considered to be doing acceptably well (Michigan Department of Education, 1989a).

The analysis indicated with 95% confidence that there was no statistically significant difference in MEAP math scores of sample

schools that participated in this study and those that did not participate (see Table 3.8). Likewise, no statistically significant difference was found in MEAP reading scores between sample schools that participated in the study and those that did not participate (see Table 3.9). However, a statistically significant difference was found in MEAP science scores between sample schools that participated in the study and those that did not participate (see Table 3.10).

Table 3.8.--MEAP math scores (Category 4).

MEAP Math Scores	N	Mean	S.D.	Std. Error
Sample participant	92	73.535	11.725	1.222
Nonparticipant	139	70.877	14.662	1.244
		t-Value	df	
Pooled variance estimate		1.46	229	

Source: Michigan Department of Education, 1989a.

Table 3.9.--MEAP reading scores (Category 4).

MEAP Reading Scores	N	Mean	S.D.	Std. Error
Sample participant	92	84.172	9.286	0.968
Nonparticipant	139	82.104	11.619	0.985
		t-Value	df	
Pooled variance estimate		1.43	229	

Source: Michigan Department of Education, 1989a.

Table 3.10.--MEAP science scores (Category 4).

MEAP Science Scores	N	Mean	S.D.	Std. Error
Sample participant	92	34.986	13.602	1.418
Nonparticipant	139	30.340	17.660	1.498
		t-Value	df	
Pooled variance estimate		2.14*	229	

Source: Michigan Department of Education, 1989a.

*Significant at alpha = .05.

Summary of Sample Returns

Even though a 39.8% sample participation in this study was a lower than ideal representation of the population, the preceding analysis of demographic factors indicated that there was no significant difference between the respondents and nonparticipants when comparing the demographic factors of school building membership, number of teaching staff per building, teacher/pupil ratio, State Equalized Valuation per state aid member, median household income, and MEAP math and reading student assessment scores.

A significant difference was found, however, in the MEAP science scores of pupils from participating and nonparticipating schools. This difference may be attributed to the fact that this was the first year schools were required to administer the MEAP science test. Many school science curricula were not in alignment with the state objectives, and consequently there was a wide variance in statewide scores. The science test therefore may be

more sensitive to school differences and might have been a weak standard of sample demographic differences.

Nine demographic variables were used to compare the respondents and nonparticipants in this study. The results from eight of the variables indicated that the respondents were representative of the sample drawn. Probability random sampling was used to select the sample from the population; consequently, the results of this study may be generalized to the population.

Treatment of Data

After participants completed the survey instruments, responses from each form were colored over with a scan-sensitive pencil to maximize scanning accuracy. Any survey instrument with more than ten omitted items or with obvious response sets was deleted from the data set. A computer program was written to record the survey responses as they were read by the scan machine. Copies of the survey form were printed at two different press times, and a technical printing error resulted in a shift of timing marks. Consequently, the surveys had to be hand-sorted into two separate runs, and a second computer program was written before the second batch of data could be recorded. Individual survey forms were manually compared to the computer tape of recorded data. Responses that were recorded incorrectly by the scan machine were individually corrected in the software data bank.

All analyses of the data were performed at the Michigan State University Computer Laboratory on the IBM 3090-180VF VM/HPO CMS

facility. The Statistical Package for the Social Sciences (SPSS-X) Release 3.0 was the software package used in all analysis procedures.

Maintaining unit-of-analysis consistency, survey items were stated to reflect group perceptions. Means were computed on the items across individuals within each group, and statistical procedures were used to verify school means. The correlation matrices for factor analysis were computed across groups using group means. Teachers within each school responded to group-referenced items so collectively, as a school unit, dimensions could be measured as a systemic versus person-focused measurement. The item means represented the central tendency of distributions of measures of a property of teachers. Consequently, measurements must be interpreted as an estimate of the magnitude of an attribute of the school, not an attribute of teachers in the school. In this manner, climate dimensions were being measured where the responses by persons within the group were solely a function of contextual constraints. Each measurement exists as one quantity indicating the magnitude of a single property of the group. Studying individuals as perceivers within schools would be an interesting but separate issue from the stated purpose of this study, which was to look at the differences between groups based on single measurements of a systemic property.

Sirotnik (1980) identified a potential statistical problem with the between-group analysis if the number of instrument items was greater than the number of participant groups. Indeed, in this

study, 103 items were included on the survey form and only 92 middle-level schools participated in this study. Any school with fewer than ten participants was dropped from the study if that number equated to a less than 60% building participation rate. Following that criterion, the data from four schools were dropped from this project.

A preliminary varimax rotational analysis was processed with the 103 items and the 88 participant schools. During the analysis, a warning was issued and all eigenvalues were computed to zero, beginning with the eighty-eighth factor.

Because of the lower than hoped for sample participation, it was necessary to reduce the item set from 103 to 88 items. Using the individual teacher as the unit of analysis, a varimax rotational factor analysis was processed. The program was set to record any items that loaded greater than .30. Of the total 103 items, 15 were chosen for deletion based on the following criteria:

1. Two items were duplicates (Items 16 and 26); Item 16 was deleted.

2. Nine original items drawn from the literature listed a factor loading less than .40. Because of their low loading and lack of prior psychometric validation, the following items were deleted from the item set: Items 31, 49, 64, 70, 76, 91, 94, 96, and 102.

3. To maintain the reliability of the three instruments used in this study, five items were deleted in the following manner: Four of the OCDQ (Halpin & Croft, 1962) and OCDQ-RS (Mulhern, 1984) items did not show a loading. All four of the items were from the

subtest Teacher Frustration. The last item (Item 3) was deleted. To maintain the integrity of the OCDQ-RS instrument, the item showing the lowest factor loading (.313) was deleted from the Teacher Engagement subtest (Item 28). Two items (Items 41 and 42) did not load and were deleted from the PCI scale (Willower, 1967). All of the Expectancy/Motivation Scale (Miskel, 1982) items loaded onto a factor; however, four items loaded below .40. Because it had the lowest loading (.310), Item 73 was deleted.

Following the rationale discussed above, the revised item set was reduced to 88 items and is listed in Appendix M. This reduced instrument, the Middle School Organizational Climate Survey-Revised Set (MSOCS-RS) was used for all analyses involving the school as the unit of analysis.

All further analyses in this study were computed using the 88-item instrument as modified above. It is recognized that having to reduce the original item set was a less than desirable situation. Still, given this analysis problem induced by less than desired returns, the deletion method was thought to be the least disruptive to the dimensions originally envisioned. It is hoped this discussion will assist future researchers as they consider the number of variables in their instrument in congruence with the number of schools that agree to participate in their research study.

Analysis Procedures for Research Questions

I. To determine both the number and qualities of dimensions present in the organizational climate of middle-level schools, the following analysis procedures were applied to the data set:

1. Field testing of the preliminary survey items by an independent panel of judges to assist in content validity.

2. Aggregation of data for each building by school and item means.

3. Factor analyses of all items using the unspecified N-factor criterion and also a range of specified N-factor criteria.

4. Alpha reliability analyses of items in various specified factor solutions.

5. Item deletion based on a systematic revision of factors consistent with the analytic procedures outlined above.

6. Factor analysis of the reduced item matrix using a specified factor criterion.

II. If through the statistical procedures outlined above the dimensions of organizational climate could be defined, second-order factor analysis in various specified factor solutions was used to determine and define the interrelatedness of the identified dimensions.

III. If through the statistical procedures outlined in Item I above the dimensions of organizational climate could be defined, the following analysis procedures were used to explore in what ways the independent variables of teacher age, teacher experience, teacher gender, and instructional organization accounted for the differences in organizational climate in middle-level schools:

1. One-way analysis of variance for each of the independent variables and the identified dimensions of middle-level organizational climate.

2. Bartlett Box-F test for homogeneity of variances.

Chapter Summary

Chapter III was devoted to a detailed discussion of the methodology used in developing an instrument for the measurement of organizational climate in middle school settings. Field testing of the preliminary form of the survey instrument resulted in significant content and clarity revisions. This revised instrument was entitled the Middle School Organizational Climate Survey-Initial Form and was the vehicle used to collect the data in this study. Two hundred thirty-five middle-level schools in Michigan were randomly selected to participate in the study. Systematic and detailed mail survey techniques resulted in 39.6% of the sample participating in this study. A comparison of survey participants and nonrespondents indicated that the returns were representative of the sample.

The climate data were collected on scan-sensitive forms and recorded at the Michigan State University Computer Laboratory. Because of a lower than hoped for return rate, it was necessary to reduce the item set to correspond with the number of participating schools. This reduction of items resulted in the survey instrument entitled the Middle School Organizational Climate Survey-Reduced

Set, which was used for all analysis procedures outlined earlier and discussed in Chapter IV.

CHAPTER IV

ANALYSIS OF DATA

The Problem Reviewed

The research of Halpin and Croft (1962) and Kottkamp et al. (1987) has contributed to the understanding of the kinds of behavior on the part of teachers and principals that are associated with the organizational climate differences found in various elementary and secondary schools. The problem identified in this study was the lack of comparable organizational climate measurement scales for use in middle-level schools.

The researcher's primary purpose in this study was to operationalize the construct of climate through the development of an instrument to identify and describe the dimensions that are present in the organizational climate of middle-level schools. Given an identified dimensionality of middle-level organizational climate, the researcher's second purpose was to explore whether or not the various dimensions relate to each other through an examination of second-order factor solutions. The identification of a defined organizational climate factor structure allowed a review of the four independent variables of teacher age, teacher experience, teacher gender, and instructional organization to explore their effect on the differences found in middle-level organizational climate.

Summary of Analysis Procedures

To determine both the number and qualities of dimensions present in the organizational climate of middle-level schools, the preliminary set of survey items was field tested by an independent panel of judges to assist in content validity. Aggregate building scores for each item were subjected to numerous factor analysis and reliability analysis procedures. A systematic deletion of items and a final factor analysis of the reduced item matrix resulted in the final form of the middle school climate instrument.

The final set of dimensions identified to portray the organizational climate of middle-level schools was subjected to a second-order factor solution to determine the underlying factor structure.

The effects of staff age, staff experience, gender composition, and instructional organization on the various dimensions of organizational climate were explored through one-way analysis of variance and a Bartlett Box-F test.

Analysis Procedures: Dimensions of Middle-Level Organizational Climate

To determine both the number and qualities of dimensions present in the organizational climate of middle-level schools, the unspecified N-factor varimax rotation was used for the initial extraction of factors (Table 4.1). Various numbers of iterations were required to extract the factors from the raw data. Consistently, the principal components analysis yielded 15 factors

Table 4.1.--Initial factor analysis: Principal components extraction, 88-item set.

Var.	Factor							
	1	2	3	4	5	6	7	8
35	.83236							
74	.83000							
36	.82832							
47	.82144							
48	.81437							
34	.79946							
33	.79618							
79	.76002							
83	.74956							
38	.73500							
72	.70217							
88	.69756							-.32310
32	.69153							
69	.69059		-.33916					
68	.68458		-.35344					
87	.68144	.30850						
86	.67874							
82	.67430							
75	.66613							
51	.63946		-.37689		.32164			
50	.62904		-.33619					
89	.62859					.38784		
93	.60891							
85	.60403							
98	.58291	.38873					-.31038	
92	-.57262		.31493					
71	.56797							
80	.56681							-.44051
78	.56454	.42074						
77	-.52674		.45267					.35470
27	.49026							
97	-.47736		.40735				.30730	
95	-.41821						.36063	
10		.90026						
20		.89035						
24		.84840						
12		.84402						
18		-.81423						
21		.79890						
8		.76021					-.32602	
11		-.73146						

Table 4.1.--Continued.

Var.	Factor							
	1	2	3	4	5	6	7	8
9		.69505						
23		.68891						
14		.66905						
6		.66160						
19		-.62001						
52		.60880						
67	.46428	.56981						
7	.30031	.50353		.30075				
90	-.42863	-.44846	.38331					
58			.75925					
46	-.35003		.71469					
60	-.38121		.67758					
44			.66220					
45	-.30649		.63863					
65			-.62428					
30	.37790		-.62325					
57			.57416					
25				.89102				
26				.85059				
13				-.78692				
100					.87846			
101					.84293			
99					.82767			
103					.72768			
62						.93625		
63						.89560		
66						.76048		
2						.52400		
4							.79525	
1							.70734	
5							.67681	
43			.33582				.39588	
54			.36469					.56158
55	-.31207		.35479					.54854
84	-.33543		.30515					.46034

Table 4.1.--Continued.

Var.	Factor							
	1	2	3	4	5	6	7	8
15		-.48547						
17		-.54401		.35286				
22		-.33043		.45884				
37					-.30494			
53								
61								
40	-.36337		.36816					
56								
59								
29								
81	.42708	.39756				.34981		
39			.40955					

Var.	Factor						
	9	10	11	12	13	14	15
35							
74							
36							
47							
48							
34							
33							
79							
83							
38							
72							
88							
32							-.36038
69							
68							
87							
86							
82					.37502		
75							

Table 4.1.--Continued.

Var.	Factor						
	9	10	11	12	13	14	15
51							
50							
89							
93				.33392			
85							
98							
92		.32232					
71							-.30108
80							
78					.48208		
77							
27							
97				-.33384			
95				-.39639			
10							
20							
24							
12							
18							
21							
8							
11							
9							
23	-.34027						
14							
6							
19	.56191						
52							
67				.38060			
7							
90							
58							
46							
60							
44							
45							
65							
30							
57				.36024			

Table 4.1.--Continued.

Var.	Factor						
	9	10	11	12	13	14	15
25							
26							
13							
100							
101							
99							
103							
62							
63							
66							
2							
4							
1							
5							
43							
54							
55							
84		.30512					
15	.72209						
17	.55439						
22	.54284						
37		.56123					
53		.54114					
61		.48668				.44181	
40		.41409					
56			.81026				
59			.71315				
29				-.67936			
81					.54459		
39						.59071	

with an eigenvalue of 1.00 or greater (Table 4.2). As a measure of the proportion of variance explained by each factor, an eigenvalue of 1.00 was used as the initial threshold criterion of a "true" factor. A scree test indicated seven factors from the identified 25 were likely meaningful factors (Figure 4.1).

Table 4.2.--Initial factor analysis: Principal components extraction, 88-item set.

Factor	Eigenvalue	Percent of Variance	Cumulative Percent
V1	27.76365	31.5	31.5
V2	9.01737	10.2	41.8
V3	6.90366	7.8	49.6
V4	3.88811	4.4	54.1
V5	3.49769	4.0	58.0
V6	2.98977	3.4	61.4
V7	2.66758	3.0	64.5
V8	2.45043	2.8	67.2
V9	2.21802	2.5	69.8
V10	2.01147	2.3	72.1
V11	1.55384	1.8	73.8
V12	1.43829	1.6	75.5
V13	1.38678	1.6	77.0
V14	1.32508	1.5	78.5
V15	1.23954	1.4	79.9

Items were determined to be viable indicators of a factor if they had a factor loading of .40 or higher. Steps involving factor analyses and alpha reliability coefficients for five-, six-, and seven-factor solutions were repeated a number of times. The reliability analysis also provided item-total correlations, which identified the relative strength of the relationship between each

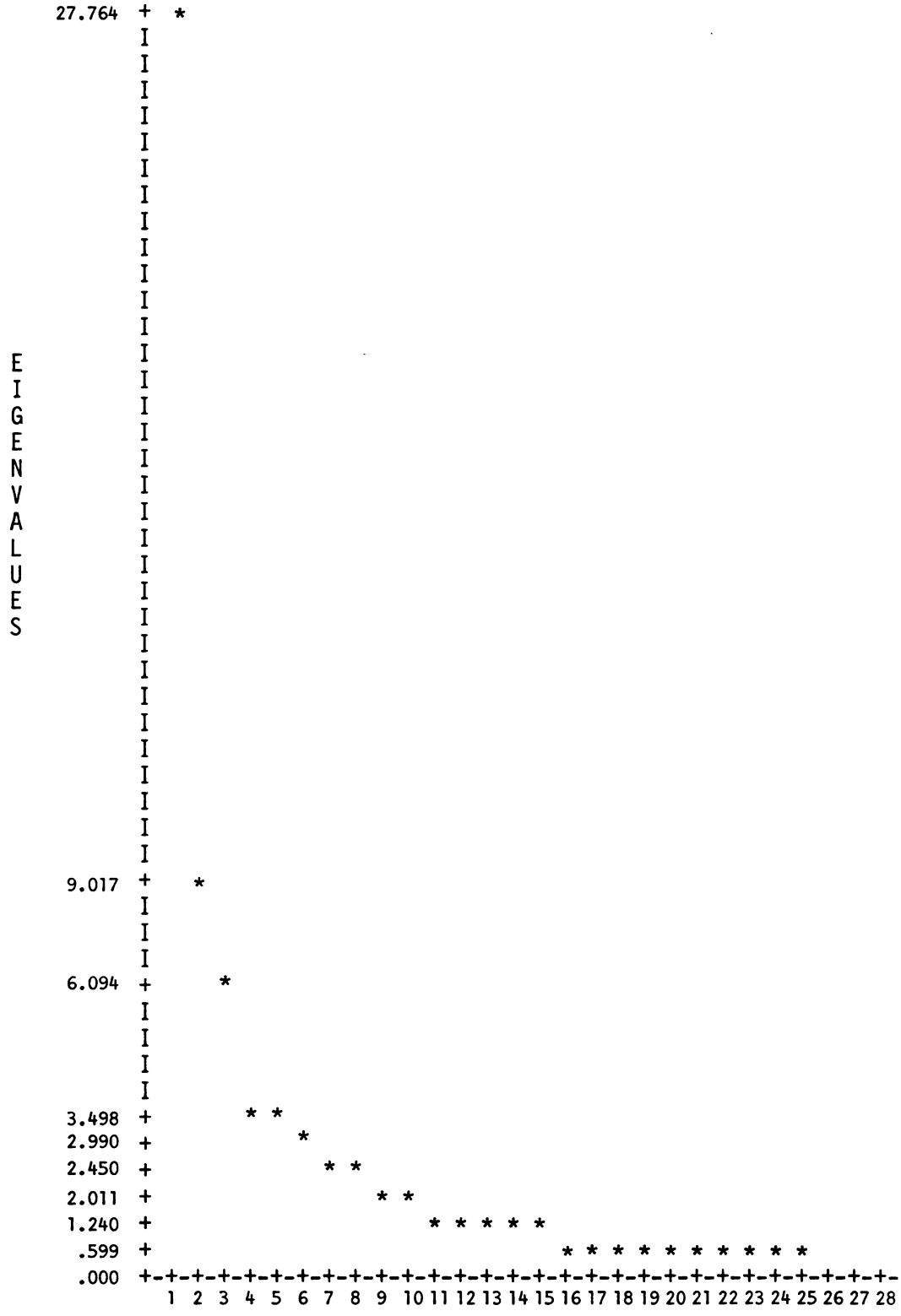

Figure 4.1: Scree test: Principal components, 88-item set.

item and the remaining items in the factor. A separate statistic also indicated what the alpha coefficients for the factor would be should any given item be deleted.

In the final analysis, it was determined that seven factors best identified the domain of organizational climate in middle-level settings. These seven factors were found to explain 62% of the total variance. Items that had a negative loading were identified from the factor analysis matrix and reversed when using these items in subsequent analyses. The rotated factor matrix, percentage of variance, and reliability analysis for the seven-factor solution are included for further reference in Tables 4.3, 4.4, and 4.5, respectively.

Using the strength of factor loadings on both the large-factor solution and the subtest factor solutions, the information from the alpha reliability analyses, and persistent assessment of the conceptual integrity of the subtests, the seven factors were gradually refined into the Middle School Organizational Climate Survey-Final Form (MSOCS-FF).

In the seven-factor solution, 83 items out of the total set of 88 items loaded above .40. Following the decision rule outlined below, 13 additional items were deleted.

1. An item was considered for deletion if the factor's alpha was raised through deletion of the item.

2. An item was considered for deletion if the item loaded on two (or more) factors and there was less than .10 difference between the two factor loadings.

Table 4.3.--Rotated factor matrix--seven factors specified: Principal components, 88-item set.

Var.	Factor						
	1	2	3	4	5	6	7
V36	.85177						
V33	.85159						
V35	.84973						
V34	.82593						
V47	.82532						
V48	.79778						
V74	.75706		-.30143				
V32	.74327						
V79	.72342			.32628			
V72	.68856						
V83	.67671			.41988			
V38	.66761						
V82	.62910			.36710			
V75	.61081			.40888			
V87	.60845	.30462		.44357			
V86	.59788			.32412		.38629	
V88	.59456		-.36156	.33619			
V69	.59144		-.46339				
V68	.58631		-.30699	.36793			
V51	.57526		-.40493			.33414	
V78	.57346	.39342		.41008			
V50	.56347		-.35661				
V71	.56056						
V93	.55997		-.38782				
V85	.55986						
V89	.54700			.54368		.30517	
V98	.53031	.31451		.34260			-.36260
V27	.49336						
V29							
V24		.86343					
V10		.85886					
V12		.83855					
V20		.82396					
V23		.78755					
V18		-.78119					
V11		-.78071					
V19		-.73461					
V21		.73057			.45442		
V8		.70114					-.39418
V17		-.70020	.35571		.38594		
V15		-.68031			.31789		
V14		.60615					

Table 4.3.--Continued.

