A STUDY OF ORGANIZATIONAL CLIMATE AND PRINCIPAL LEADERSHIP BEHAVIOR IN NEW ELEMENTARY SCHOOLS

DISSERTATION

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By

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The purposes of this study were to determine, based on the perceptions of teachers and principals, during the first year of operation in new elementary schools (1) the extent of change in organizational climate, (2) the extent of change in principal leadership behavior, (3) the difference between teachers' and principals' perceptions of climate and principal leadership behavior, and (4) the relationship between the openness factor of climate and the principal leadership behavior factors of consideration and structure.

Organizational climate and principal leadership behavior were measured three times during the 1978-1979 school year in five new elementary schools in Texas. The subjects in the study included five elementary principals and 146 classroom teachers. The Organizational Climate Description Questionnaire (OCDQ) and the Supervisory Behavior Description (SBD) questionnaire were administered at the beginning of the school year, at mid-year, and at the end of the school year.

The major findings of the study included:

1. Organizational climate. Both teachers' and principals' perceptions of the organizational climate in the school changed during the course of the school year. Teachers viewed the climate of the school as more closed at the end of the school year. Three of the five principals viewed the climate as more closed at the end of the year. One principal viewed the climate as more open at the end of the year. Teachers had significant differences on the Disengagement, Esprit, and Thrust subtests of the OCDQ. Principals had a significant difference on the Production Emphasis subtest.

2. Principal leadership behavior. Both teachers' and principals' perceptions of principal leadership behavior changed during the course of the school year. Teachers viewed the principal as progressively more impersonal and formal in relations with the teachers. Principals perceived a change in their task-oriented, supervisory behavior at mid-year.

3. Difference in perceptions. The differences in teachers' and principals' perceptions of climate and principal leadership behavior as measured by the openness score of the OCDQ and the two dimension scores of the SBD were not statistically significant.

4. Relationship between openness and consideration and openness and structure. For the scores for the total

group of subjects, the calculated correlation coefficients for the relationship between openness and consideration were all positive. For the relationship between openness and structure the correlation coefficients were all negative.

Based on the findings of the study, the following conclusions were drawn for this group of subjects:

1. Teachers' and principals' changes in perceptions of climate and principal leadership behavior were related to specific dimensions of organizational behavior.

2. Changes in teachers' perceptions of climate and principal leadership behavior appeared related to teachers' concern about the social and human-needs dimensions of organizational behavior while changes in principals' perceptions appeared related to principals' concern about the task-oriented and structural dimensions of organizational behavior.

3. Principals tended to view the climate of the school as more open than did the teachers of the school.

4. As the school year progressed, teachers viewed the principal as less authentic in his actions, more impersonal in his relations with teachers, and less considerate of teachers' social and human needs.

5. As the school year progressed, principals viewed their own behavior as less and less supervisory and directive.

Based on the findings and conclusions in this study, recommendations were made for additional longitudinal study

in the areas of organizational climate and principal leadership behavior.

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INTRODUCTION

Research in educational administration during the past twenty-five years has focused attention on three areas of concern: (a) the school as a social system, (b) the leadership behavior of the principal as an educational administrator, and (c) the organizational climate of the school as a measure of institutional well-being. A major motivation for research in these areas has been a desire to interpret the complex behaviors and interactions occurring in schools in a framework which includes both human and institutional definitions (36, 42, 48).

From these research studies (7, 9, 12, 15, 26, 47, 54), conflicting evidence has been reported about the relationship between the leadership behavior of the school principal and the organizational climate of the school. The hierarchial structure of the school system imposes leadership expectations on the individual occupying the principalship. Whether the principal exercises or abdicates his leadership role, he is an influence on the organizational climate of the school. The perceptions of the teachers may not reflect the perceptions the principal has of his leadership behavior or his perceptions of the organizational climate of the school.

Almost without exception, research efforts have excluded the principal who is in his first year of service in a new school. Prior to this study, no data existed on the changes occurring in organizational climate during the first year a principal and staff occupied a new building.

This study monitored both organizational climate and the leadership behavior of the principal, as perceived by the principals and teachers in new elementary schools, to provide data on developmental changes in climate during the first year of operation in the designated schools.

Statement of the Problem

The problem of this study was to describe changes in teachers' and principals' perceptions of organizational climate, changes in teachers' and principals' perceptions of the leadership behavior of the principal, and the relationship between organizational climate and the leadership behavior of the principal during the first year of operation in new elementary schools.

Purposes of the Study

The purposes of this study were to

1. determine the extent of change in organizational climate during the first year of operation of new elementary schools as climate was perceived by (a) teachers in individual schools, (b) teachers as a total group, (c) principals in individual schools, and (d) principals as a total group.

2. determine the extent of change in the leadership behavior of the principal during the first year of operation in new elementary schools as leadership behavior was perceived by (a) teachers in individual schools, (b) teachers as a total group, (c) principals in individual schools, and (d) principals as a total group.

3. determine the difference between teachers' perceptions and principals' perceptions of (a) organizational climate and (b) principal leadership behavior and the changes that occurred in these perceptions during the first year of operation in new elementary schools.

4. determine the relationship between the openness factor of organizational climate and the two principal leadership factors of consideration and structure and the changes which occurred in these relationships during the first year of operation in new elementary schools.

Research Questions

To carry out the purposes of this study, the following research questions were examined:

Question I: During the first year of operation in a new elementary school, how do teachers' perceptions of organizational climate, as measured by the eight subtests of the Organizational Climate Description Questionnaire (OCDQ), show evidence of change when the OCDQ is administered at the beginning of the school year, at mid-year, and at the end of the school year?

A. Within individual schools, do the scores on the OCDQ indicate (1) that teachers' perceptions have changed, (2) different patterns of dispersion exist for each assessment, (3) a significant difference exists between the three assessments, or (4) there is an identifiable pattern of change?

B. For the total group of teachers in the study, do the scores on the OCDQ indicate (1) that teachers' perceptions have changed, (2) different patterns of dispersion exist for each assessment, (3) a significant different exists between the three assessments, or (4) there is an identifiable pattern of change?

Question II: During the first year of operation in a new elementary school, how do the principals' perceptions of organizational climate, as measured by the eight subtests of the Organizational Climate Description Questionnaire (OCDQ), show evidence of change when the OCDQ is administered at the beginning of the school year, at mid-year, and at the end of the school year?

A. Within individual schools, do the scores on the OCDQ indicate (1) that principals' perceptions have changed, (2) a difference exists between the three assessments, or (3) there is an identifiable pattern of change?

B. For the total group of principals in the study, do the scores on the OCDQ indicate (1) that principals' perceptions have changed, (2) different patterns of dispersion exist for each assessment, (3) a significant difference exists

between the three assessments, or (4) there is an identifiable pattern of change?

Question III: During the first year of operation in a new elementary school, how do teachers' perceptions of the leadership behavior of the principal, as measured by the two subtests of the Supervisory Behavior Description (SBD) questionnaire, show evidence of change when the SBD is administered at the beginning of the school year, at mid-year, and at the end of the school year?

A. Within individual schools, do the scores on the SBD indicate (1) that teachers' perceptions have changed, (2) different patterns of dispersion exist for each assessment, (3) a significant difference exists between the three assessments, or (4) there is an identifiable pattern of change?

B. For the total group of teachers in the study, do the scores on the SBD indicate (1) that teachers' perceptions have changed, (2) different patterns of dispersion exist for each assessment, (3) a significant difference exists between the three assessments, or (4) there is an identifiable pattern of change?

Question IV: During the first year of operation in a new elementary school, how do the principals' perceptions of leadership behavior, as measured by the two subtests of the Supervisory Behavior Description (SBD) questionnaire show evidence of change when the SBD is administered at the

beginning of the school year, at mid-year, and at the end of the school year?

A. Within individual schools, do the scores on the SBD indicate (1) that principals' perceptions have changed, (2) a difference exists between the three assessments, or (3) there is an identifiable pattern of change?

B. For the total group of principals in the study, do the scores on the SBD indicate (1) that principals' have changed, (2) different patterns of dispersion exist for each assessment, (3) a significant difference exists between the three assessments, or (4) there is an identifiable pattern of change?

Question V: During the first year of operation in a new elementary school, does the difference between teachers' and principals' perceptions of organizational climate show evidence of change when climate is assessed by the OCDQ at the beginning of the school year, at mid-year, and at the end of the school year?

A. Within individual schools, do the scores on the OCDQ indicate (1) that there is a significant difference between teachers' and principals' perceptions of organizational climate on each of the three assessments, or (2) that there is an identifiable pattern of change for the three differences in teachers' and principals' perceptions of organizational climate?

B. For the total group of teachers and principals in the study, do the scores on the OCDQ indicate (1) that there is a significant difference between teachers' and principals' perceptions of organizational climate on each of the three assessments, or (2) that there is an identifiable pattern of change for the three differences in teachers' and principals' perceptions of organizational climate?

Question VI: During the first year of operation in a new elementary school, does the difference between teachers' and principals' perceptions of the leadership behavior of the principal show evidence of change when leadership behavior is assessed by the SBD at the beginning of the school year, at mid-year, and at the end of the school year?

A. Within individual schools, do the scores on the SBD indicate (1) that there is a significant difference between teachers' and principals' perceptions of the leadership behavior of the principal on each of the three assessments, or (2) that there is an identifiable pattern of change for the three differences in teachers' and principals' perceptions of the leadership behavior of the principal?

B. For the total group of teachers and principals in the study, do the scores on the SBD indicate (1) that there is a significant difference between teachers' and principals' perceptions of the leadership behavior of the principal on each of the three assessments, or (2) that there is an identifiable pattern of change for the three differences in

teachers' and principals' perceptions of the leadership behavior of the principal?

Question VII: During the first year of operation in a new elementary school, what is the relationship between the openness factor of organizational climate and the two principal leadership behavior factors of consideration and structure when climate is assessed by the OCDQ and leadership behavior is assessed by the SBD at the beginning of the school year, at mid-year, and at the end of the school year?

A. Within individual schools, do the scores on the OCDQ and the SBD indicate (1) that a relationship exists between openness and consideration and openness and structure for each of the assessments, (2) that there is a significant difference between the relationships for the openness, consideration, and structure factors for each of the assessments, or (3) that there is an identifiable pattern of change for the relationships for openness, consideration, and structure established for the three assessments?

B. For the total group of schools in the study, do the scores on the OCDQ and the SBD indicate (1) that a relationship exists between openness and consideration and openness and structure for each of the assessments, (2) that there is a significant difference between the relationships for the openness, consideration, and structure factors for each of the assessments, or (3) that there is an identifiable pattern

of change for the relationships for openness, consideration, and structure established for the three assessments?

Background and Significance of the Study

The past two decades have been marked by an unprecedented interest and concern about the quality and nature of public education in America. Dissatisfaction with the state of public education was most forcibly expressed in the turmoil and violence of the decade from 1965 to 1975. With a questioning attitude, both the lay public and professional educators wondered aloud about the impersonal nature of schools, about the inability of schools to implement change, and about the inability of schools to judge their own state of health (45). Most of the blame for the state of the schools was laid at the feet of school administrators.

In the attempt to define and interpret education in the context of contemporary concerns, research in educational administration has focused on (1) defining the theoretical concept of schools as social systems, (2) analyzing and defining the leadership role of school administrators, and (3) developing a method for measuring the organizational climate of schools (36, 42, 48). These three areas of concern have been researched in isolation and in varying combinations. The findings from these studies are often conflicting and indicate that the issues in question are not resolved or fully understood.

One implication arising from both the turmoil of the past decade and recent research in educational administration is that the modern school administrator must be prepared to deal with conflict (23). While the incidence of violent, external attacks on school property has lessened (51), the incidence of internal conflicts has risen (21, 23, 34). Administrators are frequently referred to as the "men-in-the-middle" because they are caught in the middle of the conflict arising from the differences between the goals of the institution and the needs of the personnel of the institution. It has been suggested by some authorities (1, 38) that internal conflict is inevitable, manageable, and to a degree healthy. One of the keys to managing and understanding conflict is found in the social system theory approach to educational administration.

The research defining the concept of schools as social systems began in the 1930s and continues to the present day. The work of Chester Barnard, Mary Parker Follett, Elton Mayo, and Herbert A. Simon laid the foundation for the application of behavioral science theory to school administration (8, pp. 85-94). George C. Homans is credited with developing a social systems theory which some educators have applied to schools (39). The most widely used conceptualization of schools as social systems was formulated by Getzels and Guba (19, 20).

The model developed by Getzels and Guba was designed for analyzing behavior in a social system. This model is based on the concept that "public education is an instrumentality of society for carrying out a function which society has decreed to be a desirable one" (46, p. 1) and that the school is the institution officially charged with the task of public education. As an institution, the school exists as an organization with a hierarchial structure, purposes, goals, and functions. The school operates as a social system and is a subset of the larger social system referred to as the school district (36, 43). In the school social system there are two complementary and interrelated components: (1) the institution itself and (2) the individuals inhabiting the institution. According to Getzels and Guba (20), the institution is characterized by institutional roles and role expectations. The second component, the individuals, is characterized by individual personality and needs. A person occupying an institutional role must blend institutional and personal needs in order to be satisfied with his role. In addition, for each role there are perceptions of the role formed by others as they observe and interact with the person occupying the role. The person occupying the role also forms his own perceptions of the role. Inevitably, conflict arises as institutional expectations and personal needs clash. The social system of the school operates best when both the needs of the institution and the needs of the

individuals are being met. Argyris (1) has emphasized that conflict will always be present in some degree and the challenge to administrators is in finding ways to manage the conflict.

The Getzels-Guba model has been used as the basis for several studies relating principal leadership behavior and organizational roles. Bridges (4) used the model to study the effect of principals' experience on teachers' perceptions of the leadership behavior of the principals. Bridges concluded that principals allow institutional expectations to influence their behavior as they gain experience. Moser (41) examined the relationship between principals and superintendents in complementary roles and found that principals used institutional expectations to guide their behavior when they dealt with their superiors and used individual personality more when they dealt with teachers. Moser defined three behavior styles which could be predicted from the Getzels-Guba model. The three leadership styles identified by Moser were (1) the nomothetic style,characterized by behavior which stresses goal accomplishment, (2) the idiographic style, characterized by behavior which stresses the individuality of people, and (3) the transactional style,characterized by behavior which stresses goal accomplishment and individual need fulfillment (41, p. 2).

As an educational administrator, the school principal finds himself in a unique position. By virtue of his

appointment to the position, the principal is expected to function as an administrator and as a leader in an organizational structure in which he is both a superordinate and a subordinate. The principalship is frequently referred to as a middle management position because the principal has responsibilities to both a chief school officer and to his own staff (22, 34, 50). As the officially designated head of a school, the principal through the exercise of his leadership is considered to be one determinant of the ability of the school to attain its goals (27, pp. 1-2). Lipham (37) describes the difference between leaders and administrators by stating that leaders initiate new structures of procedures for accomplishing organizational goals while administrators maintain organizational structures or procedures. The uniqueness of the principal's position as an appointed leader is that he is assigned a multitude of responsibilities for maintaining the system and almost no powers for initiating system change (5).

The leadership of school administrators has been studied widely. The study of leadership has progressed through several stages (32, 39, 50). The major themes in the study of leadership have been (1) the great man approach, (2) the trait approach, (3) the situational approach, and (4) the behavioral approach (37, pp. 2-5). The behavioral approach is frequently used in conjunction with the social systems theory of school organization.

The research work of Hemphill, Coons, Halpin, Fleishman, and others involved in the Ohio state University Leadership Studies during the 1950s and 1960s approached leadership description from the behavioral point of view. The Ohio State group consciously decided to investigate leader behavior and not leadership (14, p. 18). Out of the work of this group evolved the Leadership Behavior Description Questionnaire focusing on two dimensions of leadership defined as "consideration" and "initiating structure." Several other studies have substantiated the concept that leadership behavior centers on areas similar to the classifications of consideration and initiating structure (33, p. 146). Studies of leadership have also included research into the personal characteristics of leaders (26, 31), the defining of leadership styles (20, 41, 55), and the identification of variables to be considered in the selection of potential educational leaders.

Generalizations resulting from the behavioral approach to the study of leadership behavior are

(1) educational leaders are perceived to possess unique leader behavior orientations; . . .
(2) preferences and expectation for leader behavior vary widely among reference groups; . . .
(3) the leader's perception of his own behavior differs from others' perceptions; . . .
(4) confidence in leadership, satisfaction, effectiveness, and attitudes toward the work situation are all influenced by incongruence in expectations for leader behavior; . . .
(5) the effectiveness of leaders may be seriously compromised in interpersonal relationships by misperceptions and the existence of value differences; . . .

(6) relational studies indicate that leader behavior is related to many organizational variables; . . . and
(7) situational factors influence leader behavior (33, p. 148).

The view that behavior occurring within an organization can be conceptualized as a function of the relationship between the demands of the institution and the needs of the individual is supported by research on the social systems model and the research on leadership behavior. As stated previously, the Getzels-Guba model has been used to describe the institutional (nomothetic) needs and the individual (idiographic) needs of leaders and the nature of leader-follower relationships. The view that congruence between institutional and individual needs is vital to the effective and efficient operation of the organization has led to research in the area of organizational climate.

Organizational climate has been described by Halpin (28) as the personality or feel of a school. Climate has also been referred to as the atmosphere or tone of a school (43, p. 167). The relationship between leadership behavior of the principal, the teachers' perceptions of leadership behavior, and the organizational climate of the school has been investigated (7, 9, 54). Conflicting evidence about the role of the leader as an influence on organizational climate has been amassed (7, 9, 12, 15, 26, 47, 54).

The measurement of school organizational climate as an indication of the congruence between institutional needs

and individual needs has been achieved through the use of instruments developed for this purpose. As an outgrowth of their work on leadership behavior at Ohio State University, Andrew Halpin and Don Croft developed the Organizational Climate Description Questionnaire (OCDQ) (28). In a study of seventy-one schools, Halpin and Croft defined six climate categories for schools, identified four teacher behaviors and identified four principal behaviors related to school climate. Another instrument developed for measuring climate is an adaptation of an earlier instrument developed by George Stern and Carl Steinhoff (43). This instrument is named the Organizational Climate Index. A third means of assessing school climate has been developed by the Charles F. Kettering Foundation program group (CFK Ltd) and is known as the CFK Ltd School Climate Profile Instrument (18). Several other instruments for describing school climate have been developed, but it has been pointed out that most groups adopt one of the instruments and use it exclusively or they create their own instrument (44).

The question of how climate changes over time remains unanswered. Andrew Halpin has suggested the need for studies of a longitudinal nature and believes that climate does change (28, 29). Don Croft has suggested that studies of climate in new schools and with new principals should be undertaken (11). In 1975, the research team of Walden, Taylor, and Watkins reported that despite the passage of

thirteen years and the reporting of over 200 studies using the OCDQ, no studies of a longitudinal nature had been recorded (52). Walden, Taylor, and Watkins studied changes in organizational climate over time by retesting a group of schools which had been tested five years earlier. The results of this study did not support Halpin and Croft's conjecture that over a span of time schools with open climates would become more open and schools with closed climates would move toward more closed climates (52, p. 93). The study did indicate that a significant change had occurred in teachers' and principals' perceptions of climate over the five-year period,with the greatest change occurring in teachers' perceptions of climate (52, p. 92).

The interrelatedness of (1) social systems theory, (2) the study of leadership, and (3) the need for studying organizational climate in schools is summarized by Halpin in the following statement:

> . . . an essential determinant of a school's "effectiveness" an an organization is the principal's ability--or his lack of ability--to create a "climate" in which he, or other group members can initiate and consummate acts of leadership. . . . If an organization is to accomplish its tasks, leadership acts must be initiated. . . . In this view we have been supported by the central finding that pervades all research on leadership and group behavior: an "effective" group must provide satisfaction to group members by giving a sense of task-accomplishment, and by providing members with the social satisfaction that comes from being part of the group (27, pp. 1-2).

This study was significant in that it did

1. describe and analyze changes in teachers' and principals' perceptions of organizational climate and principal leadership behavior in new elementary schools during the first year of operation.

2. describe and analyze the differences in teachers' and principals' perceptions of organizational climate and principal leadership behavior in new elementary schools during the first year of operation.

3. describe and analyze changes in the relationship between the climate openness factor and the principal leadership factors of consideration and structure in new elementary schools during the first year of operation.

Definition of Terms

Change.--Become different; pass from one condition or state to another (40, p. 83). For this study, change was indicated by a difference in scores on the Organizational Climate Description Questionnaire and the Supervisory Behavior Description questionnaire.

Leadership.--A function requiring human behaviors which help a school achieve its constantly changing purposes, some of which are oriented toward productivity or task-performance and others of which are oriented toward interpersonal relationships, within the school's own social climate and conditions (14, p. 3).

Organizational climate.--The set of internal characteristics that distinguishes one school from another and influences the behavior of people (36, p. 137).

Social system.--A bounded set of elements (subsystems) and activities in mutual interaction that constitute a single social entity (36, p. 37).

Limitations

This study was limited to identifying teachers' and principals' perceptions of organizational climate and the leadership behavior of the principal in new elementary schools in which the subjects are employed.

Basic Assumption

It was assumed that organizational climate always exists. This assumption agrees with Doak's (13) interpretation that regardless of the state attributed to it, climate always exists.

Procedures for the Collection of Data

Instruments

This study employed the use of two instruments which have previously been used in research studies on organizational climate and leadership behavior. Additional demographic and background information on the subjects was obtained through the use of an information background survey.

The instrument used to measure teachers' and principals' perceptions of school organizational climate was the Organizational Climate Description Questionnaire (OCDQ) (Appendix A). The OCDQ was developed by Halpin and Croft in 1962 and consists of sixty-four Likert-type items for describing the climate of schools. The items are answered using a four-point, forced-choice scale. The item answer choices and assigned values for scoring are: rarely occurs (1), sometimes occurs (2), often occurs (3), and very frequently occurs (4). The instrument yields eight subtest means, a school climate profile, and an "openness" score. Since its development, this instrument has been used in over 200 research studies across the nation (10). Research to confirm the validity of the OCDQ has shown that the subtests effectively measure the important aspects of school organizational climate and that the "openness" score is a valid index of climate (30, 35). Some disagreement about the number of climate profiles which should be derived from the subtests has been noted (30, 43). These studies have shown that the test items have good construct validity. The OCDQ has been referred to as the most popular and widely used technique for assessing school climate and the reasons cited for its popularity include its simplicity and clarity (43, p. 174; 49, p. 445).

The instrument used to measure teachers' and principals' perceptions of the leadership behavior of the principal was

the Supervisory Behavior Description (SBD) questionnaire (Appendix B). This instrument was developed by Edwin A. Fleishman in conjunction with the scales developed for measuring leadership behavior by the staff of the Ohio State Leadership Studies project. The instrument consists of forty-eight items with forced-choice answers. The instrument is designed to measure the behavior patterns of supervisory and management personnel on two major dimensions of leadership--"consideration" and "structure" (17, p. 1). The SBD has been used as a research instrument in educational institutions and norms for educational supervisors are reported in the test manual. There is great similarity between the test items of the SBD and the original Leadership Behavior Description Questionnaire. The SBD was chosen for this study because of its shorter form and more recent revision in 1972. This instrument may be administered in fifteen minutes and is valid as a self-description measure (17).

The Population

The population for this study was defined as elementary school principals and classroom teachers in elementary schools which (1) began the 1978-1979 school year with newly formed staffs in new school plants; (2) were located in school districts in the Dallas-Fort Worth or Houston metroplex areas; (3) were operated as separate entities apart from

other elementary schools in the district; and (4) were willing to participate in the study.

Identification of the Subjects

A survey was conducted of all school districts in the Dallas-Fort Worth metroplex area and the Houston metroplex area listed in the 1977 Texas School Directory with an average daily attendance of 1,000 or more students. All participants in the study met the following criteria: (1) had a new school opening in the 1978-1979 school year; (2) were willing to participate in the study; and (3) the school operated as a separate entity apart from other elementary schools in the district from the beginning of the school year. Five eligible schools were identified and were used in the study.

Research Design

A repeated measurements design was employed in this study which was classified as descriptive, ex post facto research since the researcher did not manipulate the variables or arrange for events to happen (5). The study involved measurement, analysis and interpretation of the data. Three repeated measures of the dependent variables were collected using the Organizational Climate Description Questionnaire to assess organizational climate and the Supervisory Behavior Description questionnaire to assess principal leadership behavior.

Collection of Data

This study was conducted during the school year from September of 1978 through June of 1979. Following the identification of the eligible schools, a letter was sent to the contact person in the central administration office of each school district which outlined the purposes of the study and which requested permission to include the school in the study. When the school district agreed to permit the school to participate in the study, the principal of each school was contacted by telephone to obtain agreement to participate in the study. Each principal was then sent a letter explaining the purposes of the study and specimen copies of the instruments to be used. After obtaining the principal's agreement to participate in the study, a meeting was held with each principal prior to the first administration of the instruments. Numbered packets were prepared for each staff member participating in the study which included directions and copies of the instruments. These packets were distributed by the principal and were either picked up or mailed to the researcher. To insure confidentiality of response, the numbered packets were distributed in random order and were sealed by the respondent before being returned to the collection spot. A master list of names and packet numbers was prepared by the respondents as the packets were returned. This master list was sent along with the completed packets from each school.

Procedures for Analysis of Data

At the end of each collection period, the responses for the principal and classroom teachers from each school were placed on coding forms for keypunching. After all the data had been collected, the responses for both instruments were keypunched at the North Texas State University Computer Center. The punched cards for the OCDQ were sent to Donald Croft of Educational Research Services at New Mexico State University for scoring. The SBD was scored at the North Texas State University Computer Center utilizing a computer program written for this purpose. After the instruments were scored, analyses of the data were made using the statistical packages available through the North Texas State University Computer Center. The data derived from the demographic information section of the OCDQ and the background information survey were compiled and organized into tables.

The following inferential statistics were used in analyzing the data collected:

1. The Hartley test for homogeneity of variance was used to determine if the scores had the same degree of variability for each assessment.

2. The Cochran test for homogeneity of variance was used to determine if the groups of scores for all the schools had the same degree of variability.

3. One-factor and two-factor analysis of variance for repeated measures tests were used to determine if significant differences existed between groups and assessments.

4. The Scheffé test for comparison of means was used to determine where the significant differences occurred after a significant F ratio was found using the analysis of variance for repeated measures procedure.

5. The t test for Independent Samples was used to determine differences in teachers' and principals' perceptions of organizational climate and principal leadership behavior.

6. The Pearson product-moment correlation coefficient was used to determine the relationship between openness and consideration and openness and structure.

7. The test for significance of difference between two correlation coefficients for independent samples was used to determine if a significant difference existed between the correlation coefficients.

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CHAPTER II

REVIEW OF RELATED LITERATURE

This study examined two complex organizational phenomena, organizational climate and principal leadership behavior, in new elementary schools. The investigation of these phenomena was facilitated by describing school organization through the theoretical concept of schools as social systems.

This review of the literature is divided into three subsections: (1) Social Systems Theory, (2) The Leadership Role of the Elementary School Principal, and (3) Organizational Climate of Elementary Schools.

Social Systems Theory

In a classic sociological study of the school, Waller stated:

> The school is a unity of interacting personalities. The personalities of all who meet in the school are bound together in an organic relation. The life of the whole is in all of its parts, yet the whole could not exist without any of its parts. The school is a social organism . . . a closed system of social interaction (127, p. 6).

In this first study of school organization from a social science perspective, Waller depicted the school not just as a formal organization but as a social system or small society in which teachers and principals interact as organizational members (132, p. 350). Waller's conceptualization of the

school as a social system combined two older theories of human behavior in organizational settings into a new theoretical position which was to become known in subsequent years as the social systems point of view.

Describing human behavior in organizational settings, Etzioni (39) listed two distinct traditions or approaches in organizational theory as predecessors to the social systems point of view. The three theoretical approaches for describing human behavior in organizational settings and the point of view emphasized by each theory listed in the order of their development are: (1) the Classical or Scientific Management approach emphasizing structural aspects of the organization, 1910-1935; (2) the Human Relations approach emphasizing the social needs of individuals within the organizational structure, 1935-1950; and (3) the Social Systems approach emphasizing the integration of the goals of the organization and human relations concepts, 1950 to the present (39, 53, 99).

In the Classical or Scientific Management approach to understanding human behavior in organizations, the individual participant in the organization was depicted as being motivated almost exclusively by economic rewards. Frederick Taylor (121), father of the movement and a major contributor to Scientific Management theory, viewed the individual's function as being an appendage of the organizational machine. The central tenet of the approach was that if material

rewards were closely related to work efforts, the worker would respond with maximum performance (39, p. 21). The goal of the organization was efficiency of operation and the individual was viewed as an extension of the organizational structure responsive to organizational demands to the limit of his ability when sufficiently satisfied by economic rewards. As described in the writings of Taylor, Fayol (42), Weber (37), and Gulick and Urwick (59), every individual role within the organization needed to be defined in terms of a well established hierarchy of control and division of labor. Theoretically, it was anticipated that defining the expected human behavior and providing economic incentives would cause the individual to maximize his performance thereby improving organizational efficiency. The formulation of management principles based on Scientific Management theory resulted in the key organizational concepts of line and staff, unity of command, span of control, and delegation of responsibility (99, p. 9).

In reviewing the impact of the Scientific Management movement and theory upon the public schools, Callahan (25) found that school administrators adopted Scientific Management principles as a means of appeasing their critics' demands for more economical and utilitarian education. Callahan identified Frank Spaulding, Franklin Bobbitt, and Ellwood P. Cubberley as leaders in the effort to apply Scientific Management to education in the early 1900s.

Spaulding, superintendent of schools in Newton, Massachusetts, emphasized the need for reducing expenditures equating educational value with dollar value (25, p. 73). Franklin Bobbitt (18), instructor in educational administration at the University of Chicago in the early 1900s, applied Taylor's principles to supervisory functions within the school operation. Bobbitt argued that in schools, as in any organization, supervisors must define the goals of the organization, discover the best methods of work performance, and enforce the use of the best methods (18, p. 7). Ellwood P. Cubberley, dean of the School of Education at Stanford, endorsed the use of efficiency experts in education in his textbook, Public School Administration,published in 1929. The influence of the Scientific Management movement was so strong that by 1930 many school administrators perceived themselves as "business managers" or "school executives" rather than as scholars or educational philosophers (25, preface).

Reaction to the theoretical position expressed by the Scientific Management school of thought emerged in the form of a second theory of human behavior within organizations. This second theory, the Human Relations approach, emphasized the importance of human relationships within organizational settings. Mary Parker Follett (46), an early and able spokesman for the Human Relations point of view, argued that the fundamental problem of any organization, industrial, governmental, or educational in nature, was the building and

maintenance of dynamic, harmonious relationships. With the enunciation of this second point of view, organizational theorists shifted emphasis away from the definition of organizational structure and focused attention upon social rather than economic needs of the individual in the organization. Supporting the theoretical position of the Human Relations point of view was empirical evidence gathered from 1927 to 1932 by a team of researchers conducting experiments in working conditions at the Hawthorne Works division of the Western Electric Company (108). For his leadership of this project, Elton Mayo was recognized as the father of the Human Relations school of thought.

> Mayo and his associates discovered that: (1) the amount of work carried out by a worker (hence the organizational level of efficiency and rationality) is not determined by his physical capacity but by his social "capacity"; (2) non-economic rewards play a central role in determining the motivation and happiness of the worker; (3) the highest specialization is by no means the most efficient division of labor; and (4) workers do not react to management and its norms and rewards as individuals but as members of groups (39, p. 32).

The research team acknowledged the existence of an informal system of organization operating within the formal structure of the organization. Summarizing the role of the individual in the organization, the Hawthorne researchers concluded that management was in error when it took the worker's position in the organizational structure as representative of the worker's real situation (108, p. 17). Organizational concepts and management principles formulated during this

period contributed to general management theory. The concepts of morale, group dynamics, democratic supervision, and personnel relations were derived from Human Relations theory and research (99, p. 10).

The influence of Human Relations theory upon the public schools was more subtle than the effects produced by the introduction of Scientific Management theory. Getzels points out that education was influenced more by the studies of group dynamics and morale which emanated from the Human Relations movement than by the actual research of the Hawthorne experiments (53, p. 36). The greatest impact of the Human Relations movement was on school supervision and elementary school administration (99, p. 17). The findings of a study in leadership conducted by Lewin, Lippitt, and White (81) were widely interpreted as meaning that "democratic leadership" was superior to "autocratic" or "laissez-faire" leadership. The study, conducted with ten-year-old boys in an experimental setting, was interpreted as proving that democratic leadership was the only appropriate leader behavior for solving all operational problems within complex educational organizations (82, p. 125). The Human Relations theoretical point of view applied to education resulted in an outpouring of books and treatises on the topics of democratic leadership and human relations in education (53, p. 38).

The two points of view representing Scientific Management theory and Human Relations theory shared one common element (39, p. 39). Each point of view asserted that its theoretical base encompassed the position of the opposition. Proponents of Scientific Management maintained that the individual would be both efficient and satisfied in an efficiently-run, well defined organization where he reaped maximum economic benefit. The Human Relations theorists held that an organization would never operate efficiently unless the social needs of the workers were considered and taken into account (20, p. 14). Both schools of thought acknowledged the need for balance between the goals of the organization and the needs of the individuals within the organization. Scientific Management theorists believed that precisely defining the individual's role and providing economic rewards achieved the needed balance. Human Relations theory focused attention on the roles and relationships determined by the informal organizational structure believing that socially satisfied workers would be productive workers. The rigidity and narrowness of the two points of view necessitated the advancement of a more global assessment of human behavior in organizational settings.

The Scientific Management movement and the Human Relations movement shared a similar pattern of development. The basic theoretical positions were initially expressed by members of the business or industrial community. After the basic

assumptions were postulated in these communities, both theories were adopted and applied to the social sciences. The third theory of human behavior in organizational settings, the Social Systems theory, was formulated by social scientists and adopted by the business and industrial communities.

Wiggins (132) credits Vilfredo Pareto, an early twentieth century economist and sociologist, with being the father of Social Systems theory. In his sociological writings, Pareto depicted a society as a system of forces in equilibrium. Forces which Pareto delineated were (1) physical (soil, climate); (2) external (other societies); and (3) internal (feelings, ideologies) (132, p. 349). Operating from a social science perspective, other sociologists (75, 101) began constructing general social systems theories to explain and analyze the operation of human groups in society. Common to all of these conceptualizations of human behavior in an organizational society was an emphasis on the interrelatedness of human relationships. A major contributor to a general theory of social systems, Talcott Parsons, defined a social system as:

> . . . a plurality of individual actors interacting with each other in a situation which has at least a physical or environmental aspect, actors who are motivated in terms of a tendency to the "optimization of gratification" and whose relation to their situations, including each other is defined and mediated in terms of a system of culturally structured and shared symbols (101, pp. 5-6).

An early expression of the Social Systems point of view as applied to human behavior in formal organizations was provided by Chester Barnard (12). In 1938 in Functions of the Executive, Barnard integrated elements of the older theoretical approaches, goals of the organization and needs of the individual, into two concepts he labeled organizational efficiency and organizational effectiveness (12, pp. 60-61). Effectiveness was defined as an impersonal, non-social dimension related to the accomplishment of the organization's goals. Efficiency was defined as a dimension which was essentially personal in character and which related to the satisfactions the individual derived from participation in the organization. According to Barnard, the survival of the organization depended upon two classes of interrelated and interdependent processes characterized by the efficiency and effectiveness concepts: (1) processes related to the creation or distribution of satisfaction for the individual within the organization (efficiency) and (2) processes related to the total system of cooperation generated within the entire organization which permitted the organization to achieve its goals (effectiveness) (12, pp. 60-61). Barnard believed that the major task of the organization's leader, the executive, was to facilitate group action so the organization could function effectively and efficiently.

From the Social Systems point of view, organizations are viewed as complex social units in which many social

groups interact (39, p. 41). Human behavior in organizational settings is depicted as the product of many simultaneously existing, multilevel, mutually interacting variables (9, p. 501). Inherent in the application of Social Systems theory to organizations is an acknowledgement of the basic incompatibility between the needs of the individual and the goals of the organization. Emphasizing the interactions of individuals, Social Systems theory describes individuals in terms of "roles" and the demands made upon individuals occupying roles in terms of "role-expectations" (101, p. 198). Translated into the organizational setting, individuals are viewed as occupying organizational roles whose expected functions have been predetermined by the organization. Human behavior in organizational settings results from the integration of an individual's personality and organizational expectations. This integration was described by Bakke (10) as a "fusion process" in which the individual personalizes his role even as organizational expectations socialize his personality. The organization attempts to impress its pattern upon the individual to fulfill its needs, and the individual attempts to impress his pattern upon the organization to fulfill his needs (53, p. 47). Argyris identified the major source of conflict in organizations as emanating from a basic incongruence between individual needs and organizational demands (8, p. 229). In Argyris' view, the informal organization develops within

a formal organization to mediate the differences between individual needs and organizational demands.

In the early 1950s, Getzels and Guba (51) formulated a model of social behavior which extended Social Systems theory to school organizations. In this model, schools were conceptualized as social systems and the administration of schools was conceptualized as a social process. In describing the model they developed, Getzels and Guba stated:

> The term "social system" here is conceptual rather than descriptive; . . . for one purpose a given community may be considered a social system, with the school a particular organization within the more general social system; for another purpose the school itself, or even a single class within the school, may be considered a social system in its own right. . . . We conceive of the social system as involving two major classes of phenomena, which are at once conceptually independent and phenomenally interactive. There are, first, the institutions with certain roles and expectations that will fulfill the goals of the system. Second, inhabiting the system there are individuals with certain personalities and need-dispositions, whose interactions comprise what we generally call "social behavior." Social behavior may be apprehended as a function of the following major elements: institution, role and expectation, which together constitute the nomothetic, or normative dimension of activity in a social system; and individual, personality and need-disposition, which together constitute the idiographic or personal dimension of activity in a social system (51, p. 424).

The model developed by Getzels and Guba is depicted pictorially in Figure 1.

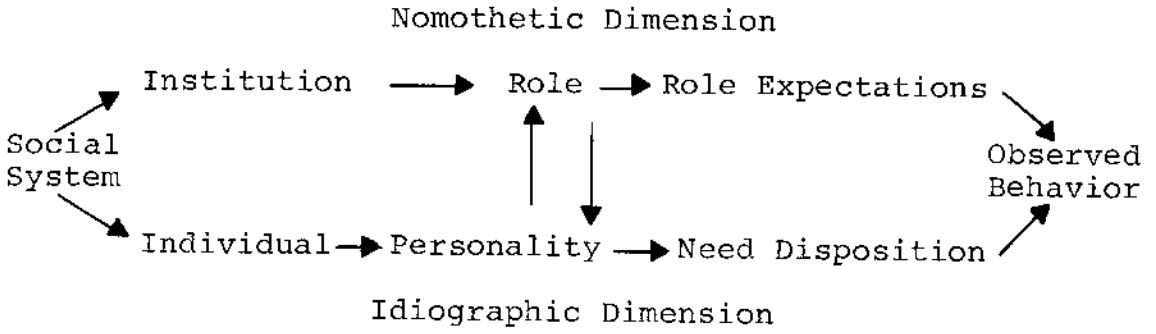

Fig. 1--General model showing the nomothetic and the idiographic dimensions of social behavior (51, p.429).

The elements of the model were defined in the following manner:

> Institution--an agency within the social system with certain routinezed patterns for carrying out the imperative functions which have been assigned to the social system.
>
> Role--the most important analytic subunit of the institution which represents status, position, or office within the institution and whose definition can only be derived in relation to other roles.
>
> Role expectations--the rights, privileges, and obligations to which any incumbent of a role must adhere.
>
> Individual--an inhabitant of the institution or social system.
>
> Personality--the dynamic organization within the individual or those need-dispositions that govern his unique reactions to the environment and to the expectation of the environment.
>
> Need-dispositions--the individual tendencies to orient and act with respect to objects in certain manners and to expect certain consequences from these actions (51, pp. 424-428).

Human behavior in the organization, as depicted in this model, is determined by both the nomothetic and idiographic

dimensions of social behavior. The individual's behavior results from the integration of personal needs and role expectations. Getzels and Guba expressed this integration process in the general equation: B + f(RxP), where B is the observed behavior, R is a given institutional role defined by the expectations attached to it, and P is the personality of the role incumbent defined by his need-dispositions (51, p. 429). Observed behavior is a function of the interaction between the personality of an individual and the role he occupies in the institution. The proportion of role and personality factors affecting behavior varies with each individual case. In educational organizations, Getzels and Guba hypothesized that the proportion of role and personality considerations might be equally balanced as depicted by line B in Figure 2.

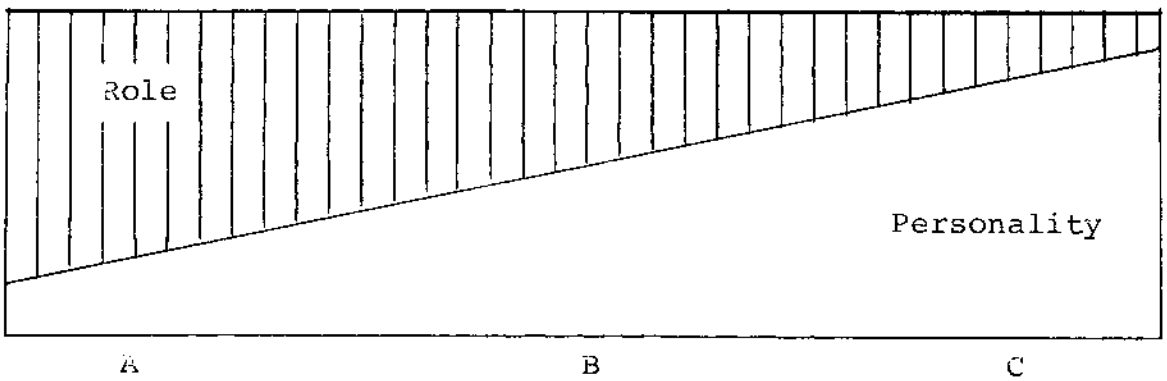

Fig. 2--The interaction of role and personality in a behavioral act [B + f (R x P)] (51, p. 430.

In formulating their model based on the general Social Systems theory developed by Parsons and others, Getzels and Guba sought to develop a comprehensive theory capable of generating both hypotheses for guiding research and principles for guiding practice (51, p. 423). Operationally, attention was focused upon the process of administration as a key element in the success of any organization. Administration was defined as a hierarchy of subordinate-superordinate roles and relationships through which the goals of the organization were achieved. The successful integration of organizational goals and the needs of persons in organizational roles was defined as the primary role-expectation for the organization's administrators. In discussing the role-expectations of the administrator, Guba stated:

> The unique task of the administrator can now be understood as that of mediating between these two sets of behavior-eliciting forces, that is, the nomothetic and the idiographic, so as to produce behavior which is at once organizationally useful as well as individually satisfying (58, p. 121).

The task of the administrator was viewed as that of aiding the individual in his adjustment to the conflict between the formal and informal elements of the organization in order that the organization might effectively accomplish its tasks. The administrator's success in integrating the organization and the individual was depicted as contributing directly to the development of an organizational state-of-being defined as "organizational climate" (9, p. 501).

The applicability of the Getzels and Guba model to research in educational organizations is documented in the numerous research studies conducted during the late 1950s and the 1960s in the areas of institutional expectations, institutional role and individual personality conflicts, and relationships among educational personnel (53). Reviewing the focus of inquiry in the study of educational administration during the period of 1954 to 1974, Immegart found that administrative behavior, role, position, and effectiveness; staff personnel; educational organization; and morale or climate were popular areas of investigation (71, p. 303-304). Results from these investigations were often contradictory giving additional support to the Social Systems view point that human behavior in organizational settings is the result of the interaction of many complex and often conflicting variables. These variables have been broadly dichotomized into two dimensions reflecting organizational needs and individuals needs. The general model developed by Getzels and Guba has been modified and refined by various researchers (1, 20, 52) to meet the needs of specific situations and to account for additional variables in the organizational setting.

For the purposes of this study, the research on the leadership role of the elementary school principal and the research on the organizational climate of elementary schools

as viewed from the Social Systems perspective have specific significance.

The Leadership Role of the Elementary School Principal

For well over a decade, professional literature on the role of the principal has focused attention on the fact that the principalship is an ambiguous position (15, 79) needing definition (96), and perhaps even abolishment (21, 55). The fact that the second oldest position in American public education could be in such question is easily comprehended when the principalship is viewed in the context of Social System theory.

Using the model developed by Getzels and Guba, the elementary school principalship may be viewed in the following manner. In terms of the nomothetic dimension, the elementary principal serves in two social systems in which his role expectations are ambiguous and contradictory. In the social system comprising the total school district, the elementary school principal occupies a subordinate position in relationship to the superintendent of schools and the board of education. In this framework of the total school district, the principal's role expectations are dictated by the policies of the district and the directives of the superintendent of schools. The primary role expectation for the principal focuses upon his ability to manage a subunit of the district, an elementary school, in a manner consistent

with school district goals. The responsibility of the principal is to maintain his subunit and to attend to its operation in a way that will contribute to the achievement of district objectives. In terms of the total school district system, elementary school principals are often viewed as having less status than secondary school principals (15, p. 5). In the second social system he serves, the elementary school, the principal occupies a superordinate position in relationship to the professional and nonprofessional staff with whom he works. At this level, even though he is operating within the framework of the larger social system of the school district, the principal has greater autonomy and his role expectations focus on his ability to lead the staff in the actual operation of the educational program. Succinctly, it may be said that the principal is forced to vacillate organizationally and operationally between being a leader and being a follower by the nature of his role (89, p. 43).

Attempts to define the role of the elementary school principal reflect the ambiguity of the position. Good defines the elementary school principal as

> an administrative and supervisory officer responsible for an elementary school; usually limited to a single school or attendance area; may or may not engage in teaching (56, p. 436).

Henclay, McCleary, and McGrath, in reviewing the definitions of the principalship compiled by the American Association

of School Administrators, state that the principal has been described as

> . . . an instructional leader; as a guidance person; as a pupil control agent or disciplinarian; as a group dynamics expert who can work with a variety of teacher cliques within a building; as an expert organizer of the school schedule; as a diplomat who can work smoothly with irate parents; as a chief of the building custodians who knows how to keep a building spic and span; as a business man who keeps his budgets, accounts, and supplies in order; as an office manager who prepares accurate records on time; as a mediator of various forces within the community; or as an effective worker with the PTA and other school groups. He is also seen at times as one who assists in policy making; as one who initiates innovations; and as one who is adept at playing many different roles in interaction with diverse school publics (66, p. 67).

Traditional definitions of the role of the principal have suggested that the principal is an important man who takes care of virtually everything in an orderly way (21, p. 29). Briner points out that the elementary principal is usually a man who is delegated all of the responsibility but has no power to fulfill the responsibility, thereby making the principalship a hollow role (21, p. 29). Barth suggests that the role of the principal has been to maintain order, maximize production, and minimize dissonance (14, p. 177). Despite the lack of clear definition of the principal's role, most people would agree with Murray and Wilhour that the principal's primary role is that of providing instructional leadership followed by his responsibility for building management and public relations (94, p. 136). Adding to the confusion over the role definition of the school principal are the findings

of Barraclough (13). In his review of the literature on the role of the elementary school principal, Barraclough found that the contemporary school principal performs an ever increasing number of complex, largely undefined roles in a rapidly changing world (13, p. 1). The occupant of the principalship is cast into a paradoxical situation. His role is largely undefined or, at best, ambiguously defined and yet everyone seems to have an opinion about what he should be doing. Additionally, new and undefined roles are constantly being added to the older, undefined role.

Other factors lending confusion to the attempts to define the principal's role are the historical evolution of the elementary school principalship, the impact of Scientific Management theory upon school administration, and the difficulty of delineating leadership skills. Authors of textbooks on the elementary school principalship (40, 66, 83, 115) depict the evolution of the principalship as a series of stages occurring during the last half of the nineteenth century. Hencley lists these stages as the Teacher-Principal stage, the Principal-Teacher stage, and the Principal stage. The Teacher-Principal position was essentially an expansion of the teaching role. The Teacher-Principal was a teacher who had added clerical duties such as attendance reporting, textbook dispensing, and school fund accounting. The Principal-Teacher role was essentially an administrative position to which teaching duties were

attached. The Principal-Teacher split his time between administrative duties and teaching duties. With the rapid growth of the public schools in the early twentieth century, the Principal-Teacher role was expanded to the Principal role. The Principal was expected to be a leader of the teachers while continuing to carry out the previously performed administrative tasks. Coincidental with the emergence of the full principalship role was the impact of Scientific Management theory upon the schools. This approach to management led the schools into what Callahan (25) called the "cult of efficiency." Emphasis was focused on the managerial or administrative duties of the newly emerging principal role. Contributing to the attention focused upon the principal as a manager was the difficulty of delineating leadership skills. The adoption of industrial management theory provided the schools with a ready made set of administrative skills. By contrast, the study of leadership was in its infant stage and was focusing attention on "leader traits" (40, pp. 309-310). The study of psychological, physical, emotional, and intellectual variables associated with leadership offered little in the way of concrete evidence for determining the role of the principal.

Reviewing the status of the elementary school principal's role, Pharis stated that, at best, the role is a mixed bag and, at worst, practically schizophrenic (102, p. 4). Much of the confusion surrounding the principalship role is the

result of differing perceptions by incumbents of other roles in the institution. From the social systems perspective, roles are complementary, flexible, and derive their meaning from other roles (53, pp. 61-63). The perception of a viewer of a role is strongly influenced by his own role. Superintendents, principals, and teachers view the principal's role differently because of their own personalities and roles. The difference in perception is increased when the principal is identified as both an administrator and as a part of the teaching staff (47, p. 95). Superintendents tend to view the principal's role from a management or administrative perspective, while teachers tend to view the principal's role from an instructional viewpoint. Foskett (47) found that teachers' and principals' views of the principal's role were more alike than were principals' and superintendents' views of the principal's role. Foskett suggests that this difference in perception may relate to the emergence of the principalship from the teaching role. Principals, in evaluating their role, indicate that they believe their role image centers around the concept of instructional leadership, but acknowledge that they actually spend little time working in this area (15, 120). Krajewski concluded from a study of how elementary principals and teachers perceived the principal's role in Texas schools that both principals and teachers believe the principal's role as an instructional and curriculum supervisor should receive top priority

(77, p. 13). Stoker (119), in another study of teachers' attitudes toward the principalship in Texas, found that teachers preferred to be left alone and did not perceive the principal as an educational leader. The incongruence between the role image and the actual role of the principal creates problems for the principal (120, p. 76). Examinations of the difference between what principals thought they should be doing and what they actually were doing have revealed the disparity between actual and ideal role images. Principals spend from one-fourth to one-third of their time doing what they think they should be doing and two-thirds to three-fourths of their time doing things other than what they think they should be doing (89, 96, 120). It has been suggested that there is a hidden script for the principal's role which causes the principal to allow his behavior to be socialized by his role in exchange for organizational rewards (131). Bridges (19) and Wiggins (130) found that tenure in the principalship caused the principal to become more like other principals; to depend less on his own personality; and to become socialized to school district expectations.

The lack of a commonly agreed upon definition for the principal's role has resulted in various stereotypes of the principalship. In The Right Principal for the Right School (2), a publication of the American Association of School Administrators, five stereotypes of the principal's role are discussed. These stereotypes are: The Mr. Chips image, the

Headmaster image, the Administrative Mechanic image, the Change Agent image, and the Leader image. Mr. Chips is depicted as the kindly, people-oriented principal; the Headmaster is the scholar and master teacher; the Administrative Mechanic is the scientific manager; the Change Agent is the educational innovator; and the Leader is the best combination of all the other images. Swift (120) described five stereotypes of principals in a study of role images of the principal. The five types of principals were: the Administrator, the Public Relations Man, the Disciplinarian, the Entertainer, and the Educator. Swift points out that these are abstractions and not ideal types (120, p. 70). The Administrator is concerned with the smooth operation of the school where teaching is but one of many components of the operation; the Public Relations Man is the buffer between parents and the central office; the Disciplinarian maintians order; and the Entertainer keeps kids happy. Of the five types, only the Educator concentrates on teaching and the educational process. The Educator resembles the traditional image of the principal. The danger of defining the principal's role in terms of stereotypes is in the creation of unrealistic expectations (120, p. 76). Conflict is inevitable when persons who interact daily have differing role images and expectations of a key role such as that of the elementary principal.

Evidence of the ambiguity of definition and the multifaceted nature of the elementary school principalship is

reflected in the terminology, man-in-the-middle, which is frequently used to describe the structural and functional roles of the principal (15, 54, 102). Structurally, the elementary school principal appears on the school district's organizational chart as subordinate to the superintendent of schools and as superordinate to the staff of an elementary school. Functionally, the principal's role has two dimensions; the achievement of organizational purposes and the satisfying of the individual needs of human beings (40, viii). The distinction between these two aspects of the principal's functional role have been identified as the difference between administration and leadership. The role of the principal demands that the principal be both an administrator and a leader. Although it is recognized that the principal must be both an administrator and a leader, there is considerable evidence that many principals abdicate the leadership role in favor of the administrative role (54, 55, 69, 120). Principals are constantly exhorted to return to their leadership role (49, 114). The administrator versus leader conflict has become a "good versus bad" dilemma for the principal (40, 54). Lipham (82) describes the difference between leaders and administrators as the difference between those who seek to change the organization and those who seek to maintain the status quo of the organization. To Lipham, leaders initiate changes in the goals, objectives, structures, procedures, inputs, processes or outputs of social systems

(82, p. 6). Principals are exhorted to attend to their instructional leadership responsibilities since this appears to be the most commonly agreed upon definition of the principal's role. Without the leadership aspect of their role, Annese states that principals, as only routine administrators in a formal organization, could be replaced by an organizationally experienced and respected clerk (7, p. 274). Occupation of the role of principal dictates that the principal engage in administrative behavior but does not insure that the principal will engage in leadership behavior. The principal does not achieve leadership status by virtue of his title or position, but gains it through his contributions to the achievement of school goals (115, p. 3). Leadership is a quality that emerges from the behavior of a person in a social system setting and a person cannot be considered a leader apart from the system (75, p. 107). Transcending the organizational structure and the legalities of a position, leadership is always expressed in groups or organizations and is a social function that cannot be carried out by oneself (7, p. 174; 129, p. 13).

The dilemma of the principal's role, whether to be an administrator or a leader, has not been resolved. Some authorities in educational administration (21, 69, 124) have advocated either a restructuring or abolishment of the principalship. Other authorities (38, 40) have suggested that a moratorium be placed on the administrator versus

leader issue and that leadership be viewed as a behavior which promotes both the achievement of organizational goals and the satisfaction of personal needs. Wayson defines leadership in the principalship as a process by which a member of the group (the principal) helps the group (the total school staff) meet its goals (129, p. 13). This definition is consistent with what has been called the "behavioral approach to educational leadership" and offers a way for understanding the principal's leadership role.