Var.	Factor						
	1	2	3	4	5	6	7
V52		.58364					-.38562
V9		.55201			.53357		
V6		.52288			.51270		
V58			.68523				
V46	-.31576		.67026				
V60	-.35285		.66676				
V44			.65984				
V30	.37145		-.60354				
V45			.58043				
V57			.56312				
V40	-.31872		.56076				
V55			.52947			-.30065	
V92	-.51490		.52093				
V43			.50245				
V77	-.47982		.49670	-.32816			
V84			.48105				
V59			.44854				
V54			.44140				
V39			.43691				
V97	-.41895		.42893				.40310
V65			-.42288				-.35900
V90	-.37434	-.41910	.42009	-.35863			
V61			.38754				
V37	-.30636		.31479			-.30767	
V53							
V56							
V62				.80436			
V63				.77774			
V66				.62171			
V2				.59092			
V81	.44918	.39960		.46538			
V80	.44368			.46128			
V26					.86839		
V25					.85373		
V13					-.67646		
V22		-.52110	.30807		.52302		
V67	.40913	.44357		.32027	.47521		
V7	.35076	.41808			.46253		

Table 4.3.--Continued.

Var.	Factor						
	1	2	3	4	5	6	7
V101						.83763	
V100						.83515	
V99						.77196	
V103						.73268	
V4							.73063
V5							.62037
V1					.30604		.61851
V95	-.38464						.46410

Table 4.4.--Principal components extraction--seven factors specified, 88-item set.

Factor	Eigenvalue	Percent of Variance	Cumulative Percent
1	27.42646	31.2	31.2
2	8.72841	9.9	41.1
3	6.54853	7.4	48.5
4	3.47264	3.9	52.5
5	3.10635	3.5	56.0
6	2.58661	2.9	58.9
7	2.31886	2.6	61.6

Table 4.5.--Reliability analysis--all items greater than .40:
Seven-factor solution.

FACTOR 1: 28 Variables
Scale Mean: 84.5392 Scale Variance: 43.6552 Std. Dev.: 6.6072
Alpha = .9705

FACTOR 2: 16 Variables
Scale Mean: 46.6143 Scale Variance: 30.3556 Std. Dev.: 5.5096
Alpha = .9491

FACTOR 3: 19 Variables
Scale Mean: 35.7882 Scale Variance: 15.8663 Std. Dev.: 3.9833
Alpha = .9216

FACTOR 4: 6 Variables
Scale Mean: 17.9930 Scale Variance: 4.4803 Std. Dev.: 2.1167
Alpha = .8555

FACTOR 5: 6 Variables
Scale Mean: 14.3548 Scale Variance: 2.6970 Std. Dev.: 1.6422
Alpha = .7736

FACTOR 6: 4 Variables
Scale Mean: 9.1232 Scale Variance: 1.7949 Std. Dev.: 1.3397
Alpha = .9182

FACTOR 7: 4 Variables
Scale Mean: 7.0762 Scale Variance: 1.3006 Std. Dev.: 1.1404
Alpha = .7464

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3. An item was considered for deletion if removal of the item did not affect the alpha rating.

4. An item considered for deletion as described in Items 1 through 3 above was retained in the factor if, in the estimation of the researcher, the item explored a unique aspect of the factor. For example, in the third factor (PCB), two items with relatively strong but split loadings were retained because the items made a substantial contribution to the conceptual depth and scope of the factor.

Through the above process of analysis and refinement, the MSOCS-FF was developed to portray the organizational climate of middle-level schools. Collectively, the seven factors contain 70 items. Two of the factors describe the behavior of the principal(s), and five of the factors describe characteristics of the faculty as a group. Each factor was named and described following a review of the final list of items.

The two factors that describe the behavior of the principal(s) are (a) Administrative Support and (b) Administrative Control.

The five factors that describe the characteristics of the faculty as a group are (a) Expectancy and Motivation, (b) Pupil Control Behavior, (c) Tangible Environment, (d) Teacher Intimacy, and (e) Teacher Frustration.

The final seven-factor varimax rotational solution and percentage of variance are presented in Tables 4.6 and 4.7, respectively. Almost every item in the final large-factor analysis

Table 4.6.--Rotated factor matrix--seven-factor solution: Reduced 70-item set.

Var.	Factor						
	1	2	3	4	5	6	7
V36	.85245						
V33	.84847						
V35	.84723						
V34	.82245						
V47	.82165						
V48	.80076						
V74	.76020		-.32229				
V32	.72620						
V79	.71142						
V72	.68819						
V83	.67811			.36854		.30476	
V38	.66920						
V82	.61550			.30311			
V75	.61413			.36872			
V87	.60841	.31267		.36976			
V68	.59919		-.36899				
V69	.59605		-.48208				
V86	.59399					.40897	
V88	.59274		-.38011				
V51	.58627		-.43934				
V50	.58073		-.39270				
V78	.56494	.40574		.39926			
V93	.56258		-.37368				
V71	.56069						
V85	.55274		-.32609				
V98	.54225	.33600		.31870			-.31625
V27	.48301						
V24		.87311					
V10		.86262					
V12		.83466					
V20		.82719					
V18		-.79888					
V23		.78696					
V11		-.78374					
V19		-.73822					
V21		.73359			.35422		
V8		.72437					-.32970
V17		-.67930	.35201		.34333		
V15		-.66607					
V14		.62929					-.30777
V52		.61258					-.30755

Table 4.6.--Continued.

Var.	Factor						
	1	2	3	4	5	6	7
V58			.78014				
V60	-.32845		.72280				
V46	-.30278		.72229				
V44			.65793				
V45			.63843				
V30	.35524		-.62542				
V57			.57866				
V77	-.45023		.55867				
V55			.55063			-.31578	
V40	-.31347		.53024				
V92	-.51383		.52067				
V54			.49820				
V84			.48255				
V43			.44452				
V59			.41943				
V62				.87293			
V63				.80224			
V66				.67454			
V2				.59932			
V81	.44129	.40463		.46024			
V25					.92393		
V26					.92238		
V13					-.75748		
V100						.80507	
V99						.79343	
V101						.79289	
V4							.79288
V1					.31685		.63835
V5							.63573

loaded primarily on the factor to which the item was assigned. The two items that were exceptions (Items 92 and 81) had nearly equal loadings on both factors.

Table 4.7.--Reduced item set--seven-factor solution: Percentage of variance.

Factor	Eigenvalue	Percent of Variance	Cumulative Percent
1	23.09843	33.0	33.0
2	7.40614	10.6	43.6
3	5.29026	7.6	51.1
4	3.08482	4.4	55.5
5	2.57032	3.7	59.2
6	2.30969	3.3	62.5
7	1.86846	2.7	65.2

A comparison of the 88-item set and the reduced 70-item set illuminates the similarities between both climate instruments. Both sets of data identified the same seven climate factors, with a similar item structure loading onto each factor. Similar percentage of variance and reliability scores provide further evidence for the construct validity of the final seven factors established in the middle school survey. Consequently, the similarities of the number and structure of the seven factors along with the generally improved percentage of variance and reliability scores determined the reduced item set to best represent the organizational climate of middle-level schools.

A comparison of the item identification and reliability coefficients for the 88- and 70-item sets is presented in Table 4.8.

Ultimately, the resultant seven factors that portray the organizational climate of middle-level schools were created from the 88 items in the Middle School Organizational Climate Survey-Revised Set. The following section contains a description of each factor and a discussion of how the items were distributed into the seven final factors.

Analysis of the Seven Final Dimensions of the Middle School Organizational Climate Survey

Dimension I: EXPECTANCY AND MOTIVATION

Expectancy and motivation refer to behavior of the faculty that is characterized largely by a student orientation. A group of teachers who have high perceptions of expectancy and motivation appear to be genuinely concerned with the mental, emotional, and social development of the middle-level student. The faculty holds high expectancy for both student outcomes and professional gratification through its efforts of hard work and dedication. To achieve these goals, the faculty continually works at improving its effectiveness in the classroom.

The faculty that generates a low score on this dimension collectively holds the perception that hard work and dedication will not result in appreciable positive student outcomes or professional gratification.

Table 4.8.--Item identification, alpha reliability coefficients, and percentage of variance for MSOCS-FF subtests in both the preliminary and final data sets.

Subtest Name	Item Identification Number		Alpha		No. of Items		% of Variance	
	Preliminary	Final	Prelim	Final	Prelim	Final	Prelim	Final
Expectancy and Motivation (EXM)	27,32,33,34,35, 36,38,47,48,50, 51,68,69,71,72, 74,75,78,79,82, 83,85,86,87,88, 89,93,98	27,32,33,34,35, 36,38,47,48,50, 51,68,69,71,72, 74,75,78,79,82, 83,85,86,87,88, 93,98	.97	.97	28	27	31.2	33.0
Administrative Support (ADSUP)	06,08,09,10,11, 12,14,15,17,18, 19,20,21,23,24, 52	08,10,11,12,14, 15,17,18,19,20, 21,23,24,52	.95	.95	16	14	9.9	10.6
Pupil Control Behavior (PCB)	30,39,40,43,44, 45,46,54,55,57, 58,59,60,65,77, 84,90,92,97	30,40,43,44,45, 46,54,55,57,58, 59,60,77,84,92	.93	.92	19	15	7.4	7.6
Tangible Environment (TGEN)	02,62,63,66,80, 81	02,62,63,66,81	.86	.87	6	5	3.9	4.4
Administrative Control (ADCON)	07,13,22,25,26, 27	13,25,26	.77	.91	6	3	3.5	3.7
Teacher Intimacy (TIN)	99,100,101,103	99,100,101	.92	.93	4	3	2.9	3.3
Teacher Frustration (TRFRUS)	01,04,05,95	01,04,05	.75	.76	4	3	2.6	2.7
					83	70	61.6	65.2

Ten items from the Expectancy Motivation Scale (Miskel, 1982) and three OCDQ-RS items from the Teacher Engagement subtest combined with 13 original items from the a priori subtests of Pupil Control Behavior (8 items), Expectancy and Motivation (4 items), and Teacher Professional Behaviors (1 item) to form the EXPECTANCY AND MOTIVATION factor.

Dimension II: ADMINISTRATIVE SUPPORT

Administrative support refers to behavior by the principal(s) that is characterized by his/her efforts to recognize and support the professional endeavors of the faculty. A faculty that scores high in administrative support perceives the principal's behavior as positively assisting the faculty in achieving its instructional goals by facilitating, encouraging, and supporting its professional efforts. The principal(s) provides instructional leadership within an environment conducive to student learning while being sensitive to the personal welfare of the faculty.

A staff that scores low in this dimension believes the principal(s) goes through the motions of his/her job but is not genuinely committed to collaborative support or overall staff morale.

This factor generated the majority of items from the OCDQ-RS. Six items from Principal Support and three Principal Control items collapsed into this new factor. Four original items from the a priori dimension of Organizational Structural Linkages combined with one item from the Pupil Control Ideology Scale (Willower et

al., 1967) to form the ADMINISTRATIVE SUPPORT factor. Elimination of items with similar loadings on the first and fifth factors along with strong alpha reliability coefficients provided evidence in support of the final group of selected items.

Dimension III: PUPIL CONTROL BEHAVIOR

This dimension refers to the faculty's perceptions of the student body. This belief is manifested through a custodial orientation to the relationships between teachers and students. A group of teachers scoring high on this dimension perceive their students to be incapable of demonstrating positive academic and behavioral self-direction and believe they must be controlled by the faculty on an impersonal basis. These teachers, who reflect this negative orientation toward students, also feel isolated and unsupported by their colleagues.

A faculty that scores low on this dimension perceives its school to be an educational community where students learn positive self-discipline through participatory activities and mutual respect.

This factor is composed of 11 items from the Pupil Control Ideology Scale (Willower et al., 1967), two items from the Expectancy Motivation Scale (Miskel, 1982), and two items from the Teacher Engagement subtest in the OCDQ-RS.

Dimension IV: TANGIBLE ENVIRONMENT

Tangible environment refers to faculty expectations of a clean and functional building conducive to instructional business. A

faculty that records a high score on this dimension perceives there are adequate instructional materials as well as an operational building to facilitate its ability to promote positive student and professional outcomes.

A faculty with low perceptions of tangible environment believes its school is an oppressive and stifling environment.

This original dimension is formed of three original items from the Tangible Environment factor, one original item from Organizational Structural Linkages, and one item from the Expectancy Motivation Scale (Miskel, 1982).

Dimension V: ADMINISTRATIVE CONTROL

Administrative control refers to behavior by the principal(s) that is characterized by close supervision of the faculty's actions and activities. A group of teachers scoring high on this dimension perceives the principal's behavior to infer that he/she does not trust the faculty to perform its professional duties without the control of the administration. These principals demand on-task behavior in an authoritarian manner. A faculty that scores low on this dimension perceives its school environment to have a collaborative relationship between staff and administration.

Throughout numerous analytic procedures, this factor maintained its independent identity and withstood attempts to have it collapse or merge into another factor. This factor is composed of three items from the OCDQ-RS Principal Control subtest.

Dimension VI: TEACHER INTIMACY

Teacher intimacy refers to the faculty behavior that is characterized by close social relationships. This factor only reflects a social-needs orientation outside of the professional workplace environment. A teaching staff that scores high in Teacher Intimacy perceives its colleagues to engage in high levels of interaction outside of the workplace. A low Teacher Intimacy score would indicate a staff that does not continue its relationships outside the working environment into a social setting.

This factor withheld its identity as an independent dimension just as in the OCDQ and OCDQ-RS studies. Three OCDQ-RS items from Teacher Intimacy Behavior form the sixth factor, which retained the factor name of TEACHER INTIMACY.

Dimension VII: TEACHER FRUSTRATION

Teacher frustration describes the faculty's dissatisfaction with noninstructional responsibilities that interfere with its teaching assignments. A faculty that scores high on this dimension tends to view the administration as interfering and counterproductive to its job of teaching. A low faculty score, however, represents a staff that perceives the assignment of auxiliary responsibilities does not distract the teachers from their primary job of instruction.

Three items from the Teacher Frustration subtest in the OCDQ-RS form this final factor, which retained the factor name of TEACHER FRUSTRATION.

Summary: Identification of Items by Source

In summary, 74% of the OCDQ-RS items were retained in the MSOCS-FF. The OCDQ-RS subtest Teacher Intimacy maintained its identity, with three of the four subtest items loading onto the factor also called TEACHER INTIMACY. Kottkamp et al. (1987) reported an alpha reliability of .71, whereas the same factor in the current study yielded a .93 reliability.

Six out of seven items in the OCDQ-RS subtest Principal Support merged with three items from the Principal Control subtest into one factor: ADMINISTRATIVE SUPPORT. Three other items from the Principal Control subtest combined to form an independent factor, ADMINISTRATIVE CONTROL.

Three items from the Teacher Engagement subtest (Kottkamp et al., 1987) collapsed into the factor EXPECTANCY AND MOTIVATION, whereas two other items from the same subtest merged into the PUPIL CONTROL BEHAVIOR factor. Three items from the Teacher Frustration subtest maintained their identity by forming the factor also called TEACHER FRUSTRATION. Of the 12 items common to both the OCDQ and the OCDQ-RS, eight emerged as items in the MSOCS-FF.

Ninety-three percent of the Expectancy Motivation Scale (Miskel, 1982) items were retained in the current study. Ten of the items combined to form the factor EXPECTANCY AND MOTIVATION. Two items merged into the factor PUPIL CONTROL BEHAVIOR, and one item disbursed into the factor TANGIBLE ENVIRONMENT. Miskel reported a mean reliability of .78 for his Expectancy Motivation Scale. The

Expectancy Motivation factor in the current study had a .97 reliability coefficient.

Sixty-seven percent of the Pupil Control Ideology items (Willower et al., 1967) were retained in the MSOCS-FF. Eleven PCI items merged into the factor PUPIL CONTROL BEHAVIOR, and one item loaded into the factor ADMINISTRATIVE SUPPORT. Willower reported a mean reliability of .91 for his Pupil Control Ideology Scale. The comparative factor in the current study had a .92 reliability coefficient.

Eighty-eight percent of the original items developed from the related literature were retained in the final form of the Middle School Organizational Climate Survey. Original items merged into the factors of EXPECTANCY AND MOTIVATION, ADMINISTRATIVE SUPPORT, and TANGIBLE ENVIRONMENT.

The seven dimensions of middle-level organizational climate that are assumed to be measured by the MSOCS-FF factors are described and items included in each factor are presented in Appendix N.

Second-Order Factor Analysis

Following the research of Halpin and Croft (1962) and Kottkamp et al. (1987), a second-order factor analysis was completed to explore the underlying structure of the seven climate factors. The initial second-order rotated factor matrix, percentage of variance, scree test, and correlation matrix were examined for a second-order factor solution. Three factors showed an eigenvalue of 1.0 or

higher and accounted for 67% of the total variance (Table 4.9). However, the lack of horizontal leveling in the scree test (Figure 4.2), absence of a clear factor matrix (Table 4.10), and generally weak measures of association in the correlation matrix (Table 4.11) supported the conclusion that the seven first-order factors could not be reduced to a second-order solution.

Due to the availability of data, the analysis was continued with an examination of a two-, three-, four-, five-, and six-factor solution, continuing to use sequential iterations to see if clarity of structure would emerge. An examination of all second-order solutions confirmed the same information regarding the absence of a second-order factor solution.

Independent Variables and Organizational Climate

In addition to the development of an instrument for the measurement of organizational climate in middle school settings, several exploratory analyses were conducted to determine whether selected independent variables accounted for differences in middle-level organizational climate. These independent variables consisted of average building teacher age, level of years of teaching experience, breakdown of faculty gender, and building instructional organization.

Average Age of Teaching Staff

The average age of the teachers for each of the 88 middle-level schools was determined. Descriptive statistics and a histogram

Table 4.9.--Initial second-order factor analysis: Percentage of variance.

Factor	Eigenvalue	Percent of Variance	Cumulative Percent
1	2.44634	34.9	34.9
2	1.23858	17.7	52.6
3	1.01729	14.5	67.2
4	.83490	11.9	79.1
5	.68755	9.8	88.9
6	.50819	7.3	96.2
7	.26715	3.8	100.0

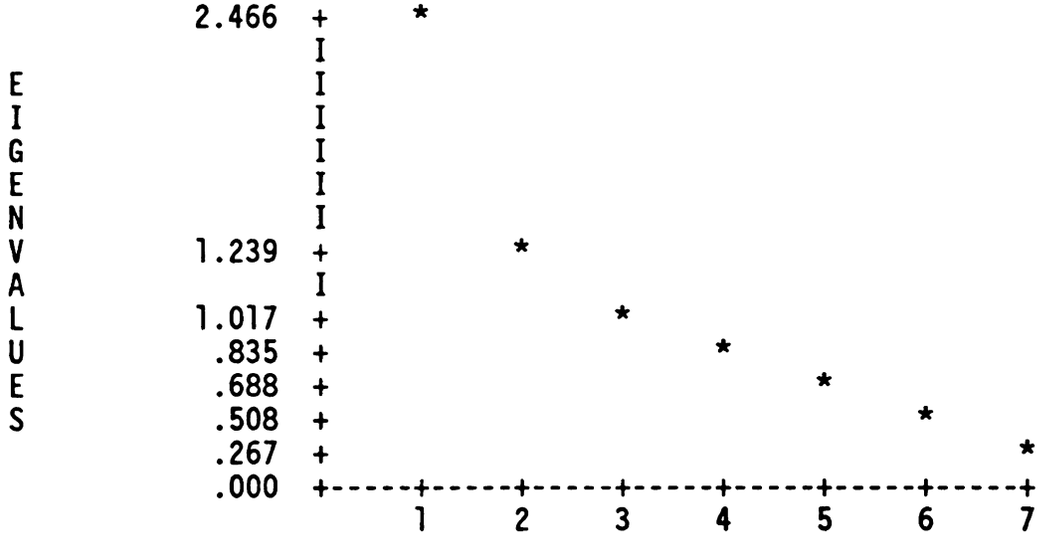


Figure 4.2: Initial second-order factor solution: Scree test.

Table 4.10.--Initial second-order factor matrix: Rotated factor matrix.

	Factor						
	1	2	3	4	5	6	7
EXM	.69944	.43836		.37449			
TGEN	.56079						
TIN		.62783					
ADSUP			.56802				
TRFRUS			-.51974				
PCB	-.33919	-.48397		-.53947			
ADCON					.46562		

Note: EXM = Expectancy and Motivation, TGEN = Tangible Environment, TIN = Teacher Intimacy, ADSUP = Administrative Support, TRFRUS = Teacher Frustration, PCB = Pupil Control Behavior, ADCON = Administrative Control.

Table 4.11.--Initial second-order factor solution: Correlation matrix.