The study of leadership has evolved as a series of major themes which may be traced historically as the great man approach, the traitist approach, the situational approach, and the behavioral approach (82, pp. 2-5). The great man approach assumed that leaders were born and that much could be learned from studying biographies of great men. The traitist approach focused on the leader's phychological and physical characteristics as a means of explaining the leader's effectiveness. The situational approach to the study of leadership emphasized the nature of roles and relationships and the characteristics of groups. The leader's behavior was analyzed in terms of the group situation in which leadership behavior occurred. The behavioral approach to the study of leadership, the most recent approach, recognizes the importance of both the psychological (individual) and sociological (group) factors.

The behavioral approach to the study of leadership focuses upon observed behavior in a particular situation without the assumption that such behavior will be exactly the same in another similar situation. Leadership is defined in terms of perceived actual behavior and not as an abstraction. Emphasizing the focus on actual behavior, Hencley states:

> In essence, the behavioral approach to leadership has tended to focus upon the search for significant behavioral dimensions to be used in describing and delineating leader behavior (67, p. 143).

Using the concepts defined by earlier management theorists and investigators (17, 73, 81), researchers at Ohio State University in the early 1960s identified two categories of leader behavior which promoted the processes of organizational goal achievement and group maintenance. These concepts had been labeled "efficiency and effectiveness," "autocratic and democratic," and "employee-oriented and production-oriented" by their respective developers. Moving away from the historical view of these concepts as either/or situations, the Ohio State group depicted leadership as a combination of behaviors (17, p. 304). The dimensions of leader behavior identified by the Ohio State researchers are

1. Initiating structure in interaction. That is the leader's behavior in (a) outlining, clarifying, and delineating leader-follower relationships, and (b) establishing clear, organizational patterns, communication channels, and procedures for accomplishing organizational tasks.

2. Consideration. That is, the leader's behavior in indicating friendship, respect, trust, and warmth in relationships between himself and group members (67, p. 144).

These two dimensions have also been referred to as the task dimension--insuring that organizational goals are attained; and the human dimension--insuring that the social and psychological needs of organizational personnel are satisfied (55, p. 11). In reviewing the behavioral approach to the study of educational leadership, Hencley listed seventeen sets of investigators who have dichotomized leader behavior along dimensions similar to Consideration and Initiation of Structure (67, p. 146).

With the expressed intention of studying leader behavior and not leadership, Hemphill and Coons of Ohio State University developed the Leadership Behavior Description Questionnaire (LBDQ), in the early 1950s. The LBDQ was used extensively in research studies in both industrial and educational settings and the findings of these studies appear to establish the importance of both Consideration and Initiation of Structure as effective dimensions of leader behavior (97, p. 233). The contributions of Andrew Halpin (62) to the study of leader behavior using the LBDQ confirmed that Consideration and Initiation of Structure are interactive dimensions and should not be viewed in either-or terms.

Studies related to the leader behavior of elementary school principals have indicated that Initiation of Structure

and Consideration are valid dimensions of the principalship role. Cook (26) found in a study of leader behavior and organizational climate in elementary schools that principals in open climate schools exhibited both Consideration and Initiation of Structure to a higher degree than did principals in closed climate schools. In his research with elementary school principals, Feitler (43) concluded that the principal's regard for teachers, his Consideration, was a determining factor in setting the organizational environment of the school. There was a significant relationship between principal leader behavior and organizational process in Feitler's study. Punch and Ducharme (106), exploring the postulates of the Life Cycle Leadership theory, found no relationship between the maturity level of teachers and their preference for task-oriented leadership. These researchers did find that teachers with a higher maturity level preferred leader behavior which satisfied their social-emotional needs (106, p. 75). Rasmussen (107) found no significant relationship between the principal's leader behavior, as defined by Consideration and Initiation of Structure, and pupil achievement. Rasmussen suggested that if principals could get just as much work out of teachers by being considerate as by being critical then principals should adopt a considerate style since it does not harm pupil achievement and does contribute to teacher morale (107, p. 27). Anderson and Brown (5) concluded from their study of 170 administrators and their respective staffs that

the type of leader behavior a principal exhibits is in itself relatively unimportant. Findings from this study indicated that debate over the relative merits of whether a leader should be system-oriented or person-oriented is unwarranted since a school staff will accept either form of leadership as long as strength in one form is not cancelled out by a disproportionately poor showing on the other form of leadership (5, p. 198). Anderson and Brown concluded from their study that a good principal was one who exercises leadership and is an active leader of his staff (5, p. 198). Exploring the conceptual ability of principals, Silver (115) found that elementary school principals with more abstract conceptual ability were more person-oriented in their leadership. The findings of this study also indicated that principals with more complex conceptual structures interacted more frequently with their staffs and performed more varied functions in the school (116, p. 62).

Related studies examining the leadership role of elementary school principals (24, 34, 57, 92, 95) have used varying conceptualizations of leader behavior. The results of these studies have often been contradictory. Getzels and Guba defined three styles of leadership based on their model of social behavior. The nomothetic style of leadership concentrates on organizational needs; the idiographic style of leadership concentrates on personal needs; and the transactional style of leadership combines both nomothetic

and idiographic behaviors. In a study of superintendents and principals, Moser (92) concluded that principals are caught in the middle between varying perceptions of their leadership behavior. Superintendents favored the nomothetic style for principals' leadership while teachers favored the idiographic style. The principal was forced to use one style with his superiors and another style with his subordinates. In a study of leadership styles and leaders' perceptions of subordinates, Willower (133) found that younger principals, whether defined as having idiographic or nomothetic leadership styles, regarded teachers as being less professional than did older principals. Nakornsri (95), in a study of teachers' perceptions of their principal's role and administrative performance, found principals tended to exhibit the transactional style of leadership behavior. Gross and Herriott, in a study of Executive Professional Leadership, gathered empirical evidence for supporting the position that principals must be in leadership roles in order to improve instructional quality and teacher morale. According to the conclusions of this study, the principalship must not be abandoned. Using the concept of Executive Professional Leadership, DeHart (34) concluded that the principal who is effective in motivating his staff creates both a climate of high morale and a school climate conducive to the development of a quality school program.

After citing the numerous problems of the elementary school principalship identified in a national survey of the role, Becker concluded that the elementary principal is understandably confused about his responsibilities and the extent of his influence as an educational leader (15, p. 23). According to Becker, the principal's feelings of confusion about his role were intensified by his belief that without a viable rationale for the principalship there is no method for determining role expectations and no criteria for judging performance (15, p. 12). In an earlier statement on the findings of the same study, Goldhammer stated that data from the study strongly indicated that the principal was the key to quality in his school and that the elementary principalship demanded an individual who could provide leadership and imagination (54, p. 11).

Rubin (112), in an examination of the relationship between teachers and principals, summarized the leadership role of the principal in a framework consistent with Social Systems theory.

> . . . The principal must be skillful at achieving balance between the individual and the group; he must be proficient at persuading teachers to couple self-direction with self-appraisal; and he must be able to prevent discord by orchestrating autonomy so that collective individual efforts blend together in a harmonious production. . . . Whatever his style and whatever his method, the principal must work unceasingly to create the incentive and desire to improve performance. . . . He must direct his energies toward a constant appraisal of the achievement of the organization, and he must insist upon continuous renewal. Thus

> his leadership must be offensive rather than defensive, aggressive rather than passive, and it must nurture a lasting obsession for finding a better way (112, pp. 65-66).

Rubin's interpretation of the leadership role of the principal implies that it is the responsibility of the principal to assist teachers in working to achieve congruence between the demands of the organization (tasks) and their personal needs (needs). This congruence of tasks and needs results in a state of organizational being which has been labeled as "organizational climate" (9, 27, 61, 84). Since the early 1960s the leadership behavior of the elementary school principal has been viewed as a major determinant of the climate of the elementary school he serves (61).

The Organizational Climate of Elementary Schools

Organizational climate is a theoretical construct used to describe the total affective dimensions of a human group or organization including feelings and attitudes toward the system itself, persons, tasks, and procedures in the system (97, p. 170). Organizational climate is conceptualized as a state of organizational being mirroring the organization's progress in the ongoing attempt to achieve congruence between individual needs and organizational needs. As a theoretical construct, organizational climate has an elusive and intangible nature which is frequently described as being analogous to the personality of an individual (61, p. 31).

As a state of organizational being, organizational climate exists as the organization exists and cannot be described as being absent or present; but climate may be described as being good or bad, open or closed, supportive or nonsupportive, authoritarian or democratic, or even ambivalent (35, p. 368). Attesting to the existence of organizational climate in schools and to its sensory characteristics, Halpin stated:

> As any teacher or school executive moves from one school to another he is inexorably struck by the difference he encounters in Organizational Climates. He voices his reaction with such remarks as, "You don't have to be in a school very long before you feel the atmosphere of a place" (61, p. 1).

In attempting to identify this state of organizational being, other investigators (11, 73, 90) have referred to this phenomenon as organizational "character," "culture," and "health." In 1955 in an article on socially perceptive administration, Cornell defined organizational climate as

> . . . a delicate blending of interpretations (or perceptions as social psychologists would call it) by persons in the organization of their jobs or roles in relationship to others and their interpretations of the roles of others in the organization (27, p. 222).

Cornell's definition of organizational climate points out a common element in all interpretations of organizational climate. Climate results from the interactions of various role occupants in an organization each of whom has selective perceptions of his own role and the roles of others in the organization. Organizational climate, as a subjective

interpretation of the state of the organization, is inherently related to the perceived behaviors of organizational members.

The first major application of the construct of organizational climate to school organizations was made by Halpin and Croft (62) in a study funded by the United States Office of Education. Using the research on morale and leader behavior as guides, Halpin and Croft decided to map the domain of organizational climate in elementary schools by identifying, describing and measuring its dimensions (61, p. 1). The two basic assumptions upon which this research was based were

> First, that how the leader really behaves is less important than how the members of his group perceive him to behave. Perceptions of leader behavior will determine the behavior of group members and hence provide a measure of organizational climate. Second, that an essential determinant of the school's "effectiveness" as an organization is the principal's ability (or lack of ability) to create a "climate" in which he and other group members can initiate and consummate acts of leadership (123, p. 446).

Using the postulates of human behavior in organizational settings from Social Systems theory, Halpin and Croft predicated their study of organizational climate in elementary schools upon the assumption that the principal played a significant role in the establishment of the climate of the school.

To carry out their study of school climate, Halpin and Croft developed an instrument to identify and describe the organizational climate of elementary schools. From a bank of

1,000 items describing teacher and principal behaviors, three preliminary versions of a climate instrument were developed, pretested, and factor analyzed. The resulting sixty-four item instrument, the Organizational Climate Description Questionnaire (OCDQ), is composed of eight subtests. Four of the eight subtests describe teacher behavior and four of the eight subtests describe principal behavior. Halpin and Croft describe the behavior tapped by each subtest in the following manner:

Teachers' Behavior

1. Disengagement indicates that the teachers do not work well together. They pull in different directions with respect to the task; they gripe and bicker among themselves.

2. Hindrance refers to the teachers' feeling that the principal burdens them with routine duties, committee demands, and other requirements which the teachers construe as unnecessary busy-work.

3. Esprit refers to "morale." The teachers feel that their social needs are being satisfied, and that they are, at the same time, enjoying a sense of accomplishment in their job.

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 which is characterized as formal and impersonal. He "goes by the book" and prefers to be guided by rules and policies rather than to deal with the teachers in an informal, face-to-face situation.

6. Production Emphasis refers to behavior by the principal which is characterized by close supervision of the staff. He is highly directive and task-oriented.

7. Thrust refers to behavior marked not by close supervision of the teachers, but by the principal's attempt to motivate the teachers through the example which he personally sets. He does not ask the teachers to give of themselves anything more than he willingly gives of himself; his behavior, though starkly task-oriented, is nonetheless viewed favorably by the teachers.

8. Consideration refers to behavior by the principal which is characterized by an inclination to treat the teachers "humanly," to try to do a little something extra for them in human terms (61, p. 2).

The final version of the OCDQ was used by the research team in a study of seventy-one elementary schools in various parts of the United States. Using the data from this national sample, Halpin and Croft identified six types of school climate by doing profile analyses of the subtest scores. The six climates were identified as (1) the open climate, (2) the autonomous climate, (3) the controlled climate, (4) the familiar climate, (5) the paternal climate, and (6) the closed climate. This typology of six climates was construed by Halpin and Croft to be more or less a continuum with the "open" climate at one end and the "closed" climate at the other end (63, p. 6). As the polar ends of the continuum, the "open" climate and the "closed" climate represented to Halpin and Croft respectively "healthy" and "unhealthy" states of organizational being. The open climate represented a situation in which the work of the organization was being done effectively, the leader was providing leadership, and the members of the staff had high Esprit. By

contrast, the closed climate represented a situation in which group members were receiving little satisfaction from either the task or social aspects of their affliation with the organization and the leader was ineffective (62, pp. 174-180).

Doll (36), using Halpin and Croft's descriptions of the six climate types, describes six types of schools. The school descriptions contain key expressions from the climate descriptions and include the following:

> The Open School: Emphasis: high degree of satisfaction in human relationships and production. Principal effective in looking out for teachers' welfare and in directing their activities. High in Esprit, Thrust, and Consideration. Average in Intimacy. Low in Disengagement, Hindrance, Aloofness and Production Emphasis.
>
> The Autonomous School: Emphasis: autonomy in decision-making. Freedom given by the principal to teachers so that they may make their own "structures for interaction." High in Aloofness, Esprit, and Intimacy. Average in Consideration and Thrust. Low in Hindrance, Disengagement, and Production Emphasis.
>
> The Controlled School: Emphasis: controlled production. A school that presses for achievement at the expense of satisfaction of social needs. High in Esprit, Hindrance, Production Emphasis, and Aloofness. Average in Thrust. Low in Intimacy and Consideration.
>
> The Familiar School: Emphasis: the happy family environment. Marked by the obviously friendly manner of the principal and the teachers, as opposed to a drive toward goal achievement. High in Disengagement, Intimacy, and Consideration. Average in Esprit and Thrust. Low in Hindrance and Aloofness.
>
> The Paternal School: Emphasis: the principal in the role of nongenuine "papa." Marked by the principal's ineffective attempts to control the teachers while satisfying their social needs. High in Disengagement, and Production Emphasis. Average in Consideration and Thrust. Low in Hindrance, Intimacy, Esprit and Aloofness.

> The Closed School: Emphasis: low degree of satisfaction in both human relationships and production. Principal ineffective in looking out for teachers' welfare and in directing their activities. High in Disengagement, Hindrance, Aloofness, and Production Emphasis. Average in Intimacy. Low in Esprit, Thrust, and Consideration (36, p. 286).

From the results of their work with the OCDQ, Halpin and Croft concluded that the single characteristic of organizational behavior which most influenced the organizational climate of the school was "authenticity." For the principal of the school, authenticity was conceived by Halpin and Croft to be a measure of the principal's effectiveness in combining the Consideration and Structure dimensions of leader behavior. For the group of teachers in the school, authenticity was conceived by Halpin and Croft to be a measure of group morale indicating how the task and social needs of the group were being met. For the OCDQ, authenticity of the principal is measured by the Thrust subtest and the authenticity of the teachers is measured by the Esprit subtest.

Attesting to the interest researchers have shown in Halpin and Croft's conceptualization of organizational climate in schools is the fact that by 1972 over 200 empirical studies had been reported using the OCDQ (29, 83, 123). The popularity of the OCDQ has been attributed to two of its characteristics: (1) the clarity with which Halpin and Croft described school climate, and (2) the simplicity with which the OCDQ can be used in the practical school situation (99, p. 174).

Although the OCDQ has proven to be the most popular instrument for measuring organizational climate in schools, it is not the only instrument developed for this purpose. In a study of the techniques used by organizational development consultants for assessing school climate, Steinhoff and Owens found that two other instruments sometimes used to measure climate were Likert and Likert's Profile of a School and Stern and Steinhoff's Organizational Climate Index (118, p. 13). The Profile of a School instrument is an adaptation of an earlier instrument for industrial organizations and it classifies schools as one of four systems types. Hall (60), in a study comparing the OCDQ and the Profile of a School, found a significant positive relationship between the two conceptualizations of organizations as measured by the two instruments. The Organizational Climate Index is an adaptation of the College Characteristics Index and draws its theoretical rationale from Murray's needs-press construct (118, p. 13). The Organizational Climate Index has 300 items and was used in a study of New York schools as a means of establishing normative data (99, p. 187). A third and newer instrument developed for assessing school climate is the CFK Ltd. School Climate Profile which has eight general climate factors, seven program determinates, eight process determinates, and three material determinates (48). The advantages the OCDQ appear to have over these other instruments are (1) the shorter length of the instrument and (2) a considerable body

of published data concerning the factor structure, reliability and validity of the instrument.

In the majority of the studies using the OCDQ, the results of the climate assessment have been correlated with personal, situational, or organizational variables associated with human behavior in school settings. Theoretically, organizational climate is conceptualized as a means of describing the total affective dimension of a human group involving many simultaneously existing, multi-level, mutually interacting variables. Thus, research in the area of school organizational climate has focused upon defining variables in school organizations which influence or affect climate. Variables which have been investigated in relationship to school organizational climate include racial and socioeconomic factors, school size, school organization, the innovativeness of the school, the effect of certain school district policies, student achievement, the dogmatism of teachers and principals, personal characteristics of teachers and principals, and the leadership of the school principal. Many of the research findings are contradictory and suggest that more research must be done before conclusive assertions about school climate may be made.

Research studies in which the relationship between racial or socioeconomic factors and school climate has been investigated lend support to the thought that these factors do affect the determination of school climate. Generally it has been

found that low socioeconomic schools are perceived to have more closed than open climates (41, 109, 122) and that the race of the teachers may be a discriminating factor in teachers' perceptions of the school's climate (50, 104, 125). Large urban schools are perceived as being more closed than open (45, 74). In studies using the OCDQ to determine school climate, Gentry and Kenney (50) have argued that the instrument discriminates against the black population since this racial group perceives school climate differently. Gentry and Kenney have suggested that the instrument be refactored for use with black schools. Pinkney and Esposito (104) found in a study of thirty desegregated elementary schools in Florida that significant differences existed in the perception of organizational climate as perceived by black and white teachers. Black teachers tend to perceive both black and white principals as the "boss" and the school climate as being closed. Walden, Taylor and Watkins (126), in a follow-up study of school climate, found that following the desegregation of the schools in the original study the schools had moved toward more closed climates. Jones (72) found that black schools were most often perceived as having closed climates.

School size, innovativeness, and organizational pattern have been investigated as variables which might have an effect on school climate. Findings from a number of studies indicated that small schools tend to be perceived as more

open in climate than are larger schools (26, 28, 31, 44, 86). Flanders (45) found that small urban schools were perceived as having an open climate with greater frequency than did large urban schools. Flagg (44) concluded from his study that as school size increases the climate tends to become more closed. Bennett (16) found that the autonomous climate was related to the innovativeness of a school. Mancuso (87) found no relationship between the climates of graded and non-graded schools and Seidman (122) could find no empirical support for the hypothesis that open climates would occur more frequently in open-space schools than would closed climates. Additionally, Seidman could find no relationship between organizational climate and the operational life span of the open-space schools (112, p. 347). In his review of selected research on the OCDQ, Cunningham (31) determined that schools with open climates were significantly smaller than closed climate schools; that secondary schools were found to have a closed organizational climate more frequently than elementary schools; that highly innovative schools tended to exhibit an open climate more frequently than non-innovative schools; and that a relationship exists between school size and organizational climate. Hoy and Appleberry (70) reported that the findings from their study of "humanistic" and "custodial" schools indicated that humanistic schools had more open climates than did custodial schools.

Research into the possible relationship between pupil achievement and the organizational climate of the school has produced contradictory findings. Cunningham (70) concluded from his review of research on the OCDQ that school climate was directly related to pupil achievement. In Cunningham's opinion, an open organizational climate was more conducive to higher pupil achievement and that significant relationships existed between open climate schools and pupil achievement in reading, language skills, and math skills. Miller (91) found a significant relationship between the openness of the school climate and designated areas of pupil achievement. Other researchers (44, 100, 105) have failed to find significant relationships between the climate types and pupil achievement.

The investigation of personal characteristics of teachers and principals which might have a relationship to the school's organizational climate has been of high interest to climate researchers. Anderson (4) and Null (98) studied the relationships between the organizational climate of schools and personal variables of the teachers and principals. The two researchers found certain personality types tended to view one or more of the dimensions of organizational climate in a manner indicative of an open climate or of a closed climate. Null reported the following comparisons of teacher personality factors associated with open and closed climate types:

Open Climate		Closed Climate
"Good" attitude children	vs	"Poor" attitude toward children
Bright	vs	Dull
Submissive	vs	Dominant
Enthusiastic	vs	Glum, Silent
Adventurous	vs	Timid
Sensitive	vs	Tough
Trustful	vs	Suspecting
Conventional	vs	Eccentric
Simple	vs	Sophisticated
Conservative	vs	Experimenting
Tense	vs	Stable (98, p. 14).

Using the same sample of subjects as Null, Anderson examined principal personality factors associated with open and closed climate types. The findings from this study indicated

1. Principals in the closed climate schools were more evasive, more changeable and worrying, and more lacking in frustration tolerance than the principals in either of the other two groups.

2. Principals in the closed climate schools were more submissive, more dependent, more conventional and mild, more easily upset than principals in the open and middle climate schools.

3. Principals in the open climate schools were more confident, self-secure, self-confident, and cheerful than either of the other two groups of principals.

4. Principals in the open climate schools were more resourceful and self-sufficient than their more sociably group dependent counterparts in the middle climate schools.

5. Principals in the open climate schools were more controlled and exacting, more successful in productive organizational activities than were the principals in the closed climate schools (4, p. 166).

Murphy (93), in a study of principals' and teachers' personality factors, concluded that the importance of personality factors as a predictor of climate varied within

the climate setting. In a study of personality attributes of teachers in organizational climates, Anderson (3) found that personality attributes of teachers as measured by the Edwards Personal Preference Schedule were not significantly different for teachers in open climates and teachers in closed climates. Tirpak (125) in a study of the relationship between organizational climate and the personal characteristics of principals found no supporting evidence for using age or years of education as a determinant of school climate. Tirpak did find evidence that there is a significant difference between the principal's perception of the school climate and the perceptions of the climate held by the school faculty. This difference in perception of the school's climate has been confirmed by other researchers (32, 130). Other researchers confirm Tirpak's findings that years of experience as a teacher or administrator, age, and sex have not proven to be significant variables associated with school climate (22, 41, 72, 103). Briner (20) concluded from his investigation of the relationship between the properties of organizational structure and certain personality traits of teachers that teachers' perceptions of the climate were a function of individual personality and the organization's structural properties. Roy (111) noted that the most obvious characteristic of teachers in open climate schools was their high morale. The investigation of the relationship between

dogmatism and school climate has not indicated that the two are related (41, 76, 80).

Studying the relationship between the leadership behavior and characteristics of the school principal and the school's climate has produced interesting findings. Halpin and Croft based their conceptualization of school climate upon the assumption that the principal played a significant role in the determination of the school's climate. Wiggins (130) found that principals' behavior and organizational climate were not significantly related. Wiggins did find that tenure in the principalship of a school increased the significance of the relationship between leader behavior and climate indicating that the climate had a socializing effect on the principal. Using the Profile of a School climate instrument, Feitler (43) investigated the relationship between principal leader behavior and contrasting organizational environments. The results of Feitler's study indicated that differences in leader behavior could be identified for schools with participative processes and schools with authoritative processes. Lutz (85) examined the effect of the principal's rule administration on staff militancy and found that the representative-centered rule was associated with high principal leadership but had no relationship to militancy. Lutz found that representative-centered rule was generally associated with warm, friendly school climates and that when punishment behavior occurred in these friendly climates a

certain amount of hostility was momentarily generated (85, p. 3).

A number of the research studies involving the use of the OCDQ have focused on determining reliability and validity for the instrument itself, the dimensions of climate as defined by Halpin and Croft, and the usefulness of the school climate types. Using the analogy that organizational climate is to the organization what personality is to the individual, Halpin and Croft devised the OCDQ by identifying through content, cluster, and factor analyses the sixty-four items describing teacher and principal behavior in the school setting. The sixty-four items were assigned to eight subtests which had been delineated by factor analysis. The instrument was then tested with a sample of elementary schools and from these data the typology of six climates was invented (63, p. 6). The OCDQ was introduced in 1962 as part of Halpin and Croft's final report to the United States Office of Education. Brown (23), in 1965, attempted to replicate the work of Halpin and Croft in the identification and classification of organizational climates. Brown found with his sample of eighty-one schools, that the OCDQ was a well constructed instrument with fairly high reliability coefficients (23, pp. 9-11). In factor-analyzing the intercorrelations of the subtest scores, Brown used a four-factor solution and derived eight organizational climates instead of the six derived by Halpin and Croft. Brown suggested that the climate types be viewed as a

continuum, as suggested by Halpin and Croft, and that the determination of discrete climate types could be better judged after more replications (23, p. 10).

Like Brown, other researchers have raised questions about the subtest structure and the number of organizational climates. Gentry and Kenney (50) found little difference in the subtest structures but found that the OCDQ did, in their opinion, discriminate between black and white schools. Mehra (88) and Dachanuluknukul (33) provided support for the internal structure of the OCDQ in their studies of Indian and Thailand schools. Kenney and Rentz (74), in a study of the responses to the OCDQ items given by teachers in 378 urban schools, identified only four factors related to climate. Kenney and Rentz concluded that the urban school is unique and its problems cannot be adequately measured by traditional instruments (74, p. 68). In a comprehensive reevaluation of the ODCQ, Hayes (64), in 1970, identified nine dimensions of organizational climate and suggested that certain items on the OCDQ be revised. Hayes was not able to identify the Aloofness climate dimension in his sample of responses from over 1,000 schools.

Andrews (6) utilized the OCDQ in studying 165 Alberta schools to determine the validity of the instrument. Andrews determined that the OCDQ had construct validity for both secondary and elementary schools but indicated that the vagueness of the six climate types detracted from the

instrument's usefulness. Andrews concluded that the subtests of the OCDQ provided valid measures of the important aspects of the principal's leadership in the perspective of interaction with his staff (6, p. 333). Stansbury (117) used a sample of 139 Iowa elementary schools in a study designed to cross-validate the OCDQ. From the findings of the study, Stansbury concluded that the OCDQ was a viable instrument which could be used in a variety of empirical studies, but recommended that the data analysis in studies be done using the subtest scores. In a study of the validity of selected subtests of the OCDQ, Roseveare (110) found that the Thrust and Esprit subtests were valid measures of the climate dimensions they were designed to measure.

Generally, the results of the early studies investigating the construction and usefulness of the OCDQ have served to justify the original dimensions of climate while some of the later studies indicate that the instrument may need some revision (64, p. 6). To date, the OCDQ as constructed by Halpin and Croft and the construct of organizational climate as defined by Halpin and Croft remain unchanged. Summarizing his conclusions concerning the OCDQ and the study of organizational climate after a comprehensive review of the literature, Thomas stated:

> The instrument is still in use and significantly, continues to provide the basis for much discussion and debate in the study of educational administration. No other instrument has had such an impact on the long-overdue analysis and study of the "atmosphere,"

"tone," "feel," or "climate" of organizations in general and schools in particular. . . . Organizational climate is a universal phenomenon. Despite its American origin the OCDQ (and, conceivably other similar instruments developed elsewhere) with appropriate modifications, does appear to offer the basis for the cross cultural study of school climate. It does seem relevant to conclude this paper with three comments: (i) It seems important that the factorial structure be examined before applying the instrument in other cultures. (ii) Care must be taken in ascribing "good" and "bad" values to the resultant sub-tests . . . (iii) Research should continue. The concept of organizational climate is too important to abandon (121, pp. 456-457.

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CHAPTER III

PROCEDURES FOR THE COLLECTION AND ANALYSIS OF DATA

The problem of this study was to describe changes in teachers' and principals' perceptions of organizational climate, changes in teachers' and principals' perceptions of the leadership behavior of the principal, and the relationship between organizational climate and the leadership behavior of the principal during the first year of operation in new elementary schools. The organizational climate of the elementary schools was measured by the eight subtests of the Organizational Climate Description Questionnaire. The leadership behavior of the elementary school principals was measured by the two dimensions of the Supervisory Behavior Description questionnaire.

This chapter includes the explanation of the procedures used in collecting and analyzing the data and is divided into six sections. The six sections are (1) the population, (2) identification of the subjects, (3) the research design, (4) the instruments, (5) procedures for collection of data, and (6) procedures for analysis of data.

The Population

The population for this study was defined as elementary school principals and classroom teachers in elementary schools:

1. Beginning the school year 1978-1979 with a newly formed staff in a new school plant.
2. Located in a school district with an average daily attendance of 1,000 or more students in the Dallas-Fort Worth or Houston metroplex areas.
3. Operating as a separate entity apart from other elementary schools in the district from the beginning of the 1978-1979 school year.
4. Willing to participate in the study for the entire 1978-1979 school year.

Identification of the Subjects

To identify the subjects for this study, all school districts in the Dallas-Fort Worth metroplex area and the Houston metroplex area which were listed in the 1977 Texas School Directory with an average daily attendance (ADA) of 1,000 or more students were contacted by telephone. This telephone survey was conducted to determine if the school district (1) anticipated opening a new elementary school at the beginning of the 1978-1979 school year; (2) would consider participating in the study; (3) had policies and procedures related to participation in research studies; and

(4) would supply the name of a contact person for future inquiries. To insure the accuracy of the obtained information, either the superintendent or an assistant superintendent of the district was contacted for this survey. As a means of cross-checking the identification of school districts projecting the opening of a new elementary school, the administrative services staffs in the regional Education Service Centers supplied lists of school districts opening new schools in their respective regions. From the telephone survey, sixteen school districts were identified as districts anticipating the opening of a new elementary school during the 1978-1979 school year. Three districts declined to participate in the study.

Thirteen school districts were identified as school districts anticipating the opening of a new elementary school in the 1978-1979 school year and willing to consider participation in the study. The contact person identified for each district was contacted by telephone and then sent a letter explaining the purposes of the study and a sample of the two instruments to be used in the study. One week after the sample instruments were mailed to the contact person, the district was contacted by telephone to determine if district approval would be given for participation in the study. At this point, four districts indicated they would not be able to participate in the study since the new elementary schools would not be opening at the beginning of the school year.

Nine school districts gave district approval for the study and supplied names, addresses, and telephone numbers for the school and principal. Each school district indicated that the principal would give final approval for participation in the study. Two districts required that additional research forms be submitted to the district. Three of the districts indicated that they would be opening more than one new school in the district during the year and district approval was given for the school nearest completion to participate in the study.

The nine elementary school principals identified by their respective districts as principals of new elementary schools were contacted by telephone and then sent a letter explaining the purposes of the study and a sample of the two instruments to be used in the study. Two weeks after the instruments were sent to the principals, the principals were contacted by telephone to determine if the school would participate in the study. Three principals refused to participate in the study and cited the extra duties involved in opening a new school as the reason for not considering participation. Six principals indicated that they had discussed the study with their staffs and agreed to participate in the study. At this time, a date was set for a meeting with the principal which was to be followed by the first administration of the instruments. On the date set, the principal in each school established the procedures

for distributing and collecting the packets of instruments in that school. The packets were then distributed to the staff members. The respondents were asked to return the packets within forty-eight hours. The principals agreed to hold the completed packets for one week to permit any teachers or staff members who were absent time to complete the instruments. Two weeks after the instruments were distributed to the schools, one principal decided that the school could not participate in the study. The final sample of subjects representing five new elementary schools in the Dallas-Fort Worth and Houston metroplex areas included five elementary school principals and 146 elementary school teachers.

The Research Design

A repeated measurements design based upon a mixed effects model was used in this study to examine changes in teachers' and principals' perceptions of organizational climate and principal leadership behavior during the first year of operation in new elementary schools. Organizational climate and principal leadership behavior were identified as the two dependent variables and were measured by repeated administrations of the Organizational Climate Description Questionnaire and the Supervisory Behavior Description questionnaire respectively. The criterion measurements were taken at three points in the school year to determine changes in the dependent variables in relation to the time of the school year (the independent variable). The independent variable

was classified as a fixed effect factor in the study and the subjects were classified as a random effect factor (6, pp. 331-332). It was assumed that since perceptions and not learning were being measured by the instruments, there would not be carry-over from one measurement to subsequent measurements. The study was classified as a descriptive, ex post facto research study since the purpose of the study was to investigate the existence of differences in the situation where the independent variable was selected rather than manipulated (5, p. 18).

The Instruments

Organizational climate and principal leadership behavior were identified as the two dependent variables being measured in this study. Criterion measurements of organizational climate and principal leadership behavior were obtained by three repeated administrations of the Organizational Climate Description Questionnaire (Appendix A) and the Supervisory Behavior Description questionnaire (Appendix B) respectively.

The Organizational Climate Description Questionnaire (OCDQ) was developed by Andrew Halpin and Donald Croft during a study of organizational climate in schools funded by the United States Office of Education. In constructing the instrument, Halpin and Croft were motivated by five factors: (1) an interest in the general topic of organizational climate; (2) knowledge that schools differed markedly in

their feel or personality; (3) dissatisfaction with morale as a measure of school climate; (4) previous experience with the Leader Behavior Description Questionnaire and the Ohio State University leadership studies group; and (5) a desire to map the domain of organizational climate in schools by identifying, describing, and measuring its dimensions (2, pp. 131-132). A discussion of the development and construction of the OCDQ is on pages 65-68 of chapter II, The Review of Literature.

Since its introduction in 1962, the format and items of the OCDQ have remained intact. The instrument is composed of sixty-four Likert-type items which are answered on a four-point, forced-choice scale: Rarely occurs (1), Sometimes occurs (2), Often occurs (3), Very frequently occurs (4).

Each item on the OCDQ is a brief statement describing either a principal or teacher behavior. The respondents indicate the frequency they perceive the behavior occurs in the school. Each of the sixty-four items is assigned to one of eight subtests which represent the eight dimensions of climate identified by Halpin and Croft. The four subtests designated as Disengagement, Hindrance, Esprit, and Intimacy describe characteristics of the faculty as a group. The four subtests designated as Aloofness, Production Emphasis, Thrust, and Consideration describe characteristics of the principal as a leader. A description of the subtests

of the OCDQ is on pages 66-67 of chapter II, The Review of Literature.

Halpin and Croft identified six climate types and then placed the climate types on an open-closed climate continuum. The six climate types as depicted on the open-closed climate continuum are (1) the Open climate, (2) the Autonomous climate, (3) the Controlled climate, (4) the Familiar climate, (5) the Paternal climate, and (6) the Closed climate. A description of the six climate types is in Appendix E. A description of the six school types associated with the six climate types is on pages 68-69 of chapter II, The Review of Literature.

The OCDQ is administered to the principal and teachers in a school where climate is to be assessed. A score is calculated for each respondent for each of the eight subtests. Additionally, a school score is calculated for each of the subtests and the pattern formed by the school scores is used to determine the type of climate the school has. The scores for the eight subtests are standardized to a mean of fifty and a standard deviation of ten. The individual scores describe how each respondent perceives the eight dimensions of climate in the school. A subtest score above fifty indicates an above average occurrence of the climate dimension while a score below fifty indicates less than average occurrence. The meaning attached to the magnitude of the scores varies with

the subtest. A low score on the Esprit or Thrust subtests is viewed as undesirable while a low score on the Hindrance or Aloofness subtests is viewed as desirable (7, p. 32). The school score for each subtest represents the mean score for the group on that subtest. An "openness" score is calculated for each respondent and for the school by summing the scores on the Esprit and Thrust subtests and then subtracting from this total the score on the Disengagement subtest. Openness is determined by high scores on the Esprit and Thrust subtests and a low score on the Disengagement subtest. Closedness is determined by low scores on the Esprit and Thrust subtests and a high score on the Disengagement subtest. For each respondent and for the school, a climate similarity index score is calculated which shows the difference between the profile of scores for the individual or school and the six prototypic profiles identified by Halpin and Croft. The climate similarity index score indicates numerically the extent to which the calculated school or individual climate profile is congruent with each of the six prototypic climate profiles. The climate type for the school or individual is determined by finding which of the prototypic profiles most closely matches numerically the profile calculated for the school or individual.

Many attempts have been made to verify the validity and reliability of the construct of organizational climate and the OCDQ as a method for assessing climate as defined

by Halpin and Croft. Since 1962, the OCDQ has been used in over 200 research studies in educational settings. A number of the major research studies involving use of the construct of organizational climate as measured by the OCDQ are discussed in the organizational climate section of chapter II, The Review of Literature, pages 69-81. Many of these studies have attempted to validate the OCDQ, to determine its reliability, to factor analyze it, to discredit it, and to manipulate the items that compose the instrument. (3, pp 2-3). Results of the studies investigating the OCDQ have tended to support the dimensions of climate as defined and the OCDQ as a viable means of assessing these dimensions. Research studies related to the investigations of the OCDQ are summarized in Chapter II, Review of Literature, on pages 78-81. In determining the reliability of the OCDQ in their construction of the instrument, Halpin and Croft computed correlations between subtest scores for even- and odd-numbered respondents, a split-half coefficient of reliability, and communality estimates for the three factor rotation solution. These data are summarized in Table I.

The Supervisory Behavior Description (SBD) questionnaire, the instrument used to measure principal leadership behavior, was designed by Edwin Fleishman. The 1972 revised form of this instrument was used in this study. During the school year the study was conducted, 1978-1979, Fleishman revised the

instrument to replace the term "he" with "he/she." However, the 1972 form was used throughout the study.

TABLE I

ESTIMATES OF INTERNAL CONSISTENCY AND OF EQUIVALENCE FOR THE EIGHT OCDQ SUBDIMENSIONS

OCDQ Subtest	Estimate*		
	1	2	3
Disengagement	.73	.59	.66
Hindrance	.68	.54	.44
Esprit	.75	.61	.73
Intimacy	.60	.49	.53
Aloofness	.26	.76	.72
Production Emphasis	.55	.73	.53
Thrust	.84	.75	.68
Consideration	.59	.63	.64

*Estimate 1 - Split-half Coefficient of Reliability, Corrected by Spearman Brown formula, N = 1151. Estimate 2 = Correlation between scores of odd-numbered and even-numbered respondents in each school, N = 71. Estimate 2 = Communality estimates for three-factor rotational solution, N = 1151.

Source: Carl Helwig, "Organizational Climate and Frequency of Principal-Teacher Communications in Selected Ohio Elementary Schools," Journal of Experimental Education, XXXIX (Summer, 1971), 53.

One of several Leader Behavior Description Questionnaires developed as a result of the Ohio State University leadership studies project, the SBD is designed to measure behavior

patterns of a group leader on the two dimensions of "Consideration" and "Structure." These two dimensions of leader behavior were originally defined by the Ohio State group and have been found to be relatively independent but not necessarily incompatible (2, p. 87). A leader may be high on both Consideration and Structure, low on both dimensions, or high on one dimension and low on the other dimension. For the SBD, the dimensions of Consideration and Structure are defined as

> Consideration. Reflects the extent to which one's supervisor exhibits behavior indicative of friendship, mutual trust and respect, and good "human relations" toward the members of his group. A high score on this dimension indicates a climate of good rapport and two-way communication; a low score indicates that the supervisor is seen to be more impersonal in his relations with group members.
>
> Structure. Reflects the extent to which one's supervisor exhibits the behavior of a leader in organizing and defining the relationships between himself and the group, defining interactions among group members, establishing ways of getting the job done, scheduling, criticizing, etc. A high score on this dimension describes the supervisor who plays a very active role in directing group activities through planning, supplying information, trying out new ideas, criticizing, and so forth. A low score characterizes supervisors who are likely to be relatively inactive in giving direction in these ways (1, p. 1).

The SBD is composed of forty-eight items which are brief statements describing the behavior of the group leader. Responses to the items of the SBD are made on a five-point, forced-choice scale: (A) Always, (B) Often, (C) Occasionally, (D) Seldom, and (E) Never. Responses are made in terms of

how frequently the respondent perceives the leader engaging in the behavior described.

The SBD is administered to the leader and his subordinates in a setting where leadership behavior is being assessed. Each item is scored with a value between zero and four. The value of choice A is zero for some items and is four for other items. The other answer choices for each item vary in value according to the value assigned to choice A. The highest possible score for the twenty-eight items designated as Consideration items is 112 points. The highest possible score for the twenty items designated as Structure items is eighty points. Consideration scores generally range from twenty-two points to one hundred six points and Structure scores generally range from thirteen points to sixty-eight points (1, p. 2).

Validity and reliability measures for the SBD are reported in the Manual for the Supervisory Behavior Description Questionnaire (1). The internal consistency reliabilities for the SBD were obtained by the split-half method. Correlations were calculated for odd- and even-numbered items for each scale and then were corrected for the full scale by applying the Spearman-Brown formula. Reliabilities for the Consideration dimension range from .89 to .98. Structure dimension reliabilities range from .68 to .87 (1, p. 3). In developing the SBD, Fleishman sought to maximize construct validity by factor analyzing 140 items to produce homogeneous

measures of Consideration and Structure. The final forty-eight items selected for measuring Consideration and Structure met three criteria: (1) a high loading with the dimension in which they were included, (2) as close to zero loading as possible on the other dimension, and (3) large standard deviation in order to discriminate among different leaders (1, p. 1).

In addition to the OCDQ and the SBD, subjects in the study responded to a background information survey (Appendix C) during the second administration of the instruments. The information requested by the survey concerned (1) level of educational preparation, (2) major area of professional preparation, (3) areas of professional certification, (4) years of teaching experience, and (5) number of years of experience in the district. The principals were asked to complete an additional form (Appendix D) requesting information concerning (1) the number of classroom teachers, (2) the number of resource or special teachers, (3) the number of aides, (4) the number of teachers with whom the principal had previously worked, (5) the number of teachers the principal assisted in hiring, (6) the number of years as an administrator, and (7) the number of years as an administrator in the district.

Procedures for Collection of Data

The procedures used for collecting the data for this study were as follows:

1. At the time each principal agreed to participate in the study, the principal was asked to supply the number of teachers in the school. The principals were permitted to include all staff members in the administration of the instruments or to include only the classroom teachers whose responses were to be analyzed. All of the principals chose to have all the staff members respond to the instruments.

2. Packets of materials were prepared for each staff member in each school. The packet consisted of both instruments, answer sheets, and an instruction sheet in a numbered envelope. The packets were unsealed when distributed to the staff members. Packets of materials for the principals were marked "Principal."

3. Prior to the distribution of the materials for the first administration of the instruments, the principal met with the staff and outlined the procedures to be used in distributing and collecting the packets. The reasons for numbering the packets and maintenance of the master list of names and packet numbers were explained. The respondents were assured that confidentiality of response would be maintained.

4. The packets were distributed to the staff members by the principal in one of two ways. The principal either placed the packets in the teachers' school boxes or distributed the packets at a faculty meeting.

5. A collection box was placed in each school office or workroom and teachers returned the sealed packets to this location. The respondents were asked to seal the packets in order to protect their confidentiality.

6. A master list containing the respondent's name and packet number was compiled by the respondents as the packets were returned to the collection location.

7. The principals held the collected packets one week in order to permit staff members who were absent on the date the instruments were distributed time to receive and complete the instruments.

8. The packets, the master list of names, and a list of teacher's names were then either mailed to or picked up by the researcher.

Procedures for Analysis of Data

At the end of each assessment period, the responses for the principal and classroom teachers from each school were placed on coding forms for keypunching. After all the data were collected, the responses for the three assessments were keypunched at the North Texas State University Computer Center. The punched cards for the OCDQ responses were sent to Donald Croft of Educational Research Services at New Mexico State University for scoring. The SBD was scored at the North Texas State University Computer Center, utilizing a computer program written for this purpose. After the instruments were scored, analyses of the data were made

using the statistical packages available through the North Texas State University Computer Center. The data derived from the demographic information section of the OCDQ and the background information survey were compiled and organized in tables.

For Research Question I, II, III, and IV the following statistical tests were used in analyzing the data

(1) the Hartley test for homogeneity of variance was used to determine if the groups of scores for each school had the same degree of variability for the three assessments of climate and leadership behavior.

(2) the Cochran test for homogeneity of variance was used to determine if the groups of scores for all the schools had the same degree of variability for the three assessments of climate and leadership behavior.

(3) One-factor and two-factor analysis of variance for repeated measures tests were used to determine if significant differences existed between the groups or the assessments.

(4) the Scheffé test for comparison of means was used to determine where the significant differences occurred after a significant F ratio was found using the analysis of variance for repeated measures procedure.

For Research Questions V and VI the t-test for Independent Samples was used to determine if significant differences existed between teachers' and principals' perceptions of organizational climate and leadership behavior.

For Research Question VII the following statistical tests were used in analyzing the data:

(1) the Pearson product-moment correlation coefficient was used to determine the relationship between the openness factor of climate and the leadership behavior factors of consideration and structure.

(2) the test for significance of difference between two correlation coefficients for independent samples was used to determine if significant differences existed between the relationships defined for the three assessments of climate and leadership behavior.

The probability level associated with each statistical procedure was reported. If a calculated statistic met or exceeded the .05 level of significance, the statistic was considered significant in this study.

CHAPTER BIBLIOGRAPHY

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CHAPTER IV

REPORT OF DATA ANALYSIS

The four purposes of this study were to determine during the first year of operation of new elementary schools (1) the extent of change in organizational climate as climate was perceived by the teachers and principals in new elementary schools, (2) the extent of change in the leadership behavior of the principal as leadership behavior was perceived by the teachers and principals in new elementary schools, (3) the difference between teachers' perceptions and principals' perceptions of organizational climate and principal leadership behavior, and (4) the relationship between the openness score of the Organizational Climate Description Questionnaire (OCDQ) and the scores for Consideration and Structure on the Supervisory Behavior Description (SBD) questionnaire. To carry out the purposes of the study, seven research questions were formulated; data were collected from 151 subjects in five new elementary schools; and the data were analyzed descriptively and statistically. The organizational climate of the new elementary schools in the study and the leadership behavior of the principals of the new elementary schools were assessed at the beginning of the school year, at mid-year, and at the end of the

school year using the OCDQ and the SBD. Background information on the subjects and schools was supplied by the responses of the subjects to the five items on the demographic information survey included in the packets for the second administration of the instruments.

This chapter presents descriptive and comparative analyses of the data and is divided into eight sections. The first section contains the data collected from the background information questions. The data in this section is organized into tables. The remaining seven sections correspond to the seven research questions and the relevant data for each question. For these seven sections, each subsection of the research question is stated and then followed by the results of the data analysis.

Background Information Data

The background information data presented in this section were extracted from the five questions of the demographic section of the OCDQ and from the background information survey. The distribution of subjects by position is presented in Table II.

TABLE II

DISTRIBUTION OF SUBJECTS BY POSITION

Position	Number	Per Cent of Total
Principal	5	3.30
Teacher	146	96.70
Total	151	100.00

The data of Table II show that five elementary school principals and 146 classroom teachers were included in the study. Approximately 97 per cent of the subjects in this study were classroom teachers.

The distribution of the subjects by position and sex is presented in Table III. The position distribution is dichotomized into principal and classroom teacher.

TABLE III

DISTRIBUTION OF SUBJECTS BY POSITION AND SEX

Position	Sex	Number	Per Cent of Total
Principal	Male	2	1.32
	Female	3	1.99
Teacher	Male	6	3.97
	Female	140	92.72
Total	. . .	151	100.00

The data of Table III shows that two male principals and three female principals participated in the study. Six male classroom teachers and 140 female classroom teachers also participated in the study. Approximately 95 per cent of the subjects in this study were female.

The subjects in the study were asked to indicate their age by selecting the appropriate ten year age interval from

the intervals listed in the question. This data is presented in Table IV.

TABLE IV

DISTRIBUTION OF SUBJECTS BY POSITION AND AGE

Position	Years of Age	Number	Per Cent of Total
Principal	20-29	0	0.00
	30-39	3	1.99
	40-49	1	.66
	50-59	1	.66
	60 or over	0	0.00
Teacher	20-29	63	41.72
	30-39	58	38.41
	40-49	22	14.57
	50-59	3	1.99
	60 or over	0	0.00
Total	. . .	151	100.00

The data of Table IV show that three of the principals were in the 30 to 39 age interval. One principal was in the 40 to 49 years age interval and the fifth principal was in the 50 to 59 years age interval. Sixty-three of the classroom teachers were in the 20 to 29 years age interval and fifty-eight teachers were in the 30 to 39 years age interval. Approximately 82 per cent of the subjects in the study were

less than forty years of age. Approximately 15 per cent of the subjects were older than forty years of age but were less than fifty years of age. Four of the subjects were older than forty-nine years of age.

The subjects in the study indicated their level of educational preparation by selecting one of four choices: High School Diploma, Bachelor's Degree, Master's Degree, or Doctor's Degree. The distribution of the subjects by position and level of educational preparation is presented in Table V.

TABLE V

DISTRIBUTION OF SUBJECTS BY POSITION AND LEVEL OF EDUCATIONAL PREPARATION

Position	Level of Educational Preparation	Number	Per Cent of Total
Principal	Bachelor's Degree	0	0.00
	Master's Degree	5	3.31
	Doctor's Degree	0	0.00
Teacher	Bachelor's Degree	114	75.50
	Master's Degree	32	21.19
	Doctor's Degree	0	0.00
Total	. . .	151	100.00

As indicated by the data of Table V, all of the principals had earned the master's degree and thirty-two of

the teachers also held this degree. Approximately 75 per cent of the subjects held only the bachelor's degree at the time the study was conducted. None of the subjects held the doctor's degree.

The subjects were asked to identify their major area of professional preparation by selecting one of the areas of preparation listed in the question. The distribution of the subjects by position and major area of professional preparation is presented in Table VI.

TABLE VI

DISTRIBUTION OF SUBJECTS BY POSITION AND MAJOR AREA OF PROFESSIONAL PREPARATION

Position	Area of Educational Preparation	Number	Per Cent of Total
Principal	Early Childhood	0	0.00
	Elementary	4	2.65
	Secondary	1	.66
	Special Education	0	0.00
	Other	0	0.00
Teacher	Early Childhood	4	2.65
	Elementary	127	84.11
	Secondary	0	0.00
	Special Education	5	3.31
	Other*	10	6.62
Total	. . . .	151	100.00

*All-level preparation (elementary and secondary).

The data of Table VI show that four of the principals had elementary education as their major area of professional preparation. One of the principals had secondary education as a major area of professional preparation. One hundred twenty-seven of the teachers had elementary education as a major area of professional preparation. Ten of the classroom teachers had all level preparation including preparation in both elementary and secondary education. Approximately 87 per cent of the subjects in this study had elementary education as a major area of professional preparation.

The subjects were asked to indicate their areas of professional certification by selecting one or more of the areas listed in the question. The distribution of the subjects by position and areas of professional certification are presented in Table VII.

As shown in Table VII, all of the principals in the study had both elementary and administrative certification. Nineteen teachers had all level certification and twenty-three teachers had early childhood certification. One hundred twenty-seven teachers were certified for elementary education. The 151 subjects in the study had 189 areas of certification.

Data related to the number of years of teaching experience was obtained by asking the subjects to indicate which of the years of experience intervals listed in the question on teaching experience matched their teaching experience.

TABLE VII

DISTRIBUTION OF SUBJECTS BY POSITION AND AREAS OF PROFESSIONAL CERTIFICATION

Position	Area of Certification	Number	Per Cent of Total
Principal	Early Childhood	0	0.0
	Elementary	5	2.64
	Secondary	1	.53
	Special Education	0	0.00
	Other[a]	5	2.64
Teacher	Early Childhood	23	12.17
	Elementary	127	67.20
	Secondary	0	0.00
	Special Education	9	4.76
	Other[b]	19	10.05
Total	. . . .	189[c]	99.99[d]

[a]Administrative certification.

[b]All-level certification (elementary and secondary).

[c]Exceeds number of subjects because of multiple certification areas.

[d]Not 100 per cent because of rounding procedures.

The listed years of experience by interval were (1) No previous teaching experience, (2) 1 to 5 years, (3) 6 to 10 years, (4) 11 to 15 years, and (5) 16 to 20 years. The data related to years of teaching experience are presented in Table VIII.

TABLE VIII

DISTRIBUTION OF SUBJECTS BY POSITION AND YEARS OF TEACHING EXPERIENCE

Position	Years of Experience	Number	Per Cent of Total
Principal	None	0	0.0
	1-5	0	0.0
	6-10	2	1.32
	11-15	2	1.32
	16-20	1	.66
Teacher	None	9	5.96
	1-5	61	40.40
	6-10	52	34.44
	11-15	22	14.57
	16-20	2	1.32
Total	. . .	151	99.99*

*Not 100 per cent because of rounding procedures.

Approximately 40 per cent of the subjects in this study had between one and five years of teaching experience. Fifty-two of the teachers and two of the principals had between six and ten years of teaching experience. Approximately 92 per cent of the subjects in this study had taught for at least one year but had not taught for more than fifteen years.

Table IX contains the data relevant to the distribution of the subjects by position and years in the school district.

TABLE IX

DISTRIBUTION OF SUBJECTS BY POSITION AND YEARS IN SCHOOL DISTRICT

Position	Years in District	Number	Per Cent of Total
Principal	None	1	.66
	1-5	2	1.32
	6-10	2	1.32
	11-15	0	0.00
	16-20	0	0.00
Teacher	None	58	38.41
	1-5	63	41.72
	6-10	19	12.58
	11-15	5	3.31
	16-20	1	.66
Total	. . .	151	99.98*

*Not 100 per cent because of rounding procedures.

Responses were made in terms of the following intervals: (1) No previous experience in this district, (2) 1 to 5 years, (3) 6 to 10 years, (4) 11 to 15 years, and (5) 16 to 20 years.

One principal and fifty-eight teachers in the study had no previous experience in the district in which they were currently employed. Approximately 43 per cent of the subjects had between one and five years of experience in the

district. Twenty-one of the subjects had between six and ten years of experience in the district while only six subjects had more than ten years of experience in the district.

The elementary school principals in the study responded to an additional information sheet in order to collect data about the school unit and the role of the principal in certain administrative procedures. Table X presents data related to the number of teachers in each school, the number of aides in each school, and the enrollment for each school. These data were collected at mid-year.

TABLE X

NUMBER OF TEACHERS, NUMBER OF AIDES, AND ENROLLMENT FOR EACH SCHOOL AT MID-YEAR

School	Number of Teachers	Number of Aides	Enrollment
1	22	4	550
2	27	10	700
3	31	3	650
4	38	7	750
5	37	10	900

As indicated by the data contained in Table X, the school with the smallest staff had twenty-two classroom teachers and four aides. The school with the largest staff

had thirty-seven classroom teachers and ten aides. The enrollment for the schools in the study ranged from 550 students to 900 students at mid-year.

The principals were asked to list the number of teachers in the school with whom they had previously worked as (1) an administrator, (2) a teacher, (3) a supervisor-consultant, or (4) other. The other category was not used by the respondents. Table XI summarizes the data related to the previous relationship of the principal to the teachers in the school for each of the five schools.

TABLE XI

NUMBER OF TEACHERS IN EACH SCHOOL WITH WHOM THE PRINCIPAL HAD PREVIOUSLY WORKED AS AN ADMINISTRATOR, SUPERVISOR-CONSULTANT OR TEACHER

School	Number of Teachers	No. of Teachers Principal Worked With As		
		Administrator	Supervisor-Consultant	Teacher
1	22	3	0	0
2	27	19	0	0
3	31	5	0	0
4	38	2	0	2
5	37	7	0	0

A study of the data in Table XI shows that only one of the principals had previously worked with the teachers in the school as a teacher. In School 2, the principal had

previously worked with nineteen of the twenty-seven teachers in the school as an administrator. All of the principals had worked with at least two of the teachers in the school as an administrator.

The principals were also asked to indicate the number of teachers in the school that they had assisted in hiring for the school. These data are presented in Table XII.

TABLE XII

NUMBER OF TEACHERS IN EACH SCHOOL THE PRINCIPAL ASSISTED IN HIRING FOR THE SCHOOL

School	No. of Teachers in School	No. of Teachers Principal Assisted in Hiring
1	22	22
2	27	27
3	31	31
4	38	38
5	37	36

As indicated by the data contained in Table XII, all of the principals had the opportunity to participate in the hiring of the teachers for the school. Only in School 5 did the principal indicate that one teacher was hired without the assistance of the principal.

The final question to which the principals responded sought information concerning (1) the number of years of

experience the principal had as an administrator and (2) the number of years of experience the principal had as an administrator in the school district. Table XIII contains the data collected for this question.

TABLE XIII

TOTAL YEARS OF EXPERIENCE AS AN ADMINISTRATOR AND YEARS OF EXPERIENCE AS AN ADMINISTRATOR IN THE SCHOOL DISTRICT FOR EACH PRINCIPAL

School	Years of Experience As An Administrator	Years of Experience As An Administrator in District
1	2	2
2	8	8
3	6	0
4	2	2
5	14	2

The data of Table XIII indicate that only one of the principals had no previous experience as an administrator in the school district in which the new elementary school was located. The years of administrative experience for the group of principals ranged from two years to fourteen years. Three of the principals indicated that all of their administrative experience had been gained in the district in which they were currently employed at the time the study was conducted.

Research Question I

Research Question I concerned changes in teachers' perception of organizational climate during the first year of operation in new elementary schools. Organizational climate was measured three times during the school year using the eight subtests of the Organizational Climate Description Questionnaire (OCDQ). Data for each of the eight subtests of the OCDQ were analyzed for the group of teachers in each of the new elementary schools and for the total group of teachers in the study.

Part A of Research Question I dealt with the analysis of data for the group of teachers in each of the new elementary schools. Subsection A.1 of this research question addressed the question of whether the scores on the subtests of the OCDQ indicated that teachers' perceptions of organizational climate in each of the schools had changed during the first year of operation. The climate type identified for each school by the climate similarity index score of the OCDQ was used as the means for determining if changes in teachers' perception of climate had occurred. The climate types identified for each of the schools for the three assessments of organizational climate are presented in Table XIV.

As shown in Table XIV, each of the five schools had at least one change in climate type over the three assessments of climate.

TABLE XIV

THREE SCHOOL CLIMATE TYPES IDENTIFIED FOR EACH SCHOOL BY OCDQ CLIMATE SIMILARITY INDEX SCORE FOR TEACHERS

School	Climate Assessment 1	Climate Assessment 2	Climate Assessment 3
1	Open	Autonomous	Autonomous
2	Autonomous	Autonomous	Familiar
3	Autonomous	Controlled	Closed
4	Autonomous	Familiar	Paternal
5	Paternal	Paternal	Closed

Two of the five schools had a different climate type identified for each of the three assessments of organizational climate. Three of the five schools had the same climate type identified for two of the three assessments of climate. In all five of the schools, the changes in climate types resulted in a more closed type of climate being identified for the school for the third assessment. The six climate types defined by Halpin and Croft are found in Table XIV. The Open and Controlled climate types were identified once each; the Familiar and Closed climate types were identified twice each; the Paternal climate type was identified three times; and the Autonomous climate type was identified six times.

Subsection A.2 of this research question addressed the question of whether different patterns of dispersion existed

for scores for the eight OCDQ subtests for each of the three assessments of teachers' perceptions of organizational climate. The mean was selected as a measure of central tendency to be used for describing the group of scores for each subtest in each school. The measures of dispersion selected to describe the variability within each group of scores were the standard deviation, range of scores, and variance. The mean, standard deviation, and range of scores for each of the eight subtests of the OCDQ for each of the three assessments of climate are presented along with the results of the tests for homogeneity of variance by school in Tables XV through XIX.

Table XV presents the means, standard deviations, and ranges of scores associated with each of the eight subtests of the OCDQ for School 1. The result of the Hartley Fmax test for homogeneity of variances for each of the subtests is also reported.

The Fmax statistic calculated for the three variances associated with each of the eight subtests of the OCDQ for School 1 was compared to the table value of 2.95 for rejection of the assumption of equal variances at the .05 level of significance with 3 variances and 20 degrees of freedom. As shown by the data of Table XV, the assumption of equal variances was rejected for the Thrust subtest of the OCDQ in School 1 since the calculated Fmax statistic exceeded the required table value.

TABLE XV

$\bar{X}$, SD, RANGE OF SCORES AND RESULT FROM FMAX TEST FOR HOMOGENEITY OF VARIANCE FOR OCDQ SUBTEST SCORES FOR THREE CLIMATE ASSESSMENTS FOR TEACHERS OF SCHOOL 1

Subtest	$\bar{X}_1$	SD_1	$Range_1$	$\bar{X}_2$	SD_2	$Range_2$	$\bar{X}_3$	SD_3	$Range_3$	Fmax
Disengagement	44.52	6.75	39-55	46.24	7.60	39-69	48.38	8.49	39-71	1.58
Hindrance	49.90	8.05	39-73	51.33	8.40	36-73	50.57	7.49	36-62	1.16
Esprit	50.38	5.65	41-60	47.33	7.62	25-58	47.76	7.39	37-62	1.82
Intimacy	52.09	8.57	39-67	53.38	5.83	45-64	62.90	6.24	42-70	2.17
Aloofness	47.81	9.31	32-69	47.86	11.57	32-80	49.71	9.67	35-66	1.54
Production Emphasis	48.76	9.59	35-73	45.81	8.46	32-65	44.52	7.91	32-59	1.47
Thrust	56.05	4.54	49-63	50.33	7.48	36-62	51.57	7.92	38-63	3.04*
Consideration	53.14	8.42	35-77	50.43	6.73	38-66	49.09	9.96	35-74	2.19

*Significant at .05 level. N = 21, DF = 20

Table XVI presents the means, standard deviations, and ranges of scores associated with each of the eight subtests of the OCDQ for School 2. The result of the Hartley Fmax test for homogeneity of variances for each of the subtests is also reported.

The F-max statistic calculated for the three variances associated with each of the eight subtests of the OCDQ for School 2 was compared to the table value of 2.95 for rejection of the assumption of equal variances at the .05 level of significance with 3 variances and 26 degrees of freedom. As shown by the data of Table XVI, none of the calculated Fmax statistics exceeded the required table value for rejection of the assumption of equal variances.

Table XVII presents the means, standard deviations, and ranges of scores associated with each of the eight subtests of the OCDQ for School 3. The result of the Hartley Fmax test for homogeneity of variances for each of the subtests is also reported.

The Fmax statistic calculated for the three variances associated with each of the eight subtests of the OCDQ for School 3 was compared to the table value of 2.40 for rejection of the assumption of equal variances at the .05 level of significance with 3 variances and 30 degrees of freedom. As shown by the data of Table XVII, the assumption of equal variances was rejected for the Disengagement subtest and for the Thrust subtest in School 3 since the calculated Fmax

TABLE XVI

$\bar{X}$, SD, RANGE OF SCORES AND RESULT FROM FMAX TEST FOR HOMOGENEITY OF VARIANCE FOR OCDQ SUBTEST SCORES FOR THREE CLIMATE ASSESSMENTS FOR TEACHERS OF SCHOOL 2

Subtest	$\bar{X}_1$	SD_1	$Range_1$	$\bar{X}_2$	SD_2	$Range_2$	$\bar{X}_3$	SD_3	$Range_3$	Fmax
Disengagement	44.81	10.28	36-78	45.63	7.41	36-59	45.52	6.93	36-64	2.20
Hindrance	50.30	9.77	33-70	49.93	8.25	33-70	47.56	6.68	33-62	2.14
Esprit	50.07	7.36	33.64	48.15	8.29	35-68	52.00	6.21	39-64	1.78
Intimacy	60.52	10.54	39-81	59.22	10.30	39-84	62.78	12.20	25-84	1.40
Aloofness	46.85	8.49	29-66	47.81	8.72	35-69	46.89	10.50	29-69	1.53
Production Emphasis	44.37	8.58	30-59	47.81	8.72	30-62	46.89	10.50	32-65	1.50
Thrust	50.33	8.57	34-63	50.52	8.21	31-63	51.11	9.56	29-62	1.36
Consideration	52.07	13.07	35-77	53.11	12.91	30-77	55.15	11.62	35-77	1.26

N = 27 DF = 26

TABLE XVII

$\bar{X}$, SD, RANGE OF SCORES AND RESULT FROM FMAX TEST FOR HOMOGENEITY OF VARIANCE FOR OCDQ SUBTEST SCORES FOR THREE CLIMATE ASSESSMENTS FOR TEACHERS OF SCHOOL 3

Subtest	$\bar{X}_1$	SD_1	$Range_1$	$\bar{X}_2$	SD_2	$Range_2$	$\bar{X}_3$	SD_3	$Range_3$	Fmax
Disengagement	45.45	6.65	36-62	47.97	10.73	36-80	48.06	8.40	39-71	2.60*
Hindrance	45.52	7.65	33-67	48.87	8.47	33-67	49.06	7.36	33-64	1.32
Esprit	50.71	7.66	31-64	49.26	7.29	37-64	47.84	7.01	29-66	1.19
Intimacy	53.22	8.95	34-70	53.87	6.63	42-64	53.48	6.89	42-67	1.82
Aloofness	52.16	8.21	35-71	53.19	7.90	32-66	51.32	6.72	38-66	1.49
Production Emphasis	53.61	9.54	35-70	57.39	11.40	40-78	58.45	9.82	43-76	1.43
Thrust	56.84	5.93	43-63	54.03	8.14	33-63	50.03	9.36	27-63	2.49*
Consideration	50.74	9.10	33-68	50.84	12.25	33-71	50.93	10.49	35-68	1.81

*Significant at .05 level. N = 31, DF = 30

statistic for each of these subtests exceeded the required table value.

Table XVIII presents the means, standard deviations, and ranges of scores associated with each of the eight subtests of the OCDQ for School 4. The result of the Hartley Fmax test for homogeneity of variances for each of the subtests is also reported.

The Fmax statistic calculated for the three variances associated with each of the eight subtests of the OCDQ for School 4 was compared to the table value of 2.40 for rejection of the assumption of equal variances at the .05 level of significance with 3 variances and 32 degrees of freedom. As shown by the data of Table XVIII, none of the calculated Fmax statistics exceeded the required table value for rejection of the assumption of equal variances.

Table XIX presents the means, standard deviations, and ranges of scores associated with each of the eight subtests of the OCDQ for School 5. The result of the Hartley Fmax test for homogeneity of variances for each of the subtests is also reported.

The Fmax statistic calculated for the three variances associated with each of the eight subtests of the OCDQ for School 5 was compared to the table value of 2.40 for rejection of the assumption of equal variances at the .05 level of significance with 3 variances and 33 degrees of freedom. As shown by the data of Table XIX, none of the calculated

TABLE XVIII

$\bar{X}$, SD, RANGE OF SCORES AND RESULT FROM FMAX TEST FOR HOMOGENEITY OF VARIANCE FOR OCDQ SUBTEST SCORES FOR THREE CLIMATE ASSESSMENTS FOR TEACHERS OF SCHOOL 4

Subtest	$\bar{X}_1$	SD_1	$Range_1$	$\bar{X}_2$	SD_2	$Range_2$	$\bar{X}_3$	SD_3	$Range_3$	Fmax
Disengagement	49.73	8.83	36-69	50.49	8.24	39-66	52.45	10.17	36-89	1.54
Hindrance	48.79	8.57	36-70	50.12	6.91	39-70	49.30	7.63	33-59	1.26
Esprit	49.03	6.26	37-60	48.88	8.60	27-64	46.76	8.64	31-60	1.90
Intimacy	54.42	7.87	39-73	54.88	7.64	39-73	55.30	8.14	39-73	1.13
Aloofness	39.00	7.04	27-57	42.49	7.23	27-57	42.27	9.17	24-71	1.70
Production Emphasis	52.12	7.37	40-70	49.42	8.13	38.68	48.06	9.21	27-68	1.56
Thrust	54.12	6.86	40-63	51.58	9.92	25-63	47.88	10.45	24-63	2.32
Consideration	49.82	10.75	38-71	50.24	9.96	30-79	47.00	7.19	30-77	2.23

N = 33 DF = 32

TABLE XIX

$\bar{X}$, SD, RANGE OF SCORES AND RESULT FROM FMAX TEST FOR HOMOGENEITY OF VARIANCE FOR OCDQ SUBTEST SCORES FOR THREE CLIMATE ASSESSMENTS FOR TEACHERS OF SCHOOL 5

Subtest	$\bar{X}_1$	SD_1	$Range_1$	$\bar{X}_2$	SD_2	$Range_2$	$\bar{X}_3$	SD_3	$Range_3$	Fmax
Disengagement	49.76	8.70	39-71	52.32	9.46	41-78	53.97	12.33	36-75	2.01
Hindrance	49.53	10.38	33-70	48.56	9.07	33-73	48.97	8.54	36-73	1.48
Esprit	48.53	7.12	29-60	42.62	9.24	18-56	43.65	8.44	29-58	1.68
Intimacy	52.18	7.14	37-67	52.38	6.04	39-64	52.15	6.67	39-67	1.40
Aloofness	45.91	8.78	27-66	49.03	9.87	32-71	48.53	7.91	35-69	1.56
Production Emphasis	50.94	8.58	38-70	52.91	8.32	38-73	54.53	7.94	35-68	1.17
Thrust	55.03	6.28	36-63	50.71	7.03	36-62	49.23	8.45	25-63	1.81
Consideration	50.82	0.30	30-68	50.03	8.28	35-66	48.73	6.06	38-63	2.36

N = 34, $\bar{X}$ = Mean, SD = Standard Deviation

Fmax statistics exceeded the required table value for rejection of the assumption of equal variances.

Subsection A.3 of this research question addressed the question of whether a significant difference existed between the three assessments of teachers' perceptions of organizational climate as climate was measured by the subtests of the OCDQ. To test the existence of a significant difference between the three assessments of climate, a one-factor analysis of variance (ANOVA) for repeated measures was performed on the group of teachers' scores for each subtest in each school. When a significant difference was found by the ANOVA for repeated measures procedure, the Scheffé test for comparison of means was used to find the source of the significant difference. The results of the ANOVA for repeated measures and the results of the Scheffé tests are presented in Tables XX through XXIX.

Table XX contains the results of the eight ANOVA for repeated measures tests of teachers' perceptions of organizational climate for School 1. The degrees of freedom, sums of squares, mean squares, F-value, and probability level associated with the calculated F-value are reported for each of the eight ANOVA tests.

The F-value calculated for each ANOVA for repeated measures procedure for School 1 was compared to the F table value of 3.23 for determination of significance at the .05 level of significance with 2 and 40 degrees of freedom. As

TABLE XX

ANOVA FOR REPEATED MEASURES TESTS FOR OCDQ SUBTEST SCORES FOR THREE CLIMATE ASSESSMENTS FOR TEACHERS OF SCHOOL 1

Source	DF	SS	MS	F	P
1. Disengagement					
Between Subject	20	1049.524			
Within Subjects	42	2617.333			
A (Assessments)	2	156.857	78.429	1.275	0.290
Residual	40	2460.476	61.512		
Total	62	3666.857			
2. Hindrance					
Between Subject	20	1199.746			
Within Subjects	42	2651.333			
A (Assessments)	2	21.460	10.730	0.163	0.850
Residual	40	2629.873	65.747		
Total	62	3851.079			
3. Esprit					
Between Subject	20	942.413			
Within Subjects	42	2067.333			
A (Assessments)	2	114.317	57.159	1.171	0.320
Residual	40	1953.016	48.825		
Total	62	3009.746			
4. Intimacy					
Between Subject	20	376.984			
Within Subjects	42	2569.333			
A (Assessments)	2	17.746	8.873	0.139	0.871
Residual	40	2551.587	63.790		
Total	62	2946.317			

TABLE XX--Continued

Source	DF	SS	MS	F	P
5. Aloofness					
Between Subject	20	2532.317			
Within Subjects	42	3801.333			
A (Assessments)	2	49.556	24.778	0.264	0.769
Residual	40	3751.778	93.794		
Total	62	6333.651			
6. Production Emphasis					
Between Subject	20	2055.270			
Within Subjects	42	2665.333			
A (Assessments)	2	198.317	99.159	1.608	0.213
Residual	40	2467.016	61.675		
Total	62	4720.603			
7. Thrust					
Between Subject	20	740.317			
Within Subjects	42	2426.000			
A (Assessments)	2	379.556	189.778	3.709	0.033*
Residual	40	2046.444	51.161		
Total	62	3166.317			
8. Consideration					
Between Subject	20	1422.889			
Within Subjects	42	3065.333			
A (Assessments)	2	178.698	89.349	1.238	0.301
Residual	40	2886.635	72.166		
Total	62	4488.222			

DF = Degrees of Freedom SS = Sum of Squares MS = Mean Square
*Significant at .05 level.

shown by the data of Table XX, the F-value calculated for the Thrust subtest of the OCDQ was found to be significant since the calculated value of 3.709 exceeded the required table value.

The Scheffé test for comparison of means was used as a follow-up procedure for determining which of the assessments of the Thrust subtest were significantly different. The results of the Scheffé procedure are presented in Table XXI.

TABLE XXI

RESULTS OF SCHEFFE TESTS COMPARING THREE ASSESSMENT MEANS FOR THE THRUST SUBTEST FOR THE TEACHERS OF SCHOOL 1

Assessment of Climate	1	2	3
1	0.000	3.351*	2.056
2		0.000	0.157
3			0.000

*Significant at the .05 level, Degrees of Freedom = 2, 39.

The Scheffé test statistic calculated for each pair of means was compared to the F table value of 3.25 for determination of significance at the .05 level of significance with 2 and 39 degrees of freedom. As shown by the data of Table XXI, the calculated Scheffé statistic for the comparison of the means for the first and second assessments of Thrust was

significant since the calculated value of 3.351 exceeded the required table value.

Table XXII contains the results of the eight ANOVA for repeated measures tests of teachers' perceptions of organizational climate for School 2. The degrees of freedom, sums of squares, mean squares, F-value, and the probability level associated with the calculated F-value are reported for each of the eight ANOVA tests.

The F-value calculated for each ANOVA for repeated measures procedure for School 2 was compared to the F table value of 3.18 for determination of significance at the .05 level of significance with 2 and 52 degrees of freedom. As shown by the data of Table XXII, none of the F-values calculated for the ANOVA tests exceeded the required table value.

Table XXIII contains the results of the eight ANOVA for repeated measures tests of teachers' perceptions of organizational climate for School 3. The degrees of freedom, sums of squares, mean squares, F-value, and probability level associated with the calculated F-value are reported for each of the eight ANOVA tests.

The F-value calculated for each ANOVA for repeated measures procedure for School 3 was compared to the F table value of 3.15 for determination of significance at the .05 level of significance with 2 and 60 degrees of freedom. As shown by the data of Table XXIII, the F-value calculated for

TABLE XXII

ANOVA FOR REPEATED MEASURES TESTS FOR OCDQ SUBTEST SCORES FOR THREE CLIMATE ASSESSMENTS FOR TEACHERS OF SCHOOL 2

Source	DF	SS	MS	F	P
1. Disengagement					
Between Subject	26	2663.654			
Within Subjects	54	2768.000			
A (Assessments)	2	10.543	5.272	0.099	0.905
Residual	52	2757.457	53.028		
Total	80	5431.654			
2. Hindrance					
Between Subject	26	3178.222			
Within Subjects	54	2355.333			
A (Assessments)	2	119.407	59.704	1.388	0.258
Residual	52	2235.926	42.999		
Total	80	5533.556			
3. Esprit					
Between Subject	26	2199.556			
Within Subjects	54	2202.000			
A (Assessments)	2	200.296	100.148	2.602	0.094
Residual	52	2001.704	38.494		
Total	80	4401.556			
4. Intimacy					
Between Subject	26	6087.580			
Within Subjects	54	3605.333			
A (Assessments)	2	174.839	87.420	1.325	0.275
Residual	52	3430.494	65.971		
Total	52	3430.494			

TABLE XXII--Continued

Source	DF	SS	MS	F	P
5. Aloofness					
Between Subject	26	2741.556			
Within Subjects	54	3992.667			
A (Assessments)	2	16.074	8.037	0.105	0.900
Residual	52	3976.593	76.473		
Total	80	6734.222			
6. Production Emphasis					
Between Subject	26	3120.617			
Within Subjects	54	3810.000			
A (Assessments)	2	171.580	85.790	1.226	0.301
Residual	52	3638.420			
Total	80	6930.617			
7. Thrust					
Between Subject	26	2973.654			
Within Subjects	54	3068.667			
A (Assessments)	2	8.914	4.457	0.076	0.927
Residual	52	3059.753	58.841		
Total	80	6042.321			
8. Consideration					
Between Subject	26	7580.667			
Within Subjects	54	4843.333			
A (Assessments)	2	132.074	66.037	0.729	0.487
Residual	52	4711.259	90.601		
Total	80	12424.000			

DF = Degrees of Freedom SS = Sum of Squares MS = Mean Square

TABLE XXIII

ANOVA FOR REPEATED MEASURES TESTS FOR OCDQ SUBTEST SCORES FOR THREE CLIMATE ASSESSMENTS FOR TEACHERS OF SCHOOL 3

Source	DF	SS	MS	F	P
1. Disengagement					
Between Subject	30	2011.914			
Within Subjects	62	5022.667			
A (Assessments)	2	136.064	68.032	0.835	0.439
Residual	60	4886.602	81.443		
Total	92	7034.580			
2. Hindrance					
Between Subject	30	1082.559			
Within Subjects	62	4695.333			
A (Assessments)	2	246.796	123.398	1.664	0.198
Residual	60	4448.538	74.142		
Total	92	5777.892			
3. Esprit					
Between Subject	30	1730.280			
Within Subjects	62	3224.000			
A (Assessments)	2	127.763	63.882	1.238	0.297
Residual	60	3096.237	51.604		
Total	92	4954.280			
4. Intimacy					
Between Subject	30	2125.849			
Within Subjects	62	3027.333			
A (Assessments)	2	6.538	3.269	0.064	0.937
Residual	60	3020.796	50.346		
Total	92	5153.183			

TABLE XXIII--Continued

Source	DF	SS	MS	F	P
5. Aloofness					
Between Subject	30	2048.925			
Within Subjects	62	3259.333			
A (Assessments)	2	54.452	27.226	0.510	0.603
Residual	60	3204.882	53.415		
Total	92	5308.258			
6. Production Emphasis					
Between Subject	30	4145.892			
Within Subjects	62	5779.333			
A (Assessments)	2	400.839	200.419	2.236	0.116
Residual	60	5378.495	89.642		
Total	92	9925.226			
7. Thrust					
Between Subject	30	1889.570			
Within Subjects	62	4508.000			
A (Assessments)	2	725.441	362.720	5.754	0.005*
Residual	60	3782.559	63.043		
Total	92	6397.570			
8. Consideration					
Between Subject	30	2963.247			
Within Subjects	62	7321.333			
A (Assessments)	2	0.581	00.290	0.002	0.998
Residual	50	7320.753	122.012		
Total	92	10284.581			

DF = Degrees of Freedom SS = Sum of Squares MS = Mean Square
*Significant at .05 level.

the Thrust subtest of the OCDQ was found to be significant since the calculated value of 5.754 exceeded the required table value. The F-value of 5.754 for the Thrust subtest had an associated probability level of 0.005.

The Scheffé test for comparison of means was used as a follow-up procedure for determining which of the assessments of the Thrust subtest were significantly different. The results of the Scheffé procedure are presented in Table XXIV.

TABLE XXIV

RESULTS OF SCHEFFE TESTS COMPARING THE THREE ASSESSMENT MEANS FOR THE THRUST SUBTEST FOR THE TEACHERS OF SCHOOL 3

Assessment of Climate	1	2	3
1	0.000	0.968	5.695*
2		0.000	1.967
3			0.000

*Significant at the .05 level, Degrees of Freedom = 2, 59.

The Scheffé test statistic calculated for each pair of means was compared to the F table value of 3.17 for determination of significance at the .05 level of significance with 2 and 59 degrees of freedom. As shown by the data of Table XXIV, the calculated Scheffé statistic for the comparison of the means for the first and third assessments of Thrust was

significant since the calculated value of 5.695 exceeded the required table value.

Table XXV contains the results of the eight ANOVA for repeated measures tests of teachers' perceptions of organizational climate for School 4. The degrees of freedom, sums of squares, mean squares, F-value, and probability level associated with the calculated F-value are reported for each of the eight ANOVA tests.

The F-value calculated for each ANOVA for repeated measures procedure for School 4 was compared to the F table value of 3.15 for determination of significance at the .05 level of significance with 2 and 64 degrees of freedom. As shown by the data of Table XXV, the F-value calculated for the Thrust subtest of the OCDQ was found to be significant since the calculated value of 3.843 exceeded the required table value.

The Scheffé test for comparison of means was used as a follow-up procedure for determining which of the assessments of the Thrust subtest were significantly different. The results of the Scheffé procedure are presented in Table XXVI.

The Scheffé test statistic calculated for each pair of means was compared to the F table value of 3.15 for determination of significance at the .05 level of significance with 2 and 63 degrees of freedom. As shown by the data in Table XXVI, the calculated Scheffé statistic for the comparison of the means for the first and third assessments of Thrust was

TABLE XXV

ANOVA FOR REPEATED MEASURES TESTS FOR OCDQ SUBTEST SCORES FOR THREE CLIMATE ASSESSMENTS FOR TEACHERS OF SCHOOL 4

Source	DF	SS	MS	F	P
1. Disengagement					
Between Subject	32	1816.444			
Within Subjects	66	6293.333			
A (Assessments)	2	130.808	65.404	0.679	0.511
Residual	64	6162.525	96.289		
Total	98	8109.778			
2. Hindrance					
Between Subject	32	2152.505			
Within Subjects	66	3623.333			
A (Assessments)	2	29.838	14.919	0.266	0.767
Residual	64	3593.495	56.148		
Total	98	5775.838			
3. Esprit					
Between Subject	32	2460.444			
Within Subjects	66	3658.667			
A (Assessments)	2	106.566	53.283	0.960	0.388
Residual	64	3552.101	55.502		
Total	98	6119.111			
4. Intimacy					
Between Subject	32	2247.960			
Within Subjects	66	3733.333			
A (Assessments)	2	12.747	6.374	0.110	0.896
Residual	64	3720.586	58.134		
Total	98	5981.293			

TABLE XXV--Continued

Source	DF	SS	MS	F	P
5. Aloofness					
Between Subject	32	1668.687			
Within Subjects	66	4534.000			
A (Assessments)	2	251.899	125.949	1.882	0.160
Residual	64	4282.101	66.908		
Total	98	6202.687			
6. Production Emphasis					
Between Subject	32	1820.626			
Within Subjects	66	5028.667			
A (Assessments)	2	281.838	140.919	1.900	0.158
Residual	64	4746.828	74.169		
Total	98	6849.293			
7. Thrust					
Between Subject	32	2738.687			
Within Subjects	66	6064.667			
A (Assessments)	2	650.263	325.131	3.843	0.026*
Residual	64	5414.404	84.600		
Total	98	8803.353			
8. Consideration					
Between Subject	32	2297.283			
Within Subjects	66	6432.667			
A (Assessments)	2	204.990	102.495	1.053	0.355
Residual	64	6227.677	97.307		
Total					

DF = Degrees of Freedom SS = Sum of Squares MS = Mean Square
*Significant at .05 level.

significant since the calculated value of 3.800 exceeded the required table value.

TABLE XXVI

RESULTS OF SCHEFFE TESTS COMPARING THE THREE ASSESSMENT MEANS FOR THE THRUST SUBTEST FOR THE TEACHERS OF SCHOOL 4

Assessment of Climate	1	2	3
1	0.000	0.632	3.800*
2		0.000	1.333
3			0.000

*Significant at the .05 level, Degrees of Freedom = 2, 63.

Table XXVII contains the results of the eight ANOVA for repeated measures tests of teachers' perceptions of organizational climate for School 5. The degrees of freedom, sums of squares, mean squares, F-value, and probability level associated with the calculated F-value are reported for each of the eight ANOVA tests.

The F-value calculated for each ANOVA for repeated measures procedure for School 5 was compared to the F table value of 3.14 for determination of significance at the .05 level of significance with 2 and 66 degrees of freedom. As shown by the data of Table XXVII, the F-values for the Esprit subtest of the OCDQ and for the Thrust subtest of the OCDQ were found to be significant since the respective calculated

TABLE XXVII

ANOVA FOR REPEATED MEASURES TESTS FOR OCDQ SUBTEST SCORES FOR THREE CLIMATE ASSESSMENTS FOR TEACHERS OF SCHOOL 5

Source	DF	SS	MS	F	P
1. Disengagement					
Between Subject	33	4886.627			
Within Subjects	68	5883.333			
A (Assessments)	2	305.431	152.716	1.807	0.172
Residual	66	5577.902	84.514		
Total	101	10769.961			
2. Hindrance					
Between Subject	33	3969.294			
Within Subjects	68	4728.667			
A (Assessments)	2	16.137	8.069	0.113	0.893
Residual	66	4712.529	71.402		
Total	101	8697.961			
3. Esprit					
Between Subject	33	3201.186			
Within Subjects	68	4321.333			
A (Assessments)	2	678.255	339.127	6.144	0.004*
Residual	66	3643.078	55.198		
Total	101	7522.520			
4. Intimacy					
Between Subject	33	2053.686			
Within Subjects	68	2304.667			
A (Assessments)	2	1.118	0.559	0.016	0.984
Residual	66	2303.549	34.902		
Total	101	4358.353			

TABLE XXVII--Continued

Source	DF	SS	MS	F	P
5. Aloofness					
Between Subject	33	2031.490			
Within Subjects	68	5985.333			
A (Assessments)	2	190.647	95.323	1.086	0.344
Residual	66	5794.686	87.798		
Total	101	8016.823			
6. Production Emphasis					
Between Subject	33	2727.343			
Within Subjects	68	4289.333			
A (Assessments)	2	219.588	109.794	1.780	0.176
Residual	66	4069.745			
Total	101	7016.676			
7. Thrust					
Between Subject	33	1660.323			
Within Subjects	68	4244.667			
A (Assessments)	2	616.843	308.422	5.611	0.006*
Residual	66	3627.823	54.967		
Total	101	5904.990			
8. Consideration					
Between Subject	33	3000.745			
Within Subjects	68	3403.333			
A (Assessments)	2	75.549	37.774	0.749	0.477
Residual	66	3327.784			
Total	101	6404.078			

DF = Degrees of Freedom SS = Sum of Squares MS = Mean Square
*Significant at .05 level.

F-values of 6.144 and 5.611 exceeded the required table value. The F-value of 6.144 for the Esprit subtest had an associated probability level of 0.004. The probability level associated with the F-value of 5.611 for the Thrust subtest was 0.006.

The Scheffé test for comparison of means was used as a follow-up procedure for determining which of the assessments of the Esprit subtest were significantly different. The results of the Scheffé procedure are presented in Table XXVIII.

TABLE XXVIII

RESULTS OF SCHEFFE TESTS COMPARING THE THREE ASSESSMENT MEANS FOR THE ESPRIT SUBTEST FOR THE TEACHERS OF SCHOOL 5

Assessment of Climate	1	2	3
1	0.000	5.382*	3.671*
2		0.000	0.163
3			0.000

*Significant at the .05 level, Degrees of Freedom = 2, 65.

The Scheffé test statistic calculated for each pair of means was compared to the F table value of 3.14 for determination of significance at the .05 level of significance with 2 and 65 degrees of freedom. As shown by the data of Table XXVIII, the calculated Scheffé statistic for the comparison of the means for the first and second assessments of Esprit was significant since the calculated value of 5.382 exceeded

the required table value. The calculated Scheffé statistic for the comparison of the means for the first and third assessments of Esprit was significant since the calculated value of 3.671 also exceeded the required table value.

The Scheffé test for comparison of means was used as a follow-up procedure for determining which of the assessments of the Thrust subtest were significantly different. The results of the Scheffé procedure are presented in Table XXIX.

TABLE XXIX

RESULTS OF SCHEFFE TESTS COMPARING THE THREE ASSESSMENT MEANS FOR THE THRUST SUBTEST FOR THE TEACHERS OF SCHOOL 5

Assessment of Climate	1	2	3
1	0.000	2.891	5.191*
2		0.000	0.334
3			0.000

*Significant at the .05 level, Degrees of Freedom = 2, 65.

The Scheffé test statistic calculated for each pair of means was compared to the F table value of 3.14 for determination of significance at the .05 level of significance with 2 and 65 degrees of freedom. As shown by the data of Table XXIX, the calculated Scheffé statistic for the comparison of the first and third assessments of Thrust was

significant since the calculated value of 5.191 exceeded the required table value.

Subsection A.4 of this research question addressed the question of whether an identifiable pattern of change in teachers' perception of organizational climate was indicated by the scores on the OCDQ subtests. The pattern of significant and nonsignificant F-values resulting from the analyses of variance for repeated measures of teachers' perceptions of organizational climate is shown for each school in Table XXX.

TABLE XXX

SIGNIFICANT AND NONSIGNIFICANT F-VALUES FOR THE ANOVA FOR REPEATED MEASURES TESTS FOR OCDQ SUBTESTS FOR TEACHERS OF FIVE SCHOOLS

School	OCDQ Subtests							
	1	2	3	4	5	6	7	8
1	-	-	-	-	-	-	*	-
2	-	-	-	-	-	-	-	-
3	-	-	-	-	-	-	*	-
4	-	-	-	-	-	-	*	-
5	-	-	*	-	-	-	*	-

*Significant F-value, -Nonsignificant F-value.
Subtests: 1-Disengagement, 2-Hindrance, 3-Esprit, 4-Intimacy, 5-Aloofness, 6-Production Emphasis, 7-Thrust, 8-Consideration.

As shown in Table XXX, two of the subtests of the OCDQ had enough difference between the teachers' scores for the three assessments of climate to produce a significant F-value for the ANOVA for repeated measures test of the subtest. Significant F-values were associated with the Esprit and Thrust subtests. Only in School 5 was a significant F-value associated with the Esprit subtest. In schools 1, 3, 4, and 5, a significant F-value was associated with the Thrust subtest. School 2 had no significant F-values associated with the analyses of variance for repeated measures of the OCDQ subtests. Only School 5 had two significant F-values.

Following the determination of the significant F-values for the Esprit and Thrust subtests, the Scheffé test was used to determine which assessments of the subtests were actually different from the other assessments of the subtests. Six significant differences were identified. The pattern of results for the Scheffé tests for the Thrust subtest is displayed in Table XXXI.

As shown in Table XXXI, four significant differences were found by the Scheffé tests. Three of the four differences were between the first and third assessments of the Thrust subtest. These three differences occurred in Schools 3, 4, and 5. The fourth difference occurred in School 1 and was between the first and second assessments of the Thrust subtest.

TABLE XXXI

RESULTS OF SCHEFFE TESTS COMPARING THREE ASSESSMENT MEANS FOR TEACHERS FOR THE THRUST SUBTEST BY SCHOOL

School	Pairwise Comparisons of Assessment Means		
	$\bar{X}_1$ & $\bar{X}_2$	$\bar{X}_1$ & $\bar{X}_3$	$\bar{X}_2$ & $\bar{X}_3$
1	*	-	-
2	-	-	-
3	-	*	-
4	-	*	-
5	-	*	-

*Significant Difference, -No Significant Difference.

The pattern of results for the Scheffé tests for the Esprit subtest of the OCDQ is displayed in Table XXXII. The results are shown by school.

TABLE XXXII

RESULTS OF SCHEFFE TESTS COMPARING THREE ASSESSMENT MEANS FOR TEACHERS FOR THE ESPRIT SUBTEST BY SCHOOL

School	Pairwise Comparisons of Assessment Means		
	$\bar{X}_1$ & $\bar{X}_2$	$\bar{X}_1$ & $\bar{X}_3$	$\bar{X}_2$ & $\bar{X}_3$
1	-	-	-
2	-	-	-
3	-	-	-
4	-	-	-
5	*	*	-

*Significant Difference, -No Significant Difference.

As shown in Table XXXII, two significant differences were found using the Scheffé test. These differences occurred in School 5 and were between the first and second assessments and the first and third assessments.

Part B of Research Question I dealt with the analysis of data for the total group of teachers in the study. Subsection B.1 of this research question addressed the question of whether the scores on the subtests of the OCDQ for the total group of teachers indicated that teachers' perceptions of organizational climate had changed during the first year of operation in new elementary schools. The data analyzed in Part A of Research Question I indicated that teachers' perceptions of organizational climate in each of the schools had changed during the year. Using the mean score rounded to the nearest whole number for each subtest of the OCDQ for the total group of teachers, the profile of scores for the total group of teachers for each assessment of climate is depicted in Figure 3.

As indicated by the profiles for subtests of the OCDQ for the total group of teachers for the three assessments of climate, teachers' perceptions of organizational climate did change. The greatest variance occurred on the Thrust subtest with the three rounded mean scores of 54, 52, and 50 for the three assessments. The solid line represents the scores for the first assessment; the dashed line represents

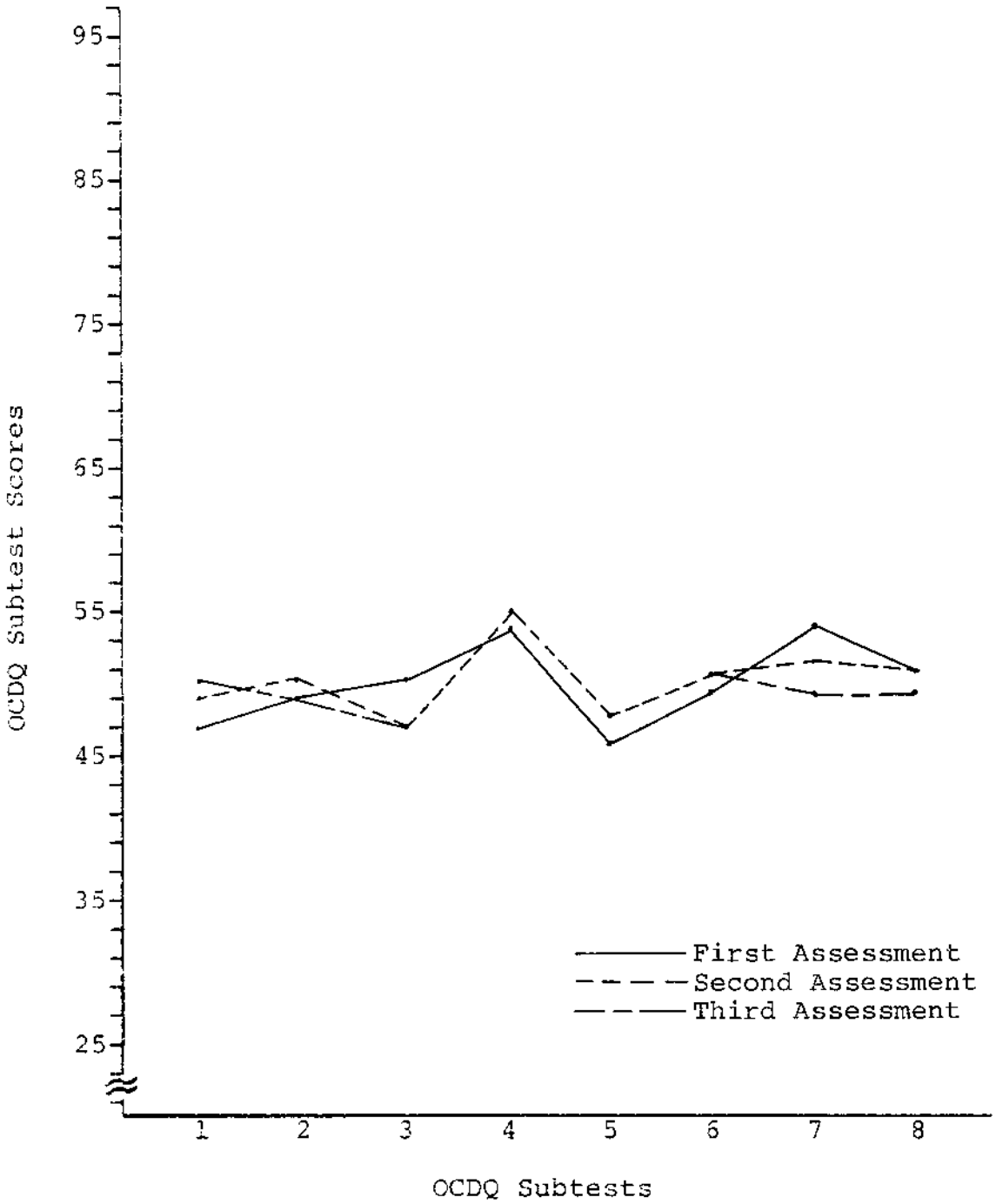


Fig. 3--Profiles of OCDQ subtest mean scores for total group of teachers for three assessments of climate.

the scores for the second assessment; and the uneven-dashed line represents the scores for the third assessment.

Subsection B.2 of this research question addressed the question of whether different patterns of dispersion existed for the eight subtest scores of the OCDQ for each of the three assessments of teachers' perceptions of organizational climate. For this subsection of the research question, the teachers participating in the study were grouped by two methods for the analysis of the data. The teachers were grouped (1) as members of the five school groups and (2) as members of one group. The data were analyzed for each method of grouping the teachers. The mean was selected as the measure of central tendency to be used as an index for describing the group of teachers' scores. The measures of dispersion selected to describe the variability within the group of teachers' scores were the standard deviation, range of scores and variance. The mean, standard deviation, and range of scores for each of the eight OCDQ subtests for the three assessments of teachers' perceptions of organizational climate are presented for the five school groups in Table XXXIII.

Table XXXIII represents a compilation of the data in Tables XV through XIX. The data are rearranged to display the data for the five school groups by subtests.

TABLE XXXIII

$\bar{X}$, SD, AND RANGE OF SCORES FOR OCDQ SUBTEST SCORES FOR THREE CLIMATE ASSESSMENTS FOR TOTAL GROUP OF TEACHERS AS MEMBERS OF FIVE SCHOOL GROUPS

Subtest	$\bar{X}_1$	SD_1	$Range_1$	$\bar{X}_2$	SD_2	$Range_2$	$\bar{X}_3$	SD_3	$Range_3$
Disengagement									
School 1	44.52	6.75	39-55	46.24	7.60	39-69	48.38	8.49	39-71
School 2	44.81	10.28	36-78	45.63	7.41	36-59	45.52	6.93	36-64
School 3	45.45	6.65	36-62	47.97	10.73	36-80	48.06	8.40	39-71
School 4	49.73	8.83	36-69	50.49	8.24	39-66	52.45	10.17	36-89
School 5	49.76	8.70	39-71	52.32	9.46	41-78	53.97	12.33	36-75
Hindrance									
School 1	49.90	8.05	39-73	51.33	8.40	36-73	50.57	7.49	36-62
School 2	50.30	9.77	33-70	49.93	8.25	33-70	47.56	6.68	33-62
School 3	45.52	7.65	33-67	48.87	8.47	33-67	49.06	7.36	33-64
School 4	48.79	8.57	36-70	50.12	6.91	39-70	49.30	7.63	33-59
School 5	49.53	10.38	33-70	48.56	9.07	33-73	48.97	8.54	36-73
Esprit									
School 1	50.38	5.65	41-60	47.33	7.62	25-58	47.76	7.39	37-62
School 2	50.07	7.36	33-64	48.15	8.29	35-68	52.00	6.21	39-64
School 3	50.71	7.66	31-64	49.26	7.29	37-64	47.84	7.01	29-66
School 4	49.03	6.26	37-60	48.88	8.60	27-64	46.76	8.64	31-60
School 5	48.53	7.12	29-60	42.62	9.24	18-56	43.65	8.44	29-58

TABLE XXXIII--Continued

Subtest	$\bar{X}_1$	SD_1	$Range_1$	$\bar{X}_2$	SD_2	$Range_2$	$\bar{X}_3$	SD_3	$Range_3$
Intimacy									
School 1	52.09	8.57	39-67	53.38	5.83	45-64	52.90	6.24	42-70
School 2	60.52	10.54	39-81	59.22	10.30	39-84	62.78	12.20	25-84
School 3	53.22	8.95	34.70	53.87	6.63	42-64	53.48	6.89	42-67
School 4	54.42	7.87	39-73	54.88	7.64	39-73	55.30	8.14	39-73
School 5	52.18	7.14	37-67	52.38	6.04	39-64	52.15	6.67	39-67
Aloofness									
School 1	47.81	9.31	32-69	47.86	11.57	32-80	49.71	9.67	35-66
School 2	46.85	8.49	29-66	47.81	8.72	35-69	46.89	10.50	29-69
School 3	52.16	8.21	35-71	53.19	7.90	32-66	51.32	6.72	38-66
School 4	39.00	7.04	27-57	42.49	7.23	27-57	42.27	9.17	24-71
School 5	45.91	8.78	27-66	49.03	9.87	32-71	48.53	7.91	35-69
Production Emphasis									
School 1	48.76	9.59	35-73	45.81	8.46	32-65	44.52	7.91	32-59
School 2	44.37	8.58	30-59	47.81	8.72	30-62	46.89	10.50	32-65
School 3	53.61	9.54	35-70	57.39	11.40	40-78	58.45	9.82	43-76
School 4	52.12	7.37	40-70	49.42	8.13	38-68	48.06	9.21	27-68
School 5	50.94	8.58	38-70	52.91	8.32	38-73	54.53	7.94	35-68
Thrust									
School 1	56.05	4.54	49-63	50.33	7.48	36-62	51.57	7.92	38-63
School 2	50.33	8.57	34-63	50.52	8.21	31-63	51.11	9.56	29-62
School 3	56.84	5.93	43-63	54.03	8.14	33-63	50.93	10.49	35-68
School 4	54.12	6.86	40-63	51.58	9.92	25-63	47.88	10.45	24-63
School 5	55.03	6.28	36-63	50.71	7.03	36-62	49.23	8.45	25-63

TABLE XXXIII--Continued

Subtest	$\bar{X}_1$	SD_1	$Range_1$	$\bar{X}_2$	SD_2	$Range_2$	$\bar{X}_3$	SD_3	$Range_3$
Consideration									
School 1	53.14	8.42	35-77	50.43	6.73	38-66	49.09	9.96	35-74
School 2	52.07	13.07	35-77	53.11	12.91	30-77	55.15	11.62	35-77
School 3	50.74	9.10	33-68	50.84	12.25	33-71	50.93	10.49	35-68
School 4	49.82	10.72	38-71	50.24	9.96	30-79	47.00	7.19	30-77
School 5	50.82	9.30	30-68	50.03	8.28	35-66	48.73	6.06	38-63

Table XXXIV presents the means for the eight subtests of the OCDQ for the three assessments of organizational climate as climate was perceived by the 146 teachers in the study grouped as members of one group. The standard deviation and range of scores associated with each mean are also displayed in Table XXXIV.

An inspection of the data in Table XXXIV shows that none of the means for the three assessments of each of the eight subtests are identical. The standard deviations associated with the means also vary in value. The largest standard deviation associated with a subtest mean is 10.36 for the Production Emphasis subtest for the third assessment of climate. The smallest standard deviation associated with a subtest mean is 6.87 for the Esprit subtest for the first assessment of climate.

Tables XXXV and XXXVI display the results of the tests for homogeneity of variances for repeated measures of teachers' perceptions of organizational climate. Two different tests for homogeneity of variances were used. For the variances associated with scores for the total group of teachers grouped as members of the five school groups, the Cochran test for homogeneity of variances was used. The variances for each of the eight subtests of the OCDQ for the three assessments of climate for the five school groups and the result of the Cochran test for homogeneity of variances are displayed in Table XXXV.

TABLE XXXIV

$\bar{X}$, SD, AND RANGE OF SCORES FOR OCDQ SUBTEST SCORES FOR THREE CLIMATE ASSESSMENTS FOR TOTAL GROUP OF TEACHERS AS MEMBERS OF ONE GROUP

Subtest	$\bar{X}_1$	SD_1	$Range_1$	$\bar{X}_2$	SD_2	$Range_2$	$\bar{X}_3$	SD_3	$Range_3$
Disengagement	47.17	8.63	36-78	48.87	9.14	36-80	50.01	10.63	36-89
Hindrance	48.70	9.05	33-73	49.63	8.18	33-73	49.03	7.56	33-73
Esprit	49.66	6.87	29-64	47.14	8.59	18-68	47.38	8.04	29-66
Intimacy	54.44	9.00	34-81	54.67	7.71	39-84	55.22	9.00	25-84
Aloofness	46.12	9.34	27-71	48.04	9.58	27-80	47.57	9.23	24-71
Production Emphasis	50.25	9.14	30-73	51.11	9.83	30-78	51.05	10.36	27-76
Thrust	54.49	6.89	34-63	51.52	8.27	25-63	49.78	9.23	24-63
Consideration	51.14	10.19	30-77	50.88	10.29	30-79	50.05	9.38	30-77

$\bar{X}$ = Mean SD = Standard Deviation

TABLE XXXV

VARIANCES AND RESULTS OF COCHRAN TESTS FOR HOMOGENEITY OF VARIANCE FOR OCDQ SUBTEST SCORES FOR THREE CLIMATE ASSESSMENTS FOR TOTAL GROUP OF TEACHERS AS MEMBERS OF FIVE SCHOOL GROUPS

Subtest Variance	School 1	School 2	School 3	School 4	School 5	Cochran C
Disengagement						
Variance 1	45.56	105.68	44.22	77.97	75.69	.303
Variance 2	57.76	54.91	115.13	67.89	89.49	.299
Variance 3	72.08	48.02	70.56	104.43	152.03	.340
Hindrance						
Variance 1	64.80	95.45	58.52	73.44	107.74	.269
Variance 2	70.56	68.06	71.74	47.75	82.26	.242
Variance 3	60.68	44.62	54.17	58.22	72.93	.251
Esprit						
Variance 1	31.92	54.17	58.68	39.19	50.69	.250
Variance 2	58.06	68.72	53.14	73.96	85.38	.252
Variance 3	54.61	38.56	49.14	74.65	71.23	.259
Intimacy						
Variance 1	73.44	111.09	80.10	61.94	50.98	.294
Variance 2	33.87	106.09	43.96	58.37	36.48	.380*
Variance 3	38.94	148.84	47.47	66.26	44.49	.346*

TABLE XXXV--Continued

Subtest Variance	School 1	School 2	School 3	School 4	School 5	Cochran C
Aloofness						
Variance 1	86.68	72.08	67.40	49.56	77.09	.245
Variance 2	133.86	76.04	62.41	52.27	97.42	.317
Variance 3	93.51	110.25	45.16	84.09	62.57	.279
Production Emphasis						
Variance 1	91.97	73.62	91.01	54.32	73.62	.239
Variance 2	71.57	76.04	129.96	66.10	69.22	.315
Variance 3	62.57	110.25	96.43	84.82	63.04	.264
Thrust						
Variance 1	20.61	73.44	35.16	47.06	39.44	.340*
Variance 2	55.95	67.40	66.26	98.41	49.42	.292
Variance 3	62.73	91.39	87.71	109.20	71.40	.258
Consideration						
Variance 1	70.90	170.82	82.81	115.56	86.49	.324*
Variance 2	45.29	166.67	150.06	99.20	68.56	.315
Variance 3	99.20	135.02	110.04	51.70	36.72	.312

*Significant at .05 level.

The Cochran C statistic calculated for the five variances associated with each of the three assessments of the eight subtests of the OCDQ was compared to the table value of .322 for rejection of the assumption of equal variances at the .05 level of significance with 5 variances and an average sample size of 29 subjects. As shown by the data of Table XXXV, the assumption of equal variances was rejected in five instances. For the Disengagement subtest, the assumption of equal variances was rejected for the third assessment since the calculated C statistic of .340 exceeded the required table value. For the Intimacy subtest, the C statistics calculated for the second and third assessments exceeded the table value and the assumption of equal variance was rejected. For the Thrust and Consideration subtests, the assumption of equal variances was rejected for the first assessment when the calculated C statistic of .340 and .324 exceeded the required table value.

Table XXXVI presents the three variances associated with each of the eight subtests of the OCDQ for the total group of teachers grouped as members of one group. The result of the Hartley Fmax test for homogeneity of variances for each of the subtests is also reported.

The Fmax statistic calculated for the three variances associated with each of the eight subtests of the OCDQ for the total group of teachers was compared to the table value

of 1.85 for rejection of the assumption of equal variances at the .05 level of significance with 3 variances and 145 degrees of freedom. As shown by the data of Table XXXVI, none of the calculated Fmax statistics exceeded the required table value for rejection of the assumption of equal variances.

TABLE XXXVI

VARIANCES AND HARTLEY TEST FOR HOMOGENEITY OF VARIANCES FOR REPEATED MEASUREMENTS OF TEACHERS' PERCEPTIONS OF ORGANIZATIONAL CLIMATE USING THE SUBTEST SCORES OF THE OCDQ--TOTAL GROUP

Subtest	$Variance_1$	$Variance_2$	$Variance_3$	Fmax
Disengagement	74.48	83.54	100.60	1.35
Hindrance	81.90	66.91	57.15	1.43
Esprit	47.20	73.79	64.64	1.56
Intimacy	81.00	59.44	81.00	1.36
Aloofness	87.23	91.78	85.19	1.07
Production Emphasis	83.54	96.82	107.33	1.28
Thrust	47.47	68.23	85.19	1.79
Consideration	103.84	105.88	88.17	1.20

N = 146, DF = 145.