Factor	EXM	ADSUP	PCB	TGEN	ADCON	TIN	TRFRUS
EXM	1.00000						
ADSUP	.35803	1.00000					
PCB	-.67388	-.28910	1.00000				
TGEN	.44029	.18067	-.23493	1.00000			
ADCON	.01414	.04225	.16315	.04066	1.00000		
TIN	.38302	.03643	-.43375	.09631	-.12856	1.00000	
TRFRUS	-.12148	-.23520	.23526	.00172	.15524	-.19276	1.00000

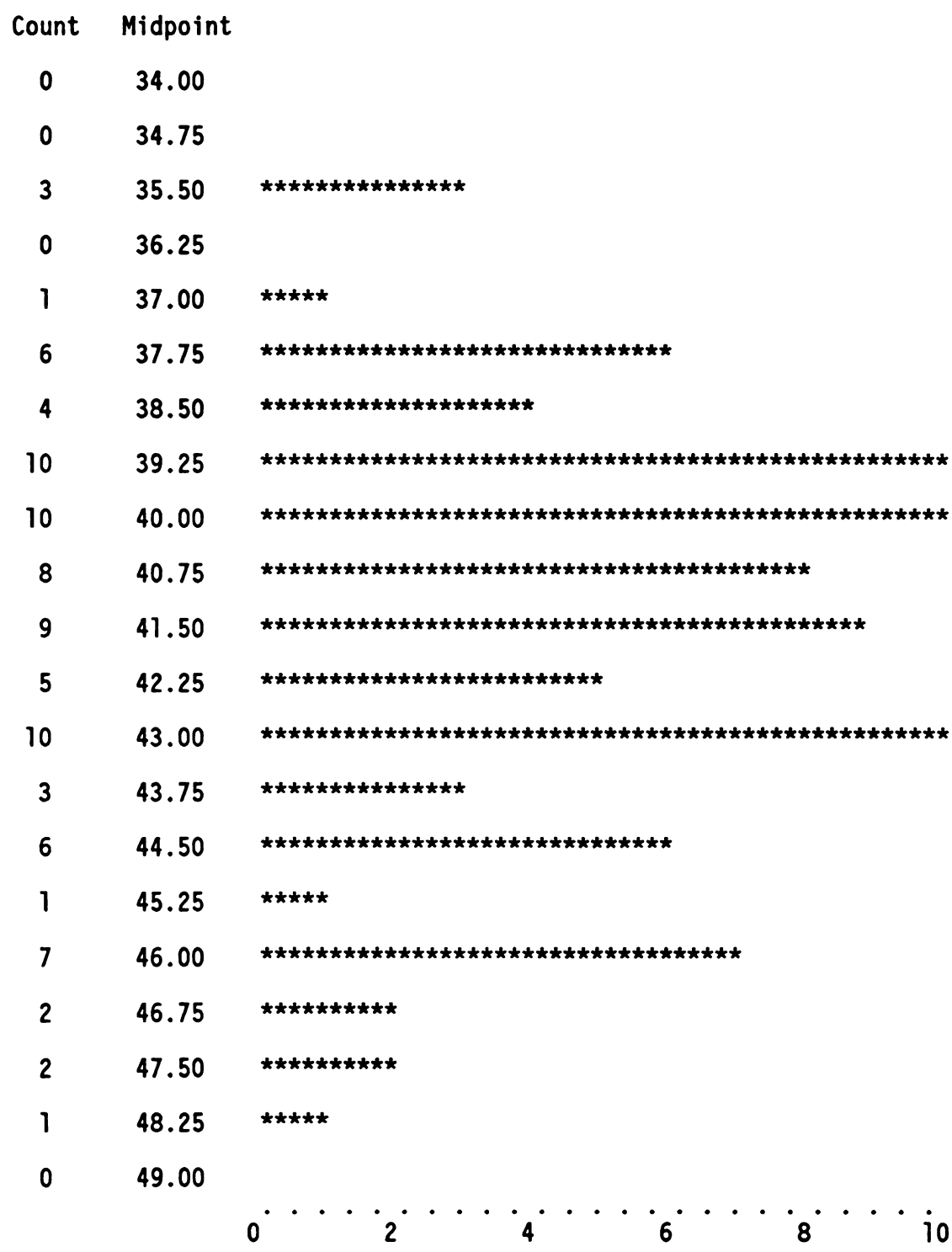
Note: EXM = Expectancy and Motivation, TGEN = Tangible Environment, TIN = Teacher Intimacy, ADSUP = Administrative Support, TRFRUS = Teacher Frustration, PCB = Pupil Control Behavior, ADCON = Administrative Control.

chart are presented in Figure 4.3. The frequency distribution approximates a normal curve with an average staff age ranging from 35.5 to 48.2 years. The aggregated data were divided into the following quartile groups:

Group	Average Age of Teachers Per School
1	Less than 39.48
2	Greater than 39.48 but less than 41.18
3	Greater than 41.18 but less than 43.43
4	Greater than 43.43

One-way analysis of variance and Bartlett-Box F test for homogeneity of variances were computed for each of the seven dependent climate variables and group average teaching age (Table 4.12). Statistical analysis indicated, with 95% confidence, that no two average age groups were significantly different for the dependent variables of Expectancy and Motivation, Pupil Control Behavior, Administrative Support, Administrative Control, Tangible Environment, and Teacher Frustration.

However, analysis indicated with 95% confidence that there was a significant difference in mean Teacher Intimacy between faculties in Groups 1 and 4 and between faculties in Group 1 and Group 3. Referencing the group categories as defined above, these data indicated that faculties with a mean age less than 39 years old showed a significantly higher score in Teacher Intimacy than faculties averaging more than 41 years old. This indicated that as the schools' average teacher age increased, the existence of close social relationships with co-workers decreased. Conversely, schools



Note: One * = approximately .20 occurrences. Mean = 41.574, Std. Error = .310, Median = 41.176, Mode = 39.00, Std. Dev. = 2.909, Variance = 8.463, Kurtosis = -.511, Skewness = .257.

Figure 4.3: Average age of teachers.

Table 4.12.--One-way analysis of variance: Seven climate scales/ average age of teaching staff.

I. EXPECTANCY AND MOTIVATION

Source	df	Sum of Squares	Mean Squares	F-Ratio	F-Prob.
Between groups	3	.2646	.0882	1.6946	.1744
Within groups	84	4.3718	.0520		
Total	87	4.6364			

Bartlett-Box F = .389, p = .761

Group	Count	Mean	Standard Deviation	Standard Error
1	22	3.0654	.1960	.0418
2	21	3.0744	.2360	.0515
3	23	2.9383	.2314	.0483
4	22	3.0073	.2462	.0525

II. ADMINISTRATIVE SUPPORT

Source	df	Sum of Squares	Mean Squares	F-Ratio	F-Prob.
Between groups	3	.1792	.0597	0.4822	.6956
Within groups	84	10.4059	.1239		
Total	87	10.5851			

Bartlett-Box F = 1.182, p = .315

Group	Count	Mean	Standard Deviation	Standard Error
1	22	2.9528	.3769	.0804
2	21	2.8810	.2787	.0608
3	23	2.8410	.4111	.0857
4	22	2.9374	.3200	.0682

Table 4.12.--Continued.

III. PUPIL CONTROL BEHAVIOR

Source	df	Sum of Squares	Mean Squares	F-Ratio	F-Prob.
Between groups	3	.1774	.0591	1.4098	.2456
Within groups	84	3.5235	.0419		
Total	87	3.7009			

Bartlett-Box F = .980, p = .401

Group	Count	Mean	Standard Deviation	Standard Error
1	22	1.8454	.1590	.0339
2	21	1.9378	.2289	.0500
3	23	1.9213	.2075	.0433
4	22	1.9671	.2179	.0464

IV. TANGIBLE ENVIRONMENT

Source	df	Sum of Squares	Mean Squares	F-Ratio	F-Prob.
Between groups	3	.5814	.1938	1.2390	.3008
Within groups	84	13.1393	.1564		
Total	87	13.7207			

Bartlett-Box F = .671, p = .570

Group	Count	Mean	Standard Deviation	Standard Error
1	22	2.9923	.3544	.0756
2	21	3.0107	.3571	.0779
3	23	2.8078	.3948	.0823
4	22	2.9655	.4640	.0989

Table 4.12.--Continued.

V. ADMINISTRATIVE CONTROL

Source	df	Sum of Squares	Mean Squares	F-Ratio	F-Prob.
Between groups	3	.1071	.0357	0.3359	.7994
Within groups	84	8.9288	.1063		
Total	87	9.0359			

Bartlett-Box F = .419, p = .739

Group	Count	Mean	Standard Deviation	Standard Error
1	22	2.1282	.3437	.0733
2	21	2.0396	.3493	.0762
3	23	2.1213	.3292	.0686
4	22	2.1110	.2781	.0593

VI. TEACHER FRUSTRATION

Source	df	Sum of Squares	Mean Squares	F-Ratio	F-Prob.
Between groups	3	.2064	.0688	0.6323	.5962
Within groups	84	9.1403	.1088		
Total	87	9.3467			

Bartlett-Box F = 1.285, p = .278

Group	Count	Mean	Standard Deviation	Standard Error
1	22	1.7819	.3436	.0733
2	21	1.9130	.3444	.0752
3	23	1.8447	.3713	.0774
4	22	1.8093	.2445	.0521

Table 4.12.--Continued.

VII: TEACHER INTIMACY

Source	df	Sum of Squares	Mean Squares	F-Ratio	F-Prob.
Between groups	3	1.9804	.6601	7.0628	.0003**
Within groups	84	7.8511	.0935		
Total	87	9.8315			

Bartlett-Box F = 1.696, p = .166

Group	Count	Mean	Standard Deviation	Standard Error
1	22	2.4685	.3136	.0669
2	21	2.2286	.3036	.0663
3	23	2.1244	.3643	.0760
4	22	2.0831	.2207	.0470

		Group			
Mean	Group	4	3	2	1
2.0831	4				
2.1244	3				
2.2286	2				
2.4685	1	*	*		

*Denotes pairs of groups significantly different at the .05 level.

**Significant at alpha = .05.

with younger teachers reflected a stronger social-needs orientation than schools with older staff members.

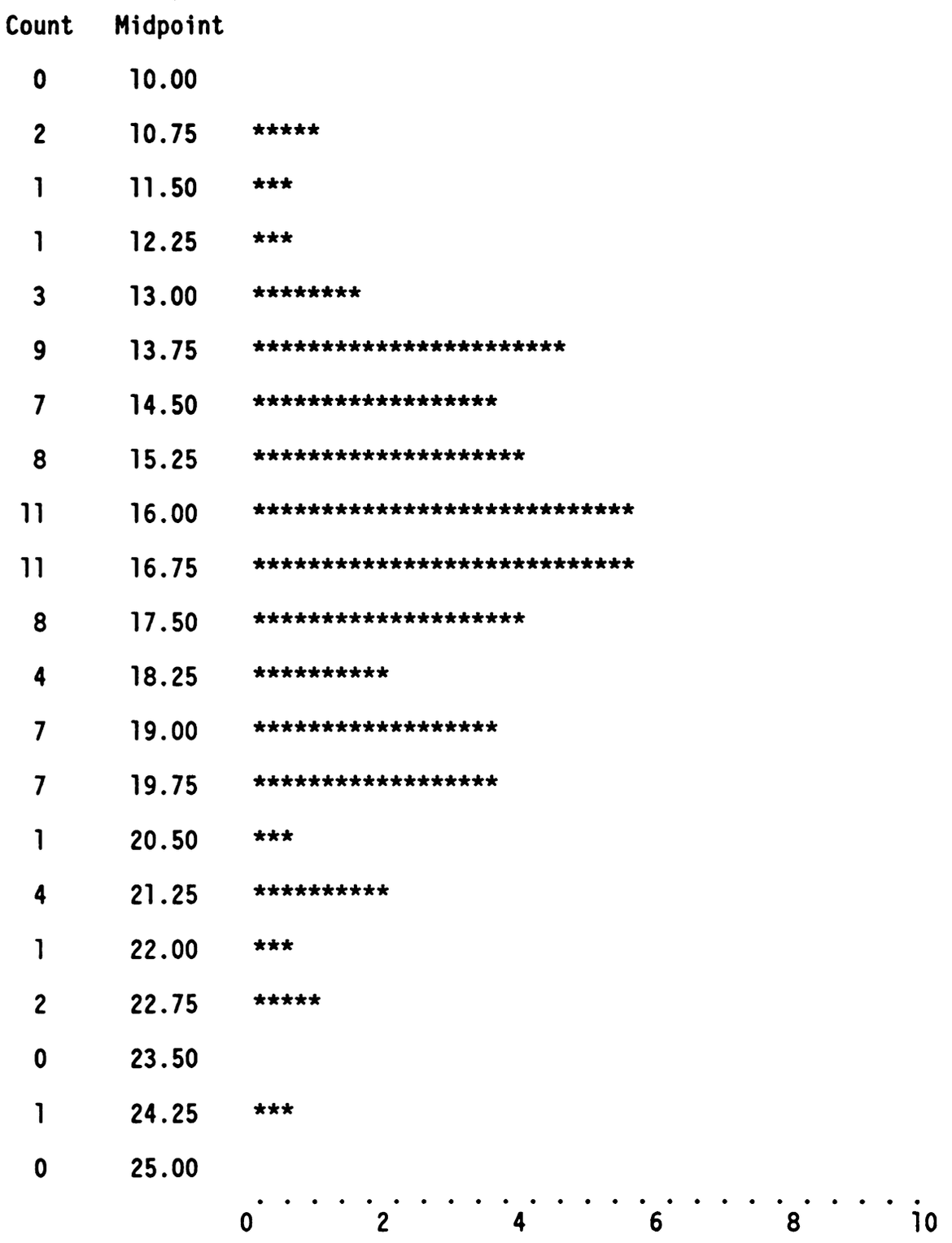
Average Years of Teaching Experience

The exploration of relationships between the seven climate scales and the level of years of teaching experience was the second analysis in this sequence. Aggregated data from the 88 schools are reported in the descriptive statistics and histogram chart in Figure 4.4. As expected, the average years of teaching experience correlated with the average age of the teaching staff. Similarly, the data indicated a relatively normal curve distribution with a range from 10.8 years of experience to 24.2 years of average staff teaching experience.

The following quartile groups were created from the aggregated school data for purposes of further analysis:

Group	Average Years of Teaching Experience Per School
1	Less than 14.78
2	Greater than 14.78 but less than 16.60
3	Greater than 16.60 but less than 18.69
4	Greater than 18.69

One-way analysis of variance and Bartlett-Box F test for homogeneity of variances were completed for each of the seven dependent climate variables with level of average years of teaching experience as the independent variable (Table 4.13). Statistical analysis indicated with 95% confidence that no two average teaching experience groups were significantly different with the dependent variables of Expectancy and Motivation, Pupil Control Behavior,



Note: One * = approximately .40 occurrences. Mean = 16.730, Std. Error = .294, Median = 16.601, Mode = 15.333, Std. Dev. = 2.760, Variance = 7.616, Kurtosis = -.087, Skewness = .316.

Figure 4.4: Average teaching experience.

Table 4.13.--One-way analysis of variance: Seven climate scales/ average years of teaching experience.

I. EXPECTANCY AND MOTIVATION

Source	df	Sum of Squares	Mean Squares	F-Ratio	F-Prob.
Between groups	3	.3010	.1003	1.9437	.1288
Within groups	84	4.3355	.0516		
Total	87	4.6364			

Bartlett-Box F = 1.256, p = .288

Group	Count	Mean	Standard Deviation	Standard Error
1	22	3.0348	.1813	.0386
2	22	3.1007	.2223	.0474
3	22	3.0056	.2771	.0591
4	22	2.9379	.2177	.0464

II. ADMINISTRATIVE SUPPORT

Source	df	Sum of Squares	Mean Squares	F-Ratio	F-Prob.
Between groups	3	.4667	.1556	1.2916	.2827
Within groups	84	10.1184	.1205		
Total	87	10.5851			

Bartlett-Box F = .206, p = .893

Group	Count	Mean	Standard Deviation	Standard Error
1	22	3.0219	.3299	.0703
2	22	2.8604	.3481	.0742
3	22	2.8306	.3807	.0812
4	22	2.8976	.3270	.0697

Table 4.13.--Continued.

III. PUPIL CONTROL BEHAVIOR

Source	df	Sum of Squares	Mean Squares	F-Ratio	F-Prob.
Between groups	3	.2558	.0853	2.0787	.1092
Within groups	84	3.4451	.0410		
Total	87	3.7009			

Bartlett-Box F = .251, p = .860

Group	Count	Mean	Standard Deviation	Standard Error
1	22	1.8794	.2006	.0428
2	22	1.8920	.2249	.0479
3	22	1.8887	.1936	.0413
4	22	2.0107	.1891	.0403

IV. TANGIBLE ENVIRONMENT

Source	df	Sum of Squares	Mean Squares	F-Ratio	F-Prob.
Between groups	3	.3030	.1010	0.6323	.5962
Within groups	84	13.4177	.1597		
Total	87	13.7207			

Bartlett-Box F = .923, p = .429

Group	Count	Mean	Standard Deviation	Standard Error
1	22	2.9312	.3589	.0765
2	22	2.9522	.4457	.0950
3	22	3.0242	.3330	.0710
4	22	2.8596	.4479	.0955

Table 4.13.--Continued.

V. ADMINISTRATIVE CONTROL

Source	df	Sum of Squares	Mean Squares	F-Ratio	F-Prob.
Between groups	3	.0289	.0096	0.0900	.9654
Within groups	84	9.0070	.1072		
Total	87	9.0359			

Bartlett-Box F = 1.096, p = .349

Group	Count	Mean	Standard Deviation	Standard Error
1	22	2.1128	.3456	.0737
2	22	2.0717	.3891	.0829
3	22	2.1006	.2738	.0584
4	22	2.1187	.2884	.0615

VI. TEACHER FRUSTRATION

Source	df	Sum of Squares	Mean Squares	F-Ratio	F-Prob.
Between groups	3	.3365	.1122	1.0457	.3768
Within groups	84	9.0102	.1073		
Total	87	9.3467			

Bartlett-Box F = .211, p = .889

Group	Count	Mean	Standard Deviation	Standard Error
1	22	1.7428	.3554	.0758
2	22	1.8664	.3183	.0679
3	22	1.8259	.3002	.0640
4	22	1.9107	.3337	.0711

Table 4.13.--Continued.

VII. TEACHER INTIMACY

Source	df	Sum of Squares	Mean Squares	F-Ratio	F-Prob.
Between groups	3	1.9671	.6557	7.0037	.0003**
Within groups	84	7.8644	.0936		
Total	87	9.8315			

Bartlett-Box F = 1.790, p = .147

Group	Count	Mean	Standard Deviation	Standard Error
1	22	2.4017	.3194	.0681
2	22	2.3203	.3624	.0773
3	22	2.1665	.3071	.0655
4	22	2.0113	.2165	.0461

		Group			
Mean	Group	4	3	2	1
2.0113	4				
2.1665	3				
2.3203	2	*			
2.4017	1	*			

*Denotes pairs of groups significantly different at the .05 level.

**Significant at alpha = .05.

Administrative Support, Administrative Control, Tangible Environment, and Teacher Frustration.

Analysis, however, indicated with 95% confidence that there was a significant difference in mean Teacher Intimacy between faculties in Group 1 and Group 4 and between faculties in Group 2 and Group 4. Due to the direct correlation between worker age and years of experience, and the earlier findings related to age of staff, it is not surprising that a significant mean difference emerged from this climate dimension. These data indicated that faculties in both Groups 1 and 2, who collectively had less than an average of 17 years of teaching experience, expressed a significantly higher degree of concern with close social relationships than those faculties with more than 19 years of teaching experience.

Composition of Faculty Gender

In the exploration of the effects of the gender composition of a middle-level building and its relationship to organizational climate, descriptive statistics and a histogram (Figure 4.5) were used to identify the percentage of female staff in each of the 88 schools. The mean percentage of female faculty was 55.1, with a range from 20% to 100%. Again, the cumulative distribution approximated a normal curve, which indicated the gender composition of the middle-level-school sample was normally distributed.

Count	Midpoint	
1	20	***
2	24	*****
0	28	
2	32	*****
6	36	**********
4	40	**********
7	44	**********
6	48	**********
14	52	**********
9	56	**********
10	60	**********
8	64	**********
8	68	**********
5	72	**********
2	76	*****
2	80	****
1	84	**
0	88	
0	92	
0	96	
1	100	***

0 2 4 6 8 10

Note: One * = approximately .40 occurrences. Mean = 55.149, Std. Error = 1.490, Median = 55.556, Mode = 50.00, Std. Dev. = 13.974, Variance = 195.285, Kurtosis = .571, Skewness = .147.

Figure 4.5: Percentage of female teachers.

The aggregated data were divided into three groups for further analysis as indicated below:

Group	Percentage of Female Faculty
1--low %	Less than 50% female
2--medium %	Greater than 50% but less than 60.69%
3--high %	Greater than 60.69% female

One-way analysis of variance and Bartlett-Box F test for homogeneity of variances were completed for each of the seven dependent climate scales and gender groups (Table 4.14). Statistical analysis indicated with 95% confidence that no two gender groups were significantly different with any of the seven dependent climate variables of Expectancy and Motivation, Pupil Control Behavior, Teacher Intimacy, Tangible Environment, Teacher Frustration, Administrative Control, and Administrative Support. Even Teacher Intimacy, which showed a significant difference for age groups and years of teacher experience, showed no difference when compared to the composition of faculty gender. Collectively, these data indicated that the gender composition within a middle-level building did not have a significant effect on building climate.

Instructional Organization

Middle-level schools have a variety of instructional-design organizations. This researcher explored the effects of average building instructional design and its relationship to the seven climate dimensions. Each of the three common instructional designs

Table 4.14.--One-way analysis of variance: Seven climate scales/ percentage female teachers.

I. EXPECTANCY AND MOTIVATION

Source	df	Sum of Squares	Mean Squares	F-Ratio	F-Prob.
Between groups	2	.0747	.0374	0.6960	.5014
Within groups	85	4.5617	.0537		
Total	87	4.6364			

Bartlett-Box F = .747, p = .474

Group	Count	Mean	Standard Deviation	Standard Error
1	33	3.0129	.2586	.0450
2	26	2.9856	.2180	.0428
3	29	3.0582	.2099	.0390

II. ADMINISTRATIVE SUPPORT

Source	df	Sum of Squares	Mean Squares	F-Ratio	F-Prob.
Between groups	2	.1588	.0794	0.6473	.5260
Within groups	85	10.4263	.1227		
Total	87	10.5851			

Bartlett-Box F = .432, p = .649

Group	Count	Mean	Standard Deviation	Standard Error
1	33	2.9231	.3806	.0663
2	26	2.8377	.3217	.0631
3	29	2.9375	.3382	.0628

Table 4.14.--Continued.

III. PUPIL CONTROL BEHAVIOR

Source	df	Sum of Squares	Mean Squares	F-Ratio	F-Prob.
Between groups	2	.0174	.0087	0.2006	.8186
Within groups	85	3.6835	.0433		
Total	87	3.7009			

Bartlett-Box F = .452, p = .636

Group	Count	Mean	Standard Deviation	Standard Error
1	33	1.9174	.1882	.0328
2	26	1.8991	.2210	.0433
3	29	1.9347	.2179	.0405

IV. TANGIBLE ENVIRONMENT

Source	df	Sum of Squares	Mean Squares	F-Ratio	F-Prob.
Between groups	2	.8596	.4298	2.8407	.0639
Within groups	85	12.8611	.1513		
Total	87	13.7207			

Bartlett-Box F = 1.047, p = .351

Group	Count	Mean	Standard Deviation	Standard Error
1	33	2.8731	.4041	.0704
2	26	2.8717	.4304	.0844
3	29	3.0828	.3275	.0608

Table 4.14.--Continued.

V. ADMINISTRATIVE CONTROL

Source	df	Sum of Squares	Mean Squares	F-Ratio	F-Prob.
Between groups	2	.0686	.0343	0.3253	.7232
Within groups	85	8.9673	.1055		
Total	87	9.0359			

Bartlett-Box F = 2.593, p = .075

Group	Count	Mean	Standard Deviation	Standard Error
1	33	2.0662	.2735	.0476
2	26	2.1117	.2875	.0564
3	29	2.1308	.4012	.0745

VI. TEACHER INTIMACY

Source	df	Sum of Squares	Mean Squares	F-Ratio	F-Prob.
Between groups	2	.0540	.0270	0.2347	.7913
Within groups	85	9.7775	.1150		
Total	87	9.8315			

Bartlett-Box F = 1.121, p = .326

Group	Count	Mean	Standard Deviation	Standard Error
1	33	2.2568	.3476	.0605
2	26	2.2031	.2801	.0549
3	29	2.2083	.3756	.0697

Table 4.14.--Continued.

VII. TEACHER FRUSTRATION

Source	df	Sum of Squares	Mean Squares	F-Ratio	F-Prob.
Between groups	2	.0750	.0375	.3438	.7100
Within groups	85	9.2717	.1091		
Total	87	9.3467			

Bartlett-Box F = .689, p = .502

Group	Count	Mean	Standard Deviation	Standard Error
1	33	1.8017	.2912	.0507
2	26	1.8724	.3455	.0678
3	29	1.8438	.3573	.0663

was assigned a value ranging on a continuum from the isolated self-contained classroom (value = 1) to the more interactive departmentalized organization (value = 2) and socially interactive interdisciplinary teaming (value = 3) arrangements. An average instructional organization score was determined for each of the 88 middle-level buildings. Analysis of aggregate school scores and histogram (Figure 4.6) indicated a leptokurtic kurtosis. This highly skewed distribution indicated that the majority of middle-level schools reported a departmentalized instructional design. The aggregate data were broken into three groups by creating a middle

Count	Midpoint	
0	1.250	
1	1.325	**
0	1.400	
0	1.475	
1	1.550	*
1	1.625	**
5	1.700	********
1	1.775	**
17	1.850	*****************************
27	1.925	**
19	2.000	*********************************
2	2.075	***
4	2.150	*******
4	2.225	*******
1	2.300	**
2	2.375	***
1	2.450	**
1	2.525	**
0	2.600	
1	2.675	**
0	2.750	

. . . . . .
0 2 4 6 8 10

Note: One * = approximately .60 occurrences. Mean = 1.959, Std. Error = .021, Median = 1.931, Mode = 2.00, Std. Dev. = .193, Variance = .037, Kurtosis = 2.889, Skewness = .714.

Figure 4.6: Instructional organization.

group composed of scores one standard deviation above and below the mean. In this manner, the following analysis groups were created:

Group	Instructional Organization Scheme
1	Less than 1.77
2	Greater than 1.77 but less than 2.15
3	Greater than 2.15

One-way analysis of variance and Bartlett-Box F test for homogeneity of variances were completed for each of the seven dependent climate scales and instructional organization groups (Table 4.15). Statistical analysis indicated with 95% confidence that no two instructional design groups were significantly different on any of the seven dependent variables. These data indicated that most middle-level schools participating in this study had a variety of instructional designs operating within their buildings and the aggregate school scores did not have a significant effect on Expectancy and Motivation, Pupil Control Behavior, Tangible Environment, Teacher Frustration, Teacher Intimacy, Administrative Control, and Administrative Support.

Chapter Summary

The analysis procedures applied to the data collected from the Middle School Organizational Climate Survey were presented and discussed in this chapter. Through these procedures, it was determined that seven dimensions best represent the organizational climate of middle-level schools. Two factors describe the behavior of the principal(s) and five factors describe the faculty as a group. Continued factor and alpha reliability analyses guided the

Table 4.15.--One-way analysis of variance: Seven climate scales/ average instructional design.

I. EXPECTANCY AND MOTIVATION

Source	df	Sum of Squares	Mean Squares	F-Ratio	F-Prob.
Between groups	2	.1809	.0905	1.7257	.1842
Within groups	85	4.4555	.0524		
Total	87	4.6364			

Bartlett-Box F = .641, p = .527

Group	Count	Mean	Standard Deviation	Standard Error
1	8	3.0234	.2203	.0779
2	68	2.9994	.2199	.0267
3	12	3.1326	.2820	.0814

II. ADMINISTRATIVE SUPPORT

Source	df	Sum of Squares	Mean Squares	F-Ratio	F-Prob.
Between groups	2	.1328	.0664	.5401	.5847
Within groups	85	10.4523	.1230		
Total	87	10.5851			

Bartlett-Box F = 1.867, p = .155

Group	Count	Mean	Standard Deviation	Standard Error
1	8	3.0227	.1914	.0677
2	68	2.8942	.3661	.0444
3	12	2.8702	.3322	.0959

Table 4.15.--Continued.

III. PUPIL CONTROL BEHAVIOR

Source	df	Sum of Squares	Mean Squares	F-Ratio	F-Prob.
Between groups	2	.1331	.0665	1.5854	.2109
Within groups	85	3.5678	.0420		
Total	87	3.7009			

Bartlett-Box F = 1.225, p = .294

Group	Count	Mean	Standard Deviation	Standard Error
1	8	1.8852	.1789	.0632
2	68	1.9375	.2153	.0261
3	12	1.8273	.1470	.0424

IV. TANGIBLE ENVIRONMENT

Source	df	Sum of Squares	Mean Squares	F-Ratio	F-Prob.
Between groups	2	.8646	.4323	2.8583	.0629
Within groups	85	12.8561	.1512		
Total	87	13.7207			

Bartlett-Box F = 1.181, p = .307

Group	Count	Mean	Standard Deviation	Standard Error
1	8	2.8258	.4969	.1757
2	68	2.9128	.3898	.0473
3	12	3.1833	.2935	.0847

Table 4.15.--Continued.

V. ADMINISTRATIVE CONTROL

Source	df	Sum of Squares	Mean Squares	F-Ratio	F-Prob.
Between groups	2	.1155	.0578	0.5505	.5787
Within groups	85	8.9204	.1049		
Total	87	9.0359			

Bartlett-Box F = 1.202, p = .301

Group	Count	Mean	Standard Deviation	Standard Error
1	8	2.0812	.3264	.1154
2	68	2.1187	.3038	.0368
3	12	2.0138	.4253	.1228

VI. TEACHER INTIMACY

Source	df	Sum of Squares	Mean Squares	F-Ratio	F-Prob.
Between groups	2	.3536	.1768	1.5854	.2109
Within groups	85	9.4779	.1115		
Total	87	9.8315			

Bartlett-Box F = 1.923, p = .146

Group	Count	Mean	Standard Deviation	Standard Error
1	8	2.3894	.4235	.1497
2	68	2.1925	.3389	.0411
3	12	2.2990	.2186	.0631

Table 4.15.--Continued.

VII. TEACHER FRUSTRATION

Source	df	Sum of Squares	Mean Squares	F-Ratio	F-Prob.
Between groups	2	.0837	.0418	0.3840	.6823
Within groups	85	9.2630	.1090		
Total	87	9.3467			

Bartlett-Box F = .045, p = .956

Group	Count	Mean	Standard Deviation	Standard Error
1	8	1.8858	.3547	.1254
2	68	1.8198	.3289	.0399
3	12	1.8979	.3212	.0927

reduction of survey items. The final 70 items represent seven factors, which collectively account for 65.2% of the variability in the measurement of organizational climate in middle-level settings.

Various second-order factor analyses were conducted to explore the interrelationship between the seven climate factors. An examination of data supported the conclusion that the seven factors could not be reduced to a second-order structure.

Exploratory analyses were conducted to determine whether four independent variables had an effect on the identified dimensions of middle-level organizational climate. The variables of building gender composition and building instructional organization were not found to have an effect on the climate dimensions of Expectancy

and Motivation, Pupil Control Behavior, Teacher Frustration, Teacher Intimacy, Tangible Environment, Administrative Control, and Administrative Support.

The independent variables of average age of teaching staff and average years of experience, however, were found to have an effect on only the climate variable, Teacher Intimacy. Teaching staffs over the age of 41 and with more than 19 years of average teaching experience demonstrated a decreased concern with social need relationships.

Chapter V begins with a discussion of the findings for each of the three research questions addressed in this study. Following the summary of findings, each research question is discussed, with recommendations and implications for future research.

CHAPTER V

SUMMARY OF FINDINGS, DISCUSSION AND IMPLICATIONS FOR FUTURE RESEARCH

Summary of the Findings

Dimensions of Middle-Level Organizational Climate

Working from the climate studies of Halpin and Croft (1962) and Kottkamp et al. (1987), the expectancy motivation study of Miskel (1982), the pupil control ideology study of Willower et al. (1967), and related literature, the researcher developed an organizational climate instrument and tested it for use in the middle-level school setting. Eight factors representing the behaviors of both the principal and teachers were found to operationalize the construct of elementary school organizational climate (Halpin & Croft, 1962). Five factors, also representing the social relationships between the principal and faculty, were identified in the measurement of secondary school organizational climate (Kottkamp et al., 1987).

In addition to the dimensions identified in the studies cited above, the effects of teachers' expectancy and motivation, pupil control behavior, and tangible environment emerged as factors in the measurement of organizational climate in middle-level schools.

Items from the Expectancy and Motivation Scale (Miskel, 1982) and the Pupil Control Ideology Scale (Willower et al., 1967) were

modified to assess perceptions of the behavior of the group as opposed to perceptions of the individual. This revision was necessary to create unit-of-analysis compatibility between the study and psychometric phases of instrument development. Previously identified as a component of exemplary schools, the physical and material aspects of a school emerged as a factor in middle school climate.

As a result of this study, seven statistically valid and reliable factors were identified and defined to portray aspects of the organizational climate of middle-level schools. Five factors describing the characteristics of the faculty as a group include Expectancy and Motivation (EXM), Pupil Control Behavior (PCB), Tangible Environment (TGEN), Teacher Intimacy (TIN), and Teacher Frustration (TFRUS). Two factors describing the behavior of the principal(s) include Administrative Support (ADSUP) and Administrative Control (ADCON).

Expectancy and Motivation emerged as the largest dimension, accounting for 33% of the total variance. This factor resulted from merging 71% of the items originally from the Expectancy and Motivation Scale (Miskel, 1982), 38% of the items from the Teacher Engagement subtest (Kottkamp et al., 1987), and 13 original items.

Eighty-six percent of the items originally included in the OCDQ-RS subtest of Principal Support and 43% of the Principal Control items combined with four original items and one PCI item (Willower et al., 1967) to compose the factor entitled Administrative Support.

As hypothesized in the research of Mulhern (1984), the development of a Pupil Control Behavior dimension did result in a strong factor reflecting the teachers' perceptions of the student body as a group. This factor was created through the merging of 61% of the items from the PCI (Willower et al., 1967) and two items from each of the subtests entitled Expectancy and Motivation (Miskel, 1982) and Teacher Engagement (Kottkamp et al., 1987).

Tangible Environment emerged as a new factor in the measurement of organizational climate and was composed of four items originally designed to represent this dimension along with one item from the Expectancy and Motivation Scale (Miskel, 1982).

Forty-three percent of the items from the OCDQ-RS Principal Control subtest remained together to form the factor entitled Administrative Control.

Consistent with the elementary school research of Halpin and Croft (1962) and the secondary school research of Kottkamp et al. (1987), Teacher Intimacy emerged as an independent factor in the measurement of school organizational climate. Seventy-five percent of the items from the Teacher Intimacy subtest (Kottkamp et al., 1987) remained to form this factor.

Teacher Frustration emerged as the weakest factor in middle-level organizational climate, drawing its three items from the Teacher Frustration subtest in the OCDQ-RS (Kottkamp et al., 1987).

The seven resultant factors are collectively composed of 70 items that make up the Middle School Organizational Climate

Survey-Final Form (MSOCS-FF). Administration of this instrument could be facilitated in approximately 25 minutes through a building faculty meeting.

Second-Order Factor Solution

Following the studies of Halpin and Croft (1962) and Kottkamp et al. (1987), second-order factor analyses were performed to explore the interrelationship of the seven middle-level climate factors. Halpin and Croft identified the three second-order factors of Social Needs, Esprit, and Social Control. Kottkamp et al. identified two second-order factors representing social needs and task achievement. However, in the exploration of middle-level climate, no clear second-order factors were revealed. The MSOCS-FF emerged as seven independent and stable factors that maintain their identity and resist collapsing into a second-order structure.

Exploration of Independent Variables and Climate Factors

An overview of the relationships between the subtests in the Organizational Climate Description Questionnaire-Final Form (MSOCS-FF) and the four independent variables of average building teacher age, average building years experience, building gender composition, and instructional design resulted in additional insights regarding differences in organizational climate.

The dimension of Teacher Intimacy was found to show a negative correlation with both building teacher age and years of teaching experience. As teachers increased in both age and years of

experience, they showed a decreased concern for close social relationships with co-workers. Teacher age and years of experience, however, did not appear to have an effect on the six other climate dimensions of Expectancy and Motivation, Administrative Support, Administrative Control, Pupil Control Behavior, Tangible Environment, and Teacher Frustration.

The gender composition of a middle-level building was not found to have a significant relationship with the seven organizational climate variables identified in this study. Teacher age, gender, and experience aggregated into building data were used to describe the personnel profile of a staff. When exploring the relationships between the composition of building personnel and the seven dimensions of middle-level organizational climate, only Teacher Intimacy emerged as having a significant effect.

Working outside the realm of personnel differences into the curricular domain, the average building instructional design was not found to influence any of the seven dimensions identified to be present in the organizational climate of middle-level schools.

Discussion and Implications for Future Research

A summary of findings from each of the three research questions reviewed above led to discussion and consequent implications for future research. The identification and description of seven factors to represent the organizational climate of middle-level schools is used in the comparison of the factors found to be present in elementary, secondary, and middle-level climate.

Comparison of Elementary, Secondary, and Middle-Level Organizational Climate Dimensions

The dimensions identified to measure the organizational climate of elementary, secondary, and middle-level schools are listed in Table 5.1, along with respective reliability coefficients and percentages of variance.

Principal behaviors. In defining the behaviors of the principal, Halpin and Croft (1962) identified the subtest Aloofness to represent formal and impersonal principal behaviors toward the staff. This dimension emerged as the weakest factor in the OCDQ and was not found to be present in the organizational climate of either secondary or middle-level climates. In addition, none of the items representing Aloofness in the OCDQ emerged in any form in the OCDQ-RS or the MSOCS-FF.

Perceptions of an autocratic and domineering principal emerged in all three levels of organizational climate. Halpin and Croft (1962) identified the behaviors of a domineering principal with the factor Production Emphasis. Kottkamp et al. (1987) found the same concept to be present in the organizational climate of secondary schools and called this factor Principal Control. Close administrative supervision of the faculty was also identified as a dimension of middle-level schools and was denoted with the factor name Administrative Control. This factor contained three items and represented 3.7% of the variance.

Table 5.1.--Comparison of dimensions and corresponding reliability coefficients present in the organizational climate of elementary, secondary, and middle-level schools.

OCDQ (Halpin & Croft, (1962)	OCDQ-RS (Kottkamp et al., 1987)	MSOCS-FF (Cheal, 1990)
	Principal Behaviors	
Aloofness * = .26 % var = 5.31	-----	-----
Production Emphasis * = .55 % var = 4.73	Principal Control a = .87 % var = 10.27	Administrative Control a = .91 % var = 3.7
Thrust * = .84 % var = 4.29 Consideration * = .59 % var = 4.20	Principal Support a = .91 % var = 23.45	Administrative Support a = .95 % var = 10.06
	Teacher Behaviors	
Disengagement * = .73 % var = 23.80 Hindrance * = .68 % var = 11.06	Teacher Frustration a = .85 % var = 6.70	Teacher Frustration a = .76 % var = 2.7
Esprit * = .75 % var = 7.59	Teacher Engagement a = .85 % var = 12.09	-----
Intimacy * = .60 % var = 5.98	Teacher Intimacy a = .71 % var = 5.28	Teacher Intimacy a = .93 % var = 3.3

Table 5.1.--Continued.

OCDQ (Halpin & Croft, (1962)	OCDQ-RS (Kottkamp et al., 1987)	MSOCS-FF (Cheal, 1990)
	Teacher Behaviors (Continued)	
-----	-----	Expectancy and Motivation a = .97 % var = 33.0
-----	-----	Pupil Control Behavior a = .92 % var = 7.6
-----	-----	Tangible Environment a = .87 % var = 4.4

KEY: ----- signifies no comparable dimension is present, * indicates split-half coefficient corrected by Spearman-Brown formula, a = alpha reliability coefficient, % var = percentage of variance explained by the factor.

Halpin and Croft (1962) identified two factors that represented the positive principal behaviors entitled Thrust and Consideration. Thrust was used to denote task-oriented principal behaviors that positively motivated the faculty, whereas Consideration represented principal behaviors of personal concern for the staff. In the study of secondary school climate, Kottkamp et al. (1987) found items from the above two factors merged to form one factor representing positive and motivating principal behaviors, entitled Principal Support. Positive administrative behaviors also emerged as a strong factor in middle-level organizational climate, with 14 items

representing 10.06% of the variability. Six of the seven items from the OCDQ-RS factor Principal Support merged with three items that loaded negatively from the OCDQ-RS factor Principal Control to form the middle-level subtest entitled Administrative Support.

Teacher behaviors. In the measurement of organizational climate in elementary school settings, Halpin and Croft (1962) were concerned with the social interactions between the principal and his/her faculty. Specifically describing behaviors of the teachers, Halpin and Croft identified four distinct subtests.

A faculty's attitude toward its work was found to be one of the most important factors in elementary school climate since Esprit obtained a high loading on both Social Needs and Social Control second-order factors. This dimension was also present in the organizational climate of secondary schools as represented by the subtest Teacher Engagement. The concept of a faculty's orientation toward work had been hypothesized to be present in the organizational climate of middle-level schools but did not emerge as a subtest in this study. However, three items originally from the OCDQ-RS Teacher Engagement subtest emerged in the newly formed Expectancy and Motivation subtest, while two other items appeared in the new subtest entitled Pupil Control Behavior. The other seven items in this hypothesized dimension did not load onto any factor. Possibly the additional items included in this climate instrument have identified a more extensive factor structure. Items that had

previously loaded onto one factor have now aggregated differently to form other factors.

The dimension of social needs emerged as a consistent subtest in the organizational climate of elementary, secondary, and middle-level schools. Teacher Intimacy in the current study contained three items that accounted for only 3.3% of the variability. In addition, Teacher Intimacy did not emerge as a separate social needs subtest as found in the second-order factor analyses of the OCDQ and the OCDQ-RS. Teacher Intimacy is a dimension found in all levels of K-12 organizational climate, but it did not maintain as prominent a position in middle-level organizational climate.

In this study, the mean building age of teachers was found to be 41.6 years. Also, teaching staffs over the age of 41 were found to demonstrate a significant decrease in concern over social needs. Possibly the aging population of Michigan teachers can account for the decreased strength of the Teacher Intimacy subtest in this study. Replication of this research with a variety of faculty age groups would serve to explore the source of decreased Teacher Intimacy. At present, it is unknown whether this decrease in teacher social needs is attributable to the unique aspects of middle-level schools or generalizable to all levels of K-12 education due to an aging teacher population.

Halpin and Croft (1962) identified two teacher behaviors representing negative perceptions of co-workers and frustration with unnecessary administrative duties. These two factors were denoted with the subtests Disengagement and Hindrance, respectively. In the

identification of organizational climate of secondary schools, Kottkamp et al. (1987) found the two teacher subtests described above to merge into the one factor, Teacher Frustration.

In the middle school study, three items from the OCDQ subtest Hindrance and one item from the OCDQ-RS subtest Teacher Frustration merged to represent 2.7% of the variance. Teacher Frustration had not been hypothesized to be a dimension of middle-level organizational climate but did emerge as the weakest factor.

Three new dimensions not present in the OCDQ or the OCDQ-RS were explored and emerged as factors in the organizational climate of middle-level schools. In an effort to investigate the social interaction involving students, Kottkamp et al. (1987) explored the pupil control orientation of teachers as an indicator of the nature of student/teacher relationships. In their study, Kottkamp et al. had one-third of the staff complete the Pupil Control Ideology Scale (Willower, 1967). Even though they admitted there was a confounding of the unit of analysis, they found a positive correlation between the pupil control ideology of teachers and the pupil control behavior of the staff.

This study included the social interactions between a faculty and their students as a dimension in organizational climate. Pupil Control Behavior did emerge as a strong factor in middle school organizational climate.

In an effort to explore the academic orientation of each school, Kottkamp et al. (1987) compared a random participant

sampling of the Expectancy Motivation Scale (Miskel, 1982) to OCDQ-RS building climate scores. They found that secondary schools with more open climates had teachers who had higher expectancy motivation than did schools with less open climates. In addition, they found the more humanistic the pupil control ideology of teachers, the higher the expectancy motivation of the faculty.