Subsection B.3 of this research question addressed the question of whether a significant difference existed between the three assessments of teachers' perceptions of organizational climate as climate was measured by the subtests of

the OCDQ for the total group of teachers. To test the existence of a significant difference between the three assessments of climate, two types of ANOVA for repeated measures tests were performed on the eight subtests of the OCDQ with the teachers grouped as (1) members of the five school groups and (2) as members of one group. When a significant difference was found by the ANOVA for repeated measures procedure, the Scheffe test for comparison of means was used to find the source of the significant difference. The results of the two-factor ANOVA for repeated measures tests for the total group of teachers as members of school groups are displayed in Table XXXVII. An unweighted means solution was used in the ANOVA for repeated measure tests since the group size varied.

The F-value calculated for the group factor of the ANOVA for repeated measures procedure for each subtest was compared to the F table value of 2.44 for determination of significance at the .05 level of significance with 4 and 141 degrees of freedom. The F-value calculated for the assessment or repeated measures factor of the ANOVA for repeated measures procedure for each subtest was compared to the F table value of 3.04 for determination of significance at the .05 level of significance with 2 and 282 degrees of freedom. The F-value calculated for the interaction factor of the ANOVA for repeated measures procedure for each subtest was compared to the F table value of 1.98 for determination of

TABLE XXXVII

ANOVA FOR REPEATED MEASURES TESTS FOR OCDQ SUBTEST SCORES FOR THREE CLIMATE ASSESSMENTS FOR TOTAL GROUP OF TEACHERS AS MEMBERS OF FIVE SCHOOL GROUPS

Source	DF	SS	MS	F	P
1. Disengagement					
Between Subject	145				
B (Groups)	4	2919.423	729.856	8.280	0.000*
Error B	141	12428.164	88.143		
Within Subjects	292				
A (Assessments)	2	569.800	284.900	3.678	0.026*
AB (Interaction)	8	143.452	17.931	0.231	0.985
Error W	282	21844.962	77.464		
2. Hindrance					
Between Subject	145				
B (Groups)	4	336.007	84.002	1.023	0.398
Error B	141	11582.326	82.144		
Within Subjects	292				
A (Assessments)	2	68.024	34.012	0.544	0.581
AB (Interaction)	8	350.492	43.811	0.701	0.690
Error W	282	17620.361	62.483		
3. Esprit					
Between Subject	145				
B (Groups)	4	1309.883	327.471	4.383	0.002*
Error B	141	10533.878	74.708		
Within Subjects	292				
A (Assessments)	2	517.076	258.538	5.118	0.007*
AB (Interaction)	8	619.810	77.476	1.534	0.145
Error W	282	14246.136	50.518		

TABLE XXXVII--Continued

Source	DF	SS	MS	F	P
4. Intimacy					
Between Subject	145				
B (Groups)	4	4134.973	1033.743	11.906	0.000*
Error B	141	12892.060	91.433		
Within Groups	292				
A (Assessments)	2	51.746	25.873	0.485	0.616
AB (Interaction)	8	173.320	21.665	0.407	0.916
Error W	282	15027.012	53.287		
5. Aloofness					
Between Subject	145				
B (Groups)	4	5301.716	1325.429	16.954	0.000*
Error B	141	11022.975	78.177		
Within Subjects	292				
A (Assessments)	2	238.502	119.251	1.601	0.203
AB (Interaction)	8	269.688	33.711	0.452	0.888
Error W	282	21010.039	74.504		
6. Production Emphasis					
Between Subject	145				
B (Groups)	4	6423.834	1605.958	16.326	0.000*
Error B	141	13869.749	98.367		
Within Subjects	292				
A (Assessments)	2	38.374	19.187	0.266	0.766
AB (Interaction)	8	1199.471	149.934	2.083	0.037*
Error W	282	20300.504	71.988		

TABLE XXXVII--Continued

Source	DF	SS	MS	F	P
7. Thrust					
Between Subject	145				
B (Groups)	4	481.301	120.325	1.696	0.154
Error B	141	10002.552	70.940		
Within Subjects	292				
A (Assessments)	2	1496.777	748.388	11.770	0.000*
AB (Interaction)	8	758.031	94.754	1.490	0.160
Error W	282	17930.984	63.585		
8. Consideration					
Between Subject	145				
B (Groups)	4	911.189	227.797	1.858	0.121
Error B	141	17286.514	122.599		
Within Subjects	292				
A (Assessments)	2	91.470	45.735	0.526	0.591
AB (Interaction)	8	501.631	62.704	0.722	0.672
Error W	282	24498.082	86.873		

*Significant at .05 level.

significance at the .05 level of significance with 8 and 282 degrees of freedom. As shown by the data of Table XXXVII, nine significant F-values were found; two significant F-values for the Disengagement subtest, two significant F-values for the Esprit subtest, one significant F-value for the Intimacy subtest, one significant F-value for the Aloofness subtest, two significant F-values for the Production Emphasis subtest, and one significant F-value for the Thrust subtest.

For the Disengagement subtest, significant F-values were found for the group factor and for the assessments factor. The calculated F-value of 8.280 for the group factor had an associated probability level of 0.000. The calculated F-value of 3.678 for the assessments factor had an associated probability level of 0.026.

The Scheffé test for comparison of means was used as a follow-up procedure for determining which of the groups and which of the assessments were significantly different. Table XXXVIII presents the results of the Scheffé procedure for the group factor of the ANOVA for repeated measures test of the Disengagement subtest of the OCDQ.

The Scheffé test statistic calculated for each pair of means was compared to the F table value of 2.44 for determination of significance at the .05 level of significance with 4 and 141 degrees of freedom. As shown by the data of Table XXXVIII, four of the calculated Scheffé statistics were significant since the statistics exceeded the required table

value. On the Disengagement subtest, School 1 differed significantly from School 5; School 2 differed significantly from both Schools 4 and 5; and School 3 differed significantly from School 5.

TABLE XXXVIII

RESULTS OF SCHEFFE TESTS COMPARING FIVE GROUP MEANS FOR THE DISENGAGEMENT SUBTEST FOR THE TOTAL GROUP OF TEACHERS AS MEMBERS OF SCHOOL GROUPS

School Group	1	2	3	4	5
1	0.000	0.113	0.065	2.219	3.512*
2		0.000	0.416	3.917*	5.746*
3			0.000	1.890	3.257*
4				0.000	0.182
5					0.000

*Significant at the .05 level, Degrees of Freedom = 4, 141.

Table XXXIX presents the results of the Scheffé procedure for the assessments factor of the ANOVA for repeated measures test of the Disengagement subtest of the OCDQ. The means are compared by pairs.

The Scheffé test statistic calculated for each pair of means was compared to the F table value of 3.04 for determination of significance at the .05 level of significance with 2 and 282 degrees of freedom.

TABLE XXXIX

RESULTS OF SCHEFFE TESTS COMPARING THREE ASSESSMENT MEANS FOR THE DISENGAGEMENT SUBTEST FOR TOTAL GROUP OF TEACHERS AS MEMBERS OF SCHOOL GROUPS

Assessment of Climate	1	2	3
1	0.000	1.359	3.789*
2		0.000	0.609
3			0.000

*Significant at the .05 level, Degrees of Freedom = 2, 282.

As shown by the data of Table XXXIX, the calculated Scheffé statistic for the comparison of the means for the first and third assessments of Disengagement was significant since the calculated value of 3.789 exceeded the required table value.

For the Esprit subtest, significant F-values were found for the group factor and for the assessments factor of the ANOVA for repeated measures test. The calculated F-value of 4.383 for the group factor had an associated probability level of 0.002. The calculated F-value of 5.118 for the assessments factor had an associated probability level of 0.007.

The Scheffé test for comparison of means was used as a follow-up procedure for determining which of the groups and which of the assessments were significantly different. Table XL presents the results of the Scheffé procedure for the group

factor of the ANOVA for repeated measures test of the Esprit subtest of the OCDQ.

TABLE XL

RESULTS OF SCHEFFE TEST COMPARING FIVE GROUP MEANS FOR THE ESPRIT SUBTEST FOR TOTAL GROUP OF TEACHERS AS MEMBERS OF SCHOOL GROUPS

School Group	1	2	3	4	5
1	0.000	0.297	0.076	0.009	1.652
2		0.000	0.094	0.511	3.996*
3			0.000	0.176	3.063*
4				0.000	1.821
5					0.000

*Significant at the .05 level, Degrees of Freedom = 4, 141.

The Scheffé test statistic calculated for each pair of means was compared to the F table value of 2.44 for determination of significance at the .05 level of significance with 4 and 141 degrees of freedom. As shown by the data of Table XL, two of the calculated Scheffé statistics were significant since the statistics exceed the required table value. On the Esprit subtest, School 2 differed significantly from School 5 and School 3 differed significantly from School 5.

Table XLI presents the results of the Scheffé procedure for the assessments factor of the ANOVA for repeated measures

test of the Esprit subtest of the OCDQ. The assessments factor is the repeated measures factor.

TABLE XLI

RESULTS OF SCHEFFE TESTS COMPARING THREE ASSESSMENT MEANS FOR THE ESPRIT SUBTEST FOR TOTAL GROUP OF TEACHERS AS MEMBERS OF SCHOOL GROUPS

Assessment of Climate	1	2	3
1	0.000	4.565*	3.759*
2		0.000	0.039
3			0.000

*Significant at the .05 level, Degrees of Freedom = 2, 282.

The Scheffé test statistic calculated for each pair of means was compared to the F table value of 3.04 for determination of significance at the .05 level of significance with 2 and 282 degrees of freedom. As shown by the data of Table XLI, two significant F-values were found. The calculated Scheffé statistic for the comparison of the means for the first and second assessments of Esprit was significant since the calculated value of 4.565 exceeded the required table value. The calculated value of 3.759 for the comparison of the means for the first and third was also significant.

For the Intimacy subtest, one significant F-value was found for the ANOVA for repeated measures test. The calculated F-value of 11.306 for the group factor had an

associated probability level of 0.000. The Scheffé test for comparison of means was used as a follow-up procedure for determining which of the groups were significantly different. Table XLII presents the results of the Scheffé procedure for the group factor of the ANOVA for repeated measures of the Intimacy subtest of the ODCQ.

TABLE XLII

RESULTS OF SCHEFFE TESTS COMPARING FIVE GROUP MEANS FOR THE INTIMACY SUBTEST FOR TOTAL GROUP OF TEACHERS AS MEMBERS OF SCHOOL GROUPS

School Group	1	2	3	4	5
1	0.000	6.273*	0.055	0.453	0.033
2		0.000	6.330*	4.343*	9.139*
3			0.000	0.236	0.222
4				0.000	0.953
5					0.000

*Significant at the .05 level, Degrees of Freedom = 4, 141.

The Scheffé test statistic calculated for each pair of means was compared to the F table value of 2.44 for determination of significant at the .05 level of significance with 4 and 141 degrees of freedom. As shown by the data of Table XLII, four of the calculated Scheffé statistics were significant since the statistics exceeded the required table value.

On the Intimacy subtest, School 2 differed significantly from all the other schools.

For the Aloofness subtest, one significant F-value was found for the ANOVA for repeated measures test. The calculated F-value of 16.954 for the group factor had an associated probability level of 0.000. The Scheffé test for comparison of means was used as a follow-up procedure for determining which of the groups were significantly different. Table XLIII presents the results of the Scheffé procedure for the group factor of the ANOVA for repeated measures test of the Aloofness subtest of the OCDQ.

TABLE XLIII

RESULTS OF SCHEFFE TESTS COMPARING FIVE GROUP MEANS FOR THE ALOOFNESS SUBTEST FOR TOTAL GROUP OF TEACHERS AS MEMBERS OF SCHOOL GROUPS

School Group	1	2	3	4	5
1	0.000	0.184	1.703	6.396*	0.050
2		0.000	3.518*	5.014*	0.059
3			0.000	18.465*	3.015*
4				0.000	6.937*
5					0.000

*Significant at .05 level, Degrees of Freedom = 4, 141.

The Scheffé test statistic calculated for each pair of means was compared to the F table value of 2.44 for

determination of significance at the .05 level of significance with 4 and 141 degrees of freedom. As shown by the data of Table XLIII, six of the calculated Scheffé statistics were significant since the statistics exceeded the required table value. For the Aloofness subtest, School 4 differed significantly from Schools 1, 2, 3, and 5; School 2 differed significantly from School 3; and School 3 differed significantly from School 5.

For the Production Emphasis subtest, significant F-values were found for the group factor and for the interaction factor of the ANOVA for repeated measures test. The calculated F-value of 16.326 had an associated probability level of 0.000. The calculated F-value for the interaction factor had an associated probability level of 0.037.

The Scheffé test for comparison of means was used as a follow-up procedure for determining which of the groups were significantly different. Table XLIV presents the results of the Scheffé procedure for the group factor of the ANOVA for repeated measures test of the Production Emphasis subtest of the OCDQ.

The Scheffé test statistic calculated for each pair of means was compared to the F table value of 2.44 for determination of significance at the .05 level of significance with 4 and 141 degrees of freedom. As shown by the data of Table XLIV, five of the calculated Scheffé statistics were significant since the statistics exceeded the required table

value. On the Production Emphasis subtest, School 1 differed significantly from Schools 3 and 5; School 2 differed significantly from Schools 3 and 5; and School 3 also differed significantly from School 4.

TABLE XLIV

RESULTS OF SCHEFFE TESTS COMPARING FIVE GROUP MEANS FOR THE PRODUCTION EMPHASIS SUBTEST FOR TOTAL GROUP OF TEACHERS AS MEMBERS OF SCHOOL GROUPS

School Group	1	2	3	4	5
1	0.000	0.000	9.773*	1.201	4.091*
2		0.000	11.282*	1.395	4.753*
3			0.000	5.333*	1.683
4				0.000	1.093
5					0.000

*Significant at .05 level, Degrees of Freedom = 4, 141.

Figure 4 depicts the mean score for each of the school groups on the Production Emphasis subtest of the OCDQ for the three assessments of climate. The ANOVA for repeated measures test of Production Emphasis found a significant interaction F-value of 2.083 with an associated probability level of 0.037.

To determine where the significant interaction occurred, tests of simple effects for the rows and columns were performed for the Production Emphasis subtest. Table XLV

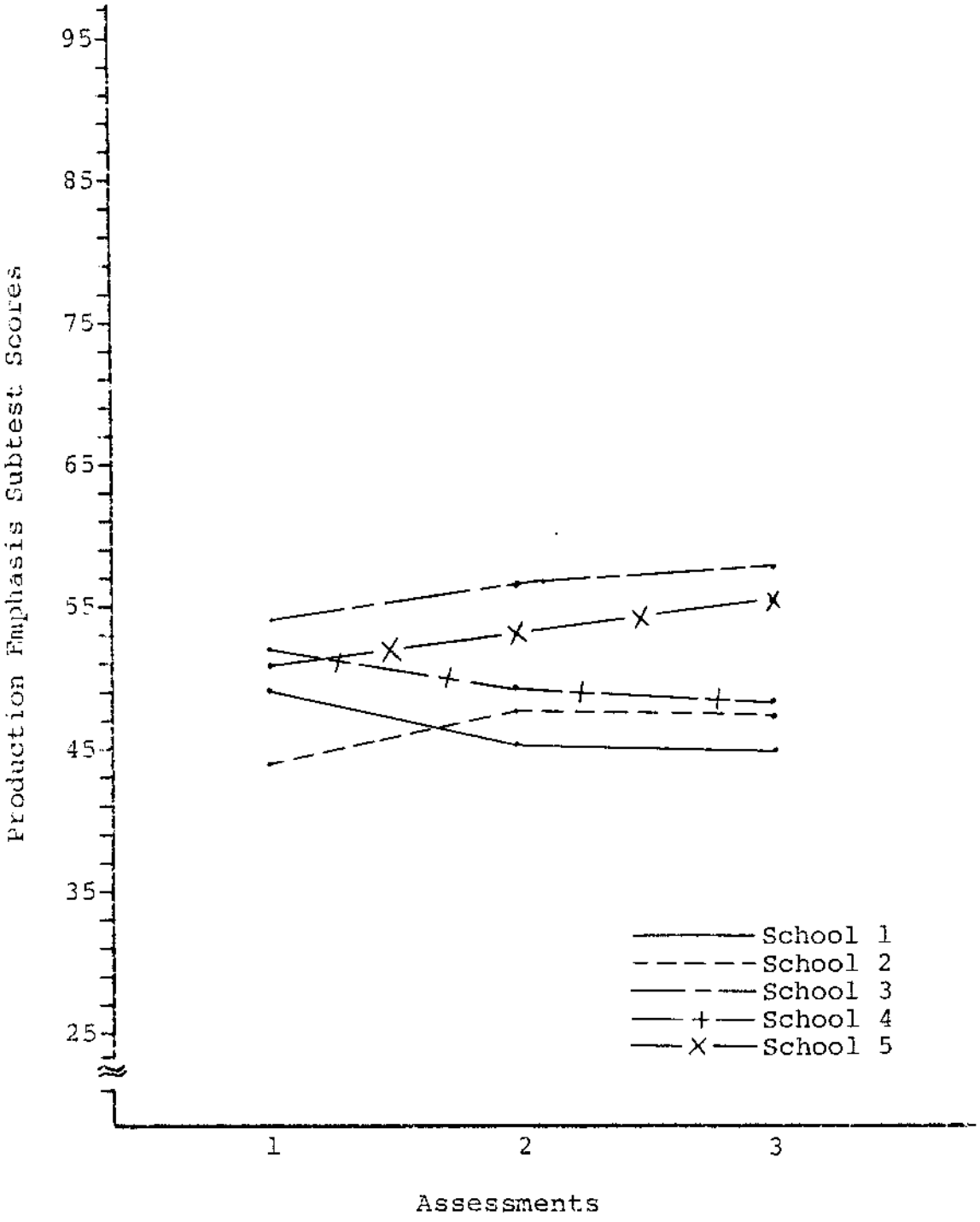


Fig. 4--Profiles of Production Emphasis subtest mean scores for three assessments of climate for teachers in five schools.

presents the results of the ANOVA for repeated measures test performed for each school group for the three assessments of climate. This table displays the means and calculated F-values for the simple effects tests of row variables.

TABLE XLV

MEANS AND F-VALUE FOR FIVE TESTS OF SIMPLE ROW EFFECTS FOR THE PRODUCTION EMPHASIS SUBTEST

School Group	$\bar{X}_1$	$\bar{X}_2$	$\bar{X}_3$	F
1	48.76	45.81	44.52	1.608
2	44.37	47.81	46.89	1.226
3	53.51	57.39	58.45	2.236
4	52.12	49.42	48.06	1.900
5	50.94	52.91	54.53	1.780

*Significant at the .05 level.

The data of Table XLV represent a compilation of data presented in Tables XV through XXVII for the analysis of data by school groups. As indicated in the discussion for Tables XV through XXVII, none of the F-values calculated for the Production Emphasis subtest were significant at the .05 level of significance for the appropriate degrees of freedom.

Table XLVI presents the results of the ANOVA for repeated measures tests performed for each assessment of climate for the five school groups. This table displays the

means and calculated F-values for the simple effects tests of column variables.

TABLE XLVI

MEANS AND F-VALUE FOR THREE TESTS OF SIMPLE COLUMN EFFECTS FOR THE PRODUCTION EMPHASIS SUBTEST

Assessment of Climate	X_1	X_2	X_3	X_4	X_5	F
1	48.76	44.37	53.51	52.12	50.94	4.839*
2	45.81	47.81	57.39	49.42	52.91	6.948*
3	44.52	46.89	58.45	48.06	54.53	11.247*

*Significant at the .05 level.

As shown by the data of Table XLVI, the F-value calculated for each of the three assessments of climate was significant at the .05 level of significance. The F-value calculated for each one way analysis of variance was compared to the F table value of 2.44 for determination of significance at the .05 level of significance with 4 and 141 degrees of freedom.

The Scheffé test for comparison of means was used as a follow-up procedure for determining which of the schools were significantly different from the other schools for each assessment of climate. The results of the Scheffé tests for each assessment of climate are presented in Tables XLVII through XLIX.

The results of the Scheffé tests comparing the five school means for the first assessment of climate are presented in Table XLVII. The five school means are compared by pairs.

TABLE XLVII

RESULTS OF SCHEFFE TESTS COMPARING FIVE SCHOOL MEANS FOR THE PRODUCTION EMPHASIS SUBTEST FOR THE FIRST ASSESSMENT OF CLIMATE

School	1	2	3	4	5
1	0.000	0.754	0.975	0.479	0.204
2		0.000	4.080*	2.953*	2.150
3			0.000	0.118	0.383
4				0.000	0.078
5					0.000

*Significant at the .05 level, Degrees of Freedom = 4, 141.

The Scheffé test statistic calculated for each pair of means was compared to the F table value of 2.44 for determination of significance at the .05 level of significance with 4 and 141 degrees of freedom. As shown by the data of Table XLVII, the calculated Scheffé statistic for the comparison of the means for School 2 and School 3 was significant since the calculated value of 4.080 exceeded the required table value. The calculated Scheffé statistic for the comparison of the means for School 2 and School 4 was

significant since the calculated value of 2.953 also exceeded the required table value.

The results of the Scheffé tests comparing the five school means for the second assessment of climate are presented in Table XLVIII. The five school means are compared by pairs.

TABLE XLVIII

RESULTS OF SCHEFFE TESTS COMPARING FIVE SCHOOL MEANS FOR THE PRODUCTION EMPHASIS SUBTEST FOR THE SECOND ASSESSMENT OF CLIMATE

School	1	2	3	4	5
1	0.000	0.143	5.050*	0.505	1.971
2		0.000	3.979*	0.116	1.176
3			0.000	3.050*	0.977
4				0.000	0.613
5					0.000

Significant at the .05 level, Degrees of freedom = 4, 141.

The Scheffé test statistic calculated for each pair of means was compared to the F table value of 2.44 for determination of significance at the .05 level of significance with 4 and 141 degrees of freedom. As shown by the data of Table XLVIII, the calculated Scheffé statistic for the comparison of the means for School 1 and School 3 was significant since the calculated value of 5.050 exceeded the

required table value. The calculated Scheffé statistic for the comparison of the means for School 2 and School 3 was also significant since the calculated value of 3.979 exceeded the required value. The third significant Scheffé statistic of 3.050 resulted from the comparison of the means for School 3 and School 4.

The results of the Scheffé tests comparing the five school means for the third assessment of climate are presented in Table XLIX. The five school means are compared by pairs.

TABLE XLIX

RESULTS OF SCHEFFE TESTS COMPARING FIVE SCHOOL MEANS FOR THE PRODUCTION EMPHASIS SUBTEST FOR THE THIRD ASSESSMENT OF CLIMATE

School	1	2	3	4	5
1	0.000	0.197	7.251*	0.479	3.880*
2		0.000	5.761*	0.061	2.623*
3			0.000	5.153*	0.745
4				0.000	2.092
5					0.000

*Significant at the .05 level, Degrees of Freedom = 4, 141.

The Scheffé test statistic calculated for each pair of means was compared to the F table value of 2.44 for determination of significance at the .05 level of significance

with 4 and 141 degrees of freedom. As shown by the data of Table XLIX, five significant differences were found by the Scheffé procedure. The calculated Scheffé statistic of 7.251 for the comparison of School 1 and School 3 was significant. The comparison of the means for School 1 and School 5 resulted in a significant Scheffé statistic with the calculated value of 3.880. The calculated value of 5.761 for the comparison of the means for School 2 and School 3 was significant as was the calculated value of 2.623 for the comparison of the means for School 2 and School 5. The fifth significant statistic resulted from the comparison of the means for School 3 and School 4 and had the calculated value of 5.153.

For the Thrust subtest, a significant F-value was found for the assessments factor. The calculated F-value of 11.770 had an associated probability level of 0.000. The Scheffé test for comparison of means was used as a follow-up procedure for determining which of the assessments were significantly different. Table L presents the results of the Scheffé procedure for the assessments factor of the ANOVA for repeated measures test of the Thrust subtest.

The Scheffé test statistic calculated for each pair of means was compared to the F table value of 3.04 for determination of significance at the .05 level of significance with 2 and 282 degrees of freedom. As shown by the data of Table L, the calculated Scheffé statistic for the comparison

of the means for the first and second assessments of Thrust was significant. The Scheffé statistic calculated for the comparison of the first and third assessments of Thrust was also significant.

TABLE L

RESULTS OF SCHEFFE TEST COMPARING THREE ASSESSMENT MEANS FOR THE THRUST SUBTEST FOR THE TOTAL GROUP OF TEACHERS AS MEMBERS OF SCHOOL GROUPS

Assessment of Climate	1	2	3
1	0.000	5.049*	12.710*
2		0.000	1.737
3			0.000

*Significant at the .05 level, Degrees of Freedom = 2, 282.

For the total group of teachers as members of one group, a second series of one-factor ANOVA for repeated measures tests were performed. When a significant F-value was found by the ANOVA for repeated measures procedure, the Scheffé test for comparison of means was used to find the source of the significant difference. The results of the ANOVA for repeated measures tests for the total group of teachers as members of one group are displayed in Table LI.

The F-value calculated for the ANOVA repeated measures test of each subtest was compared to the F table value of 3.04 for determination of significance at the .05 level of

TABLE LI

ANOVA FOR REPEATED MEASURES TESTS FOR OCDQ SUBTEST SCORES FOR THREE CLIMATE ASSESSMENTS FOR TOTAL GROUP OF TEACHERS AS MEMBERS OF ONE GROUP

Source	DF	SS	MS	F	P
1. Disengagement					
Between Subject	145	15510.221			
Within Subjects	292	22584.667			
A (Assessments)	2	594.648	297.324	3.921	0.021*
Residual	290	21990.018	75.828		
Total	437	38094.888			
2. Hindrance					
Between Subject	145	11889.342			
Within Subjects	292	18054.000			
A (Assessments)	2	64.151	32.075	0.517	0.597
Residual	290	17989.849	62.034		
Total	437	29943.342			
3. Esprit					
Between Subject	145	12011.123			
Within Subjects	292	15473.333			
A (Assessments)	2	563.320	281.660	5.478	0.005*
Residual	290	14910.014	51.414		
Total	437	27484.456			
4. Intimacy					
Between Subject	145	16922.073			
Within Subjects	292	15240.000			
A (Assessments)	2	46.922	23.461	0.448	0.639
Residual	290	15193.078	52.390		
Total	437	32162.073			

TABLE LI--Continued

Source	DF	SS	MS	F	P
5. Aloofness					
Between Subject	145	17012.703			
Within Subjects	292	21572.667			
A (Assessments)	2	292.164	146.082	1.991	0.138
Residual	290	21280.502	73.381		
Total	437	38585.370			
6. Production Emphasis					
Between Subject	145	20203.052			
Within Subjects	292	21572.667			
A (Assessments)	2	67.685	33.842	0.456	0.634
Residual	290	21504.982	74.155		
Total	437	41775.719			
7. Thrust					
Between Subject	145	10498.806			
Within Subjects	292	20312.000			
A (Assessments)	2	1652.909	826.454	12.845	0.000*
Residual	290	18659.091	64.342		
Total	437	30810.806			
8. Consideration					
Between Subject	145	18229.772			
Within Subjects	292	25066.000			
A (Assessments)	2	95.347	47.673	0.554	0.575
Residual	290	24970.652	86.106		
Total	437	43295.772			

DF = Degrees of Freedom SS = Sum of Squares MS = Mean Square
*Significant at .05 level.

significance with 2 and 290 degrees of freedom. As shown in Table LI, three significant F-values were found by the ANOVA for repeated measures tests. Significant F-values were found for the Disengagement, Esprit, and Thrust subtests of the OCDQ.

The calculated F-value of 3.921 for the Disengagement subtest was significant at the .05 level of significance and had an associated probability level of 0.021. The Scheffé test for comparison of means was used as a follow-up procedure for determining which of the assessments of the Disengagement subtest were significantly different. The results of the Scheffé procedure are presented in Table LII.

TABLE LII

RESULTS OF SCHEFFE TESTS COMPARING THREE ASSESSMENT MEANS FOR THE DISENGAGEMENT SUBTEST FOR TOTAL GROUP OF TEACHERS AS MEMBERS OF ONE GROUP

Assessment of Climate	1	2	3
1	0.000	1.389	3.870*
2		0.000	0.622
3			0.000

*Significant at the .05 level, Degrees of Freedom = 2, 287.

The Scheffé test statistic calculated for each pair of means was compared to the F table value of 3.40 for

determination of significance at the .05 level of significance with 2 and 287 degrees of freedom. As shown by the data of Table LII, the calculated Scheffé statistic for the comparison of the means for the first and third assessments of Disengagement was significant since the calculated Scheffé statistic of 3.870 exceeded the required table value.

The calculated F-value of 5.478 for the Esprit subtest was significant at the .05 level of significance and had an associated probability level of 0.005. The Scheffé test for comparison of means was used as a follow-up procedure for determining which of the assessments of the Esprit subtest were significantly different. The results of the Scheffé procedure are presented in Table LIII.

TABLE LIII

RESULTS OF SCHEFFE TESTS COMPARING THREE ASSESSMENT MEANS FOR THE ESPRIT SUBTEST FOR TOTAL GROUP OF TEACHERS AS MEMBERS OF ONE GROUP

Assessment of Climate	1	2	3
1	0.000	4.486*	3.693*
2		0.000	0.038
3			0.000

*Significant at the .05 level, Degrees of Freedom = 2, 287.

The Scheffé test statistic calculated for each pair of means was compared to the F table value of 3.40 for

determination of significance at the .05 level of significance with 2 and 287 degrees of freedom. As shown by the data of Table LIII, the calculated statistic for the comparison of the first and second assessments was significant since the calculated value of 4.486 exceeded the required table value. The calculated Scheffé statistic of 3.693 for the comparison of the first and third assessments was also significant at the .05 level of significance.

The calculated F-value of 12.845 for the Thrust subtest was significant at the .05 level of significance and had an associated probability level of 0.000. The Scheffé test for comparison of means was used as a follow-up procedure for determining which of the assessments of the Thrust subtest were significantly different. The results of the Scheffé procedure are presented in Table LIV.

TABLE LIV

RESULTS OF SCHEFFE TESTS COMPARING THREE ASSESSMENT MEANS FOR THE THRUST SUBTEST FOR TOTAL GROUP OF TEACHERS AS MEMBERS OF ONE GROUP

Assessment of Climate	1	2	3
1	0.000	4.990*	12.560*
2		0.000	1.717
3			0.000

*Significant at .05 level, Degrees of Freedom = 2, 287.

The Scheffé test statistic calculated for each pair of means was compared to the F table value of 3.40 for determination of significance at the .05 level of significance with 2 and 287 degrees of freedom. As shown by the data of Table LIV, the calculated statistic for the comparison of the first and second assessments was significant since the calculated value of 4.990 exceeded the required table value. The calculated Scheffé statistic of 12.560 for the comparison of the first and third assessments was also significant at the .05 level of significance.

Subsection B.4 of this research question addressed the question of whether an identifiable pattern of change in teachers' perceptions of organizational climate was indicated by the scores on the OCDQ subtests for the total group of teachers. The pattern of significant and nonsignificant F-values resulting from the ANOVA for repeated measures tests of teachers' perceptions of organizational climate is shown for the total group of teachers as members of school groups in Table LV.

As shown in Table LV, the between subjects factor for the ANOVA for repeated measures tests of the OCDQ subtests resulted in five significant F-values. The within subjects factor for the ANOVA for repeated measures tests had three significant F-values. The interaction factor of the ANOVA for repeated measures tests had one significant F-value.

TABLE LV

SIGNIFICANT AND NONSIGNIFICANT F-VALUES FOR THREE FACTORS OF ANOVA FOR REPEATED MEASURES TESTS FOR THREE CLIMATE ASSESSMENT FOR TOTAL GROUP OF TEACHERS AS MEMBERS OF FIVE SCHOOL GROUPS

Subtest	Between Subjects	Within Subjects	Interaction
Disengagement	*	*	-
Hindrance	-	-	-
Esprit	*	*	-
Intimacy	*	-	-
Aloofness	*	-	-
Production Emphasis	*	-	*
Thrust	-	*	-
Consideration	-	-	-

*Significant F-value. -Nonsignificant F-value.

Following the determination of the significant F-values for the Disengagement, Esprit, Intimacy, Aloofness, Production Emphasis, and Thrust subtests; the Scheffé test was used to determine which groups or assessments were significantly different from the other groups or assessments. The pattern of results for the Scheffé tests for the subtests with significant F-values on the between subjects factor is displayed in Table LVI.

TABLE LVI

RESULTS OF SCHEFFE TESTS COMPARING GROUP MEANS FOR SUBTESTS HAVING SIGNIFICANT F-VALUES FOR ANALYSES OF VARIANCE FOR REPEATED MEASURES FOR THE TOTAL GROUP OF TEACHERS AS MEMBERS OF SCHOOL GROUPS

Subtest School	School				
	1	2	3	4	5
Disengagement					
School 1	-	-	-	-	*
School 2		-	-	*	*
School 3			-	-	*
School 4				-	-
School 5					-
Esprit					
School 1	-	-	-	-	-
School 2		-	-	-	*
School 3			-	-	*
School 4				-	-
School 5					-
Intimacy					
School 1	-	*	-	-	-
School 2		-	*	*	*
School 3			-	-	-
School 4				-	-
School 5					-
Aloofness					
School 1	-	-	-	*	-
School 2		-	*	*	-
School 3			-	*	*
School 4				-	*
School 5					-
Production Emphasis					
School 1	-	-	*	-	*
School 2			*	-	*
School 3			-	*	-
School 4				-	-
School 5					-

As shown in Table LVI, twenty-one significant differences were found by the Scheffé tests. For the Disengagement subtest, School 5 differed significantly with Schools 1, 2, and 3; and School 2 differed significantly from School 4. For the Esprit subtest, School 5 differed significantly from Schools 2 and 3. For the Intimacy subtest, School 2 differed significantly from Schools 1, 3, 4, and 5. For the Aloofness subtest, School 2 differed significantly from School 3; School 4 differed significantly from Schools 1, 2, and 3; and School 5 differed significantly from Schools 3 and 4. For the Production Emphasis subtest, School 3 differed significantly from Schools 1 and 2; School 4 differed significantly from School 3 and School 5 differed significantly from Schools 1 and 2.

The pattern of results for the Scheffé tests for the subtests with significant F-values on the within subjects factor is displayed in Table LVII. The within subjects factor is the repeated measures factor.

As shown in Table LVII, five significant differences were found by the Scheffé tests. Significant differences were found for the Esprit and Thrust subtests when the subtest means for the first and second assessments were compared. Significant differences were found for the Disengagement, Esprit and Thrust subtests when the means for the first and third assessments were compared. No

significant differences were found for the comparison of the means for the second and third assessments.

TABLE LVII

RESULTS OF SCHEFFE TESTS COMPARING ASSESSMENT MEANS FOR SUBTESTS OF THE OCDQ HAVING SIGNIFICANT F-VALUES FOR THE ANALYSES OF VARIANCE FOR REPEATED MEASURES FOR THE TOTAL GROUP OF TEACHERS AS MEMBERS OF SCHOOL GROUPS

Subtest	Pairwise Comparisons of Assessment Means		
	X_1 & X_2	X_1 & X_3	X_2 & X_3
Disengagement	-	*	-
Esprit	*	*	-
Thrust	*	*	-

*Significant Difference. -Nonsignificant Difference.

For the second method of grouping the total group of teachers as members of one group, ANOVA for repeated measures tests were performed on each of the subtests of the ODCQ and three significant F-values were found. The pattern of results for significant and nonsignificant F-values for the analyses of variance for repeated measures with the total group of teachers grouped as members of one group are presented in Table LVIII.

As shown in Table LVIII, three significant differences were found for the ANOVA for repeated measures tests of the subtests of the OCDQ. Significant differences were found

for the Disengagement, Esprit, and Thrust subtests when the total group of teachers were grouped as members of one group.

TABLE LVIII

SIGNIFICANT AND NONSIGNIFICANT F-VALUES FOR THE ANALYSES OF VARIANCE FOR REPEATED MEASURES OF TEACHER PERCEPTION OF CLIMATE FOR THE TOTAL GROUP OF TEACHERS AS MEMBERS OF ONE GROUP

Subtest	Results of ANOVA
Disengagement	*
Hindrance	-
Esprit	*
Intimacy	-
Aloofness	-
Production Emphasis	-
Thrust	*
Consideration	-

*Significant F-Value. -No Significant F-Value.

The pattern of results for the Scheffé tests for the subtests with significant F-values is displayed in Table LIX. Significant and nonsignificant pairwise comparisons are shown.

As shown in Table LIX, five significant differences were found by the Scheffé tests for comparison of means. Significant differences were found for the Esprit and Thrust subtests when the subtest means were compared for the first and second

assessments of climate. Significant differences were found for the Disengagement, Esprit, and Thrust subtests when the means for the first and third assessments were compared. No significant differences were found for the comparison of the means for the second and third assessments.

TABLE LIX

RESULTS OF SCHEFFE TESTS COMPARING THE ASSESSMENT MEANS FOR SUBTESTS HAVING SIGNIFICANT F-VALUES FOR ANALYSES OF VARIANCE FOR REPEATED MEASURES FOR TOTAL GROUP OF TEACHERS AS MEMBERS OF ONE GROUP

Subtest	Pairwise Comparisons of Assessment Means		
	X_1 & X_2	X_1 & X_3	X_2 & X_3
Disengagement	-	*	-
Esprit	*	*	-
Thrust	*	*	-

*Significant Difference. -Nonsignificant Difference

Research Question II

Research Question II concerned changes in principals' perceptions of organizational climate during the first year of operation in new elementary schools. Organizational climate was measured three times during the school year using the eight subtests of the Organizational Climate Description Questionnaire (OCDQ). Data for each of the eight subtests of the OCDQ were analyzed for the principal of each school and for the total group of principals in the study.

Part A of Research Question II dealt with the analysis of data for the principal of each new elementary school. Subsection A.1 of this research question addressed the question of whether the scores on the subtests of the OCDQ indicated that the principal's perceptions of organizational climate in the school had changed during the first year of operation. The climate type identified for each school by the principal's climate similarity index score of the OCDQ was used as a means for determining if changes in the principal's perception of climate had occurred. The climate type identified for each of the schools for the three assessments of organizational climate by the climate similarity index score of the OCDQ for the principal of the school is presented in Table LX.

TABLE LX

ASSESSMENT OF SCHOOL CLIMATE DEFINED BY THE CLIMATE SIMILARITY INDEX SCORES FOR EACH PRINCIPAL FOR THREE ASSESSMENTS OF CLIMATE

School	Climate Assessment 1	Climate Assessment 2	Climate Assessment 3
1	Autonomous	Autonomous	Familiar
2	Autonomous	Autonomous	Closed
3	Familiar	Familiar	Closed
4	Autonomous	Autonomous	Open
5	Autonomous	Controlled	Autonomous

As shown in Table LX, each of the five principals had one change in climate type definition over the three assessments of climate. Four of the five principals identified the Autonomous climate type for two of the three assessments of climate for the school. The Paternal climate type was not defined for any school. The Open and Controlled climate types were identified once each; the Closed climate type was identified twice; the Familiar climate type was identified three times; and the Autonomous climate type was identified eight times.

Subsection A.2 of this research question addressed the question of whether a difference existed between the three assessments of each principal's perception of the organizational climate in the school as climate was measured by the subtests of the OCDQ. A test of significance was not possible since differences between principals or subtests were not compared. To show that the scores for the eight subtests for each of the five principals did indicate that a difference existed between assessments, the subtest scores for each principal were used to construct a graphic profile of the data. Table LXI contains the scores for each principal on the three assessments of climate using the OCDQ subtest scores. Figures 5 through 9 represent each principal's assessment of the climate in the school for each of the three assessments of climate.

TABLE LXI

OCDQ SUBTEST SCORES FOR THREE CLIMATE ASSESSMENTS FOR PRINCIPALS OF FIVE SCHOOLS

Subtest	School 1			School 2			School 3			School 4			School 5		
	X_1	X_2	X_3	X_1	X_2	X_3	X_1	X_2	X_3	X_1	X_2	X_3	X_1	X_2	X_3
Disengagement	41	41	55	53	43	43	57	57	55	43	36	41	53	46	48
Hindrance	47	47	53	39	42	53	42	50	56	50	42	42	42	47	53
Esprit	53	60	45	64	64	45	56	56	31	56	54	66	68	56	58
Intimacy	59	59	56	84	76	53	64	64	45	62	73	62	73	59	62
Aloofness	60	57	52	52	55	43	57	57	55	35	41	35	52	52	55
Production Emphasis	57	40	38	68	65	49	54	46	43	57	40	51	68	62	54
Thrust	45	52	51	56	52	42	52	60	42	52	54	51	51	45	45
Consideration	49	41	49	55	46	49	60	60	35	49	46	71	55	49	46

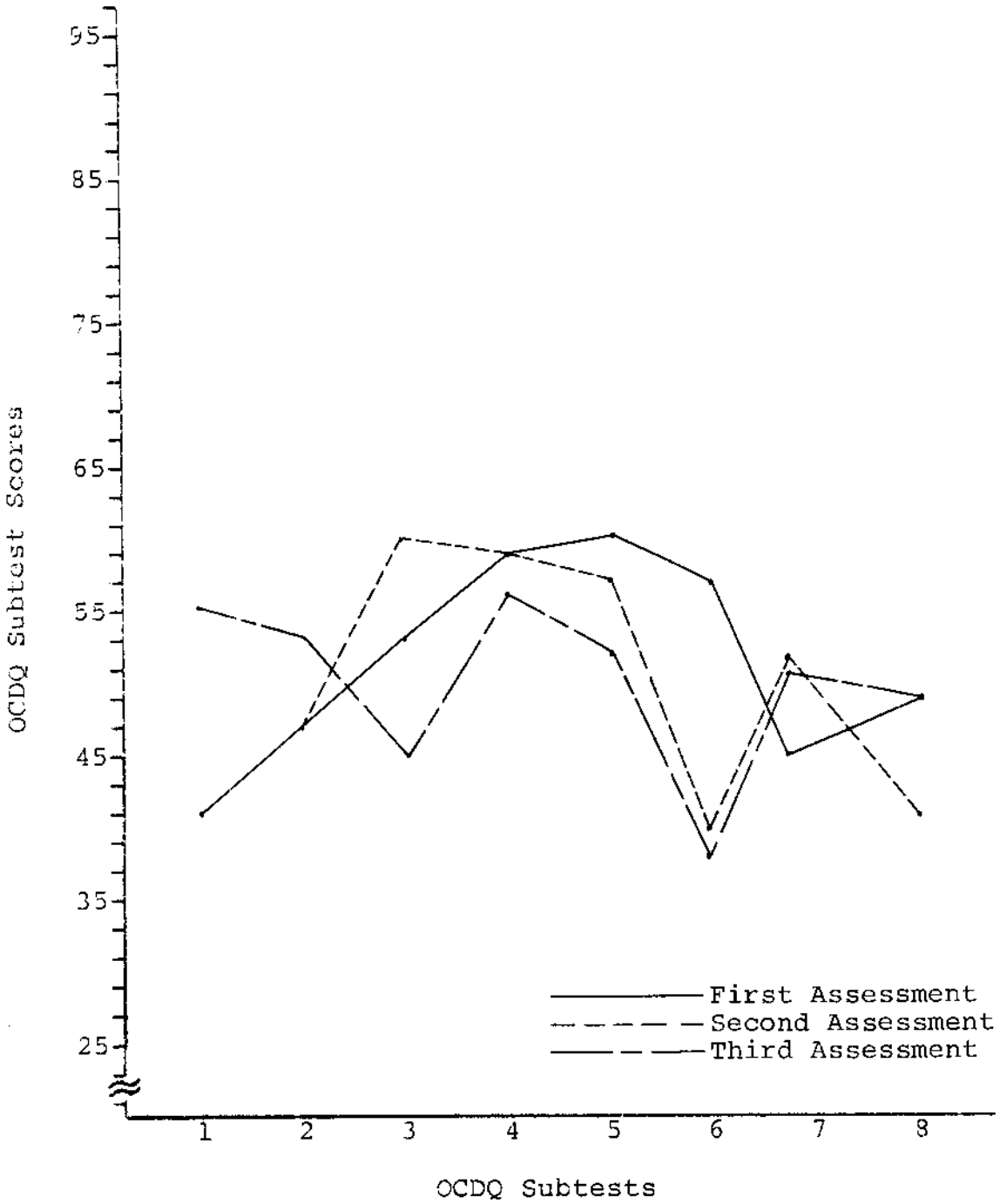
The data of Table LXI show that the subtest scores for each of the five principals did vary over the three assessments of climate. In a number of instances, two of the three scores on a particular subtest for a particular principal are identical. In no instance is the same score repeated for all three assessments of climate.

Figure 5 graphically depicts the subtest scores for the principal of School 1 for the three assessments of organizational climate. The solid line represents the first assessment of climate; the dashed line represents the second assessment of climate; and the uneven-dashed line represents the third assessment of climate.

As shown in Figure 5, the OCDQ subtest scores for the principal of School 1 indicate that a difference exists between the principal's perceptions of the three assessments of climate. The greatest difference is found on the Production Emphasis subtest between the first and third assessments. The least difference is found on the Intimacy subtest.

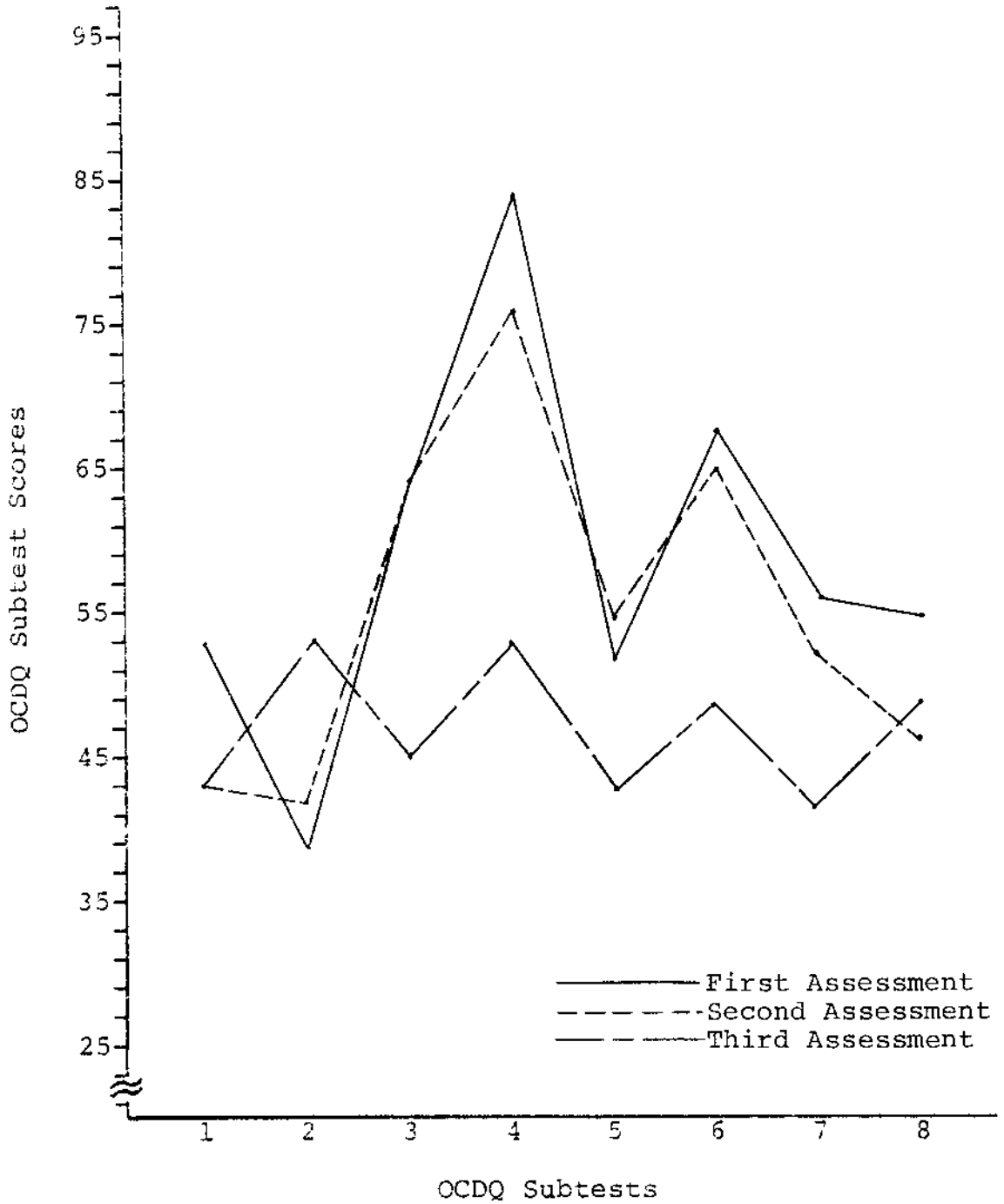
Figure 6 graphically depicts the subtest scores for the principal of School 2 for the three assessments of organizational climate. The solid line represents the first assessment of climate; the dashed line represents the second assessment of climate; and the uneven-dashed line represents the third assessment of climate.

As shown in Figure 6, the OCDQ subtest scores for the principal of School 2 indicate that a difference exists



1 = Disengagement 2 = Hindrance 3 = Esprit
4 = Intimacy 5 = Aloofness 6 = Production Emphasis
7 = Thrust 8 = Consideration

Fig. 5--Profiles of OCDQ subtest scores for three assessments of climate for principal of School 1.



1 = Disengagement 2 = Hindrance 3 = Esprit
4 = Intimacy 5 = Aloofness 6 = Production Emphasis
7 = Thrust 8 = Consideration

Fig. 6--Profiles of OCDQ subtest scores for three assessments of climate for principal of School 2.

between the principal's perceptions of the three assessments of climate. The greatest difference is found on the Intimacy subtest between the first and third assessments. Large differences are also found between the first and third assessments of the Esprit and Production Emphasis subtests. The least difference is found on the Consideration subtest.

Figure 7 graphically depicts the subtest scores for the principal of School 3 for the three assessments of organizational climate. The solid line represents the first assessment of climate; the dashed line represents the second assessment of climate; and the uneven-dashed line represents the third assessment of climate.

As shown in Figure 7, the OCDQ subtest scores for the principal of School 3 indicate that a difference exists between the principal's perceptions of the three assessments of climate. The greatest differences are found on the Esprit and Consideration subtests between the first and third assessments. The least differences are found on the Disengagement and Aloofness subtests.

Figure 8 graphically depicts the subtest scores for the principal of School 4 for the three assessments of organizational climate. The solid line represents the first assessment of climate; the dashed line represents the second assessment of climate; and the uneven-dashed line represents the third assessment of climate.

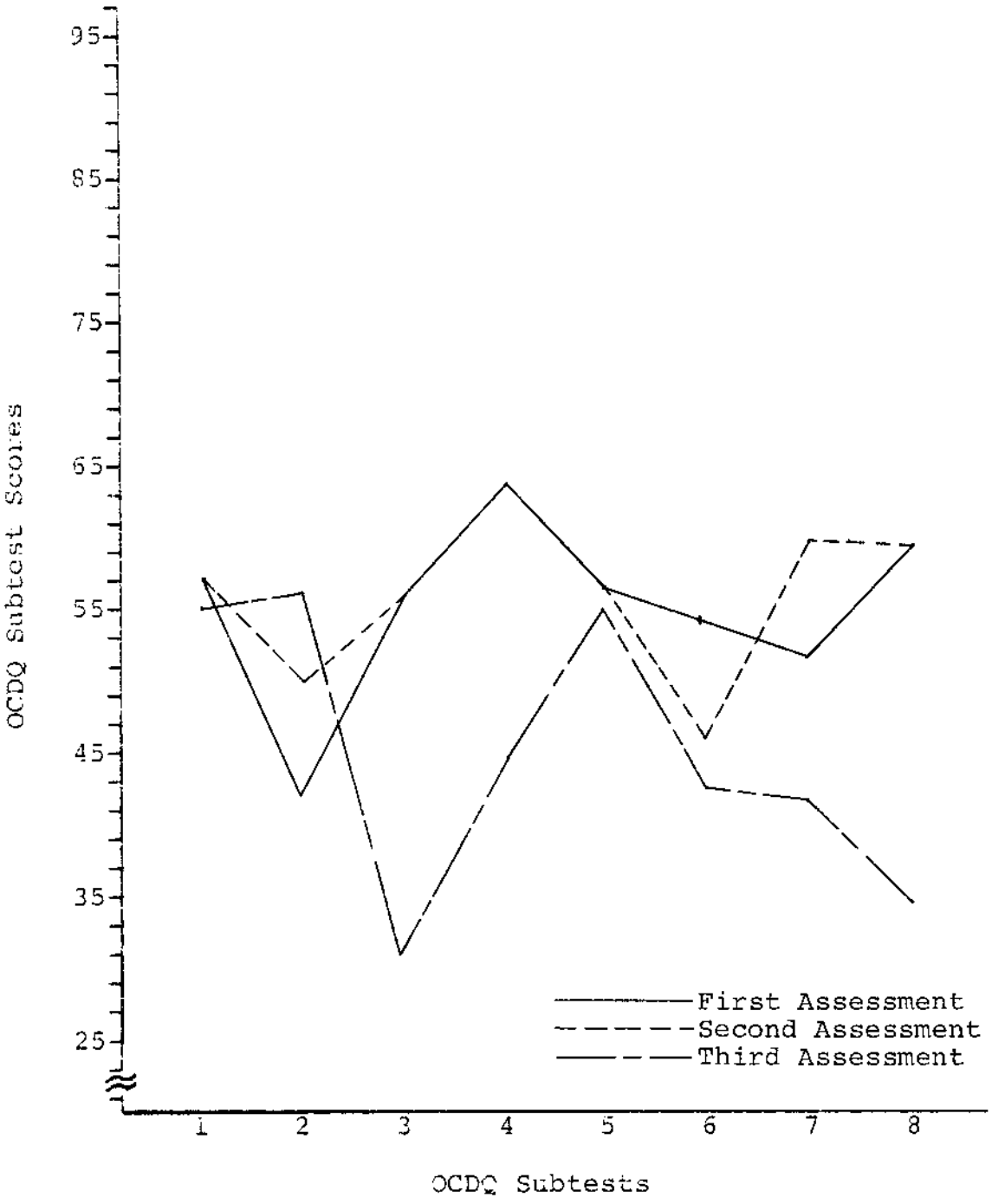
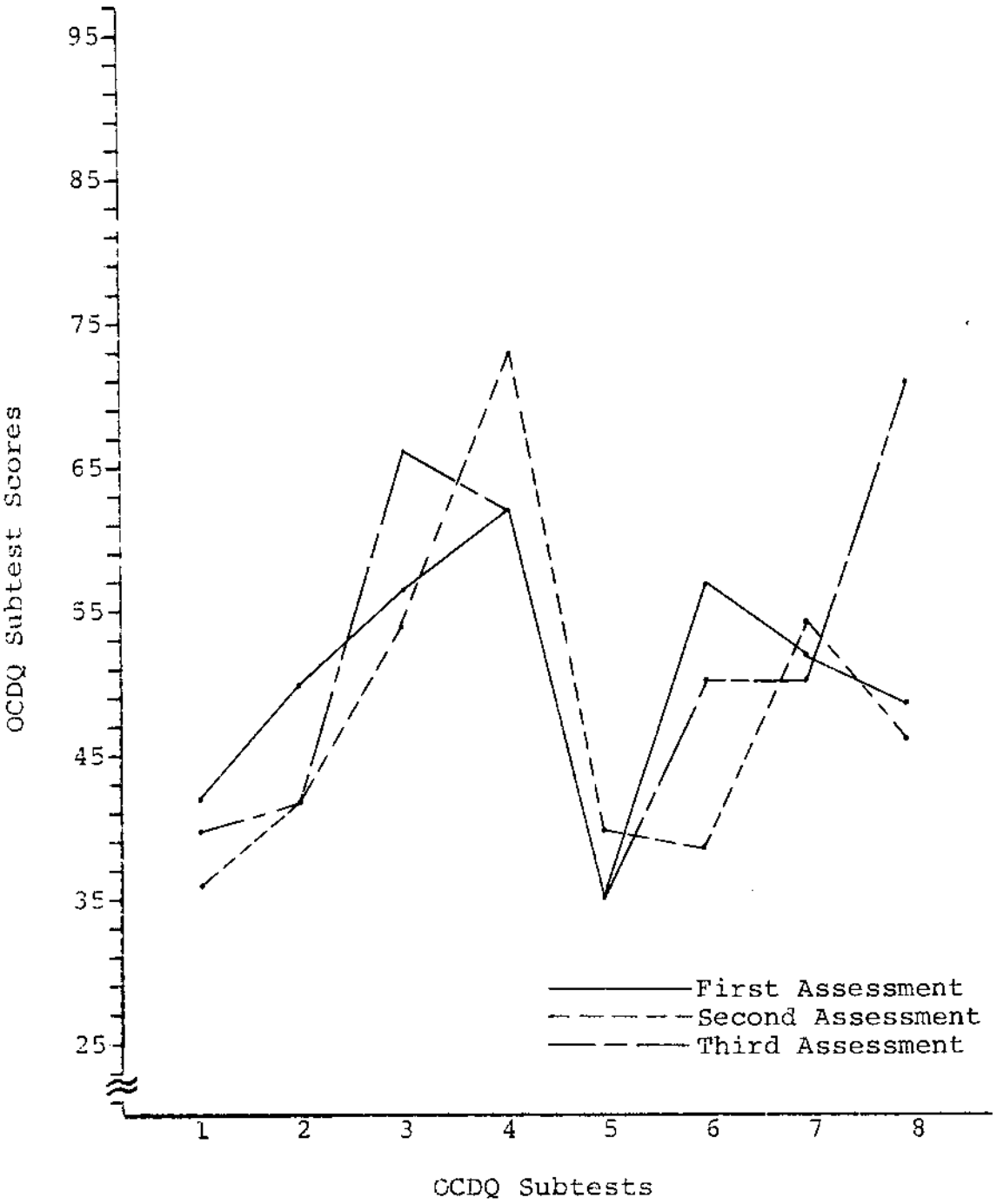


Fig. 7--Profiles of OCDQ subtest scores for three assessments of climate for principal of School 3.



1 = Disengagement 2 = Hindrance 3 = Esprit
4 = Intimacy 5 = Aloofness 6 = Production Emphasis
7 = Thrust 8 = Consideration

Fig. 8--Profiles of OCDQ subtest scores for three assessments of climate for principal of School 4.

As shown in Figure 8, the OCDQ subtest scores for the principal of School 4 indicate that a difference exists between the principal's perceptions of the three assessments of climate. The greatest difference is found on the Consideration subtest between the second and third assessments. The least difference is found on the Thrust subtest.

Figure 9 graphically depicts the subtest scores for the principal of School 5 for the three assessments of organizational climate. The solid line represents the first assessment of climate; the dashed line represents the second assessment of climate; and the uneven-dashed line represents the third assessment of climate.

As shown in Figure 9, the OCDQ subtest scores for the principal of School 5 indicate that a difference exists between the principal's perception of the three assessments of climate. The greatest differences are found between the first and second assessments for the Intimacy subtest and between the first and third assessments for the Production Emphasis subtest. The least difference is found on the Aloofness subtest.

Subsection A.3 of this research question addressed the question of whether an identifiable pattern of change in each principal's perceptions of organizational climate was indicated by the scores on the OCDQ subtests. The scores for each of the three assessments for each of the eight subtests were placed in rank order to determine if a pattern

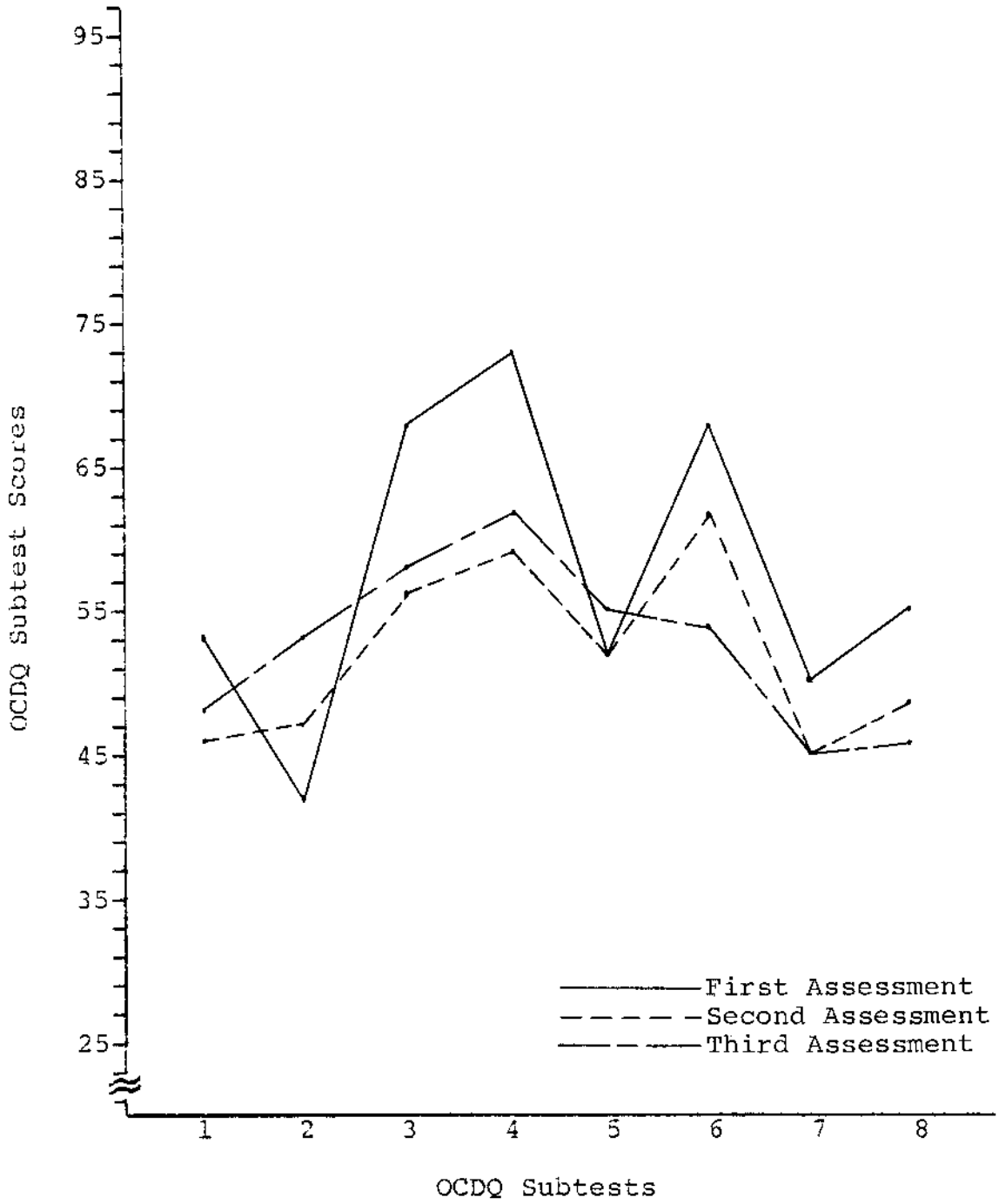


Fig. 9--Profiles of OCDQ subtest scores for three assessments of climate for principal of School 5.

of change could be observed. These data are presented in Tables LXII through LXVI.

Table LXII contains the OCDQ subtest scores and the rank ordering of the scores for the principal of School 1. Subtest scores for each of the three assessments of climate are shown.

TABLE LXII

OCDQ SUBTEST SCORES FOR THREE ASSESSMENTS OF PRINCIPAL'S PERCEPTIONS OF ORGANIZATIONAL AND RANK ORDER OF SUBTEST SCORES--SCHOOL 1

Subtest	OCDQ Subtest Scores			Rank Order/Scores		
	X_1	X_2	X_2	R_1	R_2	R_3
Disengagement	41	41	55	1.5	1.5	3
Hindrance	47	47	53	1.5	1.5	3
Esprit	53	60	45	2	3	1
Intimacy	59	59	56	2.5	2.5	1
Aloofness	60	57	52	3	2	1
Production Emphasis	57	40	38	3	2	1
Thrust	45	52	51	1	2	3
Consideration	49	41	49	2.5	1	2.5

As shown in Table LXII, tied scores occurred on the Disengagement, Hindrance, Intimacy and Consideration subtests. For the Esprit, Intimacy, Aloofness, and Production Emphasis subtests, the lowest of the three scores for each of the

subtests occurred on the third assessment. For the Disengagement, Hindrance, and Thrust subtests, the highest of the three scores for each of the subtests occurred on the third assessment.

Table LXIII contains the OCDQ subtest scores and the rank ordering of the scores for the principal of School 2. Subtest scores for each of the three assessments of climate are shown.

TABLE LXIII

OCDQ SUBTEST SCORES FOR THREE ASSESSMENTS OF PRINCIPAL'S PERCEPTIONS OF ORGANIZATIONAL CLIMATE AND RANK ORDER OF SUBTEST SCORES--SCHOOL 2

Subtest	OCDQ Subtest Scores			Rank Order of Scores		
	X_1	X_2	X_3	R_1	R_2	R_3
Disengagement	53	43	43	3	1.5	1.5
Hindrance	39	42	53	1	2	3
Esprit	64	64	45	2.5	2.5	1
Intimacy	84	76	53	3	2	1
Aloofness	52	55	43	2	3	1
Production Emphasis	68	65	49	3	2	1
Thrust	56	52	42	3	2	1
Consideration	55	46	49	3	1	2

As shown in Table LXIII, tied scores occurred on the Disengagement and Esprit subtests. For the Esprit, Intimacy,

Aloofness, Production Emphasis, and Thrust subtests, the lowest of the three scores for each of the subtests occurred on the third assessment. For the Disengagement, Intimacy, Production Emphasis, Thrust, and Consideration subtests, the highest of the three scores for each of the subtests occurred on the first assessment.

Table LXIV contains the OCDQ subtest scores and the rank ordering of the scores for the principal of School 3. Subtest scores for each of the three assessments of climate are shown.

TABLE LXIV

OCDQ SUBTEST SCORES FOR THREE ASSESSMENTS OF PRINCIPAL'S PERCEPTIONS OF ORGANIZATIONAL CLIMATE AND RANK ORDER OF SUBTEST SCORES--SCHOOL 3

Subtest	OCDQ Subtest Scores			Rank Order of Scores		
	X_1	X_2	X_3	R_1	R_2	R_3
Disengagement	57	57	55	2.5	2.5	1
Hindrance	42	50	56	1	2	3
Esprit	56	56	31	2.5	2.5	1
Intimacy	64	64	45	2.5	2.5	1
Aloofness	57	57	55	2.5	2.5	1
Production Emphasis	54	46	43	3	2	1
Thrust	52	60	42	2	3	1
Consideration	60	60	35	2.5	2.5	1

As shown in Table LXIV, tied scores occurred on the Disengagement, Esprit, Intimacy, Aloofness, and Consideration subtests. For the Disengagement, Esprit, Intimacy, Aloofness, Production Emphasis, Thrust, and Consideration subtests, the lowest of the three scores for each of the subtests occurred on the third assessment. For the Hindrance subtest, the highest of the three scores for the subtest occurred on the third assessment.

Table LXV contains the OCDQ subtest scores and the rank ordering of the scores for the principal of School 4. Subtest scores for each of the three assessments of climate are shown.

As shown in Table LXV, tied scores occurred on the Hindrance, Intimacy, and Aloofness subtests. For the Disengagement, Esprit, Production Emphasis, and Consideration subtests, the lowest of the three scores for each of the subtests occurred on the second assessment.

Table LXVI contains the OCDQ subtest scores and the rank ordering of the scores for the principal of School 5. Subtest scores for each of the three assessments of climate are shown.

As shown in Table LXVI, tied scores occurred on the Aloofness and Thrust subtests. For the Disengagement, Esprit, Intimacy, Production Emphasis, Thrust, and Consideration subtests, the highest of the three scores for each of the subtests occurred on the first assessment.

TABLE LXV

OCDQ SUBTEST SCORES FOR THREE ASSESSMENTS OF PRINCIPAL'S PERCEPTIONS OF ORGANIZATIONAL CLIMATE AND RANK ORDER OF SUBTEST SCORES--School 4

Subtest	OCDQ Subtest Scores			Rank Order of Scores		
	X_1	X_2	X_3	R_1	R_2	R_3
Disengagement	43	36	41	3	1	2
Hindrance	50	42	42	3	1.5	1.5
Esprit	56	54	66	2	1	3
Intimacy	62	73	62	1.5	3	1.5
Aloofness	35	41	35	1.5	3	1.5
Production Emphasis	57	40	51	3	1	2
Thrust	52	54	51	2	3	1
Consideration	49	46	71	2	1	3

Part B of Research Question II dealt with the analysis of data for the total group of principals in the study. Subsection B.1 of this research question addressed the question of whether the scores on the subtests of the OCDQ for the total group of principals indicated that principals' perceptions of organizational climate had changed during the first year of operation in new elementary schools. The data analyzed in Part A of Research Question II indicated that each principal's perceptions of organizational climate in the school the principal administered had changed during the year.

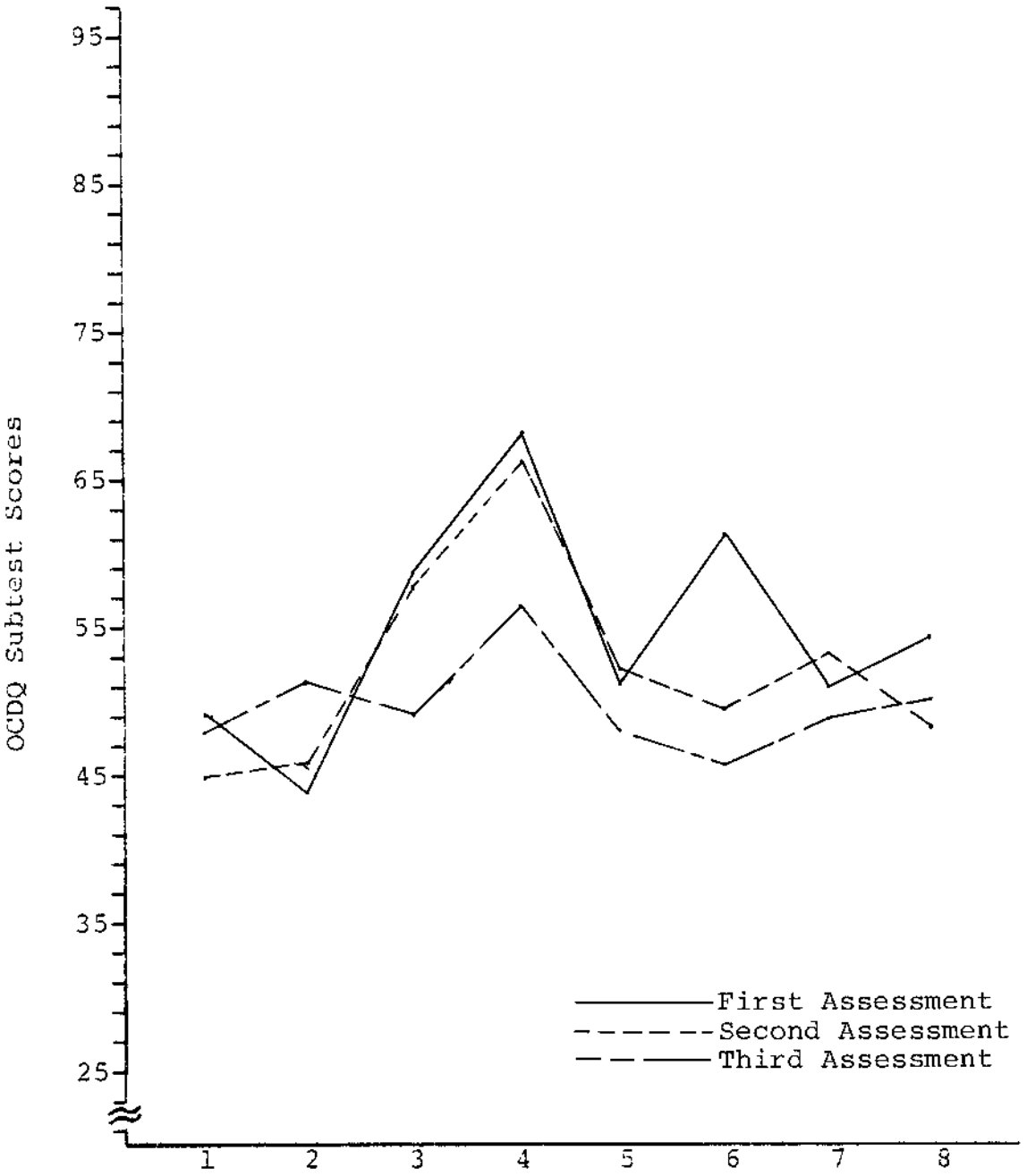
TABLE LXVI

OCDQ SUBTEST SCORES FOR THREE ASSESSMENTS OF PRINCIPAL'S PERCEPTIONS OF ORGANIZATIONAL CLIMATE AND RANK ORDER OF SUBTEST SCORES--SCHOOL 5

Subtest	OCDQ Subtest Scores			Rank Order of Scores		
	X_1	X_2	X_3	R_1	R_2	R_3
Disengagement	53	46	48	3	1	2
Hindrance	42	47	53	1	2	3
Esprit	68	56	58	3	1	2
Intimacy	73	59	62	3	1	2
Aloofness	52	52	55	1.5	1.5	3
Production Emphasis	68	62	54	3	2	1
Thrust	51	45	45	3	1.5	1.5
Consideration	55	49	46	3	2	1

Using the mean score rounded to the nearest whole number for each subtest of the OCDQ for the total group of principals, the profile of scores for the total group of principals for the three assessments of climate is depicted in Figure 10. The solid line represents the first assessment of climate; the dashed line represents the second assessment of climate; and the uneven-dashed line represents the third assessment of climate.

As shown in Figure 10, the OCDQ subtest scores for the total group of principals for the three assessments of climate



1 = Disengagement 2 = Hindrance 3 = Esprit
4 = Intimacy 5 = Aloofness 6 = Production Emphasis
7 = Thrust 8 = Consideration

Fig. 10--Profiles of OCDQ subtest mean scores for total group of principals for three assessments of climate.

indicate that the principals' perception of organizational climate did change. The greatest differences are found on the Intimacy and Production Emphasis subtests. The least differences are found on the Disengagement and Aloofness subtests.

Subsection B.2 of this research question addressed the question of whether different patterns of dispersion existed for the eight subtest scores of the OCDQ for each of the three assessments of principals' perceptions of organizational climate. The mean was selected as the measure of central tendency to be used as an index for describing the group of principals' scores. The measures of dispersion selected to describe the variability within the group of principals' scores were the standard deviation, range of scores, and the variance. The mean, standard deviation, and range of scores for each of the eight subtests of the OCDQ for each of the three assessments of principals' perception of organizational climate are presented in Table LXVII.

An inspection of the data in Table LXVII shows that none of the means for the three assessments of each of the eight subtests are identical. The standard deviations associated with means also vary in value. The largest standard deviation associated with a subtest mean is 13.47 for the Esprit subtest for the third assessment of climate. The smallest standard deviation associated with a subtest is 3.37 associated with the Thrust subtest for the second assessment.

TABLE LXVII

$\bar{X}$, SD, AND RANGE OF SCORES FOR OCDQ SUBTEST SCORES FOR THREE CLIMATE ASSESSMENTS FOR TOTAL GROUP OF PRINCIPALS

Subtest	$\bar{X}_1$	SD_1	$Range_1$	$\bar{X}_2$	SD_2	$Range_2$	$\bar{X}_3$	SD_3	$Range_3$
Disengagement	49.40	6.99	41-57	44.60	7.83	36-57	48.40	6.54	41-55
Hindrance	44.00	4.42	39-50	45.60	3.51	42-50	51.40	5.41	42-56
Esprit	59.40	6.31	53-68	58.00	4.00	54-64	49.00	13.47	31-66
Intimacy	68.40	10.16	59-84	66.20	7.92	59-76	55.60	7.09	45-62
Aloofness	51.20	9.68	35-60	52.40	6.69	41-57	48.00	8.77	35-55
Production Emphasis	60.80	6.69	54-68	48.60	9.68	40-65	45.80	6.53	38-54
Thrust	51.20	3.96	45-56	52.50	3.37	45-60	48.60	8.85	42-51
Consideration	53.60	4.67	49-60	48.40	7.09	41-60	50.00	13.08	35-71

$\bar{X}$ = Mean SD = Standard Deviation

Table LXVIII displays the results of the Hartley Fmax test for homogeneity of variances for the repeated measurements of principals' perceptions of organizational climate. The variances for each of the eight subtests of the OCDQ for the three assessments of climate and the result of the Hartley Fmax test for the three variances associated with each of the subtests are presented.

TABLE LXVIII

VARIANCES AND HARTLEY TEST FOR HOMOGENEITY OF VARIANCES FOR REPEATED MEASUREMENTS OF PRINCIPAL PERCEPTION OF ORGANIZATIONAL CLIMATE USING THE EIGHT SUBTESTS OF THE OCDQ--TOTAL GROUP OF PRINCIPALS

Subtest	$Variance_1$	$Variance_2$	$Variance_3$	F_{max}
Disengagement	48.86	61.31	42.77	1.43
Hindrance	19.54	12.32	29.27	2.38
Esprit	39.82	16.00	181.44	11.34
Intimacy	103.23	62.73	50.27	2.05
Aloofness	93.70	44.76	76.91	2.09
Production Emphasis	44.76	93.70	42.64	2.20
Thrust	15.68	11.36	78.32	6.89
Consideration	21.81	50.27	171.09	7.84

The Fmax statistic calculated for the three variances associated with each of the eight subtests of the OCDQ for the total group of principals was compared to the table

value of 15.50 for rejection of the assumption of equal variances at the .05 level of significance with 3 and 4 degrees of freedom. As shown by the data of Table LXVIII, none of the subtests had an Fmax value which exceeded the required table value.

Subsection B.3 of this research question addressed the question of whether a significant difference existed between the three assessments of principals' perceptions of organizational climate as climate was measured by the subtests of the OCDQ for the total group of principals. To test the existence of a significant difference between the three assessments of climate, one factor analyses of variance (ANOVA) for repeated measures were performed on the eight subtests of the OCDQ using the scores for the total group of principals. When a significant difference was found by the ANOVA for repeated measures procedure, the Scheffe test for comparison of means was used to find the source of the significant difference. The results of the ANOVA for repeated measures tests for the total group of principals are displayed in Table LXIX. The degrees of freedom, sums of squares, mean squares, F-value, and probability level associated with the calculated F-value are reported for each of the eight analyses of variance.

The F-value calculated for the ANOVA for repeated measures test of each subtest was compared to the F table value of 4.46 for determination of significance at the .05 level of significance with 2 and 8 degrees of freedom. As

TABLE LXIX

ANOVA FOR REPEATED MEASURES TESTS FOR OCDQ SUBTEST SCORES FOR THREE CLIMATE ASSESSMENTS FOR TOTAL GROUP OF PRINCIPALS

Source	DF	SS	MS	F	P
1. Disengagement					
Between Subject	4	423.733			
Within Subjects	10	252.000			
A (Assessments)	2	64.133	32.067	1.365	0.309
Residual	8	187.867	23.483		
Total	14	675.733			
2. Hindrance					
Between Subject	4	61.333			
Within Subjects	10	334.667			
A (Assessments)	2	151.600	75.800	3.312	0.089
Residual	8	183.067	22.883		
Total	14	396.000			
3. Esprit					
Between Subject	4	332.400			
Within Subjects	10	935.333			
A (Assessments)	2	318.533	159.267	2.066	0.189
Residual	8	616.800	77.100		
Total	14	1267.733			
4. Intimacy					
Between Subject	4	379.600			
Within Subjects	10	954.000			
A (Assessments)	2	468.400	234.200	3.858	0.067
Residual	8	485.600	60.700		
Total	14	1333.600			

TABLE LXIX--Continued

Source	DF	SS	MS	F	P
5. Aloofness					
Between Subject	4	770.400			
Within Subjects	10	143.333			
A (Assessments)	2	51.733	25.867	2.259	0.167
Residual	8	91.600	11.450		
Total	14	913.733			
6. Production Emphasis					
Between Subject	4	518.267			
Within Subjects	10	842.667			
A (Assessments)	2	636.133	318.067	12.320	0.004*
Residual	8	206.533	25.817		
Total	14	1360.933			
7. Thrust					
Between Subject	4	144.400			
Within Subjects	10	388.000			
A (Assessments)	2	41.200	20.600	0.475	0.638
Residual	8	346.800	43.350		
Total	14	532.400			
8. Consideration					
Between Subject	4	127.333			
Within Subjects	10	916.000			
A (Assessments)	2	70.933	35.467	0.336	0.724
Residual	8	845.067	105.633		
Total	14	1043.333			

DF = Degrees of Freedom SS = Sum of Squares MS = Mean Square
*Significant at .05 level.

shown in Table LXIX, only the ANOVA for the Production Emphasis subtest resulted in a significant F-value. The calculated F-value of 12.320 for the Production Emphasis subtest had an associated probability level of 0.004.

The Scheffé test for comparison of means was used as a follow-up procedure for determining which of the assessments of the Production Emphasis subtest were significantly different. The results of the Scheffé procedure are presented in Table LXX.

TABLE LXX

RESULTS OF SCHEFFE TESTS COMPARING THREE ASSESSMENT MEANS FOR THE PRODUCTION EMPHASIS SUBTEST FOR THE TOTAL GROUP OF PRINCIPALS

Assessment of Climate	1	2	3
1	0.000	7.207*	10.894*
2		0.000	0.380
3			0.000

*Significant at the .05 level, Degrees of Freedom = 2, 5.

The Scheffé test statistic calculated for each pair of means was compared to the F table value of 5.89 for determination of significance at the .05 level of significance with 2 and 5 degrees of freedom. As shown by the data of Table LXX, the calculated Scheffé statistic for the

comparison of the means for the first and second assessments of climate was significant since the calculated Scheffé statistic of 7.207 exceeded the required table value. The calculated Scheffé statistic for the comparison of the means for the first and third assessments of climate was also significant.

Subsection B.4 of this research question addressed the question of whether an identifiable pattern of change in principals' perceptions of organizational climate was indicated by the scores on the OCDQ subtests for the total group of principals. The pattern of significant and non-significant F-values resulting from the analyses of variance for repeated measures of principals' perceptions of organizational climate is shown for the total group of principals in Table LXXI.

TABLE LXXI

SIGNIFICANT AND NONSIGNIFICANT F-VALUES FOR THE ANOVA FOR REPEATED MEASURES TESTS FOR OCDQ SUBTESTS FOR TOTAL GROUP OF PRINCIPALS

Subtest	Results of ANOVA
Disengagement	-
Hindrance	-
Esprit	-
Intimacy	-
Aloofness	-
Production Emphasis	*
Thrust	-
Consideration	-

*Significant F-value. -No Significant F-value.

As shown in Table LXXI, only one significant F-value resulted from the ANOVA for repeated measures tests for the eight subtests of the OCDQ for the total group of principals. The significant F-value was associated with the Production Emphasis subtest.

The pattern of results for the Scheffé tests for the Production Emphasis subtest for the total group of principals is displayed in Table LXXII. Significant and nonsignificant pairwise comparisons are shown.

TABLE LXXII

RESULTS OF SCHEFFE TESTS COMPARING ASSESSMENT MEANS FOR THE PRODUCTION EMPHASIS SUBTEST FOR THE TOTAL GROUP OF PRINCIPALS

Subtest	Pairwise Comparisons of Assessment Means		
	X_1 & X_2	X_1 & X_3	X_2 & X_3
Production Emphasis	*	*	-

*Significant Difference. -Nonsignificant Difference.

As shown in Table LXXII, two significant differences were found using the Scheffé procedure for comparison of means. A significant difference was found between the first and second assessment of climate. A significant difference was also found between the first and third assessments of climate on the Production Emphasis subtest.

Research Question III

Research Question III concerned changes in teachers' perceptions of the leadership behavior of the principals during the first year of operation in new elementary schools. Principal leadership behavior was measured three times during the school year using the Consideration and Structure dimensions of the Supervisory Behavior Description (SBD) questionnaire. Data from each of the dimensions of the SBD were analyzed for the group of teachers in each of the new elementary schools and for the total group of teachers in the study.

Part A of Research Question III dealt with the analysis of data for the group of teachers in each of the new elementary schools. Subsection A.1 of this research question addressed the question of whether the scores on the two dimensions of the SBD indicated that teachers' perceptions of principal leadership behavior had changed during the first year of operation. The mean scores for the two dimensions of the SBD for the groups of teachers in each of the five elementary schools are presented in Table LXXIII.

As shown in Table LXXIII, the means scores for the teachers in each of the elementary schools did vary. For the Consideration dimension of the SBD, the mean scores ranged from 95.05 to 73.71. For the Structure dimension of the SBD, the mean scores ranged from 50.39 to 29.57.

TABLE LXXIII

MEANS FOR SBD DIMENSIONS FOR THREE PRINCIPAL LEADERSHIP BEHAVIOR ASSESSMENTS FOR TEACHERS IN FIVE SCHOOLS

School	Consideration			Structure		
	$\bar{X}_1$	$\bar{X}_2$	$\bar{X}_3$	$\bar{X}_1$	$\bar{X}_2$	$\bar{X}_3$
1	95.05	87.29	91.90	32.95	30.19	29.57
2	91.96	89.15	88.18	34.44	30.52	32.59
3	84.52	82.45	73.71	47.81	47.94	50.39
4	88.49	83.88	83.64	37.42	38.03	36.88
5	87.94	84.23	78.71	40.73	39.50	40.23

Subsection A.2 of this research question addressed the question of whether different patterns of dispersion existed for the scores on the two dimensions of the SBD for the three assessments of teachers' perceptions of the leadership behavior of the principal. The mean was selected as the measure of central tendency to be used for describing the group of scores for each dimension of the SBD in each school. The measures of dispersion selected to describe the variability within the group of scores were the standard deviation, range of scores, and variance. The mean, standard deviation, and range of scores for the two dimensions of the SBD for the three assessments of teachers' perceptions of principal

leadership behavior are presented by school in Table LXXXIV along with the results of the Fmax for homogeneity of variance.

An inspection of the data in Table LXXIV shows that none of the dimension means are identical. A different standard deviation is associated with each dimension mean. The largest standard deviation associated with a dimension mean was 13.94 for the second assessment of the Consideration dimension for School 4. The smallest standard deviation associated with a dimension mean was 4.65 for the second assessment of the Structure dimension for School 4.

The Fmax statistics calculated for the three variances associated with the Consideration and Structure dimensions of the SBD are also reported for each school in Table LXXIV. For School 1 and School 2, the calculated Fmax statistic was compared to the table value of 2.95 for rejection of the assumption of equal variances at the .05 level of significance with 3 variances and respective degrees of freedom of 20 and 26. For School 3, School 4, and School 5, the calculated Fmax statistic was compared to the table value of 2.40 for rejection of the assumption of equal variances at the .05 level of significance with 3 variances and respective degrees of freedom of 30, 32, and 33. As shown in Table LXXIV, the assumption of equal variances was rejected for the Consideration dimension for School 4 since the calculated Fmax statistic of 3.60 exceeded the required table value.

TABLE LXXIV

$\bar{X}$, SD, RANGE OF SCORES AND RESULTS OF FMAX TESTS FOR HOMOGENEITY OF VARIANCE FOR SBD DIMENSIONS FOR THREE PRINCIPAL LEADERSHIP BEHAVIOR ASSESSMENTS FOR TEACHERS IN FIVE SCHOOLS

School Dimension	$\bar{X}_1$	SD_1	$Range_1$	$\bar{X}_2$	SD_2	$Range_2$	$\bar{X}_3$	SD_3	$Range_3$	Fmax
School 1										
Consideration	95.05	9.28	69-109	87.29	6.78	74-97	91.90	7.76	76-109	1.87
Structure	32.95	10.40	17-50	30.19	8.92	13-42	29.57	8.68	16-41	1.44
School 2										
Consideration	91.96	8.42	79-108	89.15	8.29	66-107	88.18	12.34	52-103	2.22
Structure	34.44	8.35	15-50	30.52	8.33	13-44	32.59	7.62	9-46	1.20
School 3										
Consideration	84.52	11.78	64-105	82.45	12.41	55-100	73.71	13.06	44-95	1.23
Structure	47.81	8.77	35-65	47.94	9.61	31-73	50.39	8.47	37-67	1.29
School 4										
Consideration	88.49	7.34	73-101	83.88	13.94	44-107	83.64	13.28	52-102	3.60*
Structure	37.42	5.66	27-47	38.03	4.65	28-47	36.88	6.06	25-48	1.70
School 5										
Consideration	87.94	9.59	66-106	84.23	10.23	49-102	78.71	13.93	50-99	2.11
Structure	40.73	9.38	26-60	39.50	7.00	25-61	40.23	6.80	25-55	1.90

$\bar{X}$ = Mean SD = Standard Deviation

*Significant at .05 level.

Subsection A.3 of this research question addressed the question of whether a significant difference existed between the three assessments of teachers' perceptions of principal leadership behavior as leadership behavior was measured by the dimensions of the SBD. To test the existence of a significant difference between the three assessment of principal leadership behavior, a one-factor analysis of variance (ANOVA) for repeated measures was performed on the group of teachers' scores for each dimension in each school. When a significant difference was found by the ANOVA for repeated measures procedure, the Scheffé test for comparison of means was used to find the source of the significant difference. The results of the analyses of variance for repeated measures and the results of the Scheffe tests are presented in Tables LXXV through LXXXIII.

Table LXXV contains the results of the two ANOVA for repeated measures tests of teachers' perceptions of prinicpal leadership behavior for School 1. The degrees of freedom, sums of squares, mean squares, F-value, and probability level associated with the calculated F-value are reported for each of the ANOVA tests.

The F-value calculated for each ANOVA for repeated measures procedure for School 1 was compared to the F table value of 3.23 for determination of significance at the .05 level of significance with 2 and 40 degrees of freedom. As shown by the data of Table LXXV, the F-value calculated for

TABLE LXXV

ANOVA FOR REPEATED MEASURES TESTS FOR SBD DIMENSIONS FOR THREE PRINCIPAL LEADERSHIP BEHAVIOR ASSESSMENTS FOR TEACHERS OF SCHOOL 1

Source	DF	SS	MS	F	P
1. Consideration					
Between Subjects	20	2065.936			
Within Subjects	42	2419.333			
A (Assessments)	2	640.222	320.111	7.197	0.002*
Residual	40	1779.111	44.478		
Total	62	4485.270			
2. Structure					
Between Subjects	20	3917.429			
Within Subjects	42	1482.000			
A (Assessments)	2	136.095	68.048	2.022	0.146
Residual	40	1345.905	33.648		
Total	62	5399.429			

*Significant at .05 level.

the Consideration dimension of the SBD was found to be significant since the calculated value of 7.197 exceeded the required table value.

The Scheffé test for comparison of means was used as a follow-up procedure for determining which of the assessments of the Consideration dimension were significantly different. The results of the Scheffé procedure are presented in Table LXXVI.

TABLE LXXVI

RESULTS OF SCHEFFE TESTS COMPARING THREE ASSESSMENT MEANS FOR THE CONSIDERATION DIMENSION FOR TEACHERS OF SCHOOL 1

Assessment of Principal Leadership Behavior	1	2	3
1	0.000	7.111*	1.166
2		0.000	2.518
3			0.000

*Significant at .05 level, Degrees of Freedom = 2, 39.

The Scheffé test statistic calculated for each pair of means was compared to the F table value of 3.25 for determination of significance at the .05 level of significance with 2 and 39 degrees of freedom. As shown by the data of Table LXXVI, the calculated Scheffé statistic for the comparison of the means for the first and second assessments of Consideration was significant since the calculated value of 7.111 exceeded the required table value.

Table LXXVII contains the results of the two ANOVA for repeated measures tests of teachers' perceptions of principal leadership behavior for School 2. The degrees of freedom, sums of squares, mean squares, F-value, and probability level associated with the calculated F-value are reported for each of the ANOVA tests.

The F-value calculated for each ANOVA for repeated measures procedure for School 2 was compared to the F table value of 3.18 for determination of significance at the .05 level of significance with 2 and 52 degrees of freedom. As shown by the data of Table LXXVII, the F-value calculated for the Structure dimension of the SBD was found to be significant since the calculated value of 3.253 exceeded the required table value.

The Scheffé test for comparison of means was used as a follow-up procedure for determining which of the assessments of the Structure dimension were significantly different. The results of the Scheffé procedure are presented in Table LXXVIII.

The Scheffé test statistic calculated for each pair of means was compared to the F table value of 3.19 for determination of significance at the .05 level of significance with 2 and 49 degrees of freedom. As shown by the data of Table LXXVIII, the calculated Scheffé statistic for the comparison of the means for the first and second assessments

TABLE LXXVII

ANOVA FOR REPEATED MEASURES TESTS FOR SBD DIMENSIONS FOR THREE PRINCIPAL LEADERSHIP BEHAVIOR ASSESSMENTS FOR TEACHERS OF SCHOOL 2

Source	DF	SS	MS	F	P
1. Consideration					
Between Subjects	26	2479.210			
Within Subjects	54	5323.333			
A (Assessments)	2	208.099	104.049	1.058	0.355
Residual	52	5115.235	98.370		
Total	80	7802.543			
2. Structure					
Between Subjects	26	3458.889			
Within Subjects	54	1873.333			
A (Assessments)	2	208.296	104.148	3.253	0.047*
Residual	52	1665.037	32.021		
Total	80	5332.222			

*Significant at .05 level.

of Structure was significant since the calculated value of 3.249 exceeded the required table value.

TABLE LXXVIII

RESULTS OF SCHEFFE TESTS COMPARING THREE ASSESSMENT MEANS FOR THE STRUCTURE DIMENSION FOR TEACHERS OF SCHOOL 2

Assessment of Principal Leadership Behavior	1	2	3
1	0.000	3.249*	0.723
2		0.000	0.907
3			0.000

*Significant at the .05 level, Degrees of Freedom = 2, 49.

Table LXXIX contains the results of the two ANOVA for repeated measures tests of teachers' perceptions of principal leadership behavior for School 3. The degrees of freedom, sums of squares, mean squares, F-value and probability level associated with the calculated F-value are reported for each of the ANOVA tests.

The F-value calculated for each ANOVA for repeated measures procedure for School 3 was compared to the F table value of 3.15 for determination of significance at the .05 level of significance with 2 and 60 degrees of freedom. As shown by the data of Table LXXIX, the F-value calculated for the consideration dimension of the SBD was found to be

TABLE LXXIX

ANOVA FOR REPEATED MEASURES TESTS FOR SBD DIMENSIONS FOR THREE PRINCIPAL LEADERSHIP BEHAVIOR ASSESSMENTS FOR TEACHERS OF SCHOOL 3

Source	DF	SS	MS	F	P
1. Consideration					
Between Subjects	30	6110.925			
Within Subjects	62	9833.333			
A (Assessments)	2	2040.452	1020.226	7.855	0.001*
Residual	60	7792.882	129.881		
Total	92	15944.258			
2. Structure					
Between Subjects	30	4256.495			
Within Subjects	62	3108.667			
A (Assessments)	2	131.097	65.548	1.321	0.274
Residual	60	2977.570	49.626		
Total	92	7365.161			

*Significant at .05 level.

significant since the calculated value of 7.855 exceeded the required table value.

The Scheffé test for comparison of means was used as a follow-up procedure for determining which of the assessments of the Consideration dimension were significantly different. The results of the Scheffé procedure are presented in Table LXXX.

TABLE LXXX

RESULTS OF SCHEFFE TESTS COMPARING THREE ASSESSMENT MEANS FOR THE CONSIDERATION DIMENSION FOR TEACHERS OF SCHOOL 3

Assessment of Principal Leadership Behavior	1	2	3
1	0.000	0.254	6.968*
2		0.000	4.560*
3			0.000

*Significant at .05 level, Degrees of Freedom = 2, 59.

The Scheffé test statistic calculated for each pair of means was compared to the F table value of 3.17 for determination of significance at the .05 level of significance with 2 and 59 degrees of freedom. As shown by the data of Table LXXX, the calculated Scheffé statistic for the comparison of the means for the first and third assessments of Consideration was significant since the calculated value of 6.968 exceeded the required table value. The comparison

of the means for the second and third assessments of Consideration also resulted in significant results with a calculated value of 4.560.

Table LXXXI contains the results of the two ANOVA for repeated measures tests of teachers' perceptions of principal leadership behavior for School 4. The degrees of freedom, sums of squares, mean squares, F-value, and probability level associated with the calculated F-value are reported for each of the ANOVA tests.

The F-value calculated for each ANOVA for repeated measures procedure for School 4 was compared to the F table value of 3.15 for determination of significance at the .05 level of significance with 2 and 64 degrees of freedom. As shown by the data of Table LXXXI, neither of the F-values calculated for the ANOVA tests exceeded the required table value.

Table LXXXII contains the results of the two ANOVA for repeated measures tests of teachers' perceptions of principal leadership behavior for School 5. The degrees of freedom, sums of squares, mean squares, F-value, and probability level associated with the calculated F-value are reported for each of the ANOVA tests.

The F-value calculated for each ANOVA for repeated measures procedure for School 5 was compared to the F table value of 3.14 for determination of significance at the .05 level of significance with 2 and 66 degrees of freedom. As

TABLE LXXXI

ANOVA FOR REPEATED MEASURES TESTS FOR SBD DIMENSIONS FOR THREE PRINCIPAL LEADERSHIP BEHAVIOR ASSESSMENTS FOR TEACHERS OF SCHOOL 4

Source	DF	SS	MS	F	P
1. Consideration					
Between Subjects	32	4971.333			
Within Subjects	66	9102.667			
A (Assessments)	2	492.606	246.303	1.831	0.169
Residual	64	8610.061	134.532		
Total	98	14074.000			
2. Structure					
Between Subjects	32	1188.444			
Within Subjects	66	1722.000			
A (Assessments)	2	21.899	10.949	0.412	0.664
Residual	64	1700.101	26.564		
Total	98	2910.444			

TABLE LXXXII

ANOVA FOR REPEATED MEASURES TESTS FOR SBD DIMENSIONS FOR THREE PRINCIPAL LEADERSHIP BEHAVIOR ASSESSMENTS FOR TEACHERS OF SCHOOL 5

Source	DF	SS	MS	F	P
1. Consideration					
Between Subjects	33	4853.843			
Within Subjects	68	9508.000			
A (Assessments)	2	1468.784	734.392	6.029	0.004*
Residual	66	8039.216	121.806		
Total	101	14361.843			
2. Structure					
Between Subjects	33	2050.157			
Within Subjects	68	4021.333			
A (Assessments)	2	26.255	13.127	0.217	0.806
Residual	66	3995.078	60.531		
Total	101	6071.490			

*Significant at .05 level.

shown by the data of Table LXXXII, the F-value for the Consideration dimension of the SBD was found to be significant since the calculated value of 6.029 exceeded the required table value.

The Scheffé test for comparison of means was used as a follow-up procedure for determining which of the assessments of the Consideration dimension were significantly different. The results of the Scheffé procedure are presented in Table LXXXIII.

TABLE LXXXIII

RESULTS OF SCHEFFE TESTS COMPARING THREE ASSESSMENT MEANS FOR THE CONSIDERATION DIMENSION FOR TEACHERS OF SCHOOL 5

Assessment of Principal Leadership Behavior	1	2	3
1	0.000	0.958	5.952*
2		0.000	2.134
3			0.000

*Significant at .05 level, Degrees of Freedom = 2, 65.

The Scheffé test statistic calculated for each pair of means was compared to the F table value of 3.14 for determination of significance at the .05 level of significance with 2 and 65 degrees of freedom. As shown by the data of Table LXXXIII, the calculated Scheffé statistic for the comparison of the means for the first and third assessments of the Consideration dimension of the SBD was significant

since the calculated value of 5.952 exceeded the required table value.

Subsection A.4 of this research question addressed the question of whether an identifiable pattern of change in teachers' perceptions of principal leadership behavior was indicated by the scores on the SBD dimensions. The pattern of significant and nonsignificant F-values resulting from the analyses of variance for repeated measures of teachers' perception of principal leadership behavior is shown for each school in Table LXXXIV.

TABLE LXXXIV

SIGNIFICANT AND NONSIGNIFICANT F-VALUES FOR THE ANALYSES OF VARIANCE FOR REPEATED MEASURES OF THE TWO DIMENSIONS OF THE SBD FOR TEACHERS OF FIVE ELEMENTARY SCHOOLS

School	SBD Dimensions	
	Consideration	Structure
1	*	-
2	-	*
3	*	-
4	-	-
5	*	-

*Significant F-value. -Nonsignificant F-value.

As shown in Table LXXXIV, three schools had enough difference between the teachers' scores for the three assessments of the Consideration dimension of the SBD to produce a

significant F-value for the ANOVA for repeated measures test of the dimension. One school had enough difference between the teachers' scores for the three assessments of the Structure dimension of the SBD to produce a significant F-value for the ANOVA for repeated measures test of the dimension. School 1, School 3, and School 5 had significant F-values for the Consideration dimension. School 2 had a significant F-value for the Structure dimension. School 4 had nonsignificant F-values for both the Consideration and Structure dimensions of the SBD.

Following the determination of the significant F-values for the Consideration and Structure dimensions, the Scheffé test was used to determine which assessments of the dimensions were actually different from the other assessments of the dimensions. Five significant differences were identified. The pattern of the results for the Scheffé tests for the Consideration dimension of the SBD is presented in Table LXXXV.

As shown in Table LXXXV, four significant differences were found by the Scheffé tests. For School 1 the significant difference was between the first and second assessments of the Consideration dimension. Two significant differences were found for School 3. These differences were found between the first and third assessments and between the second and third assessments. For School 5 a significant difference was found between the first and third assessments.

TABLE LXXXV

RESULTS OF SCHEFFE TESTS COMPARING ASSESSMENT MEANS FOR CONSIDERATION DIMENSION OF SBD FOR TEACHERS IN FIVE ELEMENTARY SCHOOLS

School	Pairwise Comparisons of Assessment Means		
	X_1 & X_2	X_1 & X_3	X_2 & X_3
1	*	-	-
2	-	-	-
3	-	*	*
4	-	-	-
5	-	*	-

*Significant Difference, -Nonsignificant Difference.

Table LXXXVI contains the pattern of results for the Scheffé tests for the Structure dimension of the SBD. Only School 2 reported a significant F-value for the analysis of variance for repeated measures for the Structure dimension of the SBD.

As shown by the data of Table LXXXVI, only School 2 had a significant F-value resulting from the analysis of variance for repeated measures of the Structure dimension of the SBD. One significant difference was found by the Scheffé procedure for comparison of means. For School 2 the significant difference was found between the first and second assessments of the Structure dimension of the SBD.

TABLE LXXXVI

RESULTS OF SCHEFFE TESTS COMPARING ASSESSMENTS MEANS FOR STRUCTURE DIMENSION OF SBD FOR TEACHERS IN FIVE ELEMENTARY SCHOOLS

School	Pairwise Comparisons of Assessment Means		
	X_1 & X_2	X_1 & X_3	X_2 & X_3
1	-	-	-
2	*	-	-
3	-	-	-
4	-	-	-
5	-	-	-

*Significant Difference. -Nonsignificant Difference.

Part B of Research Question III dealt with the analysis of data for the total group of teachers in the study. Subsection B.1 of this research question addressed the question of whether the scores on the dimensions of the SBD for the total group of teachers indicated that teachers' perceptions of principal leadership behavior had changed during the first year of operation in new elementary schools. The data analyzed in Part A of Research Question III indicated that teachers' perceptions of principal leadership behavior had changed during the year. Using the mean scores rounded to the nearest whole number for the two dimensions of the SBD for the three assessments of principal leadership behavior, a graph of the mean scores for the total group of teachers for the three assessments is depicted in Figure 11.

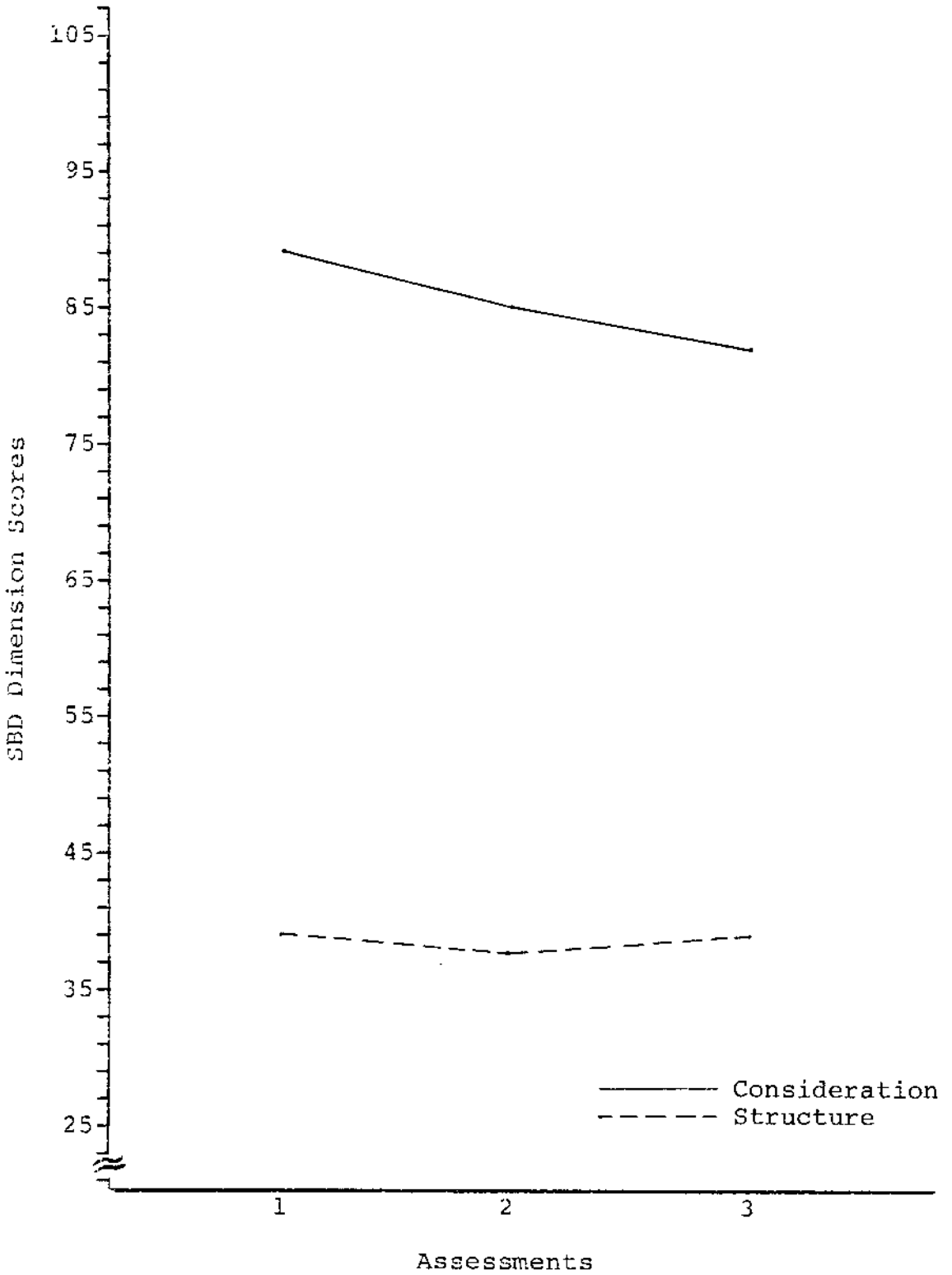


Fig. 11--Profiles of mean scores for SBD dimensions for total group of teachers for three assessments of principal leadership behavior.

As indicated by the profiles for the Consideration and Structure dimensions of the SBD for the total group of teachers, teachers' perceptions of principal leadership behavior did change. The greatest variance occurred on the Consideration dimension with the three rounded mean scores of 89, 85, and 82 for the three assessments.

Subsection B.2 of this research question addressed the question of whether different patterns of dispersion existed for the two dimension scores of the SBD for each of the three assessments of teachers' perceptions of principal leadership behavior. For this subsection of the research question, the total group of teachers in the study was grouped by two methods for the analysis of data. The teachers were grouped (1) as members of the five school groups and (2) as members of one group, and the data were analyzed for each method of grouping teachers. The mean was selected as the measure of central tendency to be used as an index for describing the group of teachers' scores. The measures of dispersion selected to describe the variability within the group of teachers' scores were the standard deviation, range of scores, and the variance. The mean, standard deviation and range of scores for the two dimensions of the SBD for the three assessments of teachers' perceptions of principal leadership behavior are presented for the five schools in Table LXXIV.