In this study, expectancy and motivation was included as a dimension in middle-level organizational climate and consistently emerged as the strongest dimension accounting for the largest percentage of variance.

Staff perceptions of the physical and material aspects of the building were included as an original dimension of middle-level organizational climate and also emerged as a factor.

Implications for Middle-Level Educators

The identification and definition of the dimensions present in the organizational climate of middle-level schools resulted in seven reliable and valid factors. These seven factors account for 65% of the variability of middle school climate as compared to the five OCDQ-RS factors that account for 57.8% of the variability in secondary school settings and eight factors that account for 66% of the variability in elementary schools.

In addition, three new dimensions were explored and emerged as strong factors in the MSOCS-FF. The factors of Expectancy and Motivation, Pupil Control Behavior, and Tangible Environment collectively accounted for 45% of the variability. These three new

factors expand the dimensionality of organizational climate as defined in Tagiuri's (1968) taxonomy. The climate instruments of Halpin and Croft (1962) and Kottkamp et al. (1987) were concerned solely with the dimension of social systems, which describes the patterned relationships of persons and groups. With the addition of the three new dimensions cited above, the MSOCS-FF includes the physical and material aspects of Tagiuri's ecology dimension along with the milieu factor, which describes the social dimension concerned with the presence of persons and groups. These three new factors have broadened the dimensionality of climate to include concepts central to the internal dynamics of any K-12 educational institution. It is recommended that, in future research on climate, these three new dimensions also be included in organizational climate scales at the elementary and secondary school settings. Faculty expectancy and motivation toward student achievement, concern with physical and instructional materials, and relationships between teachers and their students are dimensions that will be present at all educational levels.

Based on the hypothesis that middle schools are educational institutions distinct from elementary and secondary settings, and following a review of the related literature, 34 original items were generated for use in the middle-level measurement scale. Eighty-eight percent of the original climate items were retained for use in the final form of this scale.

The MSOCS-FF is presented for use in middle schools as a reliable and valid measurement scale that was developed and tested in middle-level settings. The addition of items indigenous to the unique aspects of middle schools, three new factors that have broadened the specificity of the climate dimensionality, and psychometric defense within a setting compatible with the development phase of this study all lend credibility to the practical application of this instrument.

Important Considerations for Future Instrument Use

A retrospective analysis of this project elicited several areas of discussion and implications for future use of this climate instrument. Further consideration of the items used in this instrument revealed an incompatibility between several items and the Likert response statements. As discussed in Chapter III, it was decided to maintain the integrity of the wording of items taken from a previously used measurement instrument in an attempt to avoid misrepresentation of the item's intention. However, this effort resulted in several items from the Pupil Control Ideology Scale (Willower et al., 1967) and the Expectancy and Motivation Scale (Miskel, 1982) being stated in a normative frame of reference, whereas the Likert scale reflected the frequency-of-occurrence frame of reference. For example, Item 40 from the PCI was stated as follows:

> Directing sarcastic remarks toward a defiant student is a good disciplinary technique.

An item such as this cannot be responded to by citing its rate or frequency of occurrence (Rarely Occurs, Sometimes Occurs, Often Occurs, or Very Often Occurs). Restating the item in the following manner would make it compatible with the Likert response statements while maintaining the item's intent.

> Directing sarcastic remarks toward a defiant student occurs in this school as a disciplinary technique.

An analysis of the items contained in the MSOCS-FF revealed six items that should be reworded in future use of this instrument. It is unknown how many of the items eliminated through instrument revisions were due to this incompatibility. It is possible that an item might have loaded onto a factor if its meaning had not been clouded by this incompatibility. Future use of this instrument is recommended with the following item modifications.

> Item 40:
> Directing sarcastic remarks toward a defiant student occurs in this school as a disciplinary technique.
>
> Item 44:
> Students in our school are just young hoodlums and teachers treat them accordingly.
>
> Item 55:
> When our teachers become too friendly with our students, it leads students to become too familiar.
>
> Item 75:
> In this school, teachers work hard in the performance of their job.
>
> Item 79:
> In this school, high faculty initiative leads to the attainment of the desired educational objectives.
>
> Item 82:
> In this school, working as hard as we can results in goal accomplishment.

Another potential drawback attributed to the MSOCS-FF is the length of the survey instrument. Merging three psychometrically defended instruments with additional original items into one measurement questionnaire resulted in an ambitious and lengthy survey instrument. As predicted in the development stage of this study, some schools (and individuals in participating schools) reported difficulty in completing the survey due to the extensive length of the questionnaire. The length of this instrument leads to further areas of discussion.

An instrument with a total number of items greater than the number of schools participating in the study created a significant statistical challenge. As explained in Chapter III, it was necessary to reduce the original 103-item set to a number lower than that of the participating schools in order to complete the factor analysis procedures. It was believed that the methodology used in deleting the 15 items was the least disruptive to the research project, although it is difficult to measure or predict what effects, if any, this reduction had on the overall study. In future replications of this study, researchers should consider the number of items in the measurement instrument as a guideline in determining the number of participants needed for factor analysis procedures.

A 39% participation rate was lower than hoped for but might be indicative of a research project that requires two levels of administrative approval and a faculty's cooperation to insure a high rate of return. Consequently, expansion of the population to include a variety of national or international demographic areas

would serve to boost the potential number of participating schools. This expansion of the sample population would also permit the development of broader instrument norms. Such normative information would add external validity and, of course, enhance the utility of the instrument.

Middle School Organizational Climate Survey-Final Form: Reduced Items

The MSOCS-FF contains 70 items, which define seven independent factors. Seventy items could still be regarded as lengthy and might reduce the practical application of this instrument. Some schools might reject the use of the instrument based on its completion time. In addition, the length of the instrument might encourage some participants to create inaccurate response sets.

To facilitate the use of this instrument in future research without diminishing the psychometric or philosophical integrity, a modification of the MSOCS-FF was undertaken. The factors of Expectancy and Motivation, Administrative Support, and Pupil Control Behavior represent 80% of the total number of items, whereas the factors of Tangible Environment, Administrative Control, Teacher Intimacy, and Teacher Frustration contain five or fewer items each. Without compromising reliability, an effort was made to balance the number of items representing each of the dimensions, which would also serve to reduce the overall length of the survey instrument.

The factors of Expectancy and Motivation, Administrative Support, and Pupil Control Behavior were gradually refined following

sequential reliability analysis procedures. The last item to load on a factor was deleted from the item set and a revised reliability analysis reviewed before another item was selected for deletion.

In this manner, Factor I (Expectancy and Motivation) was reduced from 27 to 10 items while only reducing the alpha reliability from .97 to .95. It is believed that the slight reduction in reliability was overridden by the advantages of a shorter, more concise scale. Replication of this reduction procedure resulted in reducing Factor II (Administrative Support) from 14 to 10 items while maintaining an alpha reliability of .95. In a similar manner, Factor III (Pupil Control Behavior) was reduced from 15 to 11 items while maintaining the .92 alpha reliability. The factors of Tangible Environment, Administrative Control, Teacher Intimacy, and Teacher Frustration contain five, three, three, and three items, respectively, and were not altered through this procedure.

The reduced-item seven-factor varimax rotational solution is shown in Table 5.2. Every item in the reduced-item factor analysis loaded primarily onto the same factor to which the item was assigned in both the preliminary and final forms of the instrument. This consistency of factors through the three forms of this measurement instrument provided additional evidence for the construct validity of the final seven factors.

Table 5.2.--Rotated factor matrix: Middle School Organizational Climate Survey-Final Form, reduced items (MSOCS-FF-RI).

Var.	Factor						
	1	2	3	4	5	6	7
24	.88900						
20	.87418						
10	.87310						
12	.86098						
18	-.78497						
23	.77978						
21	.76775				.32201		
11	-.75769						
8	.73703						-.34618
19	-.67785						
33		.87226					
36		.85901					
34		.82187					
35		.81425					
47		.79469	-.32331				
32		.75499					
48		.75093	-.34791				
74		.67422	-.38300				
72		.63678	-.36813				
79		.63187	-.34159				
58			.81876				
46			.79347				
60			.76865				
30			-.70634				
44			.69904				
45			.67478				
77		-.34733	.63895				
57			.59129				
55			.55441				
40			.53238				
92		-.42957	.52657				
62				.95939			
63				.89299			
66				.74517			
2				.57553			
81	.42717	.36206		.45428			

Table 5.2.--Continued.

Var.	Factor						
	1	2	3	4	5	6	7
25					.92688		
26					.92453		
13					-.75552		
100			-.30934			.88911	
101						.85919	
99						.80815	
4							.85578
1					.31547		.66643
5							.65385

The MSOCS-FF-RI is a more concise and timely survey instrument. Item identification, reliability coefficients, and percentage of variance for the preliminary, final, and reduced-item forms of the instrument are presented in Tables 5.3 and 5.4. Throughout all three of the instrument forms, the same seven factors emerged. Through factor analytic techniques, essentially the same items loaded onto the same factors. Similar alpha reliability coefficients were maintained throughout the instrument modifications, and the percentage of variance accounted for increased from 61.6% in the preliminary form to 65.2% in the final form, whereas 69.8% of the variability could be explained in the reduced form of the instrument.

Table 5.3.--Item identification for the preliminary, final, and reduced-item data sets.

Subtest Name	Preliminary Set	Final Set	Reduced Set
Expectancy & Motivation (EXM)	27,32,33,34,35, 36,38,47,48,50, 51,68,69,71,72, 74,75,78,79,82, 83,85,86,87,88, 89,93,98	27,32,33,34,35, 36,38,47,48,50, 51,68,69,71,72, 74,75,78,79,82, 83,85,86,87,88, 93,98	32,33,34,35, 36,47,48,72, 74,79
Administrative Support (ADSUP)	06,08,09,10,11, 12,14,15,17,18, 19,20,21,23,24, 52	08,10,11,12,14, 15,17,18,19,20, 21,23,24,52	08,10,11,12, 18,19,20,21, 23,24
Pupil Control Behavior (PCB)	30,39,40,43,44, 45,46,54,55,57, 58,59,60,65,77, 84,90,92,97	30,40,43,44,45, 46,54,55,57,58, 59,60,77,84,92	30,40,44,45, 46,55,57,58, 60,77,92
Tangible Environment (TGEN)	02,62,63,66,80, 81	02,62,63,66,81	02,62,63,66, 81
Administrative Control (ADCON)	07,13,22,25,26, 67	13,25,26	13,25,26
Teacher Intimacy (TIN)	99,100,101,103	99,100,101	99,100,101
Teacher Frustration (TRFRUS)	01,04,05,95	01,04,05	01,04,05

Table 5.4.--Alpha reliability and percentage of variance for subtests in the preliminary, final, and reduced instruments.

Subtest Name	Alpha Reliability			Percent of Variance		
	Prelim	Final	Reduced	Prelim	Final	Reduced
Expectancy & Motivation (EXM)	.97	.97	.95	31.2	33.0	13.5
Administrative Support (ADSUP)	.95	.95	.95	9.9	10.6	28.6
Pupil Control Behavior (PCB)	.92	.92	.92	7.4	7.6	9.0
Tangible Environment (TGEN)	.86	.87	.87	3.9	4.4	6.2
Administrative Control (ADCON)	.77	.91	.91	3.5	3.7	4.7
Teacher Intimacy (TIN)	.92	.93	.93	2.9	3.3	4.3
Teacher Frustration (TRFRUS)	.75	.76	.76	2.6	2.7	3.5
Cumulative percent				61.6	65.2	69.8

Because of the psychometric strengths cited above, it is recommended that future researchers at the middle level consider using this streamlined form of the instrument. It is further suggested that, in replications of this study using the MSOCS-FF-RI, researchers seek to expand the reliability of the factors of Tangible Environment, Administrative Control, Teacher Intimacy, and Teacher Frustration through the addition of measurement items. Even

though these factors had consistent reliability coefficients, expansion of the factors to include more items would serve to strengthen the overall factor structure.

All items loaded onto the same factors as in the preliminary and final instrument forms, even though they often emerged in a different order. The following description of each factor defines the items that remained to form the reduced-set version of the instrument. In the rotated factor analysis of the reduced set, Administrative Support was the first factor to emerge. All five items from the Principal Support subtest and one item from the Principal Control subtest (Kottkamp et al., 1987) remained to form the reduced factor. Four original items were retained to complete the ten variables in the Administrative Support scale.

Expectancy and Motivation was the second factor to emerge in the reduced set. Two items from the Expectancy and Motivation scale (Miskel, 1982) and eight original items remained to form this factor. The content of the items eliminated from this dimension necessitated a revision of the factor description (Appendix O). This scale now represents the expectancy, valence, and motivation of the faculty only toward student achievement. Items that represented teachers' expectancy, valence, and motivation toward professional gratification were not retained in the reduced factor set.

Pupil Control Behavior retained its position as the third factor to emerge. Maintaining their position in this subtest were eight items from the Pupil Control Ideology scale (Willower et al., 1967), both items from the Teacher Engagement scale (Kottkamp et

al., 1987), and one item from the Expectancy and Motivation scale (Miskel, 1982). As stated earlier, no reduction of items was taken on factors four through seven. A list of the items and a description of each factor in the MSOCS-FF-RI is included in Appendix O.

Second-Order Factor Solution

Through an examination of the second-order factor solutions, Halpin and Croft (1962) identified three factors to define the underlying structure of elementary organizational climate. The Social Needs factor represented individual perceptions of social interactions. The Intimacy and Consideration subtests collapsed to form this factor, which describes individual perceptions of group relationships.

The second factor, entitled Esprit, represented the behavior of the group rather than respondents' individual behavior. The subtests of Esprit and Thrust yielded a high positive loading on this factor, whereas Disengagement and Hindrance yielded high negative loadings.

The third second-order factor was entitled Social Control as it represented the principal's orientation toward directing and controlling the behavior of the teachers. This factor was composed of the subtests Aloofness and Production Emphasis.

Following the same procedures used in the OCDQ, Kottkamp et al. (1987) found two second-order factors best represented the underlying structure of secondary climate. The first factor to

emerge in the second-order solution was composed of four subtests and entitled Openness. The subtests of Principal Support and Teacher Engagement yielded strong positive loadings, whereas Principal Control and Teacher Frustration yielded strong negative loadings.

Consistent with the findings of Halpin and Croft (1962), social needs emerged as a single factor. Even though items were worded as a group reference in the OCDQ-RS, staff interactions associated with social needs satisfaction emerged as a single factor.

Through an examination of the second-order factor structure of the seven dimensions of middle-level organizational climate, no clarity of underlying structure emerged. The MSOCS-FF contains seven independent factors that did not collapse into a second-order structure. The addition of new instruments and original items created for use in middle schools could have generated new item loading combinations and factors. Possibly the resulting three new factors of Expectancy and Motivation, Pupil Control Behavior, and Tangible Environment provided a broader and more comprehensive definition of climate. Each factor is now capturing a unique and distinct aspect of a more complete measurement of middle-level organizational climate.

The MSOCS-FF consists of seven independent dimensions that can be perceived as seven independent scales. This lack of interdependence among the seven dimensions would support further research using selected scales from the MSOCS-FF. This flexibility

would allow practitioners to address individual dimensions of climate as determined for their specific school needs.

Independent Variables

The variables of teacher age and teacher experience were found to have an effect on the dimension of Teacher Intimacy. Faculties over the age of 41 or those with more than 19 years of teaching experience were found to have a decreased concern with close social relationships. It is interesting that this relationship emerged regardless of faculty gender composition. Contrary to conventional wisdom, close social relationships with co-workers emerged as a function of age and experience rather than gender.

In the research of Brophy and Good (1974), female teachers were found to react differently to male students due to sex-role socialization. In the study of middle-level climate, the gender composition of a school was found to have no significant effect on the faculty's perception of teacher/student relationships.

Gender-related teacher differences have been identified to explain differences in job stress and emotional exhaustion (Gould, 1985; Litt & Turk, 1985; Perlin & Schooler, 1978). However, in this study, an exploration of gender composition indicated no effect on the faculty's frustration with their job. Similarly, no difference was found between the variable of faculty gender and concern for the physical and material aspects of a building, expectancy and

motivation toward academic achievement, teacher social needs, and administrative support and control.

Possibly the effects found when studying gender as an individual variable are altered when studying the effects of group behaviors. Personnel decisions made from a building perspective appear to require different rationale and support than do those focused on individuals. Administrators responsible for district policies and procedures are cautioned not to apply research using the individual as the unit of analysis to situations addressing the collective needs of the staff.

The physical arrangement of students for curricular instruction did not have an effect on how teachers perceived the behavior of their students or their expectancy of academic achievement. Also of interest to practitioners is the lack of effect instructional organization had on teachers' perceptions of the physical environment, teacher frustration, or administrative behaviors. Contrary to what one might expect, instructional organization did not appear to have an effect on teacher social needs or professional isolation, which are often cited as a concern with teachers assigned to a self-contained or departmentalized instructional organization (Gould, 1988; Jordell, 1987).

Teaming is often cited as an important variable for an effective middle school program. However, based on the results of this study, the increased personnel costs required for teaming would not result in an enhanced building climate.

As discussed in Chapter III, the instructional organization in this sample was skewed toward a departmentalized strategy. This could indicate that departmentalized instructional organization occurs so frequently in Michigan middle schools that obtaining an adequate sample of nondepartmentalized schools is difficult. Consequently, it is believed that the effects of instructional organization on the dimensions of middle-level climate should be further researched with a sample of schools that includes a broader range of instructional strategies.

Generalizability

Although the sample was randomly drawn from the Michigan population, participation in this research study was voluntary. In addition, only middle-level schools in Michigan were approached to participate in this study. Therefore, generalizing beyond the sample must be undertaken cautiously and with full cognizance of the limitations of the research design.

With these limitations understood, the seven independent factors identified to portray organizational climate appear to have potential as a useful tool for helping describe the differences in middle-level school organizational climate. The factor structure in the instrument was found to be highly reliable and valid. The descriptions assigned to the factors are general enough to be applied to the diverse circumstances that occur in various middle schools but specific enough to be helpful in individual building situations.

APPENDICES

APPENDIX A

MAJOR SCHOOL CLIMATE INSTRUMENTS, CATEGORIZED BY TAGIURI'S CLIMATE TAXONOMY

Table A.1.--Major school climate instruments, categorized by Tagiuri's climate taxonomy (T = teacher, P = principal).

Instrument	Ecology	Milieu	Social System	Culture
ORGANIZATIONAL CLIMATE DESCRIPTION QUESTIONNAIRE (OCDQ) (Halpin & Croft, (1963)			Hindrance (T) Intimacy (T) Aloofness (P) Consideration (P) Production-emphasis (P)	Thrust (P) Disengagement (T) Esprit (T)
HIGH SCHOOL CHARACTERISTICS INDEX (HSCI) (Mitchell, 1968)			Strong environmental control	Strong intellectual orientation School activities Negative attitude toward environment
MY SCHOOL INVENTORY (MSI) (Ellett & Walberg, 1979)		Satisfaction	Friction Competitiveness Cohesiveness	Difficulty
LEARNING ENVIRONMENT INVENTORY (LEI) (Anderson & Walberg, 1974)	Environment	Satisfaction	Competitiveness Cohesiveness Friction Cliqueness Favoritism Formality Democratic	Speed Difficulty Apathy Diversity Goal direction Disorganization
ELEMENTARY SCHOOL ENVIRONMENT SURVEY (ESES) (Sinclair, 1970)	Building and facilities Materials and equipment Financial incentives Special services		Administrative practices Workloads School/community relations Supervisory relations Voice in education programs Performance and development	Practicality Community Awareness Propriety Scholarship

Table A.1.--Continued.

Instrument	Ecology	Milieu	Social System	Culture
PUPIL CONTROL IDEOLOGY (PCI) (Willower, Eidell, & Hoy, 1967)			Custodial--humanistic (continuum)	
PUPIL CONTROL BEHAVIOR (PCB) (Willower, 1977)			Same as PCI	
ROBUSTNESS SEMANTIC DIFFERENTIAL (RSD) (Licata et al., 1978)			Dramatic--not dramatic (continuum)	
SCHOOL DESCRIPTION INVENTORY (SDI) (Anderson, 1970)			Status maintenance Behavior control	
QUALITY OF SCHOOL LIFE (QSL) (Epstein & McPartland, 1976)		Satisfaction	Reaction to teachers	Commitment to classwork
QUALITY OF SCHOOL LIFE (QSL) (Williams & Batten, 1981)		General well-being Negative effects	Teachers	Status Identity Opportunity
Observations (Wynne, 1980)				Coherence

Table A.1.--Continued.

Instrument	Ecology	Milieu	Social System	Culture
Questionnaires (McDill & Rigsby, 1973)				Academic emulation Intellectualism-estheticism Cohesive and egalitarian estheticism Scientism Humanistic excellence Academic orientation-student status system
Questionnaires (Brookover et al., 1979)				Academic futility (S) Future evaluations and expectations (S) Present evaluations and expectations (S) Academic norms (S) Expectation of teacher push and teacher norms (S) Ability, evaluations, expectations, quality of education/college (T) Present evaluations and expectations for high school completion (T) Teacher/student commitment to improve (T) Academic futility (T) Perception of principal's expectations (T) Parent concern/expectations for quality education (P) Efforts to improve (P) Principal and parent evaluation of present quality of school (P) Present evaluations and expectations of students (P)

Source: J. Mulhern, "Organizational Climate of Secondary Schools: Revision of the OCDQ" (Doctoral dissertation, Rutgers University, 1984), Dissertation Abstracts International (1984).