As indicated in the discussion of the contents of Table LXXIV, none of the means for the two dimensions of the SBD for the three assessments are identical. A different standard deviation is associated with each mean score.

Table LXXXVII presents the means for the two dimensions of the SBD for the three assessments of principal leadership behavior as leadership behavior was perceived by the 146 teachers in the study grouped as members of one group. The standard deviation and range of scores associated with each are also displayed in the table.

An inspection of the data in Table LXXXVII shows that none of the means for the three assessments of the two dimensions of the SBD are identical. The standard deviations associated with the means also vary in value. The largest standard deviation associated with a mean of 13.89 for the third assessment of the Consideration dimension. The smallest standard deviation associated with a dimension mean is 9.87 for the first assessment of the Structure dimension.

Tables LXXXVIII and LXXXIX display the results of the tests for homogeneity of variances for repeated measures of teachers' perceptions of principal leadership behavior. Two different tests for homogeneity of variances were used. For the variances associated with scores for the total group of teachers grouped as members of the five school groups, the Cochran test for homogeneity of variances was used. The variances for the two dimensions of the SBD for the five

TABLE LXXXVII

$\bar{X}$, SD, AND RANGE OF SCORES FOR SBD DIMENSIONS FOR THREE PRINCIPAL LEADERSHIP BEHAVIOR ASSESSMENTS FOR TOTAL GROUP OF TEACHERS AS MEMBERS OF ONE GROUP

Dimension	$\bar{X}_1$	SD_1	$Range_1$	$\bar{X}_2$	SD_2	$Range_2$	$\bar{X}_3$	SD_3	$Range_3$
Consideration	89.10	9.88	64-109	85.12	11.09	44-107	82.41	13.89	44-109
Structure	39.20	9.87	15-65	37.96	9.97	13-73	38.68	10.19	9-67

school groups and the results of the Cochran tests for homogeneity of variances are displayed in Table LXXXVIII.

TABLE LXXXVIII

VARIANCES AND RESULTS OF THE COCHRAN TESTS FOR HOMOGENEITY OF VARIANCES FOR THREE ASSESSMENTS OF SBD DIMENSIONS FOR TOTAL GROUP OF TEACHERS AS MEMBERS OF FIVE SCHOOL GROUPS

SBD Dimension Variance	School					Cochran C
	1	2	3	4	5	
Consideration						
Variance 1	86.12	70.90	138.77	53.88	91.97	.314
Variance 2	45.97	68.72	154.01	194.32	104.65	.342*
Variance 3	60.22	152.28	170.56	176.36	194.04	.257
Structure						
Variance 1	108.16	69.72	76.91	32.04	87.98	.289
Variance 2	79.57	69.39	92.35	21.62	49.00	.296
Variance 3	75.34	58.06	71.74	36.72	46.24	.261

*Significant at the .05 level.

The Cochran C statistic calculated for the five variances associated with each of the three assessments of the two dimensions of the SBD was compared to the table value of .322 for rejection of the assumption of equal variances at the .05 level of significance with 5 variances and an average sample size of 29 subjects. As shown by the data in Table LXXXVIII the assumption of equal variances was rejected for the second

assessment of the Consideration dimension since the calculated C statistic of .342 exceeded the required table value.

Table LXXXIX presents the three variances associated with the two dimensions of the SBD for the total group of teachers grouped as members of one group. The results of the Hartley Fmax test for homogeneity of variances for each of the dimensions of the SBD are reported.

TABLE LXXXIX

VARIANCES AND HARTLEY TEST FOR HOMOGENEITY OF VARIANCES FOR REPEATED MEASUREMENTS OF TEACHERS' PERCEPTIONS OF PRINCIPAL LEADERSHIP BEHAVIOR USING THE TWO DIMENSIONS OF THE SBD--TOTAL GROUP OF TEACHERS

Dimension	$Variance_1$	$Variance_2$	$Variance_3$	Fmax
Consideration	97.61	122.99	192.93	1.98*
Structure	97.42	99.40	101.81	1.04

DF = 145.

The Fmax statistic calculated for the three variances associated with each of the dimensions of the SBD for the total group of teachers was compared to the table value of 1.85 for rejection of the assumption of equal variances at the .05 level of significance with 3 variances and 145 degrees of freedom. As shown by the data of Table LXXXIX, Fmax statistic calculated for the Consideration dimension

was significant since the calculated value of 1.98 exceeded the required table value.

Subsection B.3 of this research question addressed the question of whether a significant difference existed between the three assessments of teachers' perceptions of principal leadership behavior as leadership behavior was measured by the dimensions of the SBD. To test the existence of a significant difference between the three assessments of principal leadership behavior, two types of ANOVA for repeated measures tests were performed on the dimensions of the SBD with the teachers grouped as (1) members of the five school groups and (2) as members of one group. When a significant difference was found by the ANOVA for repeated measures procedure, the Scheffé test for comparison of means was used to find the source of the significant difference. The results of the ANOVA for repeated measures tests for the total group of teachers as members of school groups are displayed in Table XC. An unweighted means solution was used for the analysis of variance for repeated measures since the group size varied.

The F-value calculated for the group factor of the analysis of variance for repeated measures procedure for each dimension of the SBD was compared to the F table value of 2.44 for determination of significance at the .05 level of significance with 4 and 141 degrees of freedom. The F-value calculated for the assessment or repeated measures

TABLE XC

ANOVA FOR REPEATED MEASURES TESTS FOR SBD DIMENSIONS FOR THREE PRINCIPAL LEADERSHIP BEHAVIOR ASSESSMENTS FOR TOTAL GROUP OF TEACHERS AS MEMBERS OF FIVE SCHOOL GROUPS

Source	DF	SS	MS	F	P
Consideration					
Between Subject	145				
B (Groups)	4	7037.119	1759.280	12.112	0.000*
Error B	141	20481.248	145.257		
Within Subjects	292				
A (Assessments)	2	2960.738	1480.369	13.322	0.000*
AB (Interaction)	8	1629.170	203.646	1.833	0.071
Error W	282	31336.504	111.122		
Structure					
Between Subject	145				
B (Groups)	4	16987.545	4246.886	40.266	0.000*
Error B	141	14871.413	105.471		
Within Subjects	292				
A (Assessments)	2	146.301	73.151	1.766	0.173
AB (Interaction)	8	415.898	51.987	1.255	0.267
Error W	282	11683.691	41.431		

*Significant at .05 level. DF = Degrees of Freedom, SS = Sum of Squares, MS = Mean Square

factor of the analysis of variance for repeated measures procedure for each dimension of the SBD was compared to the F table value of 3.04 for determination of significance at the .05 level of significance with 2 and 282 degrees of freedom. The F-value calculated for the interaction factor of the analysis of variance for repeated measures procedure for each dimension of the SBD was compared to the F table value of 1.98 for determination of significance at the .05 level of significance with 8 and 282 degrees of freedom. As shown by the data of Table XC, three significant F-values were found. The calculated F-value for the group factor of the Consideration dimension of the SBD was significant since the calculated value of 12.112 exceeded the required table value. For the Consideration dimension of the SBD, the assessments factor was also found significant with a calculated F-value of 13.322. The calculated F-value for the group factor of the Structure dimension of the SBD was significant since the calculated value of 40.266 exceeded the required table value. For the three significant F-values, the associated probability level for each calculated F-value was 0.000.

For the Consideration dimension of the SBD, significant F-values were found for the group factor and for the assessments factor. The Scheffé test for comparison of means was used as a follow-up procedure for determining which of the groups and which of the assessments were significantly

different. Table XCI presents the results of the Scheffé procedure for the group factor of the ANOVA for repeated measures test for the Consideration dimension of the SBD.

TABLE XCI

RESULTS OF SCHEFFE TESTS COMPARING FIVE GROUP MEANS FOR THE CONSIDERATION DIMENSION FOR THE TOTAL GROUP OF TEACHERS AS MEMBERS OF SCHOOL GROUPS

School	1	2	3	4	5
1	0.000	0.165	8.089*	2.449*	4.063*
2		0.000	6.781*	1.506	2.927*
3			0.000	2.153	0.969
4				0.000	0.252
5					0.000

*Significant at .05 level, Degrees of Freedom = 4, 141.

The Scheffé test statistic calculated for each pair of means was compared to the F table value of 2.44 for determination of significance at the .05 level of significance with 4 and 141 degrees of freedom. As shown by the data of Table XCI, five significant differences were found. On the Consideration dimension of the SBD, School 1 differed significantly from School 3; School 1 differed significantly from School 4; School 1 differed significantly from School 5; School 2 differed significantly from School 3; and School 2 differed significantly from School 5.

Table XCII presents the results of the Scheffé procedure for the assessments factor of the ANOVA for repeated measures test for the Consideration dimension of the SBD. The assessment means are compared by pairs.

TABLE XCII

RESULTS OF SCHEFFE TESTS COMPARING ASSESSMENT MEANS FOR THE CONSIDERATION DIMENSION FOR THE TOTAL GROUP OF TEACHERS AS MEMBERS OF SCHOOL GROUPS

Assessment of Principal Leadership Behavior	1	2	3
1	0.000	5.202*	14.709*
2		0.000	2.416
3			0.000

*Significant at .05 level, Degrees of Freedom = 2, 282.

The Scheffé test statistic calculated for each pair of means was compared to the F table value of 3.04 for determination of significance at the .05 level of significance with 2 and 282 degrees of freedom. As shown by the data of Table XCII, two significant differences were found. The calculated Scheffé statistic for the comparison of the means for the first and second assessments of the Consideration dimension was significant since the calculated value of 5.202 exceeded the required table value. The calculated value of 14.709 for the comparison of the first and third

assessments of the Consideration dimension was also found significant.

For the Structure dimension of the SBD, a significant F-value was found for the group factor of the ANOVA for repeated measures test. The Scheffé test for comparison of means was used as a follow-up procedure for determining which of the groups were significantly different. Table XCIII presents the results of the Scheffé procedure for the group factor of the ANOVA for repeated measures test for the Structure dimension of the SBD.

TABLE XCIII

RESULTS OF SCHEFFE TESTS COMPARING FIVE GROUP MEANS FOR THE STRUCTURE DIMENSION FOR TOTAL GROUP OF TEACHERS AS MEMBERS OF SCHOOL GROUPS

School	1	2	3	4	5
1	0.000	0.219	28.222*	3.903*	7.902*
2		0.000	26.902*	2.562*	6.244*
3			0.000	14.425*	8.435*
4				0.000	0.876
5					0.000

*Significant at .05 level, Degrees of Freedom = 4, 141.

The Scheffé test statistic calculated for each pair of means was compared to the F table value of 2.44 for determination of significance at the .05 level of significance

with 4 and 141 degrees of freedom. As shown by the data of Table XCIII, eight of the calculated Scheffé statistics were significant since the calculated values exceeded the required table value. On the Structure dimension of the SBD, significant differences were found between School 1 and School 3, School 1 and School 4, School 1 and School 5, School 2 and School 3, School 2 and School 4, School 2 and School 5, School 3 and School 4, and School 3 and School 5.

For the total group of teachers as members of one group, a second series of one-factor ANOVA for repeated measures tests were performed. When a significant F-value was found by the ANOVA for repeated measures procedure, the Scheffé test for comparison of means was used to find the source of the significant difference. The results of the ANOVA for repeated measures tests for the total group of teachers as members of one group are displayed in Table XCIV.

The F-value calculated for the ANOVA for repeated measures test for each subtest was compared to the F table value of 3.04 for determination of significance at the .05 level of significance with 2 and 290 degrees of freedom. As shown in Table XCIV, the F-value calculated for the Consideration dimension of the SBD was significant since the calculated F-value of 14.588 exceeded the required table value.

The Scheffé test for comparison of means was used as a follow-up procedure for determining which of the assessments of the Consideration dimension of the SBD were significantly

TABLE XCIV

ANOVA FOR REPEATED MEASURES TESTS FOR SBD DIMENSIONS FOR THREE PRINCIPAL LEADERSHIP BEHAVIOR ASSESSMENTS FOR TOTAL GROUP OF TEACHERS AS MEMBERS OF ONE GROUP

Source	DF	SS	MS	F	P
1. Consideration					
Between Subjects	145	27103.902			
Within Subjects	292	36186.667			
A (Assessments)	2	3308.005	1654.002	14.588	0.000*
Residual	290	32878.662	113.375		
Total	437	63290.587			
2. Structure					
Between Subjects	145	31454.943			
Within Subjects	292	12238.000			
A (Assessments)	2	104.402	52.201	1.248	0.289
Residual	290	12133.598	41.840		
Total	437	43692.943			

*Significant at .05 level.

different. The results of the Scheffé procedure are presented in Table XCV.

TABLE XCV

RESULTS OF THE SCHEFFE TESTS COMPARING THE ASSESSMENT MEANS FOR THE CONSIDERATION DIMENSION OF THE SBD FOR THE TOTAL GROUP OF TEACHERS AS MEMBERS OF ONE GROUP

Assessment of Principal Leadership Behavior	1	2	3
1	0.000	5.098*	14.416*
2		0.000	2.368
3			0.000

*Significant at .05 level, Degrees of Freedom 2, 287.

The Scheffé test statistic calculated for each pair of means was compared to the F table value of 3.40 for determination of significance at the .05 level of significance with 2 and 287 degrees of freedom. As shown by the data of Table XCV, the calculated statistic for the comparison of the first and second assessments was significant since the calculated value of 5.098 exceeded the required table value. The calculated Scheffé statistic of 14.416 for the comparison of the first and third assessments was also significant at the .05 level of significance.

Subsection B.4 of this research question addressed the question of whether an identifiable pattern of change in

teachers' perceptions of principal leadership behavior was indicated by the scores on the dimensions of the SBD for the total group of teachers. The pattern of significant and nonsignificant F-values resulting from the ANOVA for repeated measures tests of teachers' perceptions of principal leadership behavior is shown for the total group of teachers as members of school groups in Table XCVI.

TABLE XCVI

SIGNIFICANT AND NONSIGNIFICANT F-VALUES FOR THE THREE MAIN EFFECT FACTORS OF THE ANALYSES OF VARIANCE FOR REPEATED MEASURES OF TEACHERS' PERCEPTIONS OF PRINCIPAL LEADERSHIP BEHAVIOR

Dimension	Between Subjects	Within Subjects	Interaction
Consideration	*	*	-
Structure	*	-	-

*Significant F-value. -Nonsignificant F-value.

As shown in Table XCVI, the between subjects factor of the ANOVA for repeated measures tests were significant for both the Consideration and Structure dimensions of the SBD. For the Consideration dimension, the within subjects factor had a significant F-value. No significant F-values were associated with the interaction factor of the ANOVA for repeated measures tests.

Following the determination of the significant F-values for the Consideration and Structure dimensions of the SBD,

the Scheffé test for comparison of means was used to determine which groups of assessments differed significantly. The pattern of results for the Scheffé tests for the two dimensions of the SBD for the between subjects factor of the analysis of variance for repeated measures procedure is displayed in Table XCVII.

TABLE XVCII

RESULTS OF THE SCHEFFE TESTS COMPARING GROUP MEANS FOR DIMENSIONS OF THE SBD HAVING SIGNIFICANT F-VALUES FOR THE ANALYSES OF VARIANCE FOR REPEATED MEASURES FOR TOTAL GROUP OF TEACHERS AS MEMBERS OF SCHOOL GROUPS

SBD Dimension School	School				
	1	2	3	4	5
Consideration					
School 1	-	-	*	*	*
School 2		-	*	-	*
School 3			-	-	-
School 4				-	-
School 5					-
Structure					
School 1	-	-	*	*	*
School 2		-	*	*	*
School 3			-	*	*
School 4				-	-
School 5					-

*Significant F-value. -Nonsignificant F-value.

As shown in Table XCVII, thirteen significant differences were found by the Scheffé tests. School 1 differed significantly from Schools 3, 4, and 5 on both the Consideration and Structure dimensions of the SBD. School 2 differed significantly from Schools 3 and 5 on the Consideration dimension and from Schools 3, 4, and 5 on the Structure dimension. School 3 differed significantly from Schools 1 and 2 on both dimensions of the SBD. School 4 differed significantly from School 1 on the Consideration dimension and from Schools 1, 2, and 3 on the Structure dimension. School 5 differed significantly from Schools 1 and 2 on the Consideration dimension and from Schools 1, 2, and 3 on the Structure dimension.

The pattern of results for the Scheffé tests for the dimensions of the SBD on the within subjects factor is displayed in Table XCVIII. The within subjects factor is the repeated measures factor.

XCVIII

RESULTS OF THE SCHEFFE TESTS COMPARING THE ASSESSMENT MEANS FOR THE CONSIDERATION DIMENSION OF THE SBD FOR THE TOTAL GROUP OF TEACHERS AS MEMBERS OF SCHOOL GROUPS

SBD Dimension	Pairwise Comparisons of Assessment Means		
	X_1 & X_2	X_1 & X_3	X_2 & X_3
Consideration	*	*	-

*Significant F-value. -Nonsignificant F-value.

For the second method of grouping the total group of teachers as members of one group, analyses of variance for repeated measures were performed on each dimension of the SBD. The ANOVA for repeated measures test for the Consideration dimension produced a significant F-value. The pattern of results for the Scheffé tests for the Consideration dimension is displayed in Table XCIX. Significant and nonsignificant pairwise comparisons are shown in the table.

TABLE XCIX

RESULTS OF THE SCHEFFE TESTS COMPARING THE ASSESSMENT MEANS FOR THE CONSIDERATION DIMENSION OF THE SBD FOR THE TOTAL GROUP OF TEACHERS AS MEMBERS OF ONE GROUP

	Pairwise Comparison of Assessment Means		
	X_1 & X_2	X_1 & X_3	X_2 & X_3
Consideration	*	*	-

*Significant F-value. -Nonsignificant F-value.

As shown in Table XVIX, two significant differences were found using the Scheffé procedure as a follow-up procedure for the ANOVA for repeated measures test for the Consideration dimension of the SBD for the total group of teachers as members of one group. Significant differences were found between the first and second assessments and between the first and third assessments of principal leadership behavior.

Research Question IV

Research Question IV concerned changes in principals' perceptions of principal leadership behavior during the first year of operation in new elementary schools. Principal leadership behavior was measured three times during the school year using the two dimensions of the Supervisory Behavior Description (SBD) questionnaire. Data from the two dimensions of the SBD were analyzed for the principal of each school and for the total group of principals in the study.

Part A of Research Question IV dealt with the analysis of data for the principal of each new elementary school. Subsection A.1 of this research question addressed the question of whether the scores on the dimensions of the SBD indicated that the principal's perceptions of principal leadership behavior in the school had changed during the first year of operation. The scores of each principal for the two dimensions of the SBD for the three assessments of principal leadership behavior are presented in Table C.

The data of Table C show that the scores for each principal for the three assessments of principal leadership behavior did vary. The largest score recorded for the Consideration dimension of the SBD was 104 for the third assessment by the principal of School 4. The lowest score recorded for the Consideration dimension was 51 for the third assessment by the principal of School 3. The largest score recorded for the Structure dimension of the SBD was 59 for

TABLE C

SBD DIMENSION SCORES FOR THREE PRINCIPAL LEADERSHIP BEHAVIOR ASSESSMENTS FOR PRINCIPALS OF FIVE SCHOOLS

School Dimension	X_1	X_2	X_3
School 1			
Consideration	87	92	82
Structure	38	36	37
School 2			
Consideration	93	90	87
Structure	50	34	37
School 3			
Consideration	77	67	51
Structure	59	58	44
School 4			
Consideration	92	63	104
Structure	37	31	36
School 5			
Consideration	80	76	71
Structure	45	39	43

the first assessment by the principal of School 3. The lowest score recorded for the Structure dimension was 31 for the second assessment by the principal of School 4.

Subsection A.2 of this research question addressed the question of whether a difference existed between the three assessments of each principal's perceptions of principal leadership behavior in the school as leadership behavior was measured by the dimensions of the SBD. A test of significance was not possible since differences between principals or dimensions were not compared. To determine if the scores for the SBD dimensions for each of the five principals indicated that a difference existed between assessments, the dimension scores for each principal were used to construct a graphic profile of the data. Figures 12 through 16 represent each principal's assessment of principal leadership behavior in the school for each of the three assessments of leadership behavior.

Figure 12 graphically depicts the dimension scores for the principal of School 1 for the three assessments of principal leadership behavior using the dimensions of the SBD. The solid line represents the Consideration dimension and the dashed line represents the Structure dimension.

As shown in Figure 12, the scores for the principal of School 1 did vary on both the Consideration and Structure dimensions of the SBD. The greatest change in scores occurred on the second assessment when the score for

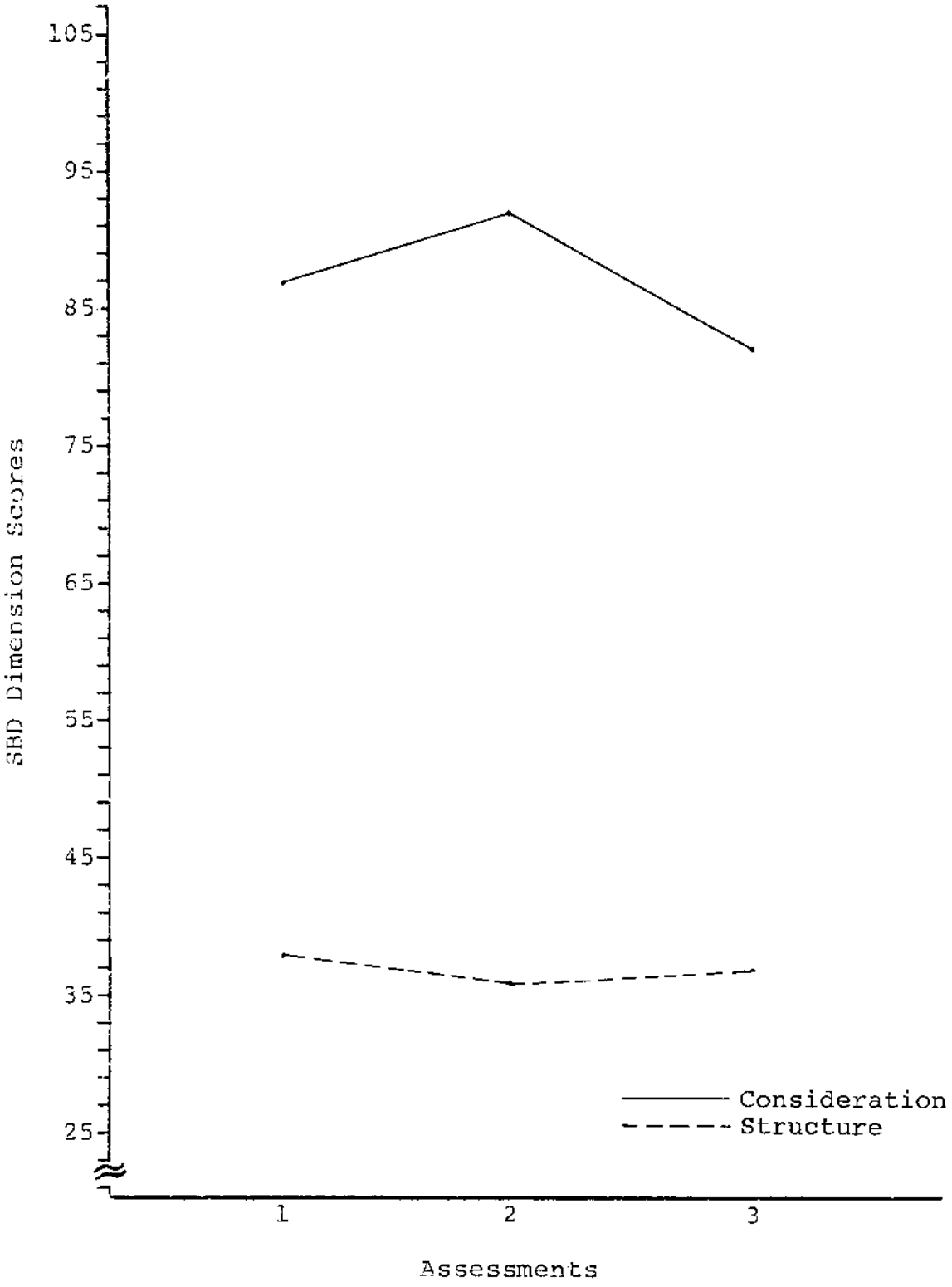


Fig. 12--Profiles of scores for SBD dimensions for three assessments of principal leadership behavior for principal of School 1.

Consideration rose to its highest value of 92 and the score for Structure dropped to its lowest value of 36.

Figure 13 graphically depicts the dimension scores for the principal of School 2 for the three assessments of principal leadership behavior using the dimensions of the SBD. The solid line represents the Consideration dimension and the dashed line represents the Structure dimension.

As shown in Figure 13, the scores for the principal of School 2 did vary on both the Consideration and Structure dimensions of the SBD. The greatest change in scores occurred on the second assessment where the score for Consideration dropped from 93 to 90 and the score for Structure dropped to its lowest value of 34.

Figure 14 graphically depicts the dimension scores for the principal of School 3 for the three assessments of principal leadership behavior using the dimensions of the SBD. The solid line represents the Consideration dimension and the dashed line represents the Structure dimension.

As shown in Figure 14, the scores for the principal of School 3 did vary on both the Consideration and Structure dimensions of the SBD. The greatest change occurred on the third assessment where the Consideration score dropped to its lowest value of 51 and the Structure score dropped to its lowest value of 44.

Figure 15 graphically depicts the dimension scores for the principal of School 4 for the three assessments of

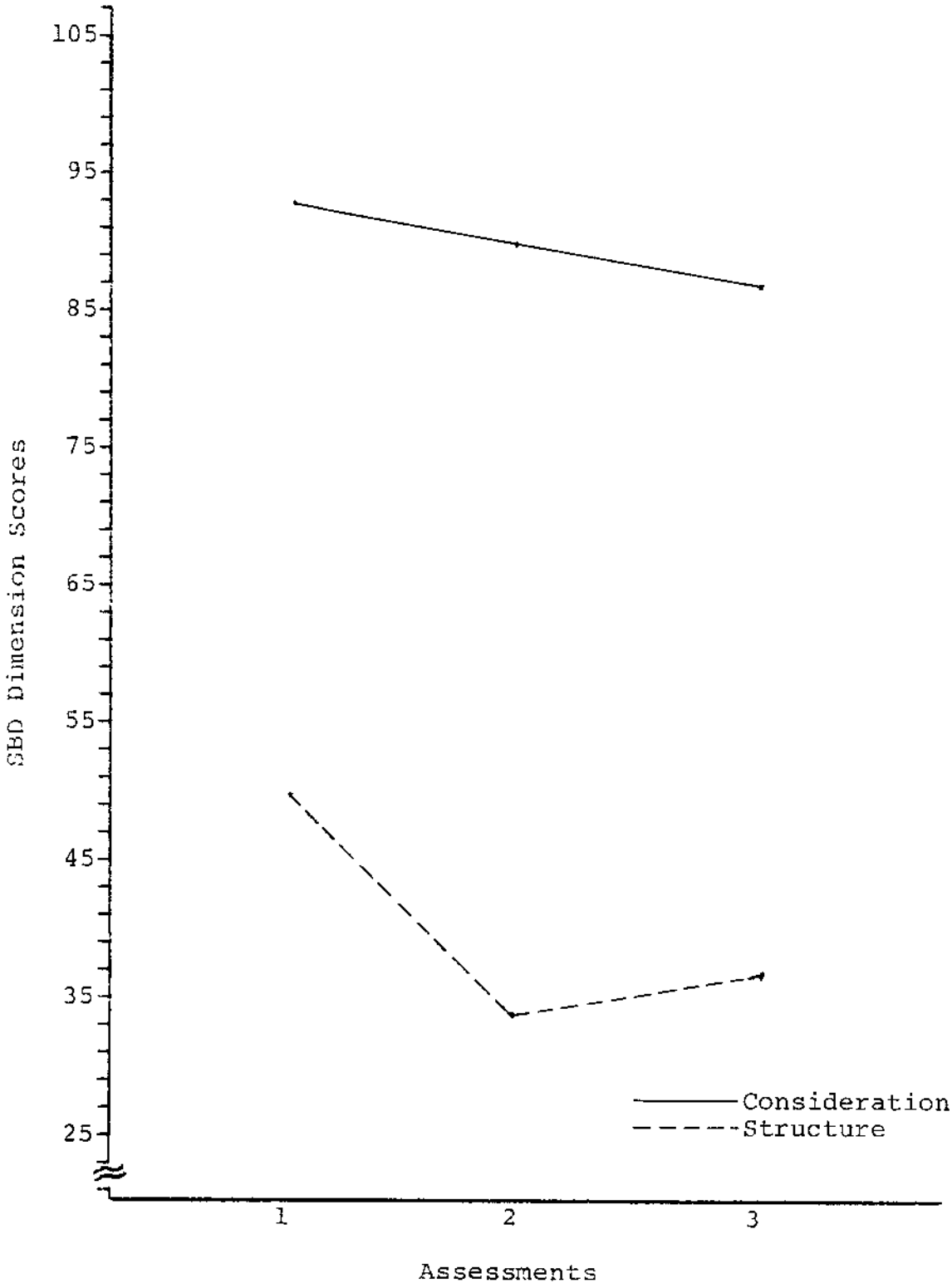


Fig. 13--Profiles of scores for SBD dimensions for three assessments of principal leadership behavior for principal of School 2.

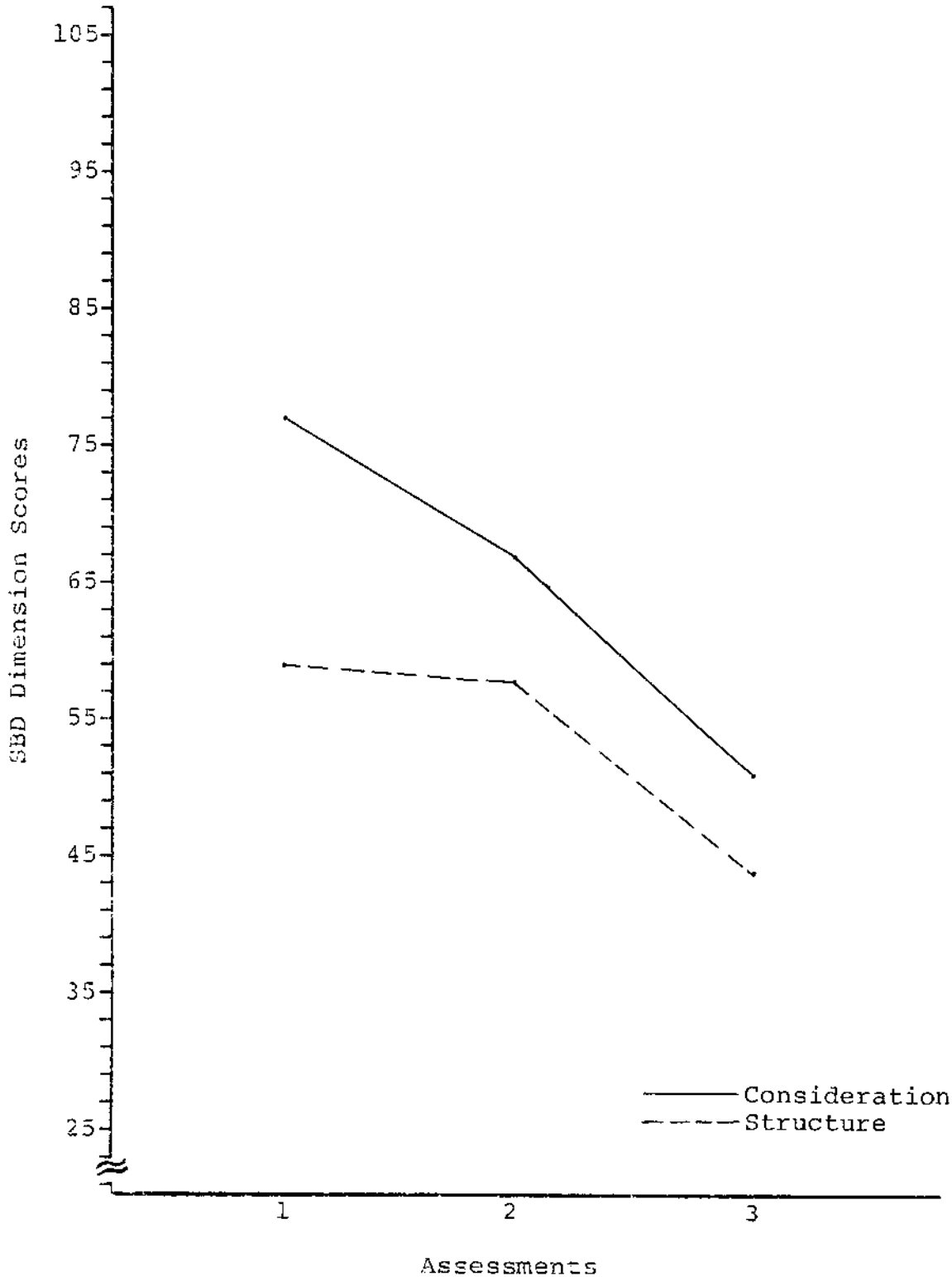


Fig. 14--Profiles of scores for SBD dimensions for three assessments of principal leadership behavior for principal of School 3.

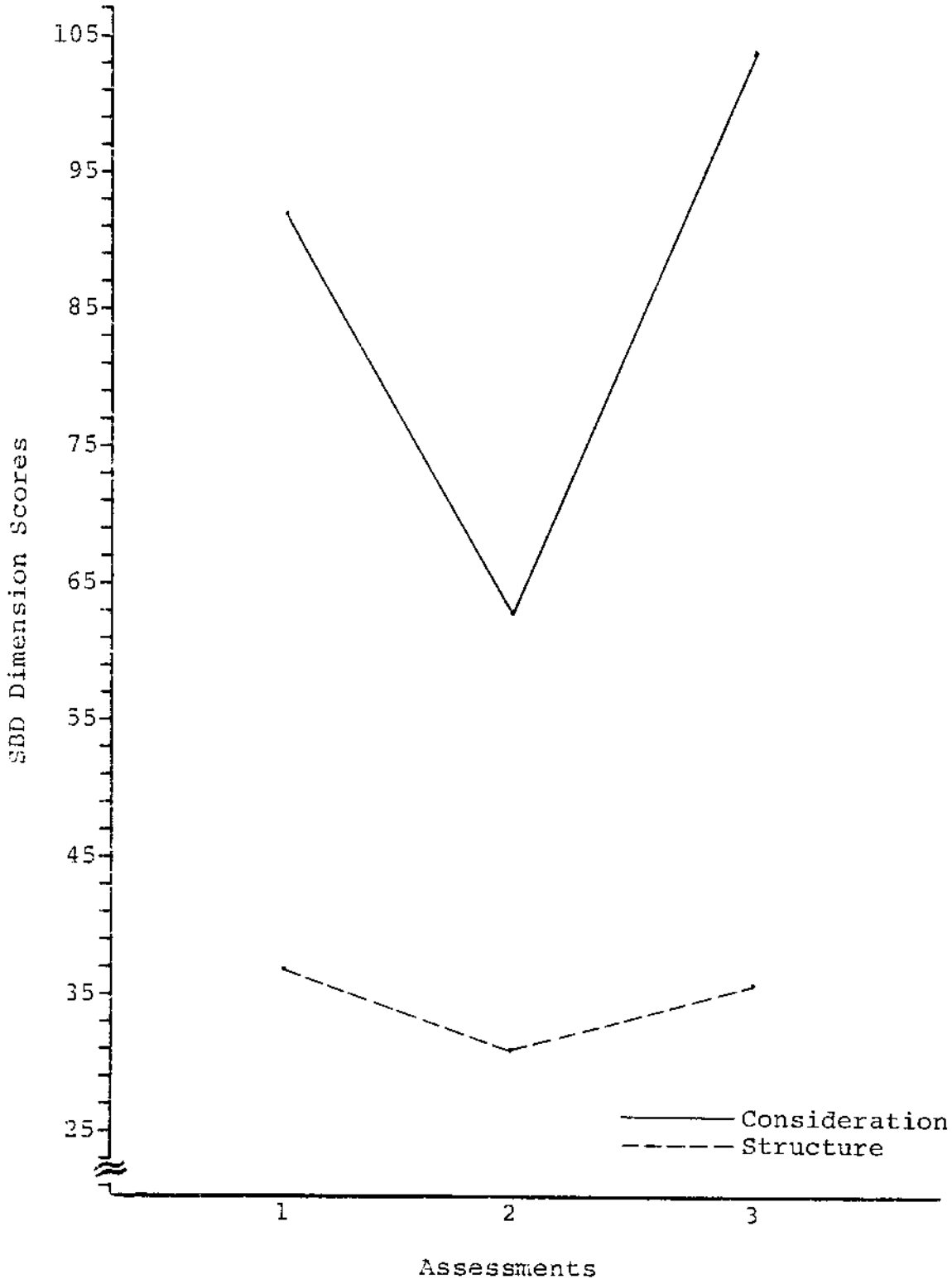


Fig. 15--Profiles of scores for SBD dimensions for three assessments of principal leadership behavior for principal of School 4.

principal leadership behavior using the dimensions of the SBD. The solid line represents the Consideration dimension and the dashed line represents the Structure dimension.

As shown in Figure 15, the scores for the principal of School 4 did vary on both the Consideration and Structure dimensions of the SBD. The greatest change occurred on the third assessment where the Consideration score dropped to its lowest value of 63 and the Structure score dropped to its lowest value of 31.

Figure 16 graphically depicts the dimension scores for the principal of School 5 for the three assessments of principal leadership benavior using the dimensions of the SBD. The solid line represents the Consideration dimension and the dashed line represents the Structure dimension.

As shown in Figure 16, the scores for the principal of School 5 did vary on both the Consideration and Structure dimensions of the SBD. The greatest change occurred on the third assessment where the Consideration score dropped to its lowest value of 71 and the Structure score rose from 39 to 43.

Subsection A.3 of this research question addressed the question of whether an identifiable pattern of change in each principal's perceptions of principal leadership behavior was indicated by the scores on the SBD dimensions. The scores for the two dimensions of the SBD for the three assessments for each principal were placed in rank order to

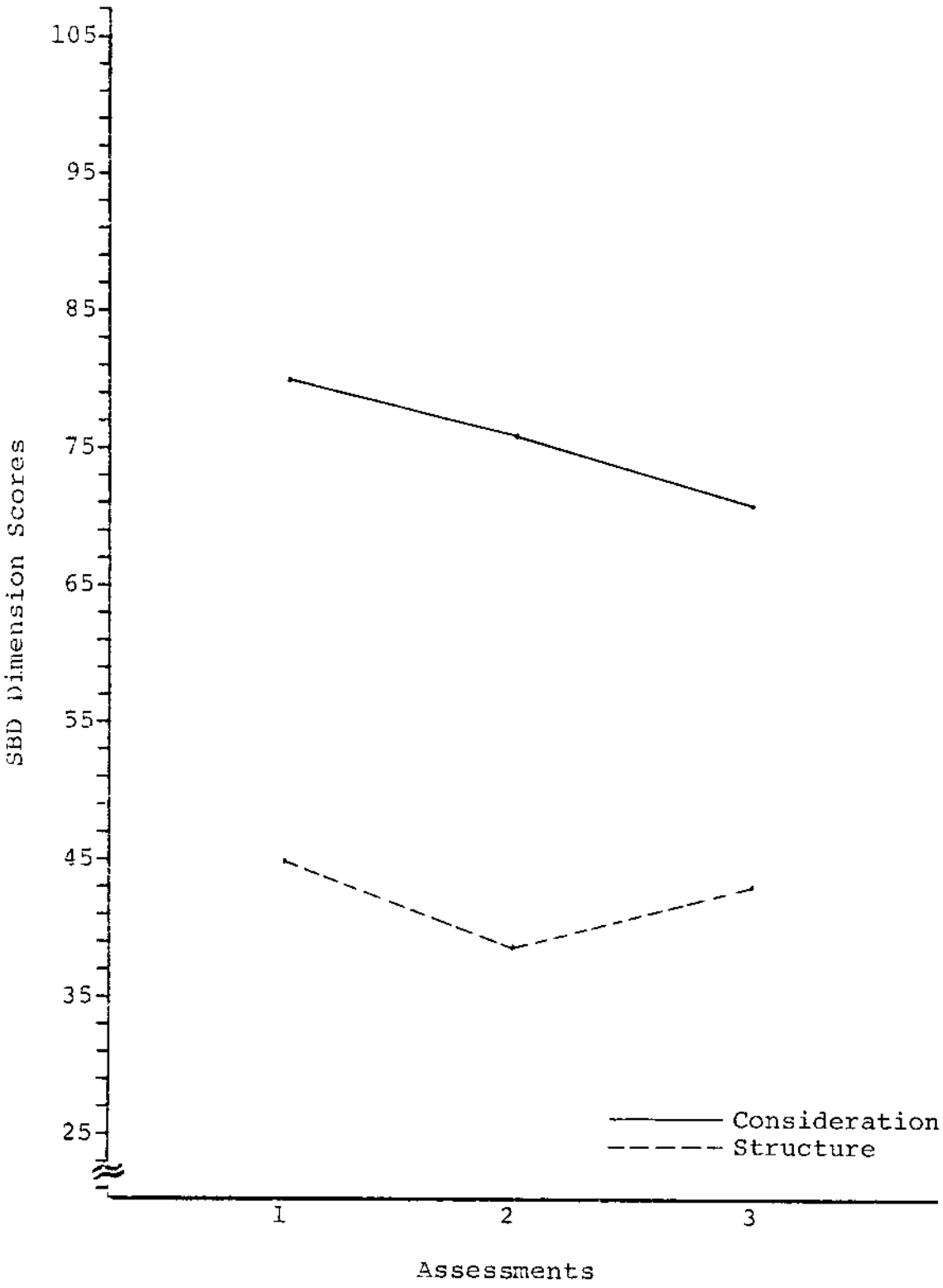


Fig. 16--Profiles of scores for SBD dimensions for three assessments of principal leadership behavior for principal of School 5.

determine if a pattern of change could be observed. These data are presented in Table CI.

As shown in Table CI, there were no tied scores for the three assessments of principal leadership behavior using the scores for the Consideration and Structure dimensions of the SBD for each principal. For the Consideration dimension of the SBD, four of the five principals had the lowest score for this dimension on the third assessment. Only the principal of School 4 had the highest score for Consideration on the third assessment. For the Structure dimension of the SBD, four of the five principals had the highest score for this dimension on the first assessment. For these principals the pattern of scores for the Structure dimension was to have the highest score on the first assessment, the lowest score on the second assessment, and the second highest score on the third assessment. Only the principal of School 3 did not have this pattern of scores.

Part B of Research Question IV dealt with the analysis of data for the total group of principals in the study. Subsection B.1 of this research question addressed the question of whether the scores on the SBD dimensions for the total group of principals indicated that principals' perceptions of principal leadership behavior had changed during the first year of operation in new elementary schools. The data analyzed in Part A of Research Question IV indicated that each principal's perceptions of principal leadership behavior

TABLE CI

SBD DIMENSION SCORES AND RANK ORDER OF SCORES FOR THREE PRINCIPAL LEADERSHIP BEHAVIOR ASSESSMENTS FOR PRINCIPALS OF FIVE SCHOOLS

School Dimension	SBD Dimension Scores			Rank Order of Scores		
	X_1	X_2	X_3	R_1	R_2	R_3
School 1						
Consideration	87	92	82	2	3	1
Structure	38	36	37	3	1	2
School 2						
Consideration	93	90	87	3	2	1
Structure	50	34	37	3	1	2
School 3						
Consideration	77	67	51	3	2	1
Structure	59	58	44	3	2	1
School 4						
Consideration	92	63	104	2	1	3
Structure	37	31	36	3	1	2
School 5						
Consideration	80	76	71	3	2	1
Structure	45	39	43	3	1	2

had changed during the year. Using the mean score rounded to the nearest whole number for each of the SBD dimensions for the total group of principals, the profile of scores for the total group of principals for the three assessments of principal leadership behavior is depicted in Figure 17. The solid line represents the Consideration dimension scores and the dashed line represents the Structure dimension scores.

As shown in Figure 17, the scores for the total group of principals did vary on both the Consideration and Structure dimension of the SBD. The greatest change occurred on the second assessment where the Consideration score dropped from 86 to 78 and the Structure score dropped from 46 to 40.

Subsection B.2 of this research question addressed the question of whether different patterns of dispersion existed for the two dimensions of the SBD for each of the three assessments of principals' perceptions of principal leadership behavior. The mean was selected as the measure of central tendency to be used as an index for describing the group of principals' scores. The measures of dispersion selected to describe the variability within the group of scores were the standard deviation, range of scores, and the variance. The mean, standard deviation, and range of scores for each of the dimensions of the SBD for each of the three assessments of principals' perceptions of principal leadership behavior are presented in Table CII.

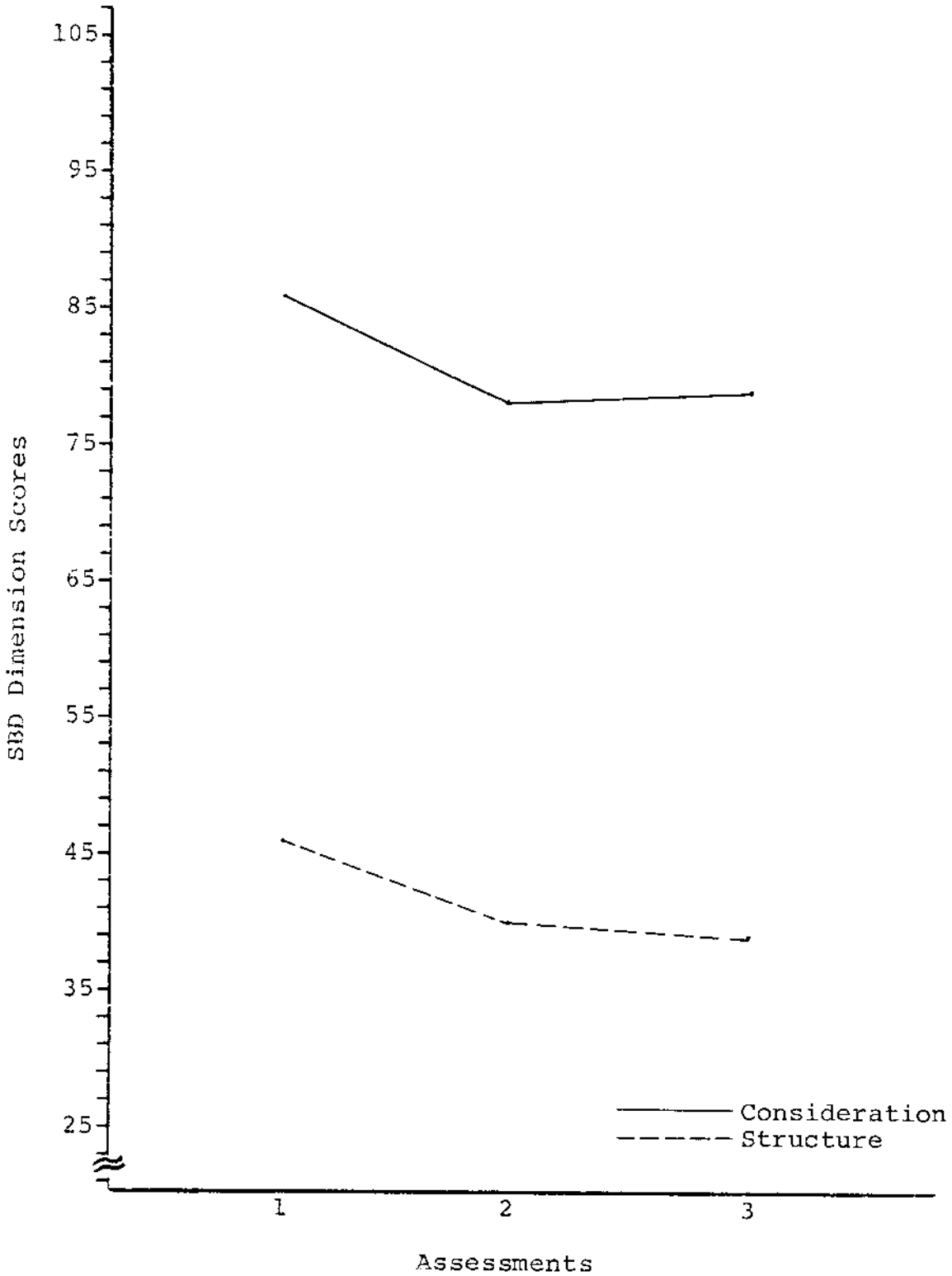


Fig. 17--Profiles of mean scores for SBD dimensions for total group of principals for three assessments of principal leadership behavior.

TABLE CII

$\bar{X}$, SD, AND RANGE OF SCORES FOR SBD DIMENSION SCORES FOR THREE PRINCIPAL LEADERSHIP BEHAVIOR ASSESSMENTS FOR TOTAL GROUP OF PRINCIPALS

Dimension	$\bar{X}_1$	SD_1	$Range_1$	$\bar{X}_2$	SD_2	$Range_2$	$\bar{X}_3$	SD_3	$Range_3$
Consideration	85.80	7.12	77-93	77.60	13.13	63-92	79.00	19.66	51-104
Structure	45.80	9.09	37-59	39.60	10.69	31-58	39.40	3.78	36-44

An inspection of the data in Table CII shows that none of the means for the three assessments of each dimension of the SBD are identical. The standard deviations associated with each of the means are varied. The largest standard deviation associated with a dimension mean is 19.66 for the Consideration dimension for the third assessment. The smallest standard deviation associated with a dimension mean is 3.78 for the Structure dimension for the third assessment. Only a small numerical difference was noted between the second and third assessments on the Structure dimension of the SBD. For the second assessment of Structure the mean was 39.60 and for the third assessment the mean was 39.40.

Table CIII displays the results of the Hartley Fmax test for homogeneity of variances for the repeated measurements of principals' perceptions of principal leadership behavior for the total group of principals. The variances for the two dimensions of the SBD for the three assessments of principal leadership behavior and the result of the Hartley Fmax test for the three variances associated with each SBD dimension are presented in the Table.

The Fmax statistic calculated for the three variances associated with the two dimensions of the SBD for the total group of principals was compared to the table value of 15.50 for rejection of the assumption of equal variances at the

.05 level of significance with 3 variances and 4 degrees of freedom. As shown by the data of Table CIII, none of the calculated Fmax values exceeded the required table value.

TABLE CIII

VARIANCES AND HARTLEY TEST FOR HOMOGENEITY OF VARIANCES FOR REPEATED MEASUREMENTS OF PRINCIPALS' PERCEPTIONS OF PRINCIPAL LEADERSHIP BEHAVIOR USING THE TWO DIMENSIONS OF THE SBD--TOTAL GROUP OF PRINCIPALS

Dimension	$Variance_1$	$Variance_2$	$Variance_3$	Fmax
Consideration	50.69	172.40	386.52	7.62
Structure	82.63	114.28	14.29	7.80

DF = 4.

Subsection B.3 of this research question addressed the question of whether a significant difference existed between the three assessments of principals' perceptions of principal leadership behavior as leadership behavior was measured by the dimensions of the SBD for the total group of principals. To test the existence of a significant difference between the three assessments of leadership behavior, a one-factor ANOVA for repeated measures tests were performed on the dimensions of the SBD using the scores for the total group of principals. When a significant difference was found by the ANOVA for repeated measures procedure, the Scheffe test for comparison of means was used to find the source of the

significant difference. The results of the ANOVA for repeated measures tests for the total group of principals are displayed in Table CIV. The degrees of freedom, sums of squares, mean squares, F-value, and probability level associated with the calculated F-value are reported for the two dimensions of the SBD.

The F-value calculated for the analysis of variance for repeated measures of each SBD dimension was compared to the F table value of 4.46 for determination of significance at the .05 level of significance with 2 and 8 degrees of freedom. As shown in Table CIV, neither of the calculated F-values were significant.

Subsection B.4 of this research question addressed the question of whether an identifiable pattern of change in principals' perceptions of principal leadership behavior was indicated by the scores on the SBD dimensions for the total group of principals. The ANOVA for repeated measures tests for the two dimensions of the SBD for the total group of principals did not produce evidence of a significant difference in principals' scores on the SBD.

Research Question V

Research Question V concerned changes in the difference between teachers' and principals' perceptions of organizational climate during the first year of operation in new elementary schools. The existence of the difference in

TABLE CIV

ANOVA FOR REPEATED MEASURES TESTS FOR SBD DIMENSION SCORES FOR THREE PRINCIPAL LEADERSHIP BEHAVIOR ASSESSMENTS FOR TOTAL GROUP OF PRINCIPALS

Source	DF	SS	MS	F	P
1. Consideration					
Between Subjects	4	1289.067			
Within Subjects	10	1341.333			
A (Assessments)	2	192.400	96.200	0.670	0.538
Residual	8	1148.933	143.617		
Total	14	2630.400			
2. Structure					
Between Subjects	4	650.933			
Within Subjects	10	326.667			
A (Assessments)	2	1324.000	66.200	2.726	0.125
Residual	8	194.267	24.283		
Total	14	977.600			

teachers' and principals' perceptions of organizational climate was documented in Chapter II, The Review of Literature. Organizational climate was measured for this research question by the "openness" score of the Organizational Climate Description Questionnaire (OCDQ). Organizational climate was measured three times during the school year and the data were analyzed for the principal and group of teachers in each school and for the total group of teachers and principals in the study.

Part A of this research question dealt with the analysis of data for the principal and group of teachers in each of the new elementary schools. Subsection A.1 of this research question addressed the question of whether there was a significant difference between the principal's perceptions and the teachers' perceptions of organizational climate for each of the three assessments of climate. To test for the existence of a significant difference in perceptions, the t test for independent samples was used. Tables CV through CVII display the results of the t tests for each school group for the three assessments of organizational climate.

Table CV presents the data relevant to the first assessment of organizational climate. The principal's mean, the teachers' mean, the associated standard deviations for each mean, the degrees of freedom, and the results of the t tests for independent samples are shown in the table for each school group.

TABLE CV

RESULTS OF t TESTS COMPARING MEANS FOR PRINCIPAL AND TEACHERS OF FIVE ELEMENTARY SCHOOLS FOR FIRST ASSESSMENT OF CLIMATE USING THE OPENNESS SCORE OF THE OCDQ

School	Principal Mean	SD	Teacher Mean	SD	DF	t
1	52.00	0.00	55.38	4.54	20	-0.73
2	58.00	0.00	52.04	7.34	26	0.80
3	51.00	0.00	55.55	6.62	30	-0.68
4	56.00	0.00	51.76	6.63	32	0.63
5	57.00	0.00	52.03	7.09	33	0.69

*Significant at the .05 level.