APPENDIX B

PANEL OF MIDDLE SCHOOL EXPERT JUDGES

Panel of Expert Judges

Mr. Thomas Barris
(MASSP Member and MAMSE Board of Directors)
Principal, Webber Middle School
Saginaw Public Schools
2600 Prescott
Saginaw, Michigan 48601

Mr. John Borgert
Principal, Mason Middle School
235 Temple Street
Mason, Michigan 48854

Dr. Donald Cooke
King Mountain Elementary School
Half Moon Bay, California 94019

Dr. Robert Crane
Principal, South Intermediate School
Saginaw Public Schools
224 North Elm
Saginaw, Michigan 48602

Dr. Shirley Davis
222 Hargrove
Berkley, West Virginia 25801

Dr. Marcia Fortner
9446 Parkwood
Davison, Michigan 48423

Dr. Tom Gatewood
Virginia Polytechnic Institute and State University
Education Department
Blacksburg, Virginia 24061

Dr. Nick Georgiady
110 West Bull Run
Oxford, Ohio 45056

Dr. Glen Gerard
3732 Forest Valley Ct.
Grand Rapids, Michigan 49508

Mr. Mike Horning
(MASSP Member and MAMSE Board of Directors)
Principal, Onsted Middle School
Slee Road
Onsted, Michigan 49265

Dr. Charles Jaquith
324 Ronan Hall
Central Michigan University
Mt. Pleasant, Michigan 48859

Mr. Ronald Johnson
Principal, L'Anse Creuse South Middle School
34361 Jefferson
Mt. Clemens, Michigan 48045

Mr. Richard Lane
Superintendent, Tahquamenon Area Schools
700 Newberry Avenue
Newberry, Michigan 49868

Mr. James Lee
(MASSP Executive Board Member, MAMSE Board of Directors)
Principal,a Drew Middle School
9600 Wyoming
Detroit, Michigan 48204

Dr. Suzette Lee, Principal
Manistee Junior High School
550 Maple Street
Manistee, Michigan 49660

Dr. Dolly McMaster
Assistant Superintendent of Instructional Services
Northville Public Schools
501 West Main Street
Northville, Michigan 48167

Dr. James Morse
2915 Hall Street
Grand Rapids, Michigan 49506

Dr. William Powell
100 Sandstone Circle
Athens, Georgia 30601

Dr. David Prentice
Principal, Plainwell Middle School
720 Brigham
Plainwell, Michigan 49080-1598

Mr. Mike Samulski
(MASSP Board Member, MAMSE 1989-1990 President)
Principal, Wyandot Middle School
Chippewa Valley Schools
39490 Garfield Road
Mt. Clemens, Michigan 48044

Mr. Robert Schwenter
(MASSP Executive Board Member, MAMSE Board of Directors)
Principal, Elk Rapids Middle School
707 East Third Street
Elk Rapids, Michigan 49629

Dr. Marie Smith
Principal, Franklin Elementary School
801 Overland SW
Grand Rapids, Michigan 49503

Dr. Ross Stephenson
Assistant Superintendent
Dexter Community Schools
2615 Baker Road
Dexter, Michigan 48130

Mr. Anthony Topoleski
Superintendent
Gobles Public Schools
409 North State Street
Gobles, Michigan 49055

Dr. Pandi Walsh
P.O. Box 32
Canyon Estate
Tijeras, New Mexico 87059

Mr. Terry Walters
(MASSP Member and MAMSE Board of Directors)
Saline High School
7265 Saline Ann Arbor Road
Saline, Michigan 48176

Dr. Dorita Wotiska
Diocese of Lansing
228 N. Walnut
Lansing, Michigan 48933

APPENDIX C

LETTER FROM MICHIGAN ASSOCIATION OF MIDDLE SCHOOL EDUCATORS

PROMOTING MIDDLE LEVEL EDUCATION

December 8, 1988

Mr./Ms./Dr.
Middle School
address
City, Michigan 4----

Dear Mr./Ms./Dr.:

The organizational climate of a work place has been shown to have an effect on both worker output and job satisfaction. During the past thirty years, researchers have explored the internal climate of industry and business as well as colleges, secondary, and elementary schools. However, there appears to be a lack of research measuring the environment that serves the unique developmental needs of those students growing through the middle school years.

You have been identified as having notable expertise in the theoretical and/or practical aspects of a middle school. Therefore, we are seeking your assistance in the review of survey items proposed for use in the measurement of the organizational climate of a middle school. Your input will be used to revise the survey tool for use with approximately 2,000 teachers and principals employed in Michigan public middle schools. These data will be statistically analyzed for identification of the various dimensions present in middle school organizational climate. The resultant Inventory of Middle School Organizational Climate will be forwarded to you upon your request.

Thank you for sharing your time and expertise so that collectively we can work to improve the effectiveness of the schools in the middle. Please complete the enclosed survey and return in the stamped envelop we have provided on or before December 19, 1988. Feel free to contact Jennifer Cheal at W:517-265-8122 or H:517-265-1385 if you would like more information about this study.

Sincerely,

Louis G. Romano
Executive Director

Jennifer P. Cheal
Principal Researcher

MICHIGAN ASSOCIATION OF MIDDLE SCHOOL EDUCATORS
MICHIGAN STATE UNIVERSITY, COLLEGE OF EDUCATION • 419 ERICKSON HALL
EAST LANSING, MICHIGAN 48824 • 517/353-5461

APPENDIX D

PERMISSION TO USE PUBLISHED INSTRUMENTS

HOFSTRA UNIVERSITY HEMPSTEAD, NEW YORK 11550

February 2, 1989

Ms Jennifer P. Cheal
16 Lakeridge Drive
Adrian, Michigan 49221

Dear Ms Cheal:

I am in receipt of your letter requesting use of items from the OCDQ-RS in your research on the climate of middle schools. I have no problem with items being used in dissertation and scholarly research so long as they are not used for profit making purposes and the origin of the items is properly recognized through some standard scholarly citation system. I would also recall the issue of unit of analysis in our conversation. The OCDQ-RS was designed to be used as a school unit measure not an individual measure.

I do not have the Mennuti and Kottkamp article at the office. I shall send it under separate cover.

I wish you the best in your work. I look forward to seeing the results of your study and would enjoy receiving a proposal copy if that is possible in the mean time. If you have any comments on the Mennuti and Kottkamp paper I would appreciate receiving them as we are trying to revise it for publication. If you have further questions do not hesitate to call or write.

Best wishes,

Robert B. Kottkamp
Associate Professor and
Director of Doctoral Progam

MACMILLAN PUBLISHING COMPANY
A DIVISION OF MACMILLAN, INC.
866 Third Avenue, New York, N. Y. 10022

February 9, 1989

Jennifer P. Cheal
16 Lakeridge Drive
Adrian, MI 49221

Dear Ms. Cheal:

You have our permission to use the "Organizational Climate Description Questionnaire" from THEORY AND RESEARCH IN ADMINISTRATION by Andrew W. Halpin, subject to the following limitations:

Permission is granted for usage of the instrument in the manner and for the purpose as specified in your letter of January 31, 1989, and in all copies to meet degree requirements including University Microfilms edition. New permission is required if the dissertation is later accepted for commercial publication;

Full credit must be given on every copy reproduced as follows:

> Reprinted with permission of Macmillan Publishing Company from THEORY AND RESEARCH IN ADMINISTRATION by Andrew W. Halpin. Copyright © 1966 by Andrew W. Halpin.

Permission is granted for a fee of $35.00. This fee is payable upon signing this letter of agreement.

If you are in agreement, kindly sign and return one copy of this letter with your remittance; the second copy is for your records.

Thank you and best wishes.

Sincerely,

Ian R. Gross
Permissions Department

AGREED TO AND ACCEPTED:

_____

Jennifer P. Cheal

16 Lakeridge Drive
Adrian, Michigan 49221
February 28, 1989

Dr. Donald J. Willower
Rackley Building
University Park, Pennsylvania 16802

Dear Dr. Willower:

Please find this communication a confirmation of our conversation earlier today. At that time, I asked your permission to incorporate the items from the Pupil Control Ideology Form into my proposed instrument for the measurement of middle school organizational climate.

I will be sure to reference the source of the items and forward a final copy of my research to you upon its completion. Please send me a written confirmation of your permission to utilize the PCI items into my research study at your earliest convenience.

Thank you for sharing your past research data which will assist me as I continue to pursue the measurement of organizational climate for our middle school leadership.

Sincerely,

Jennifer P. Cheal

Jennifer P. Cheal

3/6/89
To Cheal —
You have my permission to use the PCI form in your research
Good luck in your work!
Sincerely
Donald J. Willower

16 Lakeridge Drive
Adrian, Michigan 49221
February 20, 1989

Dr. Cecil Miskel, Dean
University of Michigan
School of Education Room 1110
610 East University
Ann Arbor, Michigan 48109-1259

Dear Dr. Miskel:

Please find this communication a confirmation of our conversation last week. At that time, I asked your permission to modify and incorporate your Expectancy-Motivation Scale into my proposed instrument for the measurement of middle school organizational climate.

I will be sure to reference the source of the items and forward a final report of my research to you upon its completion. Please send me a written confirmation of your permission allowing me to modify and incorporate the items into my research study at your earliest convenience.

Thank you for sharing your past research data which will assist me as I continue to pursue the measurement of organizational climate for our middle school educational leadership.

Sincerely,

Jennifer P. Cheal

Jennifer P. Cheal

Permission Granted.
Cecil Miskel
2-27-89

APPENDIX E

MIDDLE SCHOOL ORGANIZATIONAL CLIMATE SURVEY-INITIAL FORM

(CLASSIFIED INTO HYPOTHESIZED FACTORS)

MIDDLE SCHOOL ORGANIZATIONAL CLIMATE SURVEY--INITIAL FORM
(103 Items)

KEY: * Identification of item modified from OCDQ-RS (Mulhern, 1984).

$ Identification of original item drawn from the related literature (Cheal, 1990).

Identification of item modified from OCDQ (Halpin & Croft, 1962).

@ Identification of item modified from Motivation/Expectancy Scale (Miskel, 1982).

& Identification of item modified from Pupil Control Ideology (Willower et al., 1967).

I. Organizational Structural Linkages

1. #* Administrative paperwork is burdensome at this school.
2. $ We have adequate instructional materials for our school program.
3. #* Routine duties do NOT interfere with the job of teaching.
4. #* Our teachers have too many committee requirements.
5. * Assigned non-teaching duties are excessive.
6. $ Our principal establishes building goals and objectives.
7. $ Our principal encourages parents to get involved in our school.
8. $ Our principal's organization insures maximum classroom time-on-task.

II. Managerial Control: Administration/Teachers

9. #* Our principal(s) sets an example by working hard himself/herself.
10. #* Our principal(s) goes out of his/her way to help teachers.
11. #* Our principal(s) does NOT explain his/her reasons for criticism to teachers.

12. * Our principal(s) compliments teachers.

13. * Our principal(s) does NOT monitor everything teachers do.

14. * Our principal(s) is available before and/or after school to help teachers when assistance is needed.

15. * Teacher/principal conferences are dominated by the principal.

16. * Our principal(s) closely checks teacher activities.

17. * Our principal(s) is autocratic.

18. * Our principal(s) does NOT look out for the personal welfare of the faculty.

19. * Our principal(s) talks more than listens.

20. $ Our principal(s) recognizes faculty achievements.

21. $ Our principal(s) provides instructional leadership.

22. * Our principal(s) rules with an iron fist.

23. $ Our principal(s) encourages teacher autonomy.

24. #* Our principal(s) uses constructive criticism.

25. * Our principal(s) supervises teachers closely.

26. * Our principal(s) closely checks teacher activities.

III. Managerial Control: Teacher/Students

27. * Our teachers spend time before and/or after school with students who have individual problems.

28. * Student government has an influence on our school policy.

29. &* Our students are trusted to work together without supervision.

30. * Our students solve their problems through logical reasoning.

31. $ Our teachers do NOT feel accountable for student failure.

32. $ Our teachers re-teach material to students as needed.

33. $ Our teachers continually monitor student progress to adjust their instructional programs.

34. $ Teaching strategies in this school are based upon principles of learning.

35. $ Our teachers attempt to motivate their students to learn.

36. $ Our teachers plan instructional activities for maximum learning at all achievement levels.

37. & It is more important for our students to learn to obey rules than learn to make their own decisions.

38. $ In this school, teachers listen to all sides of the story and are fair to all students in their final decisions.

39. & It is desirable to require our students to sit in individually assigned seats during assemblies.

40. & Directing sarcastic remarks toward a defiant student is a good disciplinary technique.

41. & Our teachers should consider revision of their teaching methods if these are criticized by their students.

42. & Our students should NOT be permitted to contradict the statements of a teacher in class.

43. & Our beginning teachers are not likely to maintain strict enough control over their students.

44. & A few students are just young hoodlums and should be treated accordingly.

45. & Our students often misbehave in order to make the teacher look bad.

46. & Our students cannot perceive the difference between democracy and anarchy in the classroom.

47. $ Our teachers are sensitive to the developmental needs of middle school students as they plan their lessons.

48. $ Teachers in this building show a genuine caring for their students.

49. $ In this school, teachers and students together formulate rules governing behavior.

50. $ In this school, teacher discipline is fair and consistent with classroom rules.

51. * Our teachers are friendly with students.

52. & Our principal(s) gives unquestioning support to teachers in disciplining students.

53. & It is justifiable to have students learn many facts about a subject even if they have no immediate application.

54. & In this school, too much student time is spent on guidance and activities and too little on academic preparation.

55. & Being friendly with our students often leads them to become too familiar.

56. & If a student uses obscene or profane language in our school, it must be considered a moral offense.

57. & If our students are allowed to use the lavatory without getting permission this privilege will be abused.

58. & It is often necessary to remind our pupils that their status in school differs from that of teachers.

59. & A pupil who destroys school material or property should be severely punished.

60. & Our students are usually NOT capable of solving their problems through logical reasoning.

61. & Student governments are a good "safety valve" but should not have much influence on our school policy.

IV. Effective Building Climate

62. $ Our school has a well maintained/clean interior.

63. $ The exterior of our school is well maintained.

64. $ I do NOT feel safe when I go to my car.

65. $ It is safe to leave personal property in our school.

66. $ Custodial services are available when needed.

V. Expectancy and Motivation

67. $ Our principal maintains high expectations for the professional behavior of all teachers.

68. $ Our teachers maintain high expectations for the conduct of all students.

69. $ Our teachers maintain high academic expectations for all students.

70. $ Our school formally recognizes student achievement and effort of all students.

71. $ Our teachers voluntarily attend training sessions to improve their instructional effectiveness.

72. @ In this school, it is important that our students acquire an interest in the subject matter.

73. @ It is NOT important that our staff has positive relationships with students.

74. $ Our teachers believe that all students can learn.

75. @ Good job performance by our teachers requires hard work.

76. $ Our teachers believe it is futile to give extra help to students where there is little home support.

77. @ Our expending high levels of energy DOES NOT lead to commensurate levels of student achievement.

78. @ We have the opportunity to develop our skills and abilities in this school.

79. @ High faculty initiative leads to the attainment of the desired educational objectives.

80. @ We emphasize the importance of our students' behavior.

81. @ Our teachers have chances to learn new things.

82. @ Working as hard as we can results in goal accomplishment.

83. @ We have positive feelings about ourselves as educators.

84. @ Energetic educators are NOT particularly successful teachers here.

85. @ We place importance on keeping student frustration at a low level.

86. @ When we put forth a high degree of effort it leads to a high level of performance.

87. @ In this school, we have the chance to accomplish something worthwhile.

88. @ Our intensive efforts lead to high student achievement.

VI. Teacher Professional Behaviors

89. * Teachers are proud of this school.

90. * Teachers do NOT really enjoy working here.

91. $ Our teachers think of their work as a job rather than a profession.

92. * Teachers do NOT help and support each other.

93. $ Teachers share their expertise and materials with colleagues.

94. $ Teachers do NOT treat one another as professional colleagues.

95. #* Teachers interrupt other faculty members who are talking at staff meetings.

96. $ Even though we don't always agree, teachers share their concerns openly.

97. #* The mannerisms of teachers at this school are annoying.

98. #* The morale of our teachers is high.

VII. Teacher Social Needs

99. #* Our teachers' closest friends are other faculty members at this school.

100. #* Teachers invite other faculty members to visit them at home.

101. * Our teachers socialize with each other on a regular basis.

102. $ New faculty members are made to feel a part of the group.

103. #* Our teachers know the family background of other faculty members.

APPENDIX F

LETTER OF APPROVAL FROM UNIVERSITY COMMITTEE ON RESEARCH INVOLVING HUMAN SUBJECTS (UCRIHS)

MICHIGAN STATE UNIVERSITY

UNIVERSITY COMMITTEE ON RESEARCH INVOLVING
HUMAN SUBJECTS (UCRIHS)
206 BERKEY HALL
(517) 353-9738

EAST LANSING • MICHIGAN • 48824-1111

December 19, 1988

IRB# 88-534

Jennifer Putnam Cheal
16 Lakeridge Drive
Adrian, MI 49221

Dear Ms. Cheal:

Subject: "ORGANIZATIONAL CLIMATE OF MIDDLE SCHOOLS: DEVELOPMENT OF A MEASUREMENT TOOL IRB# 88-534"

The above project is exempt from full UCRIHS review. The proposed research protocol has been reviewed by another committee member. The rights and welfare of human subjects appear to be protected and you have approval to conduct the research.

You are reminded that UCRIHS approval is valid for one calendar year. If you plan to continue this project beyond one year, please make provisions for obtaining appropriate UCRIHS approval one month prior to December 19, 1989.

Any changes in procedures involving human subjects must be reviewed by UCRIHS prior to initiation of the change. UCRIHS must also be notified promptly of any problems (unexpected side effects, complaints, etc.) involving human subjects during the course of the work.

Thank you for bringing this project to my attention. If I can be of any future help, please do not hesitate to let me know.

Sincerely,

John K. Hudzik, Ph.D.
Chair, UCRIHS

JKH/sar

cc: S. Moore

APPENDIX G

SUPERINTENDENT CORRESPONDENCE

MICHIGAN ASSOCIATION
OF
SCHOOL ADMINISTRATORS

Office of the Executive Director

421 West Kalamazoo, Lansing, Michigan 48933 Telephone 517 371-5250

March 31, 1989

Dear Superintendent:

The enclosed information describes a dissertation proposal relative to the organizational climate of middle schools. The proposal includes a survey of 235 pre-selected middle schools in Michigan. A middle school in your district has been selected, and your permission for the building principal and teaching staff to consider participation is being requested.

I would encourage your review of the enclosed materials and your district's participation in the survey. The student writing the dissertation is Jennifer Putnam Cheal who is also a Middle School Assistant Principal in Adrian. Your participation will assist a fellow administrator, and the results of the survey could prove beneficial to your district.

I encourage your favorable response on the postcard that is enclosed.

Sincerely yours,

Don R. Elliott
Executive Director

pat
Enclosures

16 Lakeridge Drive
Adrian, Michigan 49221
March 31, 1989

Dr./Mr./Mrs/ ----------
Superintendent
-------- Public Schools
Address
--------, Michigan 4----

Dear Dr./Mr./Mrs. ----------:

The organizational climate of a work place has been shown to have an effect on both worker output and job satisfaction. During the past thirty years, researchers have explored the internal climate of industry and business as well as colleges, secondary, and elementary schools. However, there appears to be a lack of research measuring the environment that serves the unique developmental needs of those students growing through the middle level years.

The --------- Middle/Junior High School in your district was one of 235 schools selected randomly from the Michigan population to be a participant in this project. Identification of the dimensions present in middle level climate will offer educational leaders a measurement tool for affecting change and innovation in their middle level buildings. With your approval, the teachers and principal from your middle level school will be able to consider active participation in this study.

I have enclosed a copy of the survey for your review. All teacher responses will be anonymous and the principal's response will be kept confidential. No individual or school will be named in any report of the research.

Please complete and return the attached postcard. A copy of the summary results will be forwarded to those who request it. Thank you for your support as we work together to improve the effectiveness of middle schools.

Please feel free to contact me if you would like more information about this study (Office: 517-265-8122 or Residence: 517-265-1385).

Sincerely,

Jennifer P. Cheal

Enclosures

APPENDIX H

MIDDLE SCHOOL ORGANIZATIONAL CLIMATE SURVEY

16 Lakeridge Drive
Adrian, Michigan 49221
March 1989

Dear Middle School Colleague:

The organizational climate of a work place has been shown to have an effect on both worker output and job satisfaction. During the past thirty years, researchers have explored the internal climate of industry and business as well as colleges, secondary, and elementary schools. However, there appears to be a lack of research measuring the environment that serves the unique developmental needs of those students growing through the middle school years. The purpose of this study is to help determine what dimensions are present in the organizational climate of a middle school.

As one of 130 middle schools selected randomly to participate in this study, we are interested in ***your personal*** perceptions of the internal environment of your middle school building. With your cooperation, we will be able to gather data that will allow us to assist fellow educators in structuring positive and effective change in their middle schools.

Teacher responses will be ***anonymous and no individual or school will be named in any report of the research.*** Your principal has designated a teacher to administer, collect, seal, and return your responses. This project will require approximately 20 - 30 minutes to complete. You indicate your voluntary agreement to participate by completing and returning this questionnaire.

Thank you for taking time from your staff meeting to work with us on this project which will benefit all schools "in the middle." A copy of the summary results will be forwarded to those who return the enclosed postcard. Please feel free to contact me if you would like more information about this study (Office: 517-265-8122 or Residence: 517-265-1385).

Sincerely,

Jennifer P. Cheal

Jennifer P. Cheal

MIDDLE SCHOOL ORGANIZATIONAL CLIMATE SURVEY

Return to: Jennifer P. Cheal, 16 Lakeridge Drive, Adrian, Michigan 49221

—Please do not bend or fold SURVEY FORMS-

The following items represent some dimensions of middle school organizational climate. Since we are collecting opinions, there are no correct or incorrect answers. You are to darken the response that most nearly reflects your personal opinion of YOUR SCHOOL. Some of the items might be hard to answer, but please mark your best response to EVERY statement.

Please mark all survey answers BY USING A NUMBER-TWO PENCIL. DO NOT USE ink, ballpoint, or felt-tip pens. Avoid making stray marks on the answer sheets.

DIRECTIONS:

1. READ each item carefully.

2. THINK about how frequently the described situation occurs in YOUR school.

3. DECIDE whether the situation (R) Rarely Occurs, (S) Sometimes Occurs, (O) Often Occurs, or (VO) Very Often Occurs as described in the item.

4. CAREFULLY darken in the circle which shows the item you have selected.

KEY: **RARELY OCCURS (R)**
SOMETIMES OCCURS (S)
OFTEN OCCURS (O)
VERY OFTEN OCCURS (VO)

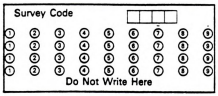
Example: The situation **Rarely Occurs** as described. ●ⓈⓄⓋ

Example: The situation **Sometimes Occurs** as described. Ⓡ●ⓄⓋ

Example: The situation **Often Occurs** as described. ⓇⓈ●Ⓥ

Example: The situation **Very Often Occurs** as described. ⓇⓈⓄ●

5. ANSWER EACH QUESTION.



KEY:

RARELY OCCURS (R), SOMETIMES OCCURS (S), OFTEN OCCURS (O), VERY OFTEN OCCURS (VO)

1.	Administrative paperwork is burdensome at this school.	1. Ⓡ Ⓢ Ⓞ Ⓥ
2.	We have adequate instructional materials for our school program.	2. Ⓡ Ⓢ Ⓞ Ⓥ
3.	Routine duties do NOT interfere with the job of teaching.	3. Ⓡ Ⓢ Ⓞ Ⓥ
4.	Our teachers have too many committee requirements.	4. Ⓡ Ⓢ Ⓞ Ⓥ
5.	Assigned non-teaching duties are excessive.	5. Ⓡ Ⓢ Ⓞ Ⓥ
6.	Our principal establishes building goals and objectives.	6. Ⓡ Ⓢ Ⓞ Ⓥ
7.	Our principal encourages parents to get involved in our school.	7. Ⓡ Ⓢ Ⓞ Ⓥ
8.	Our principal's organization insures maximum classroom time-on-task.	8. Ⓡ Ⓢ Ⓞ Ⓥ
9.	Our principal(s) sets an example by working hard himself/herself.	9. Ⓡ Ⓢ Ⓞ Ⓥ
10.	Our principal(s) goes out of his/her way to help teachers.	10. Ⓡ Ⓢ Ⓞ Ⓥ
11.	Our principal(s) does NOT explain his/her reasons for criticism to teachers.	11. Ⓡ Ⓢ Ⓞ Ⓥ
12.	Our principal(s) compliments teachers.	12. Ⓡ Ⓢ Ⓞ Ⓥ
13.	Our principal(s) does NOT monitor everything teachers do.	13. Ⓡ Ⓢ Ⓞ Ⓥ
14.	Our principal(s) is available before and/or after school to help teachers when assistance is needed.	14. Ⓡ Ⓢ Ⓞ Ⓥ
15.	Teacher/principal conferences are dominated by the principal.	15. Ⓡ Ⓢ Ⓞ Ⓥ
16.	Our principal(s) closely checks teacher activities.	16. Ⓡ Ⓢ Ⓞ Ⓥ
17.	Our principal(s) is autocratic.	17. Ⓡ Ⓢ Ⓞ Ⓥ
18.	Our principal(s) does NOT look out for the personal welfare of the faculty.	18. Ⓡ Ⓢ Ⓞ Ⓥ
19.	Our principal(s) talks more than listens.	19. Ⓡ Ⓢ Ⓞ Ⓥ
20.	Our principal(s) recognizes faculty achievements.	20. Ⓡ Ⓢ Ⓞ Ⓥ
21.	Our principal(s) provides instructional leadership.	21. Ⓡ Ⓢ Ⓞ Ⓥ
22.	Our principal(s) rules with an iron fist.	22. Ⓡ Ⓢ Ⓞ Ⓥ
23.	Our principal(s) encourages teacher autonomy.	23. Ⓡ Ⓢ Ⓞ Ⓥ
24.	Our principal(s) uses constructive criticism.	24. Ⓡ Ⓢ Ⓞ Ⓥ
25.	Our principal(s) supervises teachers closely.	25. Ⓡ Ⓢ Ⓞ Ⓥ
26.	Our principal(s) closely checks teacher activities.	26. Ⓡ Ⓢ Ⓞ Ⓥ
27.	Our teachers spend time before and/or after school with students who have individual problems.	27. Ⓡ Ⓢ Ⓞ Ⓥ

KEY:

RARELY OCCURS (R), SOMETIMES OCCURS (S), OFTEN OCCURS (O), VERY OFTEN OCCURS (VO)

28.	Student government has an influence on our school policy.	28. Ⓡ Ⓢ Ⓞ Ⓥ
29.	Our students are trusted to work together without supervision.	29. Ⓡ Ⓢ Ⓞ Ⓥ
30.	Our students solve their problems through logical reasoning.	30. Ⓡ Ⓢ Ⓞ Ⓥ
31.	Our teachers do NOT feel accountable for student failure.	31. Ⓡ Ⓢ Ⓞ Ⓥ
32.	Our teachers re-teach material to students as needed.	32. Ⓡ Ⓢ Ⓞ Ⓥ
33.	Our teachers continually monitor student progress to adjust their instructional programs.	33. Ⓡ Ⓢ Ⓞ Ⓥ
34.	Teaching strategies in this school are based upon principles of learning.	34. Ⓡ Ⓢ Ⓞ Ⓥ
35.	Our teachers attempt to motivate their students to learn.	35. Ⓡ Ⓢ Ⓞ Ⓥ
36.	Our teachers plan instructional activities for maximum learning at all achievement levels.	36. Ⓡ Ⓢ Ⓞ Ⓥ
37.	It is more important for our students to learn to obey rules than learn to make their own decisions.	37. Ⓡ Ⓢ Ⓞ Ⓥ
38.	In this school, teachers listen to all sides of the story and are fair to all students in their final decisions.	38. Ⓡ Ⓢ Ⓞ Ⓥ
39.	It is desirable to require our students to sit in individually assigned seats during assemblies.	39. Ⓡ Ⓢ Ⓞ Ⓥ
40.	Directing sarcastic remarks toward a defiant student is a good disciplinary technique.	40. Ⓡ Ⓢ Ⓞ Ⓥ
41.	Our teachers should consider revision of their teaching methods if these are criticized by their students.	41. Ⓡ Ⓢ Ⓞ Ⓥ
42.	Our students should NOT be permitted to contradict the statements of a teacher in class.	42. Ⓡ Ⓢ Ⓞ Ⓥ
43.	Our beginning teachers are not likely to maintain strict enough control over their students.	43. Ⓡ Ⓢ Ⓞ Ⓥ
44.	A few students are just young hoodlums and should be treated accordingly.	44. Ⓡ Ⓢ Ⓞ Ⓥ
45.	Our students often misbehave in order to make the teacher look bad.	45. Ⓡ Ⓢ Ⓞ Ⓥ
46.	Our students cannot perceive the difference between democracy and anarchy in the classroom.	46. Ⓡ Ⓢ Ⓞ Ⓥ
47.	Our teachers are sensitive to the developmental needs of middle school students as they they plan their lessons.	47. Ⓡ Ⓢ Ⓞ Ⓥ
48.	Teachers in this building show a genuine caring for their students.	48. Ⓡ Ⓢ Ⓞ Ⓥ
49.	In this school, teachers and students together formulate rules governing behavior.	49. Ⓡ Ⓢ Ⓞ Ⓥ
50.	In this school, teacher discipline is fair and consistent with classroom rules.	50. Ⓡ Ⓢ Ⓞ Ⓥ
51.	Our teachers are friendly with students.	51. Ⓡ Ⓢ Ⓞ Ⓥ

KEY:

RARELY OCCURS (R), SOMETIMES OCCURS (S), OFTEN OCCURS (O), VERY OFTEN OCCURS (VO)

52.	Our principal(s) gives unquestioning support to teachers in disciplining students.	52. Ⓡ Ⓢ Ⓞ Ⓥ
53.	It is justifiable to have students learn many facts about a subject even if they have no immediate application.	53. Ⓡ Ⓢ Ⓞ Ⓥ
54.	In this school, too much student time is spent on guidance and activities and too little on academic preparation.	54. Ⓡ Ⓢ Ⓞ Ⓥ
55.	Being friendly with our students often leads them to become too familiar.	55. Ⓡ Ⓢ Ⓞ Ⓥ
56.	If a student uses obscene or profane language in our school, it must be considered a moral offense.	56. Ⓡ Ⓢ Ⓞ Ⓥ
57.	If our students are allowed to use the lavatory without getting permission, this privilege will be abused.	57. Ⓡ Ⓢ Ⓞ Ⓥ
58.	It is often necessary to remind our pupils that their status in school differs from that of teachers.	58. Ⓡ Ⓢ Ⓞ Ⓥ
59.	A pupil who destroys school material or property should be severely punished.	59. Ⓡ Ⓢ Ⓞ Ⓥ
60.	Our students are usually NOT capable of solving their problems through logical reasoning.	60. Ⓡ Ⓢ Ⓞ Ⓥ
61.	Student governments are a good "safety valve" but should not have much influence on our school policy.	61. Ⓡ Ⓢ Ⓞ Ⓥ
62.	Our school has a well maintained/clean interior.	62. Ⓡ Ⓢ Ⓞ Ⓥ
63.	The exterior of our school is well maintained.	63. Ⓡ Ⓢ Ⓞ Ⓥ
64.	I do NOT feel safe when I go to my car.	64. Ⓡ Ⓢ Ⓞ Ⓥ
65.	It is safe to leave personal property in our school.	65. Ⓡ Ⓢ Ⓞ Ⓥ
66.	Custodial services are available when needed.	66. Ⓡ Ⓢ Ⓞ Ⓥ
67.	Our principal maintains high expectations for the professional behavior of all teachers.	67. Ⓡ Ⓢ Ⓞ Ⓥ
68.	Our teachers maintain high expectations for the conduct of all students.	68. Ⓡ Ⓢ Ⓞ Ⓥ
69.	Our teachers maintain high academic expectations for all students.	69. Ⓡ Ⓢ Ⓞ Ⓥ
70.	Our school formally recognizes student achievement and effort of all students.	70. Ⓡ Ⓢ Ⓞ Ⓥ
71.	Our teachers voluntarily attend training sessions to improve their instructional effectiveness.	71. Ⓡ Ⓢ Ⓞ Ⓥ
72.	In this school, it is important that our students acquire an interest in the subject matter.	72. Ⓡ Ⓢ Ⓞ Ⓥ
73.	It is NOT important that our staff has positive relationships with students.	73. Ⓡ Ⓢ Ⓞ Ⓥ
74.	Our teachers believe that all students can learn.	74. Ⓡ Ⓢ Ⓞ Ⓥ
75.	Good job performance by our teachers requires hard work.	75. Ⓡ Ⓢ Ⓞ Ⓥ

KEY:

RARELY OCCURS (R), SOMETIMES OCCURS (S), OFTEN OCCURS (O), VERY OFTEN OCCURS (VO)

76.	Our teachers believe it is futile to give extra help to students where there is little home support.	76. ⓡ ⓢ ⓞ ⓥⓞ
77.	Our expending high levels of energy DOES NOT lead to commensurate levels of student achievement.	77. ⓡ ⓢ ⓞ ⓥⓞ
78.	We have the opportunity to develop our skills and abilities in this school.	78. ⓡ ⓢ ⓞ ⓥⓞ
79.	High faculty initiative leads to the attainment of the desired educational objectives.	79. ⓡ ⓢ ⓞ ⓥⓞ
80.	We emphasize the importance of our students' behavior.	80. ⓡ ⓢ ⓞ ⓥⓞ
81.	Our teachers have chances to learn new things.	81. ⓡ ⓢ ⓞ ⓥⓞ
82.	Working as hard as we can results in goal accomplishment.	82. ⓡ ⓢ ⓞ ⓥⓞ
83.	We have positive feelings about ourselves as educators.	83. ⓡ ⓢ ⓞ ⓥⓞ
84.	Energetic educators are NOT particularly successful teachers here.	84. ⓡ ⓢ ⓞ ⓥⓞ
85.	We place importance on keeping student frustration at a low level.	85. ⓡ ⓢ ⓞ ⓥⓞ
86.	When we put forth a high degree of effort it leads to a high level of performance.	86. ⓡ ⓢ ⓞ ⓥⓞ
87.	In this school, we have the chance to accomplish something worthwhile.	87. ⓡ ⓢ ⓞ ⓥⓞ
88.	Our intensive efforts lead to high student achievement.	88. ⓡ ⓢ ⓞ ⓥⓞ
89.	Teachers are proud of this school.	89. ⓡ ⓢ ⓞ ⓥⓞ
90.	Teachers do NOT really enjoy working here.	90. ⓡ ⓢ ⓞ ⓥⓞ
91.	Our teachers think of their work as a job rather than a profession.	91. ⓡ ⓢ ⓞ ⓥⓞ
92.	Teachers do NOT help and support each other.	92. ⓡ ⓢ ⓞ ⓥⓞ
93.	Teachers share their expertise and materials with colleagues.	93. ⓡ ⓢ ⓞ ⓥⓞ
94.	Teachers do NOT treat one another as professional colleagues.	94. ⓡ ⓢ ⓞ ⓥⓞ
95.	Teachers interrupt other faculty members who are talking at staff meetings.	95. ⓡ ⓢ ⓞ ⓥⓞ
96.	Even though we don't always agree, teachers share their concerns openly.	96. ⓡ ⓢ ⓞ ⓥⓞ
97.	The mannerisms of teachers at this school are annoying.	97. ⓡ ⓢ ⓞ ⓥⓞ
98.	The morale of our teachers is high.	98. ⓡ ⓢ ⓞ ⓥⓞ
99.	Our teachers' closest friends are other faculty members at this school.	99. ⓡ ⓢ ⓞ ⓥⓞ
100.	Teachers invite other faculty members to visit them at home.	100. ⓡ ⓢ ⓞ ⓥⓞ
101.	Our teachers socialize with each other on a regular basis.	101. ⓡ ⓢ ⓞ ⓥⓞ
102.	New faculty members are made to feel a part of the group.	102. ⓡ ⓢ ⓞ ⓥⓞ
103.	Our teachers know the family background of other faculty members.	103. ⓡ ⓢ ⓞ ⓥⓞ

The following demographic data will assist us in generating profiles and categories of respondents. Please be assured that analyses will be anonymous. Neither you, your district, nor your school will be identified in reporting the results of this study.

Print your age and number of years teaching experience you have (counting the present year as a full year) in the appropriate boxes below. Mark your age and years of teaching experience in the scanned area below the boxes.

104. Age

105. Years of teaching experience

In order to answer the following questions, blacken the circle immediately to the left of the response you choose.

106. What is your sex? ○ Male ○ Female

107. What type of teacher certification do you have?

○ Elementary ○ Secondary ○ K-12 ○ Other _____

108. Which of the following identifies the predominate grade-level of the students you teach in your current assignment?

○ Grade 5 ○ Grade 6 ○ Grade 7 ○ Grade 8 ○ Grade 9

The instructional design of middle schools can be defined with the following terms:

— Self-contained: one teacher and one group of students for all academic subjects for an extended period of time.
— Departmentalized: one teacher who instructs different groups of students in his/her area of expertise for a discrete period of time.
— Teaming: two or more teachers who together plan, teach, and evaluate a selected number of students.

109. Which best describes the majority of instruction for your present teaching assignment?

○ Self-contained ○ Departmentalized ○ Teaming

110. Indicate the majority of the instructional design for EACH of the grade levels you teach in your current assignment.

GRADE 5	○ Self-contained	○ Departmentalized	○ Teaming
GRADE 6	○ Self-contained	○ Departmentalized	○ Teaming
GRADE 7	○ Self-contained	○ Departmentalized	○ Teaming
GRADE 8	○ Self-contained	○ Departmentalized	○ Teaming
GRADE 9	○ Self-contained	○ Departmentalized	○ Teaming

Thank you for your time and interest in completing this survey. Please return the included postcard at your convenience if you would like to receive the results of this study.

APPENDIX I

SUPERINTENDENT FOLLOW-UP TRANSMITTAL

16 Lakeridge Drive
Adrian, Michigan 49221
March --, 1989

Mr./Mrs./Dr/ --------
Superintendent
--------- Public Schools
Address
------, Michigan 4----

Dear Mr./Mrs./Dr. --------:

Please find enclosed a copy of the organizational climate study previously mailed to you. Possibly it never reached your desk or possibly it became buried within the seemingly endless list of priority items.

As educational leaders in a changing society, we need direct and practical data on conditions in schools to effectively formulate useful models of innovation.

Your willingness to allow the -------- Middle School's principal and teachers to consider participation in this study will assist us in gathering data that should be beneficial to your middle level staff and its students.

There is a noticeable lack of educational research specifically on the middle level. Quite often, the schools in the middle must rely on extrapolations from the elementary and secondary school research. It is our belief that middle level schools are matchless environments serving the unique developmental needs of their students.

Please complete and return the attached postcard. By marking the first option, you will permit me to send information regarding this study to Mr./Mr. ---- seeking his/her willingness to have the ------ Middle School participate in this study. All teacher responses will be anonymous and the principal's response will be kept confidential. No individual or school will be named in any report of the research.

A copy of the summary results will be forwarded to those who request it. Thank you for taking time from your busy schedule to assist your middle level school.

Please feel free to contact me if you would like more information about this study (Office: 517-265-8122 or Residence: 517-265-1385).

Very Sincerely Yours,

Jennifer P. Cheal

APPENDIX J

PRINCIPAL CORRESPONDENCE

Michigan Association of Secondary School Principals

Serving High School & Middle Level Administrators
2339 School of Education Bldg.—The University of Michigan
Ann Arbor, Michigan 48109-1259
(313) 769-5497 or (313) 763-9850

Executive Director
JACK D. BITTLE
Associate Director
JIM BALLARD
Ass't Director for Middle Level
JACOB BRISENDINE

President
JOSEPH SCHWARTZ
Saline Middle School

President-Elect
GERRI KIESSEL
Garden City High School

Vice-President
ROGER ELFORD
Owosso High School

Dear Middle Level Principal:

We have studied the enclosed survey and have talked to Jennifer Cheal about the use of the findings, and feel that the results could give us some valuable information. It is our hope that Jennifer will publish the findings in our Journal, SECONDARY EDUCATION TODAY.

We encourage you to help your colleague, and middle level education, by participating in this study of organizational climate.

Sincerely yours,

Jack D. Bittle
Executive Director

Jake Brisendine
Asst. Dir. for Middle Level

JDB-JB/ila

16 Lakeridge Drive
Adrian, Michigan 49221
March 29, 1989

Middle School Principal
Middle School Name
Street
City, Michigan Zip Code

Dear Dr./Mr./Ms.:

The Middle School was one of 130 Michigan middle schools selected randomly to participate in this study of middle level organizational climate. Your district Superintendent has already reviewed and approved your school's opportunity to participate in this study.

The organizational climate of a work place has been shown to have an effect on both worker output and job satisfaction. During the past thirty years, researchers have explored the internal climate of industry and business as well as colleges, elementary, and secondary schools. However, there appears to be a lack of research that measures the environment that serves the unique developmental needs of those students growing through the middle level years.

We hope that you and your teachers will assist us in making this a successful study by participating with us as we seek to identify the unique dimensions present in middle level organizational climate. These data will assist educational leaders in structuring change and innovation in middle school buildings. All teacher responses will be kept **anonymous** and your responses (building principal) will be kept **confidential. No individual or school will be named in any report of the research.**

I have enclosed a copy of the survey for your advanced review. Please place completion of the survey on your next staff meeting agenda. Unless I hear from you on or before April --, 1989, I will assume the ---------- Middle School is participating in this study and I will be mailing the following packet of materials to you:

1. Cover letter and survey form for each of your teachers.
2. Addressed/stamped return envelope for teacher responses.
3. Cover letter, survey form, and separate return envelope for building principal(s).

A copy of the completed study and/or an organizational climate profile of your building will be mailed to you upon completion of this project at your request.

Thank you for your cooperation and support as we work together to improve the effectiveness of the schools in the middle. Please feel free to contact me if you would like more information about this study (WORK: 517-265-8122 RESIDENCE: 517-265-1385).

Sincerely,

Jennifer P. Cheal

APPENDIX K

SURVEY ADMINISTRATION INFORMATION

March 1989

TO:

FROM: Jennifer P. Cheal

RE: Directions for Organizational Climate Survey

Thank you for your cooperation and support as we work together to improve the effectiveness of the schools in the middle.

To insure personal/district confidentiality and consistency in this study, please observe the following standardized procedures.

1. The organizational climate survey should be completed by the entire teaching staff - at the same time. The easiest and most efficient way to accomplish this is to complete it at a faculty meeting. It should take about 20 - 30 minutes.

2. The computer survey forms and #2 pencils should be handed out and collected by a designated teacher. To assure the teachers that their responses will remain anonymous, the principal should NOT be in the room while the staff completes the survey.

3. Please have the building principal(s) complete their survey separately from the teachers and seal it in the enclosed envelope marked "Principal." Place the teachers' AND principal's surveys into the addressed and stamped mailing envelope.

4. DO NOT mail back the return postcards in the envelopes provided. Postage has been applied for survey forms only!!

5. Building principal(s) who would like a copy of the study and/or a building climate profile should complete and return an enclosed Principal Respondent postcard.

6. Teachers who would like a copy of the study should complete and return an enclosed Teacher Respondent postcard separately to insure anonymity.