The t-value calculated for each comparison of means was compared to the t table value for a two-tailed test at the .05 level of significance for the appropriate degrees of freedom. For School 1 the required table value was 2.086. For School 2 the required table value was 2.056. For Schools 3, 4, and 5, the required table value was 2.042. As shown by the data of Table CV, none of the calculated t-values exceeded the required table values.

Table CVI presents the data relevant to the second assessment of organizational climate. The principal's mean, the teachers's mean, the associated standard deviations for each mean, the degrees of freedom, and the results of the t tests for independent samples are shown in the table for each school group.

TABLE CVI

RESULTS OF t TESTS COMPARING MEANS FOR PRINCIPAL AND TEACHERS OF FIVE ELEMENTARY SCHOOLS FOR SECOND ASSESSMENT OF CLIMATE USING THE OPENNESS SCORE OF THE OCDQ

School	Principal Mean	SD	Teacher Mean	SD	DF	t
1	59.00	0.00	50.48	7.74	20	1.08
2	60.00	0.00	50.96	7.27	26	1.22
3	55.00	0.00	52.34	8.58	30	0.30
4	59.00	0.00	50.10	8.79	32	1.00
5	52.00	0.00	46.41	7.59	33	0.73

*Significant at .05 level.

The t-value calculated for each comparison of means was compared to the t table value for a two-tailed test at the .05 level of significance for the appropriate degrees of freedom. For School 1 the required table value was 2.086. For School 2 the required table value was 2.056. For Schools 3, 4, and 5, the required table value was 2.042. As shown by the data of Table CVI, none of the calculated t-values exceeded the required table values.

Table CVII presents the data relevant to the second assessment of organizational climate. The principal's mean, the teachers' mean, the associated standard deviations for each mean, the degrees of freedom, and the results of the t tests for independent samples are shown in the table for each school group.

TABLE CVII

RESULTS OF t TESTS COMPARING MEANS FOR PRINCIPAL AND TEACHERS OF FIVE ELEMENTARY SCHOOLS FOR THIRD ASSESSMENT OF CLIMATE USING THE OPENNESS SCORE OF THE OCDQ

School	Principal Mean	SD	Teacher Mean	SD	DF	t
1	46.00	0.00	50.67	8.43	20	-0.54
2	46.00	0.00	53.11	7.10	26	-0.83
3	36.00	0.00	49.87	8.74	30	-1.56
4	67.00	0.00	46.73	9.27	32	2.16*
5	52.00	0.00	45.59	9.96	33	0.63

*Significant at the .05 level.

The t-value calculated for each comparison of means was compared to the t table value for a two-tailed test at the .05 level of significance for the appropriate degrees of freedom. For School 1 the required table value was 2.086. For School 2 the required table value was 2.056. For Schools 3, 4, and 5, the required table value was 2.042. As shown by the data of Table CVII, only one significant t-value was found. The calculated t-value of 2.16 for School 4 was significant since the calculated value exceeded the required table value.

Subsection A.2 of this research question addressed the question of whether an identifiable pattern of change existed for the three differences between the principal's perceptions of organizational climate and the teachers' perceptions of

organizational climate determined for each elementary school. Organizational climate was measured by the openness score of the OCDQ and the t test for independent samples was used to compare means and test for significance. Figures 18 through 22 display the profiles for the mean scores for the principal and group of teachers in each of the elementary schools.

Figure 18 displays the profiles of mean scores for the three assessments of organizational climate for the principal and group of teachers in School 1. The mean scores for the group of teachers are rounded to the nearest whole number. The solid line depicts the principal's profile of scores for the three assessments of climate. The dashed line depicts the profile of mean scores for the group of teachers in School 1.

As shown in Figure 18, a difference existed between the principal's mean and the teachers' mean for each of the three assessments of climate in School 1. The data of Tables CV through CVII show that the differences were not statistically significant. For the principal of School 1, the highest score was recorded for the second assessment and the lowest score was recorded for the third assessment. For the teachers of School 1, the highest mean score was recorded for the first assessment and the lowest mean score was recorded for the second assessment.

Figure 19 displays the profiles of mean scores for the three assessments of organizational climate for the principal

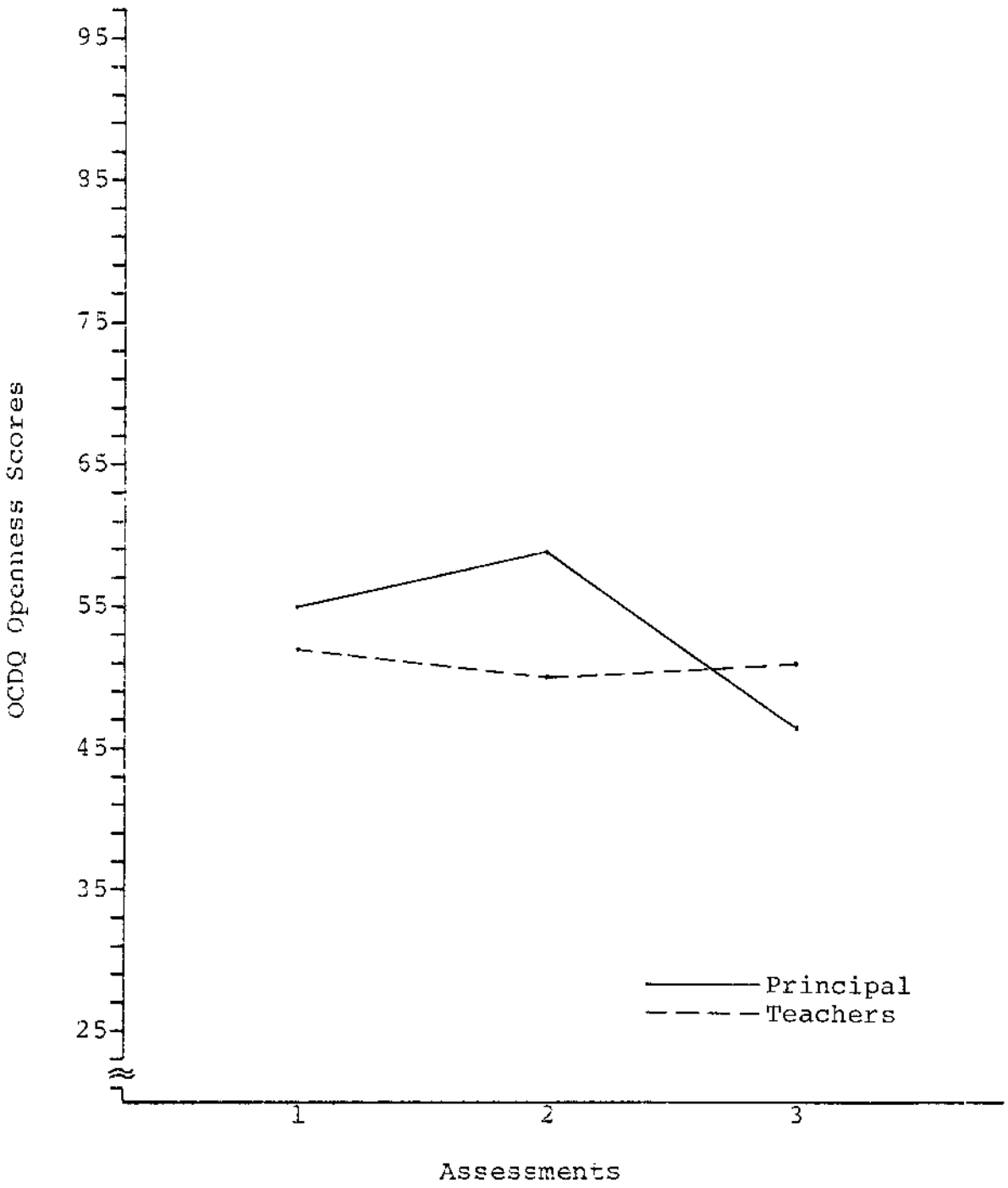


Fig. 18--Profiles of openness scores for principal and teachers of School 1 for three assessments of climate.

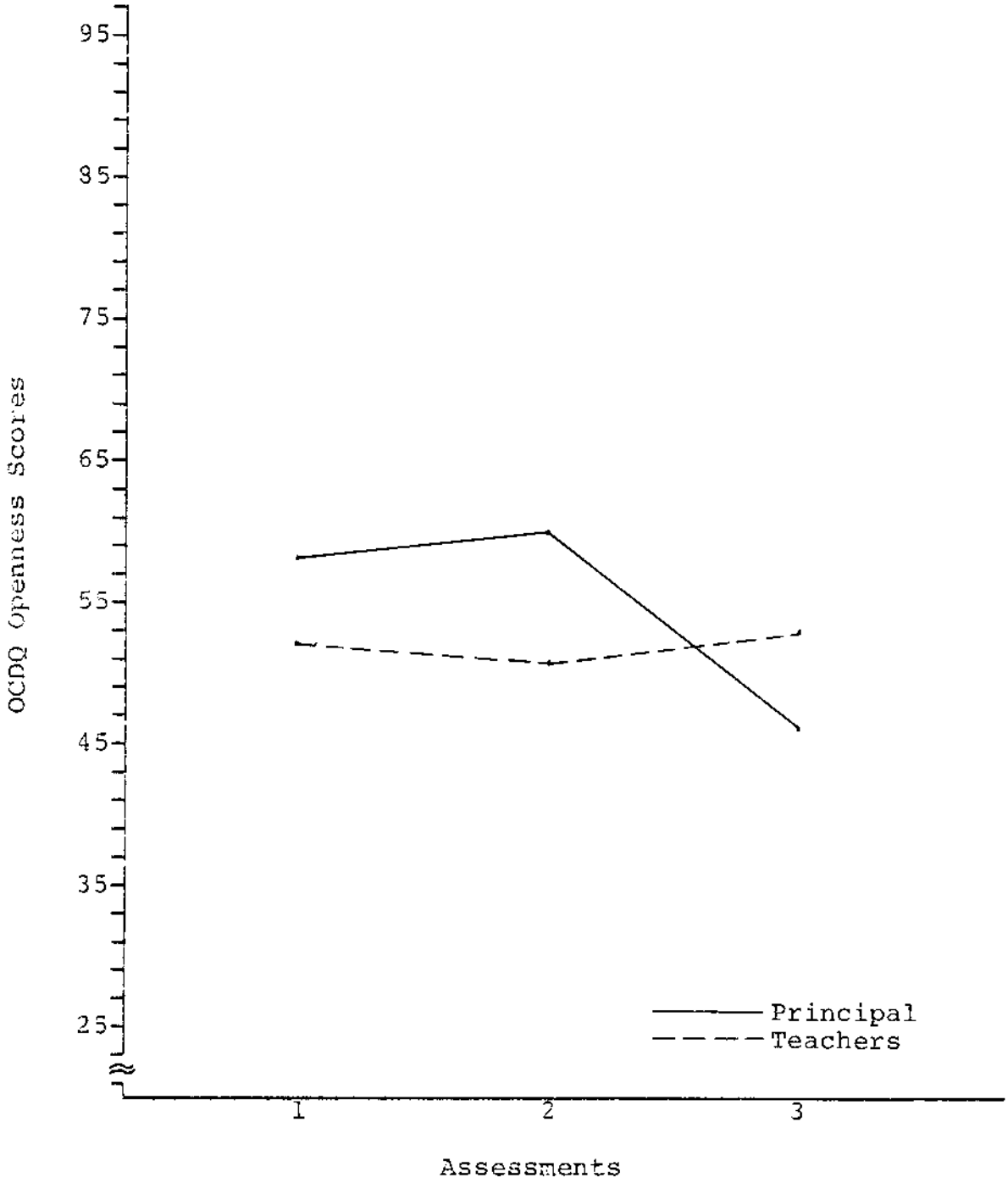


Fig. 19--Profiles of openness scores for principal and teachers of School 2 for three assessments of climate.

and group of teachers in School 2. The mean scores for the group of teachers are rounded to the nearest whole number. The solid line depicts the principal's profile of scores for the three assessments of climate. The dashed line depicts the profile of mean scores for the group of teachers in School 2.

As shown in Figure 19, a difference existed between the principal's mean and the teachers' mean for each of the three assessments of climate in School 2. The data of Tables CV through CVII show that the differences were not statistically significant. For the principal of School 2, the highest score was recorded for the second assessment and the lowest score was recorded for the third assessment. For the teachers of School 2, the highest mean score was recorded for the third assessment and the lowest mean score was recorded for the second assessment.

Figure 20 displays the profiles of mean scores for the three assessments of organizational climate for the principal and group of teachers in School 3. The mean scores for the group of teachers are rounded to the nearest whole number. The solid line depicts the principal's profile of scores for the three assessments of climate. The dashed line depicts the profile of mean scores for the group of teachers in School 3.

As shown in Figure 20, a difference existed between the principal's mean and the teachers' mean for each of the

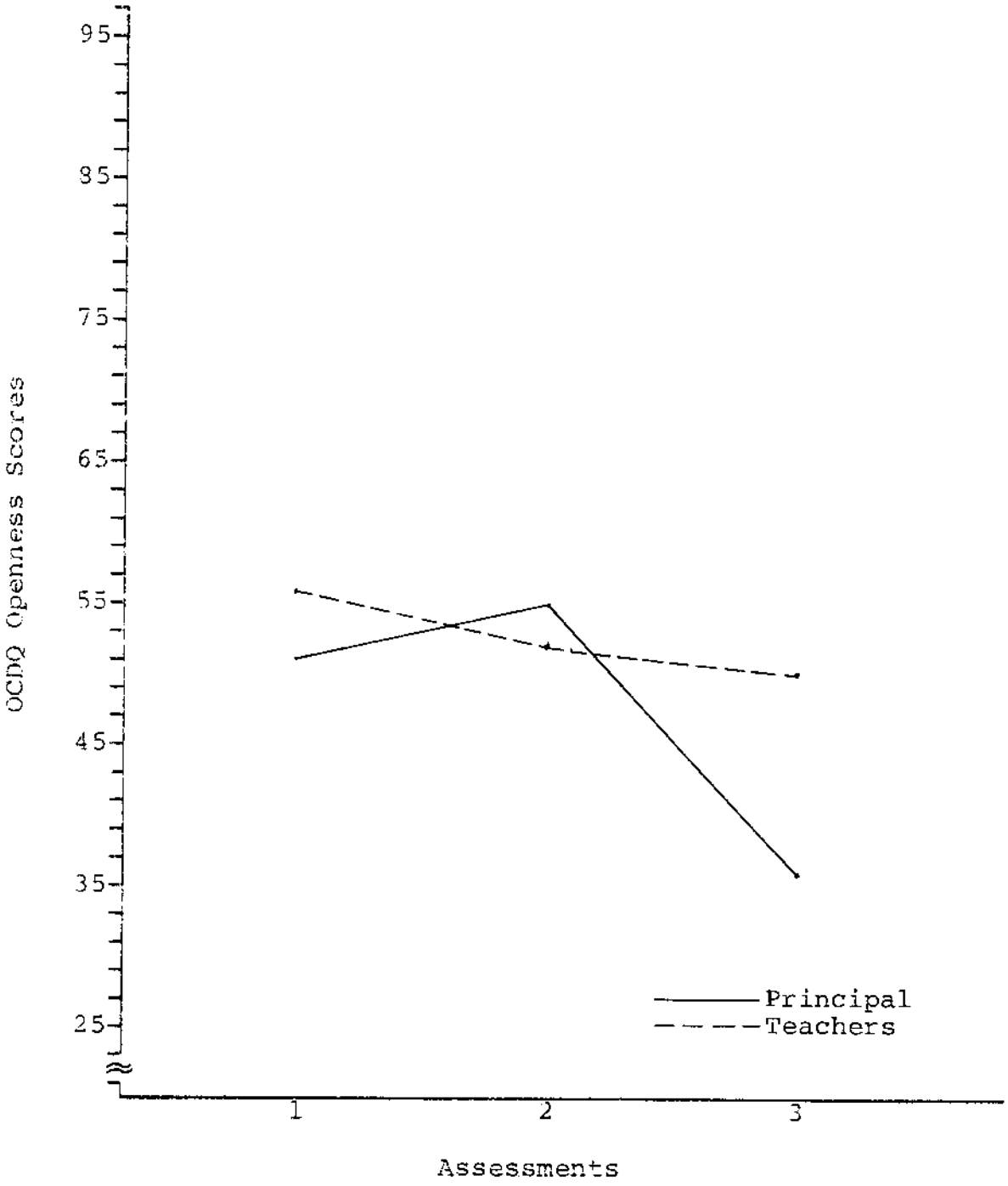


Fig. 20--Profiles of openness scores for principal and teachers of Sch-ol 3 for three assessments of climate.

three assessments of climate in School 3. The data of Tables CV through CVII show that the differences were not statistically significant. For the principal of School 3, the highest score was recorded for the second assessment and the lowest score was recorded for the third assessment. For the teachers of School 3, the highest mean score was recorded for the first assessment and the lowest score was recorded for the third assessment.

Figure 21 displays the profiles of mean scores for the three assessments of organizational climate for the principal and group of teachers in School 4. The mean scores for the group of teachers are rounded to the nearest whole number. The solid line depicts the principal's profile of scores for the three assessments of climate. The dashed line depicts the profile of mean scores for the group of teachers in School 4.

As shown in Figure 21, a difference existed between the principal's mean and the teachers' mean for each of the three assessments of climate in School 4. The data of Tables CV through CVII show that only the difference found for the third assessment was statistically significant. For the principal of School 4, the highest score was recorded for the third assessment and the lowest score was recorded for the first assessment. For the teachers of School 4, the highest score was recorded for the first assessment and the lowest score was recorded for the third assessment.

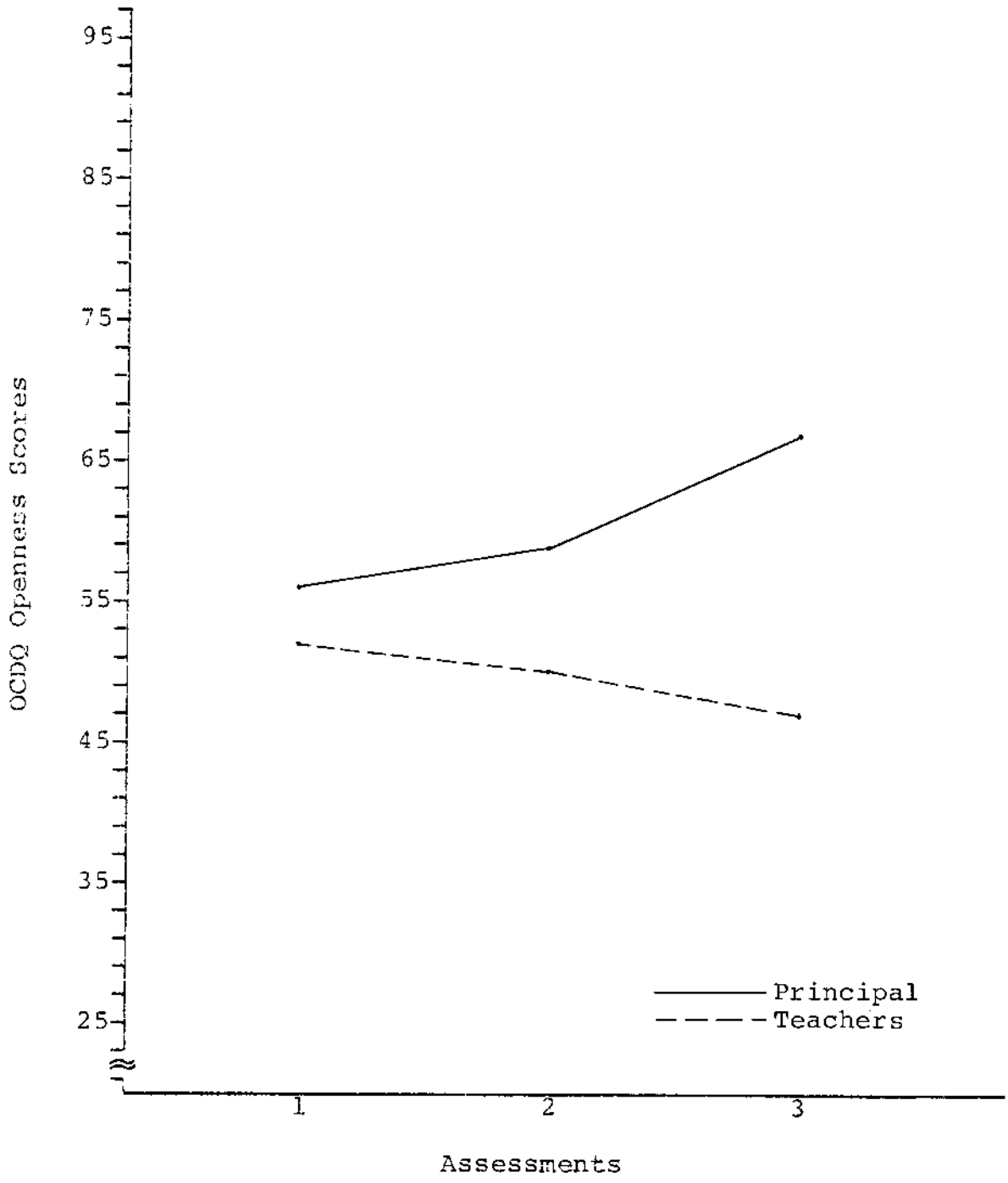


Fig. 21--Profiles of openness scores for principal and teachers of School 4 for three assessments of climate.

Figure 22 displays the profiles of mean scores for the three assessments of organizational climate for the principal and group of teachers in School 5. The mean scores for the group of teachers are rounded to the nearest whole number. The solid line depicts the principal's profile of scores for the three assessments of climate. The dashed line depicts the profile of means scores for the group of teachers in School 5.

As shown in Figure 22, a difference existed between the principal's mean and the teachers' mean for each of the three assessments of climate in School 5. The data of Tables CV through CVII show the differences were not statistically significant. For the principal of School 5, the highest score was recorded for the first assessment and the lowest score was 52 which was recorded for both the second and third assessments. For the teachers of School 5, the highest score was recorded for the first assessment and the lowest score was recorded for the second assessment.

Table CVIII displays the pattern of differences for the three assessments of organizational climate in the five elementary schools. The assessment where the greatest difference occurred is indicated as is the assessment where the least difference occurred.

As shown in Table CVIII, the greatest difference for Schools 1, 2, and 5 occurred on the second assessment of climate. For Schools 3 and 4, the greatest difference

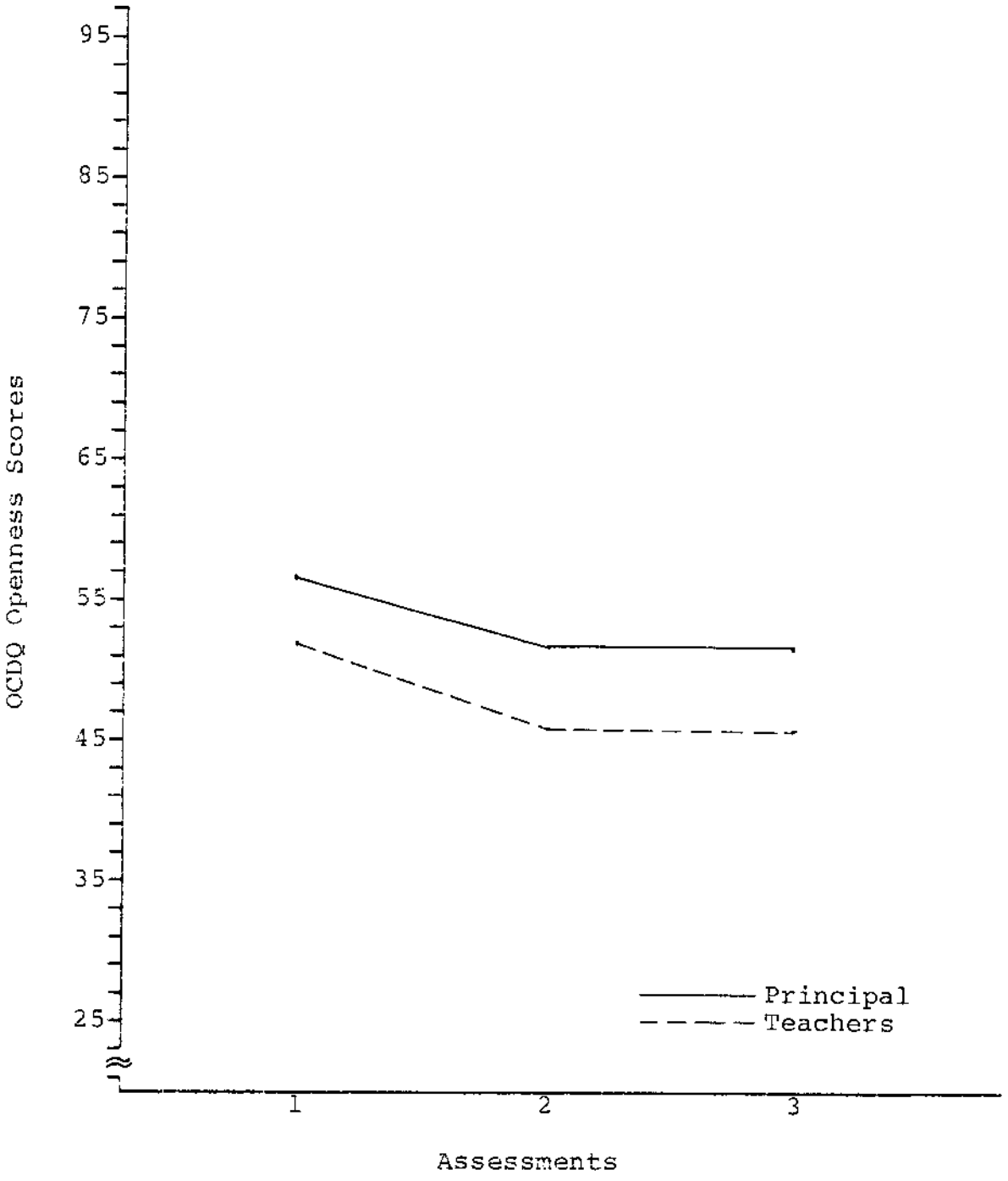


Fig. 22--Profiles of openness scores for principal and teachers of School 5 for three assessments of climate.

occurred on the third assessment of climate. Two least differences occurred on the first assessment of climate but no school had a greatest difference reported for the first assessment of climate.

TABLE CVIII

PATTERN OF GREATEST AND LEAST DIFFERENCES BETWEEN PRINCIPALS' AND TEACHERS' MEANS FOR THREE ASSESSMENTS OF CLIMATE

School	Assessment 1	Assessment 2	Assessment 3
1		+	-
2	-	+	
3		-	+
4	-		+
5		+	-

+Greatest Difference. -Least Difference.

Part B of Research Question V dealt with the analysis of data for the total group of principals and teachers in the study. Subsection B.1 of this research question addressed the question of whether there was a significant difference between the principals' perceptions and the teachers' perceptions of organizational climate for each of the three assessments of climate. To test for the existence of a significant difference in perceptions, the t test for independent samples was used. Table CIX displays the results of the t tests for the three assessments of climate for the

total group of principals and teachers. The principals' mean, the teachers' mean, the associated standard deviations for each mean, the degrees of freedom, and the results of the t tests for independent samples are shown in the table.

TABLE CIX

RESULTS OF t TESTS COMPARING MEANS FOR PRINCIPALS AND TEACHERS FOR THE THREE ASSESSMENTS OF CLIMATE USING THE OPENNESS SCORE OF THE CODQ

Assessment	Principal Mean	SD	Teacher Mean	SD	DF	t
1	54.97	2.75	53.20	6.75	149	.58
2	56.70	3.13	49.93	8.22	149	1.83
3	50.02	10.67	48.88	9.15	149	.27

*Significant at the .05 level.

The t-value calculated for each comparison of means was compared to the t table value of 1.980 for a two-tailed test at the .05 level of significance with 149 degrees of freedom. As shown by the data of Table CIX, none of the calculated t-values were significant.

Subsection B.2 of this research question addressed the question of whether an identifiable pattern of change existed for the three differences between principals' perceptions of organizational climate and teachers' perceptions of organizational climate for the total group of principals and teachers. Figure 23 displays the profiles of the three mean scores for

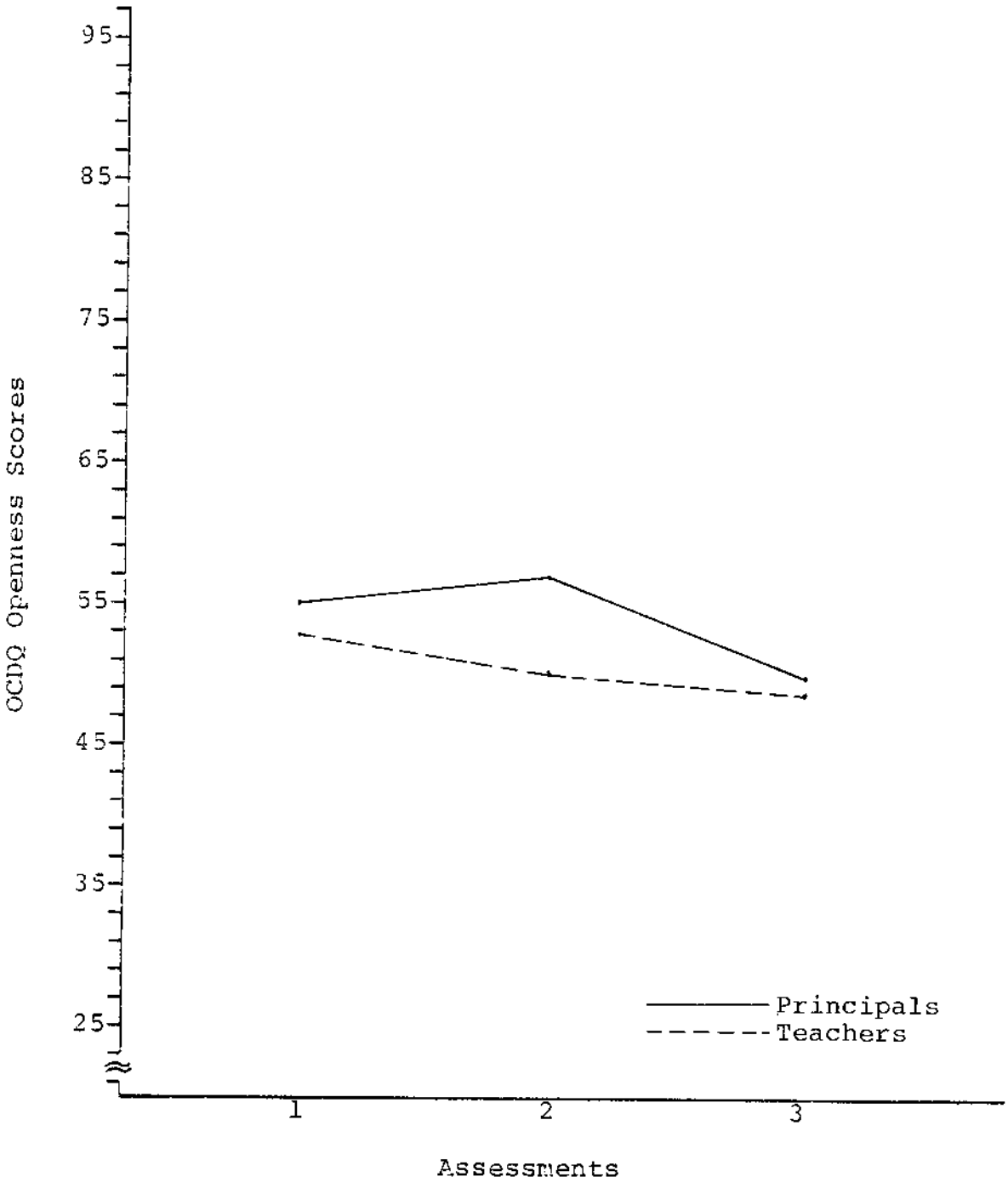


Fig. 23--Profiles of mean scores for openness for principals and teachers for three assessments of climate.

the principals and teachers. The mean scores are rounded to the nearest whole number. The solid line depicts the principals' scores and the dashed line depicts the teachers' scores for the three assessments of climate.

As shown in Figure 23, a difference existed between the principals' mean score and the teachers' mean score for each of the three assessments of climate. The data of Table CIX show that the differences were not statistically significant. For the total group of principals, the highest mean score was recorded for the second assessment and the lowest mean score was recorded for the third assessment. For the total group of teachers, the highest mean score was recorded for the first assessment and the lowest mean score was recorded for the third assessment.

Table CX displays the pattern of differences for the three assessments of organizational climate for the total group of principals and teachers. The assessment where the greatest difference occurred is indicated as is the assessment where the least difference occurred.

TABLE CX

PATTERN OF GREATEST AND LEAST DIFFERENCES BETWEEN PRINCIPALS' AND TEACHERS' MEANS FOR THREE ASSESSMENTS OF CLIMATE FOR TOTAL GROUP OF PRINCIPALS AND TEACHERS

Assessment	Difference
1	
2	+
3	-

+Greatest Difference. -Least Difference.

As shown in Table CX, the greatest difference between the principals' and teachers' perceptions of organizational climate occurred on the second assessment of climate. The least difference occurred on the third assessment of climate.

Research Question VI

Research Question VI concerned changes in the difference between teachers' and principals' perceptions of principal leadership behavior during the first year of operation in new elementary schools. The existence of a difference in teachers' and principals' perceptions of principal leadership behavior was documented in Chapter II, The Review of Literature. Principal leadership behavior was measured for this research question by the two dimensions of the Supervisory Behavior Description (SBD) questionnaire. Principal leadership behavior was measured three times during the school year and the data were analyzed for the principal and group of teachers in each school and for the total group of teachers and principals in the study.

Part A of this research question dealt with the analysis of data for the principal and group of teachers in each of the new elementary schools. Subsection A.1 of this research question addressed the question of whether there was a significant difference between the principal's perceptions and the teachers' perceptions of principal leadership behavior for each of the three assessments of leadership behavior.

To test for the existence of a significant difference in perceptions, the t test for independent samples was used. Tables CXI through CXIII display the results of the t-tests for each school group for the three assessments of principal leadership behavior using the Consideration and Structure dimensions of the SBD.

Table CXI presents the data relevant to the first assessment of principal leadership behavior. The principal's mean, the teachers' mean, the associated standard deviations for each mean, the degrees of freedom, and the results of the t tests for independent samples are shown in the table for both dimensions of the SBD for each school group.

The t-value calculated for each comparison of means was compared to the t table value for a two-tailed test at the .05 level of significance. For School 1 the required table value was 2.086. For School 2 the required table value was 2.056. For Schools 3, 4, and 5, the required table value was 2.042. As shown by the data of Table CXI, none of the calculated values exceeded the required table values.

Table CXII presents the data relevant to the second assessment of principal leadership behavior. The principal's mean, the teachers' mean, the associated standard deviations for each mean, the degrees of freedom, and the results of the t tests for independent samples are shown in the table for both dimensions of the SBD for each school group.

TABLE CXI

RESULTS OF t TESTS COMPARING MEANS FOR PRINCIPAL AND TEACHERS IN FIVE SCHOOLS FOR FIRST ASSESSMENT OF PRINCIPAL LEADERSHIP BEHAVIOR USING THE SBD DIMENSIONS

School SBD Dimension	Principal Mean	SD	Teacher Mean	SD	DF	t
School 1						
Consideration	87.00	0.00	95.05	9.28	20	-0.85
Structure	38.00	0.00	32.95	10.40	20	0.47
School 2						
Consideration	93.00	0.00	91.96	8.42	26	0.12
Structure	50.00	0.00	34.44	8.35	26	1.83
School 3						
Consideration	77.00	0.00	84.52	11.78	30	-0.63
Structure	59.00	0.00	47.71	8.72	30	1.27
School 4						
Consideration	92.00	0.00	88.48	7.34	32	0.47
Structure	37.00	0.00	37.42	5.66	32	-0.07
School 5						
Consideration	80.00	0.00	87.94	9.59	33	-0.82
Structure	45.00	0.00	40.73	9.38	33	0.45

*Significant at .05 level.

TABLE CXII

RESULTS OF t TESTS COMPARING MEANS FOR PRINCIPAL AND TEACHERS IN FIVE SCHOOLS FOR SECOND ASSESSMENT OF PRINCIPAL LEADERSHIP BEHAVIOR USING THE SBD DIMENSIONS

School SBD Dimension	Principal Mean	SD	Teacher Mean	SD	DF	t
School 1						
Consideration	92.00	0.00	87.29	6.78	20	0.68
Structure	36.00	0.00	30.19	8.92	20	.64
School 2						
Consideration	90.00	0.00	89.15	8.29	26	0.10
Structure	34.00	0.00	30.52	8.33	26	0.41
School 3						
Consideration	67.00	0.00	82.45	12.41	30	-1.22
Structure	58.00	0.00	47.39	9.50	30	1.10
School 4						
Consideration	63.00	0.00	83.88	13.94	32	1.48
Structure	31.00	0.00	38.03	4.65	32	-1.49
School 5						
Consideration	76.00	0.00	84.23	10.23	33	-0.79
Structure	39.00	0.00	39.50	7.00	33	-0.07

*Significant at .05 level.

The t-value calculated for each comparison of means was compared to the t table value for a two-tailed test at the .05 level of significance. For School 1 the required table value was 2.086. For School 2 the required table value was 2.056. For Schools 3, 4, and 5, the required table value was 2.042. As shown by the data of Table CXII, none of the calculated values exceeded the required table values.

Table CXIII presents the data relevant to the third assessment of principal leadership behavior. The principal's mean, the teachers' mean, the associated standard deviations for each mean, the degrees of freedom, and the results of the t tests for independent samples are shown in the table for both dimensions of the SBD for each school group.

The t-value calculated for each comparison of means was compared to the t table value for a two-tailed test at the .05 level of significance. For School 1 the required table value was 2.086. For School 2 the required table value was 2.056. For Schools 3, 4, and 5, the required table value was 2.042. As shown by the data of Table CXIII, none of the calculated values exceeded the required table values.

Subsection A.2 of this research question addressed the question of whether an identifiable pattern of change existed for the three differences between the principal's perceptions of principal leadership behavior and the teachers' perceptions of principal leadership behavior determined for each school. Principal leadership behavior was measured by the dimensions

TABLE CXIII

RESULTS OF t TESTS COMPARING MEANS FOR PRINCIPAL AND TEACHERS IN FIVE SCHOOLS FOR THIRD ASSESSMENT OF PRINCIPAL LEADERSHIP BEHAVIOR USING THE SBD DIMENSIONS

School SBD Dimension	Principal Mean	SD	Teacher Mean	SD	DF	t
School 1						
Consideration	82.00	0.00	91.90	7.76	20	-1.25
Structure	37.00	0.00	29.57	8.68	20	0.84
School 2						
Consideration	87.00	0.00	88.18	12.34	26	-0.09
Structure	37.00	0.00	32.59	7.62	26	0.57
School 3						
Consideration	51.00	0.00	73.71	13.06	30	-1.71
Structure	44.00	0.00	50.16	8.44	30	-0.72
School 4						
Consideration	104.00	0.00	83.64	13.28	32	1.51
Structure	36.00	0.00	36.88	6.06	32	-0.14
School 5						
Consideration	71.00	0.00	78.71	13.93	33	-0.55
Structure	43.00	0.00	40.23	6.80	33	0.40

*Significant at .05 level.

of the SBD and the t test for independent samples was used to compare means and test for significance. Figures 24 through 28 display the profiles of the three mean scores for the principal and group of teachers in each of the five schools. Profiles are shown for both the Consideration and Structure dimensions of the SBD.

Figure 24 displays the profiles of mean scores for the three assessments of principal leadership behavior for the principal and group of teachers in School 1. The mean scores for the group of teachers are rounded to the nearest whole number. The solid line depicts the principal's scores and the dashed line depicts the scores for the group of teachers in School 1.

As shown in Figure 24, a difference existed between the principal's mean score and the teachers' mean score for each of the three assessments of the Consideration and Structure dimensions of the SBD. The data of Tables CXI through CXIII show that the differences were not statistically significant. For the Consideration dimension of the SBD, the two profiles cross each other as the teachers' mean score for the second assessment decreases in value as the principal's mean score for the second assessment increases in value. For the Structure dimension of the SBD, the two profiles parallel each other for the three assessments with the principal's profile having the higher value scores.

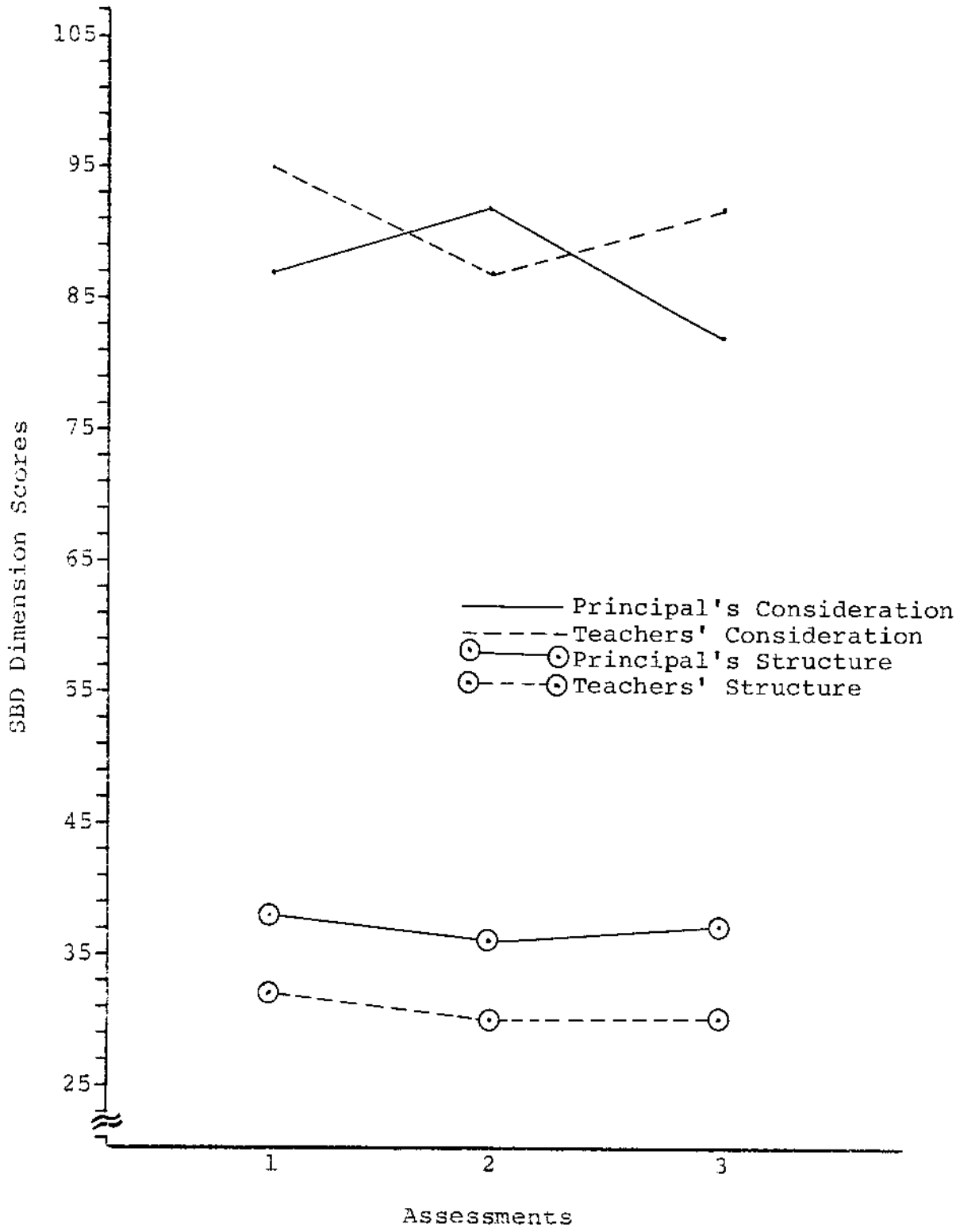


Fig. 24--Profiles of SBD dimension scores for principal and teachers of School 1 for three assessments of principal leadership behavior.

Figure 25 displays the profiles of mean scores for the three assessments of principal leadership behavior for the principal and group of teachers in School 2. The mean scores for the group of teachers are rounded to the nearest whole number. The solid line depicts the principal's scores and the dashed line depicts the scores for the group of teachers in School 2.

As shown in Figure 25, a difference existed between the principal's mean score and the teachers' mean score for each of the three assessments of the Consideration and Structure dimensions of the SBD. The data of Tables CXI through CXIII show that the differences were not statistically significant. For the Consideration dimension of the SBD, the two profiles parallel each other for the first two assessments with the principal's scores being higher in value and then the profiles cross as the teachers' mean for the third assessment exceeds the principal's mean in value. For the Structure dimension of the SBD, the two profiles begin far apart with the principal's mean exceeding the teachers' mean in value and then the profiles draw closer together for the second and third assessments with the principal's mean scores continuing to have the highest values.

Figure 26 displays the profiles of mean scores for the three assessments of principal leadership behavior for the principal and group of teachers in School 3. The mean scores for the group of teachers are rounded to the nearest

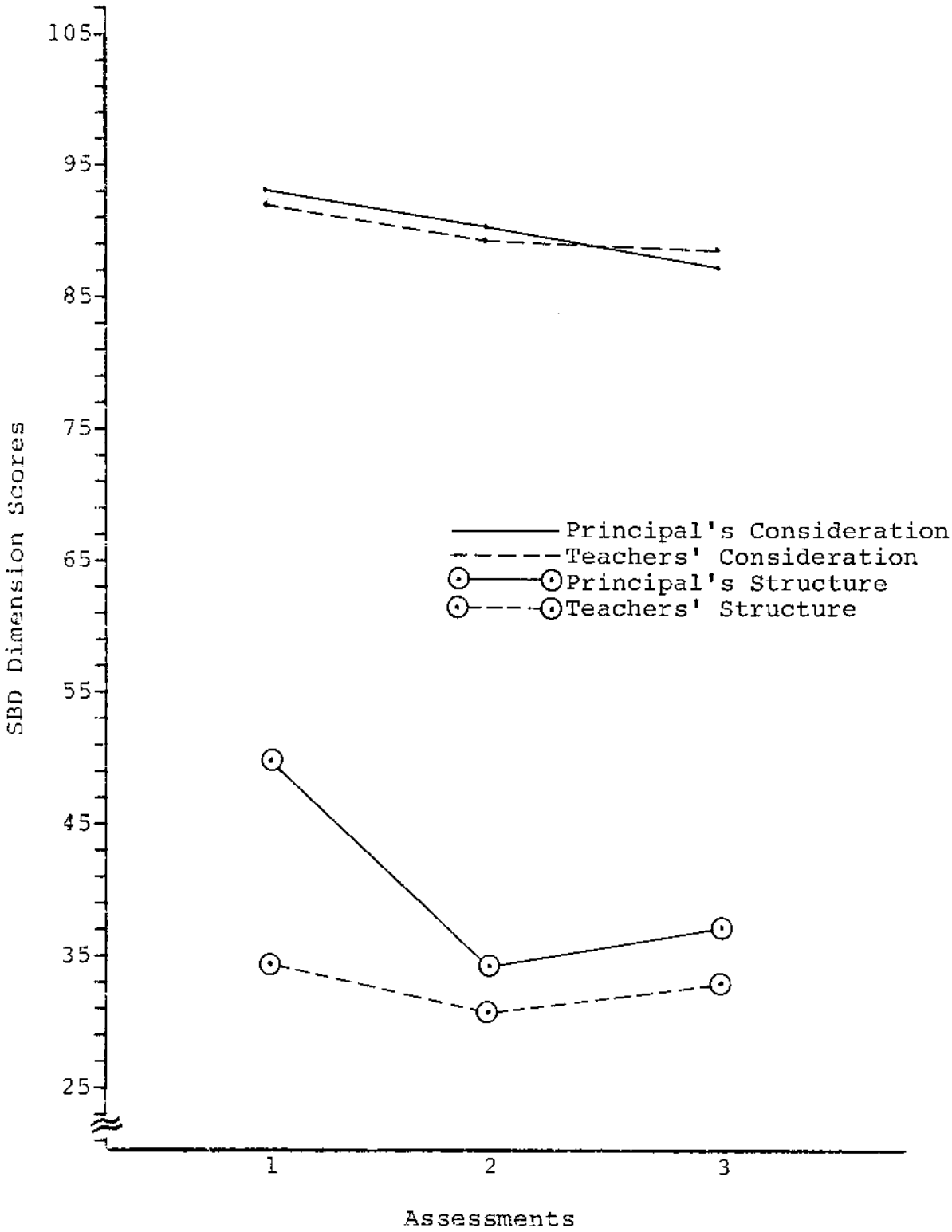


Fig. 25--Profiles of SBD dimension scores for principal and teachers of School 2 for three assessments of principal leadership behavior.

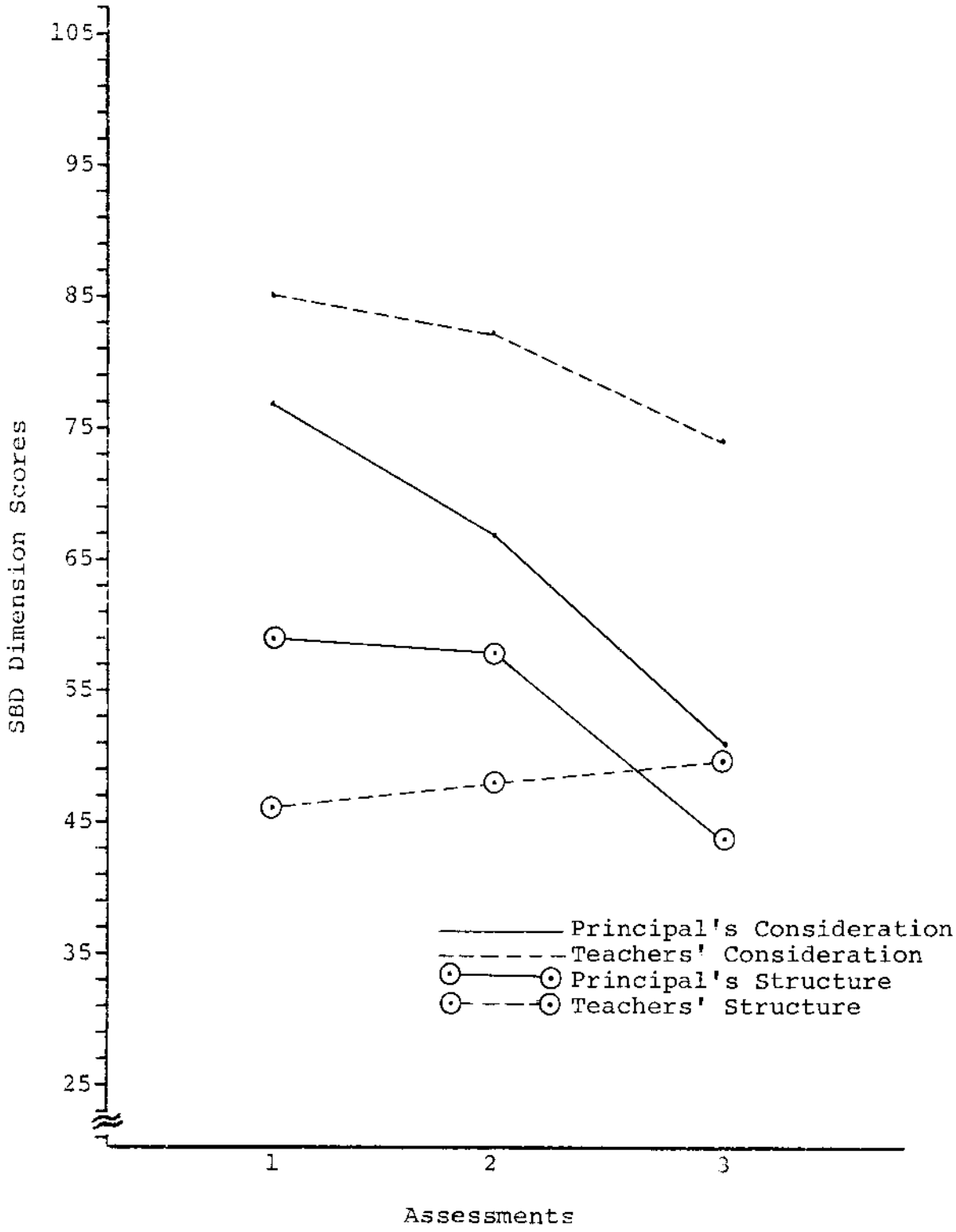


Fig. 26--Profiles of SBD dimension scores for principal and teachers of School 3 for three assessments of principal leadership behavior.

whole number. The solid line depicts the principal's scores and the dashed line depicts the scores for the group of teachers in School 3.

As shown in Figure 26, a difference existed between the principal's mean score and the teachers' mean score for each of the three assessments of the Consideration and Structure dimensions of the SBD. The data of Tables CXI through CXIII show that the differences were not statistically significant. For the Consideration dimension of the SBD, the two profiles begin apart with the teachers' mean exceeding the principal's mean in value and the profiles draw further apart for the second and third assessments as the scores for both groups decrease in value. For the Structure dimension of the SBD, the two profiles parallel each other for the first two assessments with the principal's scores exceeding the teachers' scores in value and then the profiles cross when the principal's mean decreases in value and falls below the teachers' mean.

Figure 27 displays the profiles of mean scores for the three assessments of principal leadership behavior for the principal and group of teachers in School 4. The mean scores for the group of teachers are rounded to the nearest whole number. The solid line depicts the principal's scores and the dashed line depicts the scores for the group of teachers in School 4.