7. Please return the completed survey forms (and any unused survey forms) on or before June 1, 1989 - if at all possible.

THANK YOU FOR YOUR COOPERATION AND SUPPORT IN THIS STUDY!!

APPENDIX L

SURVEY FOLLOW-UP CORRESPONDENCE

TEACHER RESPONDENT SURVEY RESULTS

Yes, please send me a copy of the results of the middle school organizational climate study. Mail this information in the summer of 1989 to the address below:

NAME: _____

STREET: _____

CITY: _____ MICHIGAN, ZIP CODE_____

BUILDING PRINCIPAL RESPONDENT

Yes, our school has participated in this study. Please send the information I have marked below upon completion of this study.

_____ Summary of the study

_____ Building climate profile, School Name _____

NAME: _____

STREET: _____

CITY: _____ MICHIGAN, ZIP CODE: _____

April 8, 1989

Dear _____:

My records show that your school has not returned the package of completed organizational climate surveys. In the event that the package has been lost in transit, please phone my office that _____ middle/junior high school has returned their materials.

Thank you in advance for your participation if we crossed in the mail. Otherwise, please complete and return the teachers' and principal(s) response to this study at your earliest convenience.

Again, thank you to you and your staff for your time and effort in assisting all middle level schools.

Jennifer P. Cheal
16 Lakeridge Drive
Adrian, Michigan 49221

Office (517) 265-8122
Residence (517) 265-1385

APPENDIX M

MIDDLE SCHOOL ORGANIZATIONAL CLIMATE SURVEY-REVISED SET

MIDDLE SCHOOL ORGANIZATIONAL CLIMATE SURVEY--REVISED SET
(88 Items)

KEY: * Identification of item modified from OCDQ-RS (Mulhern, 1984).

$ Identification of original item drawn from the related literature (Cheal, 1990).

Identification of item modified from OCDQ (Halpin & Croft, 1962).

@ Identification of item modified from Motivation/Expectancy Scale (Miskel, 1982).

& Identification of item modified from Pupil Control Ideology (Willower et al., 1967).

I. Organizational Structural Linkages

1. #* Administrative paperwork is burdensome at this school.

2. $ We have adequate instructional materials for our school program.

4. #* Our teachers have too many committee requirements.

5. * Assigned non-teaching duties are excessive.

6. $ Our principal establishes building goals and objectives.

7. $ Our principal encourages parents to get involved in our school.

8. $ Our principal's organization insures maximum classroom time-on-task.

II. Managerial Control: Administration/Teachers

9. #* Our principal(s) sets an example by working hard himself/herself.

10. #* Our principal(s) goes out of his/her way to help teachers.

11. #* Our principal(s) does NOT explain his/her reasons for criticism to teachers.

12. * Our principal(s) compliments teachers.

13. * Our principal(s) does NOT monitor everything teachers do.

14. * Our principal(s) is available before and/or after school to help teachers when assistance is needed.

15. * Teacher/principal conferences are dominated by the principal.

17. * Our principal(s) is autocratic.

18. * Our principal(s) does NOT look out for the personal welfare of the faculty.

19. * Our principal(s) talks more than listens.

20. $ Our principal(s) recognizes faculty achievements.

21. $ Our principal(s) provides instructional leadership.

22. * Our principal(s) rules with an iron fist.

23. $ Our principal(s) encourages teacher autonomy.

24. #* Our principal(s) uses constructive criticism.

25. * Our principal(s) supervises teachers closely.

26. * Our principal(s) closely checks teacher activities.

III. Managerial Control: Teacher/Students

27. * Our teachers spend time before and/or after school with students who have individual problems.

29. &* Our students are trusted to work together without supervision.

30. * Our students solve their problems through logical reasoning.

32. $ Our teachers re-teach material to students as needed.

33. $ Our teachers continually monitor student progress to adjust their instructional programs.

34. $ Teaching strategies in this school are based upon principles of learning.

35. $ Our teachers attempt to motivate their students to learn.

36. $ Our teachers plan instructional activities for maximum learning at all achievement levels.

37. & It is more important for our students to learn to obey rules than learn to make their own decisions.

38. $ In this school, teachers listen to all sides of the story and are fair to all students in their final decisions.

39. & It is desirable to require our students to sit in individually assigned seats during assemblies.

40. & Directing sarcastic remarks toward a defiant student is a good disciplinary technique.

43. & Our beginning teachers are not likely to maintain strict enough control over their students.

44. & A few students are just young hoodlums and should be treated accordingly.

45. & Our students often misbehave in order to make the teacher look bad.

46. & Our students cannot perceive the difference between democracy and anarchy in the classroom.

47. $ Our teachers are sensitive to the developmental needs of middle school students as they plan their lessons.

48. $ Teachers in this building show a genuine caring for their students.

50. $ In this school, teacher discipline is fair and consistent with classroom rules.

51. * Our teachers are friendly with students.

52. & Our principal(s) gives unquestioning support to teachers in disciplining students.

53. & It is justifiable to have students learn many facts about a subject even if they have no immediate application.

54. & In this school, too much student time is spent on guidance and activities and too little on academic preparation.

55. & Being friendly with our students often leads them to become too familiar.

56. & If a student uses obscene or profane language in our school, it must be considered a moral offense.

57. & If our students are allowed to use the lavatory without getting permission this privilege will be abused.

58. & It is often necessary to remind our pupils that their status in school differs from that of teachers.

59. & A pupil who destroys school material or property should be severely punished.

60. & Our students are usually NOT capable of solving their problems through logical reasoning.

61. & Student governments are a good "safety valve" but should not have much influence on our school policy.

IV. Effective Building Climate

62. $ Our school has a well maintained/clean interior.

63. $ The exterior of our school is well maintained.

65. $ It is safe to leave personal property in our school.

66. $ Custodial services are available when needed.

V. Expectancy and Motivation

67. $ Our principal maintains high expectations for the professional behavior of all teachers.

68. $ Our teachers maintain high expectations for the conduct of all students.

69. $ Our teachers maintain high academic expectations for all students.

71. $ Our teachers voluntarily attend training sessions to improve their instructional effectiveness.

72. @ In this school, it is important that our students acquire an interest in the subject matter.

74. $ Our teachers believe that all students can learn.

75. @ Good job performance by our teachers requires hard work.

77. @ Our expending high levels of energy DOES NOT lead to commensurate levels of student achievement.

78. @ We have the opportunity to develop our skills and abilities in this school.

79. @ High faculty initiative leads to the attainment of the desired educational objectives.

80. @ We emphasize the importance of our students' behavior.

81. @ Our teachers have chances to learn new things.

82. @ Working as hard as we can results in goal accomplishment.

83. @ We have positive feelings about ourselves as educators.

84. @ Energetic educators are NOT particularly successful teachers here.

85. @ We place importance on keeping student frustration at a low level.

86. @ When we put forth a high degree of effort it leads to a high level of performance.

87. @ In this school, we have the chance to accomplish something worthwhile.

88. @ Our intensive efforts lead to high student achievement.

VI. Teacher Professional Behaviors

89. * Teachers are proud of this school.

90. * Teachers do NOT really enjoy working here.

92. * Teachers do NOT help and support each other.

93. $ Teachers share their expertise and materials with colleagues.

95. #* Teachers interrupt other faculty members who are talking at staff meetings.

97. #* The mannerisms of teachers at this school are annoying.

98. #* The morale of our teachers is high.

VII. Teacher Social Needs

99. #* Our teachers' closest friends are other faculty members at this school.

100. #* Teachers invite other faculty members to visit them at home.

101. * Our teachers socialize with each other on a regular basis.

103. #* Our teachers know the family background of other faculty members.

APPENDIX N

MIDDLE SCHOOL ORGANIZATIONAL CLIMATE SCALE-

FINAL FORM

SEVEN DIMENSIONS OF MIDDLE-LEVEL ORGANIZATIONAL CLIMATE-FINAL FORM (MSOCS-FF)

KEY: * Identification of item modified from OCDQ-RS (Mulhern, 1984)

$ Identification of original item drawn from the related literature (Cheal, 1990)

Identification of item modified from OCDQ (Halpin & Croft, 1962)

@ Identification of item modified from Motivation/Expectancy Scale (Miskel, 1982)

& Identification of item modified from Pupil Control Ideology (Willower, Eidell, and Hoy, 1967)

- Reversed item as identified from the factor matrix

I. TEACHER BEHAVIOR

1. Expectancy and Motivation (EXM)

Description:

Expectancy and Motivation refers to behavior of the faculty which is characterized largely by a student orientation. A group of teachers who have high perceptions of expectancy and motivation appear genuinely concerned with the mental, emotional, and social development of the middle level student. The faculty holds high expectancy for both student outcomes and professional gratification through their efforts of hard work and dedication. To achieve these goals, the faculty continually works at improving their effectiveness in the classroom. The faculty who generates a low score on this dimension collectively hold the perception that hard work and dedication will not result in appreciable positive student outcomes or professional gratification.

Items:

36. $ Our teachers plan instructional activities for maximum learning at all achievement levels.

33. $ Our teachers continually monitor student progress to adjust their instructional programs.

35. $ Our teachers attempt to motivate their students to learn.

34. $ Teaching strategies in this school are based upon principles of learning.

47. $ Our teachers are sensitive to the developmental needs of middle school students as they plan their lessons.

48. $ Teachers in this building show a genuine caring for their students.

74. $ Our teachers believe that all students can learn.

32. $ Our teachers re-teach material to students as needed.

79. @ High faculty initiative leads to the attainment of the desired educational objectives.

72. @ In this school, it is important that our students acquire an interest in the subject matter.

83. @ We have positive feelings about ourselves as educators.

38. $ In this school, teachers listen to all sides of the story and are fair to all students in their final decisions.

82. @ Working as hard as we can results in goal accomplishment.

75. @ Good job performance by our teachers requires hard work.

87. @ In this school, we have the chance to accomplish something worthwhile.

68. $ Our teachers maintain high expectations for the conduct of all students.

69. $ Our teachers maintain high academic expectations for the conduct of all students.

86. @ When we put forth a high degree of effort it leads to a high level of performance.

88. @ Our intensive efforts lead to high student achievement.

51. * In this school, teacher discipline is fair and consistent with classroom rules.

78. @ We have the opportunity to develop our skills and abilities in this school.

93. $ Teachers share their expertise and materials with colleagues.

71. $ Our teachers voluntarily attend training sessions to improve their instructional effectiveness.

85. @ We place importance on keeping student frustration at a low level.

98. #* The morale of our teachers is high.

27. * Our teachers spend time before and/or after school with students who have individual problems.

2. Pupil Control Behavior (PCB)

Description:

This dimension refers to the faculty's perceptions of the student body. This belief is manifested through a custodial orientation to the relationships between teachers and students. A group of teachers who score high on this dimension perceive their students to be incapable of demonstrating positive academic and behavioral self-direction and must be controlled by the faculty on an impersonal basis. These teachers, who reflect this negative orientation towards students, also feel isolated and unsupported by their colleagues. A faculty who scores low on this dimension perceive their school to be an educational community where students learn positive self-discipline through participatory activities and mutual respect.

Items:

58. & It is often necessary to remind our pupils that their status in school differs from that of teachers.

60. & Our students are usually NOT capable of solving their problems through logical reasoning.

46. & Our students cannot perceive the difference between democracy and anarchy in the classroom.

44. & A few students are just young hoodlums and should be treated accordingly.

45. & Our students often misbehave in order to make the teacher look bad.

30. -* Our students solve their problems through logical reasoning.

57. & If our students are allowed to use the lavatory without getting permission this privilege will be abused.

77. @ Our expending high levels of energy DOES NOT lead to commensurate levels of student achievement.

55. & Being friendly with our students often leads them to become too familiar.

40. & Directing sarcastic remarks toward a defiant student is a good disciplinary technique.

92. * Teachers do not help and support each other.

54. & In this school, too much student time is spent on guidance and activities and too little on academic preparation.

84. @ Energetic educators are NOT particularly successful teachers here.

43. & Our beginning teachers are not likely to maintain strict enough control over their students.

59. & A pupil who destroys school material or property should be severely punished.

3. Tangible Environment (TGEN)

Description:

Tangible Environment refers to faculty expectations of a clean and functional building conducive to instructional business. A faculty who records a high score on this dimension perceives there are adequate instructional materials and a functional building to facilitate their ability to promote positive student and professional outcomes.

Items:

62. $ Our school has a well maintained/clean interior.

63. $ The exterior of our school is well maintained.

66. $ Custodial services are available when needed.

02. $ We have adequate instructional materials for our school program.

81. @ Our teachers have chances to learn new things.

4. Teacher Intimacy (TIN)

Description:

Teacher Intimacy refers to the faculty behavior that is characterized by close social relationships. This factor only reflects a social-needs orientation outside of the professional workplace environment. A teaching staff that scores high in Teacher Intimacy perceive their colleagues to engage in high levels of interaction outside of the workplace. A low Teacher Intimacy score would indicate a staff that does not continue their relationships outside the working environment into a social setting.

Items:

100. #* Teachers invite other faculty members to visit them at home.

99. #* Our teachers' closest friends are other faculty members at this school.

101. * Our teachers socialize with each other on a regular basis.

5. Teacher Frustration (TFRUS)

Description:

Teacher Frustration describes the faculty's dissatisfaction with non-instructional responsibilities that interfere with their teaching assignments. A faculty who scores high on this dimension tend to view the administration as interfering and counterproductive to their job of teaching. A low faculty score, however, represents a faculty who perceives the assignment of auxiliary responsibilities does not distract the teachers from their primary job of instruction.

Items:

04. #* Our teachers have too many committee requirements.

01. #* Administrative paperwork is burdensome at this school.

05. * Assigned non-teaching duties are excessive.

II. Principal(s) Behavior

1. Administrative Support (ADSUP)

Description:

Administrative Support refers to behavior by the principal(s) which is characterized by his/her efforts to recognize and support the professional endeavors of the faculty. A faculty who scores high in administrative support perceives the principal's behavior as positively assisting the faculty in achieving their instructional goals by facilitating, encouraging, and supporting their professional efforts. The principal(s) provides instructional leadership within an environment conducive to student learning while being sensitive to the personal welfare of the faculty. A staff who scores low in this dimension believes the principal(s) goes through the motions of his/her job but is not genuinely committed to collaborative support or overall staff morale.

Items:

24. #* Our principal(s) uses constructive criticism.

10. #* Our principal(s) goes out of his/her way to help teachers.

12. * Our principal(s) compliments teachers.

20. $ Our principal(s) recognizes faculty achievements.

18. -* Our principal(s) does NOT look out for the personal welfare of the faculty.

23. $ Our principal(s) encourages teacher autonomy.

11. -#* Our principal(s) does NOT explain his/her reasons for criticism to teachers.

19. -* Our principal(s) talks more than listens.

21. $ Our principal(s) provides instructional leadership.

08. $ Our principal's organization insures maximum classroom time-on-task.

17. -* Our principal(s) is autocratic.

15. -* Teacher/principal conferences are dominated by the principal.

14. * Our principal(s) is available before and/or after school to help teachers when assistance is needed.

52. & Our principal(s) gives unquestioning support to teachers in disciplining students.

2. Administrative Control (ADCON)

Description:

Administrative Control refers to behavior by the principal(s) which is characterized by close supervision of the faculty's actions and activities. A group of teachers who score high on this dimension perceives the principal(s) behavior to infer that he/she does not trust the faculty to perform their professional duties without the control of the administration. These principal(s) demand on-task behavior in an authoritarian manner. A faculty that scores low on this dimension perceives their school environment to have a collaborative relationship between staff and administration.

Items:

26. * Our principal(s) closely checks teacher activities.

25. * Our principal(s) supervises teachers closely.

13. -* Our principal(s) does NOT monitor everything teachers do.

APPENDIX O

MIDDLE SCHOOL ORGANIZATIONAL CLIMATE SURVEY-

FINAL FORM: REDUCED ITEMS

SEVEN DIMENSIONS OF MIDDLE-LEVEL ORGANIZATIONAL CLIMATE-FINAL FORM REDUCED ITEMS (MSOCS-FF-RI)

KEY: * Identification of item modified from OCDQ-RS (Mulhern, 1984)

$ Identification of original item drawn from the related literature (Cheal, 1990)

Identification of item modified from OCDQ (Halpin & Croft, 1962)

@ Identification of item modified from Motivation/Expectancy Scale (Miskel, 1982)

& Identification of item modified from Pupil Control Ideology (Willower, Eidell, and Hoy, 1967)

- Reversed item as identified from the factor matrix

I. TEACHER BEHAVIOR

1. Expectancy and Motivation (EXM)

Description:

Expectancy and Motivation refers to behavior of the faculty which is characterized largely by a student orientation. A group of teachers who have high perceptions of expectancy and motivation appear genuinely concerned with the mental, emotional, and social development of the middle-level student. The faculty holds high expectancy for student outcomes through its efforts of hard work and dedication. To achieve these goals, the faculty continually works at improving its effectiveness in the classroom. The faculty that generates a low score on this dimension collectively holds the perception that hard work and dedication will not result in appreciable positive student outcomes.

Items:

36. $ Our teachers plan instructional activities for maximum learning at all achievement levels.

33. $ Our teachers continually monitor student progress to adjust their instructional programs.

35. $ Our teachers attempt to motivate their students to learn.

34. $ Teaching strategies in this school are based upon principles of learning.

47. $ Our teachers are sensitive to the developmental needs of middle school students as they plan their lessons.

48. $ Teachers in this building show a genuine caring for their students.

74. $ Our teachers believe that all students can learn.

32. $ Our teachers re-teach material to students as needed.

79. @ High faculty initiative leads to the attainment of the desired educational objectives.

72. @ In this school, it is important that our students acquire an interest in the subject matter.

2. Pupil Control Behavior (PCB)

Description:

This dimension refers to the faculty's perceptions of the student body. This belief is manifested through a custodial orientation to the relationships between teachers and students. A group of teachers who score high on this dimension perceive their students to be incapable of demonstrating positive academic and behavioral self-direction and must be controlled by the faculty on an impersonal basis. These teachers, who reflect this negative orientation towards students, also feel isolated and unsupported by their colleagues. A faculty who scores low on this dimension perceive their school to be an educational community where students learn positive self-discipline through participatory activities and mutual respect.

Items:

58. & It is often necessary to remind our pupils that their status in school differs from that of teachers.

60. & Our students are usually NOT capable of solving their problems through logical reasoning.

46. & Our students cannot perceive the difference between democracy and anarchy in the classroom.

44. & A few students are just young hoodlums and should be treated accordingly.

45. & Our students often misbehave in order to make the teacher look bad.

30. -* Our students solve their problems through logical reasoning.

57. & If our students are allowed to use the lavatory without getting permission this privilege will be abused.

77. @ Our expending high levels of energy DOES NOT lead to commensurate levels of student achievement.

55. & Being friendly with our students often leads them to become too familiar.

40. & Directing sarcastic remarks toward a defiant student is a good disciplinary technique.

92. * Teachers do not help and support each other.

3. Tangible Environment (TGEN)

Description:

Tangible Environment refers to faculty expectations of a clean and functional building conducive to instructional business. A faculty who records a high score on this dimension perceives there are adequate instructional materials and a functional building to facilitate their ability to promote positive student and professional outcomes.

Items:

62. $ Our school has a well maintained/clean interior.

63. $ The exterior of our school is well maintained.

66. $ Custodial services are available when needed.

02. $ We have adequate instructional materials for our school program.

81. @ Our teachers have chances to learn new things.

4. Teacher Social Needs (TSN)

Description:

Teacher Social Needs refers to the faculty behavior that is characterized by close social relationships. This factor only reflects a social-needs orientation outside of the professional workplace environment. A teaching staff that scores high in Teacher Social Needs perceive their colleagues to engage in high levels of interaction outside of the workplace. A low Teacher Social Needs score would indicate a staff that does not continue their relationships outside the working environment into a social setting.

Items:

100. #* Teachers invite other faculty members to visit them at home.

99. #* Our teachers' closest friends are other faculty members at this school.

101. * Our teachers socialize with each other on a regular basis.

5. Teacher Frustration (TFRUS)

Description:

Teacher Frustration describes the faculty's dissatisfaction with non-instructional responsibilities that interfere with their teaching assignments. A faculty who scores high on this dimension tend to view the administration as interfering and counterproductive to their job of teaching. A low faculty score, however, represents a faculty who perceives the assignment of auxiliary responsibilities does not distract the teachers from their primary job of instruction.

Items:

04. #* Our teachers have too many committee requirements.

01. #* Administrative paperwork is burdensome at this school.

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II. Principal(s) Behavior

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Items:

24. #* Our principal(s) uses constructive criticism.

10. #* Our principal(s) goes out of his/her way to help teachers.

12. * Our principal(s) compliments teachers.

20. $ Our principal(s) recognizes faculty achievements.

18. -* Our principal(s) does NOT look out for the personal welfare of the faculty.

23. $ Our principal(s) encourages teacher autonomy.

11. -#* Our principal(s) does NOT explain his/her reasons for criticism to teachers.

19. -* Our principal(s) talks more than listens.

21. $ Our principal(s) provides instructional leadership.

08. $ Our principal's organization insures maximum classroom time-on-task.

2. Administrative Control (ADCON)

Description:

Administrative Control refers to behavior by the principal(s) which is characterized by close supervision of the faculty's actions and activities. A group of teachers who score high on this dimension perceives the principal(s) behavior to infer that he/she does not trust the faculty to perform their professional duties without the control of the administration. These principal(s) demand on-task behavior in an authoritarian manner. A faculty that scores low on this dimension perceives their school environment to have a collaborative relationship between staff and administration.

Items:

26. * Our principal(s) closely checks teacher activities.

25. * Our principal(s) supervises teachers closely.

13. -* Our principal(s) does NOT monitor everything teachers do.

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