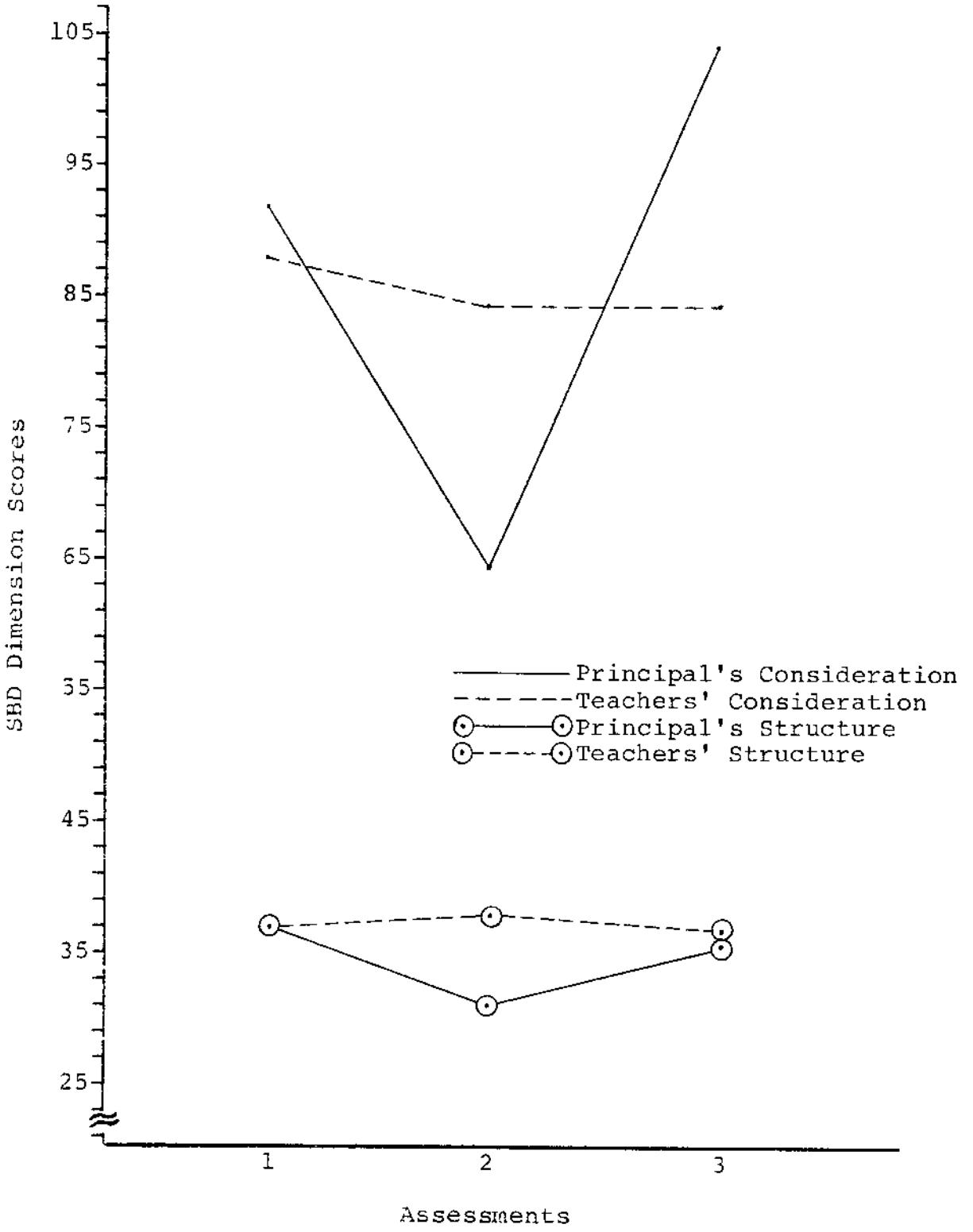


Fig. 27--Profiles of SBD dimension scores for principal and teachers of SChool 4 for three assessments of principal leadership behavior.

As shown in Figure 27, a difference existed between the principal's mean score and the teachers' mean score for each of the three assessments of the Consideration and Structure dimensions of the SBD. The data of Tables CXI through CXIII show that the differences were not statistically significant. For the Consideration dimension of the SBD, the two profiles cross as the principal's mean score exceeds the teachers' for the first assessment, decreases sharply for the second assessment, and then increases sharply for the third assessment. For the Structure dimension of the SBD, the means are very close for the first assessment and then spread apart for the second assessment as the principal's mean decreases in value and come close together for the final assessment as the principal's mean increases in value.

Figure 28 displays the profiles of mean scores for the three assessments of principal leadership behavior for the principal and group of teachers in School 5. The mean scores for the group of teachers are rounded to the nearest whole number. The solid line depicts the principal's scores and the dashed line depicts the scores for the group of teachers in School 5.

As shown in Figure 28, a difference existed between the principal's mean score and the teachers' mean score for each of the three assessments of the Consideration and Structure dimensions of the SBD. The data of Tables CXI through CXIII show that the differences were not statistically significant.

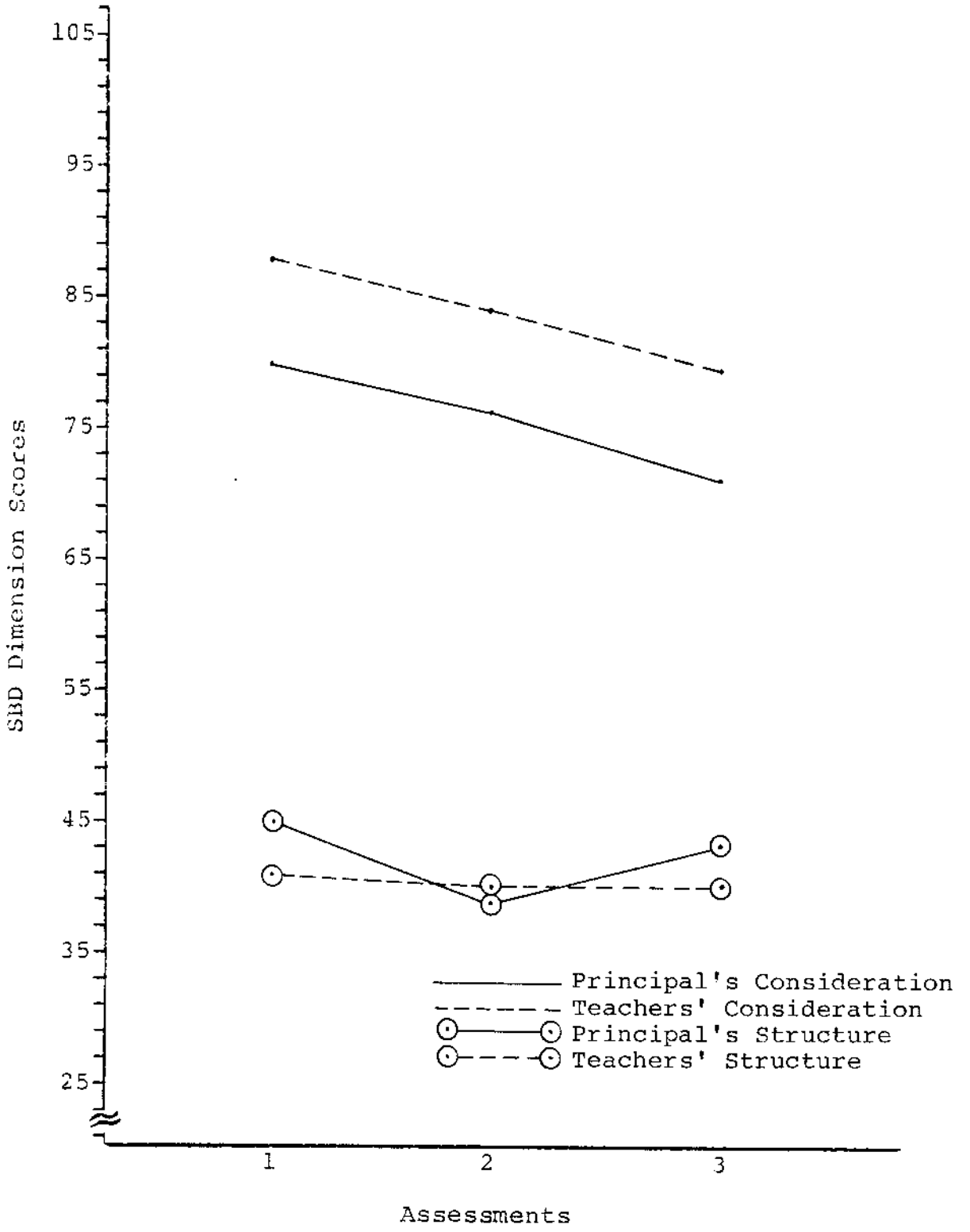


Fig. 28--Profiles of SBD dimension scores for principal and teachers of School 5 for three assessments of principal leadership behavior.

For the Consideration dimension of the SBD, the profiles parallel each other for the three assessments with both groups of scores decreasing in value on each assessment. The teachers' mean exceeds the principal's mean for each assessment. For the Structure dimension of the SBD, the principal's mean exceeds the teachers' mean for the first assessment, decreases in value to match the teachers' mean for the second assessment, and then increases above the teachers' mean for the third assessment.

Table CXIV displays the pattern of differences for the three assessments of principal leadership behavior in the five schools. The assessment where the greatest difference occurred is indicated as is the assessment where the least difference occurred.

As shown in Table CXIV, five greatest differences occurred on the first assessment; one greatest difference occurred on the second assessment; and four greatest differences occurred on the third assessment. For the Consideration dimension, three of the greatest differences occurred on the third assessment and the other two greatest differences occurred on the first assessment. For the structure dimension, three greatest differences occurred on the first assessment; one greatest difference occurred on the second assessment; and one greatest difference occurred on the third assessment.

TABLE CXIV

PATTERN OF GREATEST AND LEAST DIFFERENCES BETWEEN PRINCIPALS' AND TEACHERS' MEANS FOR THREE ASSESSMENTS OF PRINCIPAL LEADERSHIP BEHAVIOR FOR FIVE ELEMENTARY SCHOOLS

School SBD Dimension	Assessment 1	Assessment 2	Assessment 3
School 1			
Consideration		-	+
Structure	-		+
School 2			
Consideration	+		-
Structure	+	-	
School 3			
Consideration	-		+
Structure	+		-
School 4			
Consideration	-		+
Structure	-	+	
School 5			
Consideration	+		-
Structure	+	-	

+Greatest Difference. -Least Difference.

Part B of Research Question VI dealt with the analysis of data for the total group of principals and teachers in the study. Subsection B.1 of this research question addressed the question of whether there was a significant difference between the principals' perceptions and the teachers' perceptions of principal leadership behavior for

each of the three assessments of leadership behavior. To test for the existence of a significant difference in perceptions, the t test for independent samples was used. Table CXV displays the results of the t tests for the three assessments of principal leadership behavior for the total group of principals and teachers. The principals' mean, the teachers' mean, the degrees of freedom, the associated standard deviations for each mean, and the results of the t tests for independent samples for the two dimensions of the SBD are shown in the table.

The t-value calculated for each comparison of means was compared to the t table of 1.980 for a two-tailed test at the .05 level of significance with 149 degrees of freedom. As shown by the data of Table CXV, none of the calculated t-values were significant.

Subsection B.2 of this research question addressed the question of whether an identifiable pattern of change existed for the three differences between principals' perceptions of principal leadership behavior and teachers' perceptions of principal leadership behavior for the total group of principals and teachers. Figure 29 displays the profiles of the three mean scores for the principals and teachers. The mean scores are rounded to the nearest whole number. The solid line depicts the principals' scores and the dashed line depicts the teachers' scores for the three assessments of principal leadership behavior.

TABLE CXV

RESULTS OF t TESTS COMPARING MEANS FOR PRINCIPALS AND TEACHERS FOR THREE ASSESSMENTS OF PRINCIPAL LEADERSHIP BEHAVIOR USING THE SBD DIMENSION

Assessment SBD Dimension	Principal Mean	SD	Teacher Mean	SD	DF	t
Assessment 1						
Consideration	85.49	6.55	89.10	9.88	149	-0.81
Structure	46.08	8.19	39.18	9.84	149	1.55
Assessment 2						
Consideration	76.04	11.37	85.12	11.09	149	-1.80
Structure	39.87	9.85	37.84	9.83	149	0.45
Assessment 3						
Consideration	78.75	18.38	82.41	13.89	149	-0.57
Structure	39.66	3.47	38.64	10.13	149	0.23

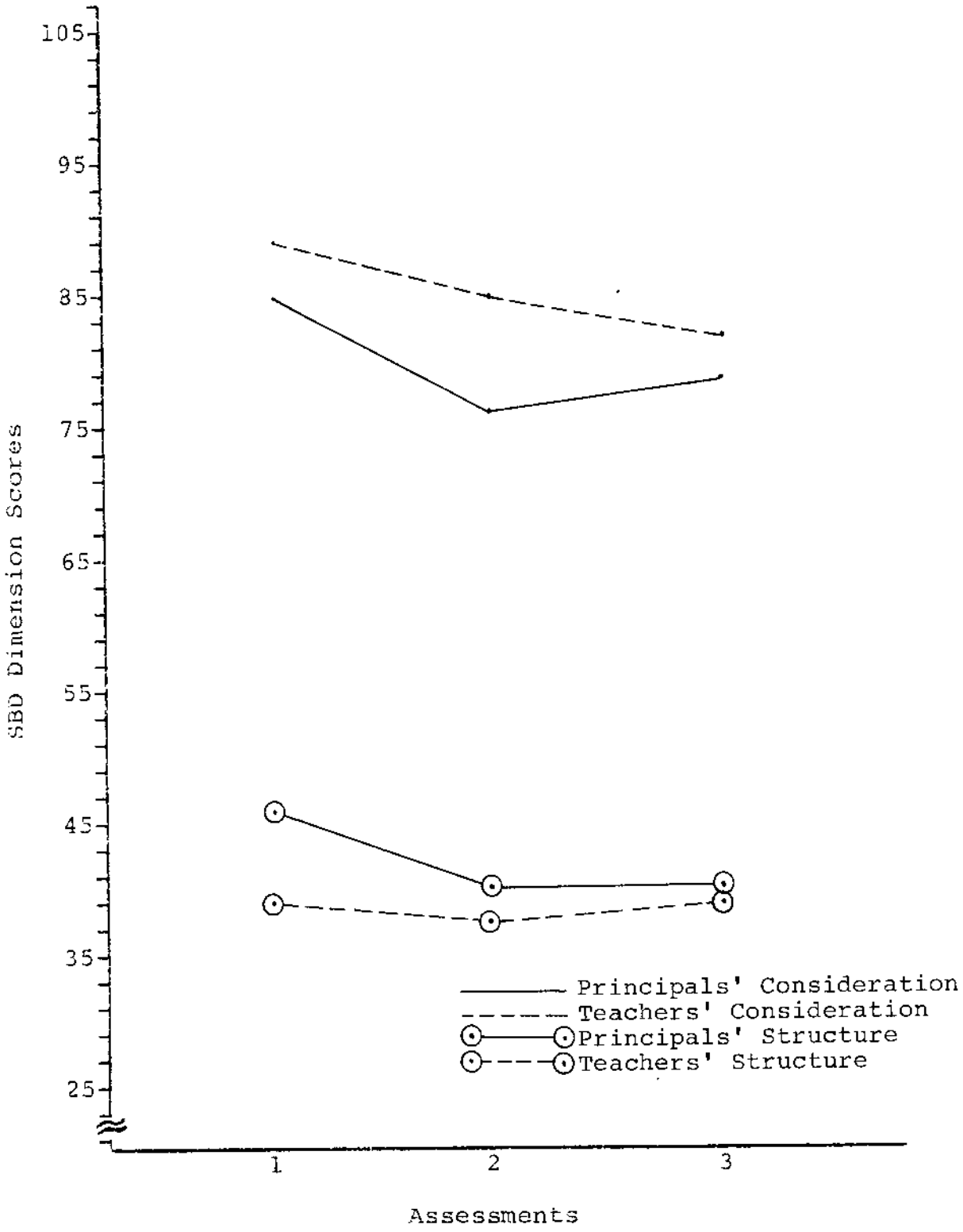


Fig. 29--Profiles of mean scores for SBD dimensions for principals and teachers for three assessments of principal leadership behavior.

As shown in Figure 29, a difference existed between the principals' mean score and the teachers' mean score for each of the three assessments of the Consideration and Structure dimensions of the SBD. The data of Table CXV show that the differences were not statistically significant. For the Consideration dimension of the SBD, the teachers' mean for all three assessments is higher in value than the principals' mean with the greatest difference on the second assessment. For the Structure dimension of the SBD, the principals' mean for all three assessments is higher than the teachers' mean with the greatest difference on the first assessment.

Table CXVI displays the pattern of differences for the total group of principals and teachers. The assessment where the greatest difference occurred is indicated as is the assessment where the least difference occurred.

As shown in Table CXVI, the greatest difference for the Consideration dimension occurred on the second assessment. The greatest difference between principals' and teachers' perceptions for the Structure dimension occurred on the first assessment. For the Consideration and Structure dimensions, the least difference occurred on the third assessment of principal leadership behavior.

Research Question VII

Research Question VII concerned the relationship between the openness factor of organizational climate and the

TABLE CXVI

PATTERN OF GREATEST AND LEAST DIFFERENCES BETWEEN PRINCIPALS' AND TEACHERS' MEANS FOR THREE ASSESSMENTS OF PRINCIPAL LEADERSHIP BEHAVIOR FOR THE TOTAL GROUP OF PRINCIPALS AND TEACHERS

Assessment SBD Dimension	Difference
Assessment 1	
Consideration	
Structure	+
Assessment 2	
Consideration	+
Structure	
Assessment 3	
Consideration	-
Structure	-

+Greatest Difference. -Least Difference.

principal leadership factors of Consideration and Structure. Openness was measured for this research question by the openness score of the Organizational Climate Description Questionnaire (OCDQ). Consideration and structure were measured for this research question by the Consideration and Structure dimensions of the Supervisory Behavior Description (SBD) questionnaire. Using the OCDQ and the SBD, the climate and principal leadership behavior factors were measured three times during the school year and the data were analyzed for each school group and for the total group of schools in the study.

Part A of this research question dealt with the analysis of data for each school group. Subsection A.1 of this

research question addressed the question of whether the scores for the OCDQ and the SBD indicated that a relationship existed between the openness factor and the consideration and structure factors. To determine if a relationship existed between the openness factor of climate and the principal leadership factors, Pearson product-moment correlation coefficients were computed for each assessment of climate and principal leadership behavior using the OCDQ openness score and the scores for the Consideration and Structure dimensions of the SBD. For each school group, the scores for the teachers and the principal were combined for the calculation of the correlation coefficients. To test the significance of the relationship between the factors, a test of significance was performed for each computed correlation coefficient.

Tables CXVII through CXXI display the Pearson product-moment correlation coefficients for the openness, consideration, and structure factors associated with the three assessments of climate and principal leadership behavior. The results of the tests of significance of correlation are also displayed in the tables.

Table CXVII displays the Pearson product-moment correlation coefficients calculated for School 1. The results of the tests of significance of correlation for each of the computed correlation coefficients are included in the table.

TABLE CXVII

PRODUCT-MOMENT CORRELATIONS BETWEEN MEASURES OF OPENNESS, CONSIDERATION, AND STRUCTURE AND RESULTS OF TESTS OF SIGNIFICANCE OF CORRELATION FOR SCHOOL 1

Principal Leadership Behavior	Organizational Climate	Test of Significance
SBD Dimensions	OCDQ Openness	t
Assessment 1		
Consideration	0.2740	1.254
Structure	0.0964	.449
Assessment 2		
Consideration	-0.0449	.179
Structure	-0.3361	1.617
Assessment 3		
Consideration	-0.0427	.179
Structure	0.0214	.089

*Significant at .05 level, N = 22, Degrees of Freedom = 20.

Table CXVIII displays the Pearson product-moment correlation coefficients calculated for School 2. The results of the tests of significance of correlation for each of the computed correlation coefficients are included in the table.

Table CXIX displays the Pearson product-moment correlation coefficients calculated for School 3. The results of the tests of significance of correlation for each of the computed correlation coefficients are included in the table.

TABLE CXVIII

PRODUCT-MOMENT CORRELATIONS BETWEEN MEASURES OF OPENNESS, CONSIDERATION, AND STRUCTURE AND RESULTS OF TESTS OF SIGNIFICANCE OF CORRELATION FOR SCHOOL 2

Principal Leader-ship Behavior	Organizational Climate	Test of Significance
SBD Dimensions	OCDQ Openeess	t
Assessment 1		
Consideration	-0.0639	.306
Structure	0.2727	1.429
Assessment 2		
Consideration	0.2517	1.317
Structure	0.1306	.668
Assessment 3		
Consideration	-0.072	.153
Structure	0.1345	.668

*Significant at .05 level, N = 28, Degrees of Freedom = 26.

The Pearson product-moment correlation coefficients computed as indices of the relationship between (1) openness and consideration and (2) openness and structure were tested for significance of correlation. The two correlation coefficients for each assessment for School 1 were compared to the t table value of 2.086 for determination of significance at the .05 level of significance for a two-tailed test

TABLE CXIX

PRODUCT-MOMENT CORRELATIONS BETWEEN MEASURES OF OPENNESS, CONSIDERATION, AND STRUCTURE AND RESULTS OF TESTS OF SIGNIFICANCE OF CORRELATION FOR SCHOOL 3

Principal Leader-ship Behavior	Organizational Climate	Test of Significance
SBD Dimensions	OCDQ Openness	t
Assessment 1		
Consideration	-0.2064	.164
Structure	-0.0406	.219
Assessment 2		
Consideration	0.1227	.622
Structure	-0.1989	1.118
Assessment 3		
Consideration	0.3329	1.914
Structure	-0.0151	.055

*Significant at .05 level, N = 32, Degrees of Freedom = 30.

with 20 degrees of freedom. As shown by the data of Table CXVII, none of the correlation coefficients were found to be significant since none of the calculated values exceeded the required value.

The Pearson product-moment correlation coefficients computed as indices of the relationship between (1) openness and consideration and (2) openness and structure were tested

for significance of correlation. The two correlation coefficients for each assessment for School 2 were compared to the t table value of 2.056 for determination of significance at the .05 level of significance for a two-tailed test with 26 degrees of freedom. As shown by the data of Table CXVIII, none of the correlation coefficients were found to be significant since none of the calculated values exceeded the required value.

The Pearson product-moment correlation coefficients computed as indices of the relationship between (1) openness and consideration and (2) openness and structure were tested for significance of correlation. The two correlation coefficients for each assessment for School 3 were compared to the t table value of 2.042 for determination of significance at the .05 level of significance for a two-tailed test with 30 degrees of freedom. As shown by the data of Table XIX, none of the correlation coefficients were found to be significant since none of the calculated values exceeded the required value.

Table CXX displays the Pearson product-moment correlation coefficients calculated for School 4. The results of the tests of significance of correlation for each of the computed correlation coefficients are included in the table.

The Pearson product-moment correlation coefficients computed as indices of the relationship between (1) openness and consideration and (2) openness and structure were tested

TABLE CXX

PRODUCT-MOMENT CORRELATIONS BETWEEN MEASURES OF OPENNESS, CONSIDERATION, AND STRUCTURE AND RESULTS OF TESTS OF SIGNIFICANCE OF CORRELATION FOR SCHOOL 4

Principal Leader-ship Behavior	Organizational Climate	Test of Significance
SBD Dimensions	OCDQ Openness	t
Assessment 1		
Consideration	0.1702	.976
Structure	0.0593	.340
Assessment 2		
Consideration	-0.0995	.568
Structure	0.1225	.684
Assessment 3		
Consideration	0.4207	2.618*
Structure	0.1579	.917

*Significant at .05, N = 34, Degrees of Freedom = 32.

for significance of correlation. The two correlation coefficients for each assessment for School 4 were compared to the t table value of 2.042 for determination of significance at the .05 level of significance for a two-tailed test with 32 degrees of freedom. As shown by the data of Table CXX, one significant correlation was found. The correlation coefficient for openness and consideration for the third assessment had a calculated value of 2.618 and was significant

since the calculated value exceeded the required table value.

Table CXXI displays the Pearson product-moment correlation coefficients calculated for School 5. The results of the tests of significance of correlation for each of the computed correlation coefficients are included in the table.

TABLE CXXI

PRODUCT-MOMENT CORRELATIONS BETWEEN MEASURES OF OPENNESS, CONSIDERATION, AND STRUCTURE AND RESULTS OF TESTS OF SIGNIFICANCE OF CORRELATION FOR SCHOOL 5

Principal Leadership Behavior	Organizational Climate	Test of Significance
SBD Dimensions	OCDQ Openness	t
Assessment 1		
Consideration	0.5290	3.590*
Structure	0.1680	.991
Assessment 2		
Consideration	-0.0450	.230
Structure	-0.1296	.753
Assessment 3		
Consideration	0.2043	1.173
Structure	0.1086	.636

*Significant at .05 level, N = 35, Degrees of Freedom = 33.

The Pearson product-moment correlation coefficients computed as indices of the relationship between (1) openness and consideration and (2) openness and structure were tested for significance of correlation. The two correlation coefficients for each assessment for School 5 were compared to the t table value of 2.042 for determination of significance at the .05 level of significance for a two-tailed test with 33 degrees of freedom. As shown by the data of Table CXXI, one significant correlation was found. The correlation coefficient for openness and consideration for the first assessment had a culculated value of 3.590 and was significant since the calculated value exceeded the required table value.

Subsection A.2 of this research question addressed the question of whether a significant difference existed between the relationships for the climate and principal leadership behavior factors established for the three assessments. To determine if there was a significant difference in the correlation coefficients computed for the relationship of (1) openness and consideration and (2) openness and structure for the three assessments, the correlation coefficients were tested by pairs for the significance of the difference between two correlation coefficients for independent samples.

Table CXXII displays the results of the tests for the significance of the difference between correlation coefficients for the five schools. The correlation coefficients for

TABLE CXXII

RESULTS OF TESTS FOR SIGNIFICANCE OF THE DIFFERENCE BETWEEN CORRELATION COEFFICIENTS FOR THREE ASSESSMENTS CLIMATE AND LEADERSHIP BEHAVIOR FACTORS FOR FIVE SCHOOLS

School	Pairwise Comparisons for Assessments		
Openness/SBD Dimension	1 & 2	1 & 3	2 & 3
School 1			
Openness/Consideration	.978	.978	.000
Openness/Structure	1.367	.231	-1.136
School 2			
Openness/Consideration	1.113	.088	1.025
Openness/Structure	.516	.516	.000
School 3			
Openness/Consideration	- .555	-1.399	.844
Openness/Structure	.600	- .095	- .696
School 4			
Openness/Consideration	1.051	-1.087	-2.138*
Openness/Structure	- .260	- .398	- .138
School 5			
Openness/Consideration	2.512*	1.520	- .992
Openness/Structure	1.172	.248	- .924

*Significant at .05 level.

(1) openness and consideration and (2) openness and structure are compared by pairs for the three assessments of climate and principal leadership behavior for each school.

The significance of the difference between each pair of correlation coefficients was tested by transforming the correlation coefficients to z scores. The z value calculated for the comparison of each pair of correlation coefficients was compared to the z table value of 1.960 for determination of significance at the .05 level of significance for a two-tailed test. For the two-tailed test, a z score equal to or smaller than -1.960 or a z score equal to or larger than +1.960 was significant. As shown by the data of Table CXXII, two significant differences were identified. For School 4 for the relationship between openness and consideration, the difference between the correlation coefficients for the second and third assessments was found to be significant. For School 5 for the relationship between openness and consideration, the difference between the correlation coefficients for the first and second assessments was found to be significant.

Subsection A.3 of this research question addressed the question of whether an identifiable pattern of change existed for the three assessments for the relationship of the climate factor and the two factors of principal leadership behavior. Table CXXIII displays the pattern of positive correlations

TABLE CXXIII

PATTERN OF POSITIVE AND NEGATIVE CORRELATIONS FOR THREE ASSESSMENTS OF CLIMATE OPENNESS FACTOR AND PRINCIPAL LEADERSHIP BEHAVIOR FACTORS OF CONSIDERATION AND STRUCTURE FOR FIVE ELEMENTARY SCHOOLS

Openness/SBD Dimension	Assessment 1	Assessment 2	Assessment 3
School 1			
Openness/Consideration	+	-	-
Openness/Structure	+	-	+
School 2			
Openness/Consideration	-	+	-
Openness/Structure	+	+	+
School 3			
Openness/Consideration	-	+	+
Openness/Structure	-	-	-
School 4			
Openness/Consideration	+	-	+
Openness/Structure	+	+	+
School 5			
Openness/Consideration	+	-	+
Openness/Structure	+	-	+

+Positive Correlation. -Negative Correlation.

and negative correlations for the three assessments of climate and principal leadership behavior for each of the five schools.

As shown by the data of Table CXXIII, the type of correlation determined for the relationship between openness and consideration changed for each school on the second assessment. For Schools 1, 4, and 5 for the second assessment, the correlation coefficient changed from a positive to a negative correlation indicating that high scores on one factor tended to be paired with low scores on the other factor. For schools 2 and 3 for the second assessment, the correlation coefficient changed from a negative to a positive correlation indicating that high scores on one factor tended to be paired with high scores on the other factor. For the relationship between openness and structure, two changes occurred on the second assessment with the correlation changing from a positive to a negative correlation. For Schools 2, 3, and 4, no changes in correlation type occurred across the three assessments for the openness and structure relationship.

Part B of this research question dealt with the analysis of data for the total group of schools in the study. Subsection B.1 of this research question addressed the question of whether the scores for the OCDQ and the SBD indicated that a relationship existed between the openness factor and the consideration and structure factors. To determine if a relationship existed between the openness factor of climate and the principal leadership factors, Pearson product-moment

correlation coefficients were computed for each assessment of climate and principal leadership behavior using the OCDQ openness score and the scores for the Consideration and Structure dimensions of the SBD. The scores for the five principals and the 146 classroom teachers were combined for the calculation of the correlation coefficients. To test the significance of the relationship between the factors, a test of significance was performed for each computed correlation coefficient.

Table CXXIV displays the Pearson product-moment correlation coefficients for the openness, consideration, and structure factors associated with the three assessments of climate and principal leadership behavior. The results of the tests of significance are also displayed in the table.

The Pearson product-moment correlation coefficients computed as indices of the relationship between (1) openness and consideration and (2) openness and structure were tested for significance of correlation. The two correlation coefficients for each assessment for the total group of schools were compared to the t table value of 1.980 for determination of significance for a two-tailed test with 149 degrees of freedom. As shown by the data of Table CXXIV, only one of the correlation coefficients was not found to be significant. The correlation coefficients computed for the three assessments for the relationship between openness and consideration were all found to be significant. Only the

TABLE CXXIV

PRODUCT-MOMENT CORRELATIONS BETWEEN MEASURES OF OPENNESS, CONSIDERATION, AND STRUCTURE AND RESULTS OF TESTS OF SIGNIFICANCE OF CORRELATION FOR TOTAL GROUP OF SCHOOLS

Principal Leadership Behavior	Organizational Climate	Test of Significance
SBD Dimensions	OCDQ Openness	t
Assessment 1		
Consideration	0.2017	2.492*
Structure	-0.0389	1.726
Assessment 2		
Consideration	0.1709	2.106*
Structure	-0.3344	4.267*
Assessment 3		
Consideration	0.2781	3.560*
Structure	-0.2393	3.018*

*Significant at .05 level, N = 151, Degrees of Freedom = 149.

correlation coefficient for the first assessment for the relationship between openness and structure was not found to be significant.

Subsection B.2 of this research question addressed the question of whether a significant difference existed between the relationships for the climate and principal leadership

behavior factors established for the three assessments. To determine if there was significant difference in the correlation coefficients computed for the relationship of (1) openness and consideration and (2) openness and structure for the three assessments, the correlation coefficients were tested by pairs for the significance of the difference between two correlation coefficients for independent samples.

Table CXXV displays the results of the tests for the significance of the difference between correlation coefficients for the total group of schools. The correlation coefficients for (1) openness and consideration and (2) openness and structure are paired for the three assessments of climate and principal leadership behavior for the total group of schools.

TABLE CXXV

RESULTS OF TESTS FOR SIGNIFICANCE OF THE DIFFERENCE BETWEEN CORRELATION COEFFICIENTS FOR THREE ASSESSMENTS OF CLIMATE AND LEADERSHIP BEHAVIOR FACTORS FOR TOTAL GROUP OF SCHOOLS

Openness/SBD Dimension	Pairwise Comparisons for Assessments		
	1 & 2	1 & 3	2 & 3
Openness/Consideration	.265	-.659	-.924
Openness/Structure	1.685	.865	.820

*Significant at .05 level.

The significance of the difference between each pair of correlation coefficients was tested by transforming the

correlation coefficients to z scores. The z value calculated for the comparison of each pair of correlation coefficients was compared to the z table value of 1.960 for determination of significance at the .05 level of significance for a two-tailed test. For the two-tailed test, a z score equal to or smaller than -1.960 or a z score equal to or larger than +1.960 was significant. As shown by the data of Table CXXV, none of the differences between correlation coefficients were found to be significant.

Subsection B.3 of this research question addressed the question of whether an identifiable pattern of change existed for the three assessments for the relationship of the climate factor and the two factors of principal leadership behavior. Table CXXV displays the pattern of positive correlations and negative correlations for the three assessments of climate and principal leadership behavior for the total group of schools.

TABLE CXXVI

PATTERN OF POSITIVE AND NEGATIVE CORRELATIONS FOR THREE ASSESSMENTS OF CLIMATE OPENNESS FACTOR AND PRINCIPAL LEADERSHIP BEHAVIOR FACTORS OF CONSIDERATION AND STRUCTURE FOR THE TOTAL GROUP OF SCHOOLS

Openness/SBD Dimension	Assessments		
	1	2	3
Openness/Consideration	+	+	+
Openness/Structure	-	-	-

+Positive Correlation. -Negative Correlation.

As shown by the data of Table CXXVI, the type of correlation determined for the relationship between (1) openness and consideration and (2) openness and structure for the total group of schools did not change for the three assessments. For the relationship between openness and consideration, the three correlation coefficients were positive, indicating that high scores on one factor tended to be paired with high scores on the other factor. For the openness and structure relationship, the three correlation coefficients were all negative, indicating that high scores on one factor tended to be paired with low scores on the other factor.

CHAPTER V

FINDINGS OF THE DATA ANALYSIS

The findings of the descriptive and statistical analysis of the data reported in chapter IV, Report of the Data Analysis, are reported and discussed in this chapter. For each of the seven research questions formulated for investigation in this study, the findings of the data analysis are reported in the order in which the tests or comparisons were made.

Research Question I concerned changes in teachers' perceptions of organizational climate during the first year of operation in new elementary schools. Organizational climate was measured three times during the school year using the eight subtests of the Organizational Climate Description Questionnaire (OCDQ). Data for each of the eight subtests of the OCDQ were analyzed for (a) the group of teachers in each of the five elementary schools and (b) the total group of 146 teachers participating in the study.

Part A of Research Question I dealt with the analysis of data for the group of teachers in each of the five new elementary schools. The difference in climate types identified for each school by the teachers' scores on the OCDQ for the three assessments of climate indicated that in each of

the five schools the teachers' perceptions of climate had changed during the school year. Each of the six climate types defined by Halpin and Croft were identified at least once during the course of the three assessments of climate in the five schools. The Open and Controlled climate types were identified once each; the Familiar and Closed climate types were identified twice each; the Paternal climate type was identified three times; and the Autonomous climate type was identified six times. The teachers in two of the five schools identified a different climate type for their school for each of the three assessments. The teachers in the other three schools identified only two climate types for their school naming the same climate type for two of the three assessments. In all five of the schools, the final climate type identified for the school by the teachers of the school represented a more closed type of climate than the type of climate identified for the school on the first assessment of climate. Teachers in each of the five elementary schools viewed the climate in their school as more closed at the end of the school year than at the beginning of the school year.

Since the data indicated that teachers' perceptions of climate had changed during the year, statistical tests were used to determine which dimensions of climate were perceived differently and when the changes in perceptions occurred. As a preliminary procedure to the tests comparing the sub-test means, tests for homogeneity of variance were performed

using the three variances associated with the teachers' scores for the OCDQ subtests. Since the variances being tested were for the same group of subjects, the purpose of the tests for homogeneity of variance was to determine if the degree of variability within each group of scores remained approximately the same for the three assessments. Increases in variance were interpreted as meaning that the attitudes of the group were becoming more heterogeneous, while decreases in variance were interpreted as meaning that the attitudes of the group were becoming more uniform. Based on the results of the Hartley Fmax tests for homogeneity of variance, the assumption of equal variances was rejected for three of the forty comparisons made for the three variances associated with each of the eight subtests in the five schools.

For two of the five school groups, based on the results of the tests for homogeneity of variance, the assumption of equal variances was rejected for the Thrust subtest. An examination of the variances for the three assessments shows that the size of the variance increased with each subsequent assessment. For these two school groups, the teachers viewed the principal behavior defined by the Thrust dimension of climate from both ends of the attitude continuum with some teachers rating the principal very low in Thrust and some teachers rating the principal very high in Thrust. Over the three assessments of climate, the difference in

attitude among the teachers concerning the Thrust behavior of the principal was reinforced and more extreme attitudes were produced as the year progressed.

For one of the five school groups, based on the results of the tests for homogeneity of variance, the assumption of equal variances was rejected for the Disengagement subtest. An examination of the variances for the three assessments shows that the variances for the Disengagement subtest for this school group fluctuated significantly. The variance for the second assessment was three times larger than the variance for the first assessment and was twice the size of the variance for the third assessment. For this school group, the teachers viewed the teachers' behavior defined by the Disengagement dimension of climate in a very dissimilar manner for each of the three assessments of climate. The changes in the degree of variability within the scores for the group of teachers in this school reflected a general lack of group agreement concerning the Disengagement climate dimension.

A one-factor analysis of variance (ANOVA) for repeated measures was performed on the subtest scores for the teachers in each of the five schools to determine if significant differences existed between the mean scores for the three assessments of climate. Based on the results of the ANOVA for repeated measures tests, significant differences were

found for five of the forty comparisons made for the three means associated with each of the eight OCDQ subtests in the five schools.

For four of the five school groups, significant differences were found for the Thrust subtest. As one of the OCDQ subtests examining the behavior of the principal, the Thrust subtest measures principal behavior which is highly task-oriented but which is perceived favorably by the teachers since the principal attempts to motivate the teachers through personal example. The principal is perceived as not asking the teachers to give more of themselves than he is willing to give of himself. A low score on the Thrust subtest is viewed as undesirable. For the four school groups with significant differences on the Thrust subtest, the mean score for the group of teachers' scores decreased in value for each subsequent assessment of climate. The teachers in these four schools believed that over the year the principal was asking more of the teachers than the principal was willing to do personally.

For one of the five school groups, a significant difference was found for the Esprit subtest in addition to the difference found for the Thrust subtest. As one of the four subtests of the OCDQ examining the behavior of the teachers, the Esprit subtest measures teachers' morale and the general attitude teachers have concerning the way the organization is providing congruence between teachers' social and task

needs. A high score on the Esprit subtest is viewed as desirable. For the school with the significant difference on the Esprit subtest, the mean score for the group of teachers' scores for the second assessment decreased in value by approximately six points indicating that the teachers' morale had dropped between the first and second assessments. For the third assessment, the teachers' mean score rose by one point indicating only marginal improvement in morale.

For the significant differences found using the ANOVA for repeated measures procedure, the Scheffé test for comparison of means was used as a method of determining which of the three means were actually different. For the Thrust subtest, three significant differences were found between the first and third assessments, and one significant difference was found between the first and second assessments. For the school group with a significant difference on the Esprit subtest, the mean scores for both the second and third assessments were significantly lower than the mean scores for the first assessment.

In three of the four schools with a significant difference on the Thrust subtest, the greatest difference in teachers' perceptions of the Thrust climate dimension occurred between the perceptions of the teachers at the beginning of the school year and the perceptions of the teachers at the end of the school year. As evidence by the decrease in mean scores over the three assessments, the teachers in these schools

believed the principal was becoming less and less authentic in his Thrust leadership behavior as the school year progressed. Teachers in these schools were most critical of the principal's Thrust behavior at the end of the school year. In the fourth school with a significant difference on the Thrust subtest, the greatest difference in teachers' perceptions of the principal's behavior occurred between the perceptions of the teachers at the beginning of the school year and the perceptions of the teachers at mid-year. As evidenced by the fluctuation in the mean scores, the teachers in this school were most critical of the principal's Thrust behavior at mid-year and then reduced this level of criticism so that teachers' perceptions at the end of the school year were not significantly different than they had been at the beginning of the school year.

For the school with a significant difference on the Esprit subtest in addition to the significant difference on the Thrust subtest, two significant differences were found by the tests for comparison of means. Teachers' perceptions of the Esprit climate dimension at mid-year and at the end of the school year were significantly different from their perceptions at the beginning of the school year. As evidenced by the fluctuation in mean scores, the morale of the teachers was lowest at mid-year and improved only marginally by the end of the school year.

As described by Halpin and Croft, Thrust and Esprit are the two dimensions of climate which define the authenticity or genuineness of the principal's and teachers' behavior. Thrust is an index of the authenticity of the principal's behavior and Esprit is an index of the authenticity of teachers' behavior. Authenticity of behavior is the major characteristic of the Open climate and its existence decreases as the climate becomes more closed. For the five schools in this study, the changes in teachers' perceptions of the climate in their schools are reflected in the changes in teachers' perceptions of the Thrust and Esprit climate dimensions measured by the Thrust and Esprit subtests of the OCDQ.

In summary, when the data for the group of teachers in each of the five new elementary schools were analyzed, teachers' perceptions of the climate in their individual schools had changed during the course of the school year. The teachers in each of the five schools viewed the climate of the school as more closed at the end of the year than at the beginning of the year. An analysis of the OCDQ subtest scores showed that four of the five schools had significant differences between assessments for the Thrust subtest; one school had no significant differences; and one school had a significant difference between the assessments for the Esprit subtest in addition to the difference found on the Thrust subtest. For the significant differences found by the ANOVA for

repeated measures procedure, four of the six significant differences were between the means for the first and third assessments.

A limited comparison of the teachers' perceptions of climate in the five schools in terms of the demographic data collected on the school groups shows that the one school with no significant differences on the OCDQ subtests was the school in which the principal had previously worked with the majority of the teachers as a school administrator. For this school, the OCDQ subtest which had the greatest nonsignificant difference was the Esprit subtest. The group of four schools with significant differences on the Thrust subtest included both the school with the smallest number of staff members and the school with the largest number of staff members. Teachers in the school with the smallest number of staff members identified the Open climate for their school at the beginning of the year and the Autonomous climate type for the second and third assessments. The Open and Autonomous climates represent the two most open climate types on the climate continuum defined by Halpin and Croft. The teachers in the school with the largest number of staff members identified the Paternal climate for the first two assessments of climate and the Closed climate for the third assessment. The Paternal and Closed climates represent the two most closed climate types on the Halpin and Croft climate continuum. The school which

had significant differences on both the Thrust and Esprit subtests was the school with the largest student enrollment.

Part B of Research Question I dealt with the analysis of data for the total group of teachers participating in the study. For this subsection of the research question, the teachers were grouped by two methods for the analysis of the data. The teachers were grouped (a) as members of the five school groups and (b) as members of one group. Grouping the teachers as members of school groups permitted limited statistical comparisons among the schools. Grouping the teachers as members of one group provided a more generalized view of teachers' perceptions of climate during the first year of operation in new elementary schools.

The findings from Part A of this research question and the scores for the total group of teachers indicated that teachers' perceptions of climate changed during the course of the school year. Since the data indicated that teachers' perceptions of climate had changed, statistical tests were used to determine which dimensions of climate were perceived differently and when the changes in perceptions occurred. Since the teachers were grouped by two different methods, two different tests for homogeneity of variance and two different ANOVA for repeated measures tests were used.

For the total group of teachers grouped as members of the five school groups, the Cochran C test for homogeneity of variance was used to determine if the scores for the five

school groups had approximately the same degree of variance for each assessment of climate. This test was employed since the five groups did not contain the same number of subjects. For the first assessment of climate, the assumption of equal variances was rejected for the Thrust and Consideration subtests. For the Thrust subtest the five school variances ranged from 20.61 to 73.44. For the Consideration subtest the variances ranged from 70.90 to 170.82. For the second assessment of climate, the assumption of equal variances was rejected for the Intimacy subtest. For the Intimacy subtest the variances ranged from 33.87 to 106.09. For the third assessment of climate, the assumption of equal variances was rejected for the Disengagement and Intimacy subtests. For the Disengagement subtest the variances ranged from 48.02 to 152.03 and for the Intimacy subtest the variances ranged from 38.94 to 148.84. With the exception of the variances associated with the Disengagement subtest, the smallest variance for each assessment was associated with the scores for School 1 and the largest variance for each assessment was associated with the scores for School 2. For the total group of teachers as members of school groups, the assumption of equal variances among the groups was rejected for five of the twenty-four tests for homogeneity of variance. None of the subtests had the assumption of equal variances among groups rejected for all three of the assessments of climate.

For the total group of teachers grouped as members of one group, the Hartley Fmax test for homogeneity of variance was used to determine if the degree of variability within the group of scores for each of the three assessments remained approximately the same. Based on the results of the Hartley Fmax tests, the assumption of equal variances was retained for each of the OCDQ subtests.

An ANOVA for repeated measures was performed on the group of scores for each subtest of the OCDQ for each of the two methods of grouping the total group of teachers. For the total group of teachers as members of school groups, a two-factor ANOVA for repeated measures was performed on the group of scores for each OCDQ subtest. This ANOVA for repeated measures examines the differences among the groups (the between-subjects factor), the differences among the repeated assessments (the within-subjects factor), and possible interaction between the groups and the assessments. For the group of teachers as members of one group, a one-factor ANOVA for repeated measures was performed on the group of scores for each OCDQ subtest. This ANOVA for repeated measures examines the differences among the repeated assessments (the within-subjects factor) only.

For the eight subtests of the OCDQ, nine significant differences were found using the two-factor ANOVA for repeated measures procedure. Five significant differences were found for the between-subjects factor, three significant differences

were found for the within-subjects factor, and one significant difference was found for the interaction factor.

For the between-subjects factor, significant differences were found for the Disengagement, Esprit, Intimacy, Aloofness, and Production Emphasis subtests. Since the between subjects factor answers the question of whether significant differences exist among the groups, the results of the tests indicate that for the five subtests listed above, group membership differentially affected teachers' perceptions. Three of the five subtests are OCDQ subtests examining teachers' behavior in the school setting. Disengagement measures the degree to which teachers do not work well together; Esprit measures the morale of the teachers; and Intimacy measures teachers' enjoyment of social relations with each other. The other two of the five listed subtests are OCDQ subtests examining the behavior of the principal in the school setting. Aloofness measures the degree to which the principal's behavior is formal and impersonal and Production Emphasis measures task-oriented behavior which is marked by close supervision of the teachers.

For the within-subjects factor of the two-factor ANOVA for repeated measures, significant differences were found for the Disengagement, Esprit, and Thrust subtests. Since the within-subjects factor answers the question of whether significant differences exist among the repeated assessments, the results of the tests indicate that for the subtests listed,

the perceptions of the teachers changed and did not remain constant across the three assessments. Two of the three listed subtests are OCDQ subtests examining teachers' behavior and the third subtest is an OCDQ subtest examining the behavior of the principal. Disengagement measures the degree to which teachers do not work well together; Esprit measures the morale of the teachers; and Thrust measures the leadership behavior of the principal where the principal attempts to motivate the teachers through his personal example. In addition to measuring the described behaviors, the Disengagement, Esprit, and Thrust subtests are the three subtests used in the determination of the openness score.

For the interaction factor of the two-factor ANOVA for repeated measures, one significant difference was found on Production Emphasis subtest. The presence of the significant interaction difference indicates that for the Production Emphasis subtest the manner in which this behavior was perceived by the teachers in the five groups varied across the assessments of climate.

For the eight subtests of the OCDQ, three significant differences were found using the one-factor ANOVA for repeated measures procedure. Significant differences were found for the Disengagement, Esprit, and Thrust subtests. The results of these tests were a reiteration of the findings for the within-subjects factor of the two-factor ANOVA for repeated measures. Only fractional differences in the calculated

F-values were noted as differences in the results of the one-factor and two-factor ANOVA for repeated measures procedures.

For the significant differences found using the ANOVA for repeated measures procedures, the Scheffé test for comparison of means was used as a method for determining which of the groups and assessments were actually different. For the two-factor ANOVA for repeated measures tests, significant differences were found for the between-subjects factor, the within-subjects factor, and the interaction factor.

For the between-subjects factor, significant differences were found for the Disengagement, Esprit, Intimacy, Aloofness, and Production Emphasis subtests. The results of the Scheffé tests indicated that for the Disengagement subtest there was a significant difference between the means for School 5 and the means for Schools 1, 2, and 3. A comparison of the means shows that the value of the mean for the teachers in School 5 exceeded the value of the means for the teachers in each of the other three schools for each assessment. The teachers in School 5 perceived themselves as less able to work together than did the teachers in each of the other three schools. For this subtest, a significant difference also existed between School 2 and School 4. An examination of the subtest means for these two groups shows that while the mean scores for School 2 remained approximately the same for each assessment, the mean score for School 4 increased in value for each subsequent assessment. The teachers in School 2 perceived

themselves with the same degree of Disengagement across the three assessments while the teachers in School 4 perceived themselves as becoming more disengaged as the school year progressed.

For the Esprit subtest, significant differences were found between the means for School 5 and the means for Schools 2 and 3. A comparison of the Esprit subtest means for these three school groups shows that the mean scores for the teachers in School 5 were lower in value for each of the three climate assessments than were the mean scores for the teachers in both Schools 2 and 3. The teachers in School 5 perceived themselves as having lower morale for each of the three assessments than did the teachers in School 2 and 3.

For the three assessments of the Intimacy subtest, a significant difference existed between the means for School 2 and the means for the other four schools. A comparison of the subtest means for the five schools shows that for each assessment the mean scores for the teachers in School 2 exceeded the mean scores for the teachers in the other schools. For the three assessments of climate, the teachers in School 2 perceived themselves as having better social relationships within the group than did the teachers in the other four schools.

For the Aloofness subtest, six significant differences were identified. School 3 differed significantly from School 2; School 4 differed significantly from all other

schools; and School 5 differed significantly from School 3. A comparison of the Aloofness subtest means for the three assessments of climate for School 3 and School 2 shows that the teachers in School 3 had a higher mean score for each assessment than did the teachers of School 2. The teachers of School 3 perceived their principal as more formal and distant than did the teachers in School 2. For the three assessments of climate, the teachers of School 4 had the lowest mean scores for the Aloofness subtest when the means for all five schools were compared. The principal of School 4 was perceived by the teachers of that school as less aloof than the principals of the other schools were perceived to be by the teachers in those schools. A comparison of the subtest means for the teachers of School 5 and School 3 shows that the principal of School 5 was perceived by the teachers of the school as less aloof than the principal of School 3 was perceived by the teachers of that school.

For the Production Emphasis subtest, School 1 differed significantly from Schools 3 and 5; School 2 differed significantly from Schools 3 and 5; and School 3 differed significantly from School 4. A comparison of the means for the three assessments of climate shows that the mean scores for the teachers of School 1 were lower than the mean scores for the teachers of Schools 3 and 5. The mean scores for the teachers of School 2 were also lower than the mean scores for the teachers of Schools 3 and 5. The significant

differences between Schools 1 and 2 and Schools 3 and 5 indicate that the teachers in Schools 1 and 2 perceived their principal as less task-oriented and supervisory than the principals of Schools 3 and 5 were perceived to be by the teachers of their respective schools. The significant difference between School 3 and School 4 resulted from different patterns for the mean scores. The mean scores for the first assessment were very close in value, but for the second and third assessments the mean scores for School 3 increased in value while the mean scores for School 4 decreased in value.

The results of the within-subjects factor of the two-factor ANOVA for repeated measures and the one-factor ANOVA for repeated measures tests indicated the presence of significant differences for the Disengagement, Esprit, and Thrust subtests. For the Disengagement subtest, the means for the first and third assessments were significantly different. An examination of the means shows that the value of the mean score increased for each subsequent assessment of climate. As a total group, teachers perceived themselves as becoming more disengaged over the course of the year. For the Esprit subtest, the tests of means produced two significant differences. A significant difference existed between the means for the first and second assessments and between the means for the first and third assessments. For the total group of teachers, teachers' perceptions of the Esprit climate dimension at mid-year and at the end of the school year were

significantly different from their perceptions at the beginning of the year. A comparison of the mean scores shows that the value of the mean decreased significantly for the second assessment and then remained at that level for the third assessment. As a group, teachers believed that group morale had changed significantly by mid-year and had not improved by the end of the school year. For the Thrust subtest, significant differences were found between the means for the first and second assessments and between the means for the first and third assessments. An examination of the Thrust subtest means shows that the means decreased in value for each subsequent assessment. As group, teachers believed that as the year progressed the principal was asking more of the teachers than he was willing to do himself. Teachers were most critical of the principal's Thrust behavior at the end of the school year.

In summary, when the data for the total group of teachers were analyzed, teachers' perceptions of climate had changed during the school year. For the total group of teachers grouped as members of the five school groups, significant differences among the groups were found using the two-factor ANOVA for repeated measures procedure. Based on the results of the ANOVA for repeated measures, group membership affected teachers' perceptions of the Disengagement, Esprit, Intimacy, Aloofness, and Production Emphasis subtests. For the teachers of the schools in this study, the dimensions of climate which

differed significantly from school to school included (1) the degree to which teachers worked well together, (2) the morale of the group, (3) the degree of friendly social relations within the group, (4) the degree to which the principal was perceived as formal and impersonal, and (5) the degree to which the principal closely supervised the teachers. For these dimensions of climate as perceived by the teachers in this study, the results of the statistical analyses indicate that it would be erroneous to assume that the school groups viewed these aspects of climate in a similar way. The number of significant differences resulting from the comparison of each school group with the other groups ranged from five to eleven per school group. The school group with the largest number of significant differences between itself and the other schools was the school in which the majority of the teachers had previously worked with the principal of the school as an administrator. The school group with the second largest number of significant differences between itself and the other schools was the school with the largest number of staff members.

Significant differences were found for the Disengagement, Esprit, and Thrust subtests by the within-subjects factor of the two-factor ANOVA for repeated measures and the one-factor ANOVA for repeated measures tests. For the total group of teachers as members of one group, the dimensions of climate which differed significantly across the three assessments

of climate included (1) the degree to which teachers worked well together, (2) the morale of the group, and (3) the degree to which teachers perceived the principal as not asking more of the teachers than he was willing to do himself. For these dimensions of climate as perceived by the total group of teachers in the study, the results of the statistical analyses indicate that it would be erroneous to assume that teachers' perceptions remained constant throughout the year. As the school year progressed, the teachers as a total group believed that (1) the teachers were less and less able to work well together, (2) there was a lack of congruence between teachers' social and task needs with a significant drop in morale as early as mid-year, and (3) the principal was asking the teachers to do more than he was willing to do himself. Additionally, the significant differences found for the Disengagement, Esprit, and Thrust subtests suggest that as a total group the teachers questioned the authenticity of both the group's and the principal's behavior as the school year progressed. The pattern of changes for these three subtests reflected the tendency of the teachers to view the climate of the school as becoming more closed as the school year progressed.

Research Question II concerned changes in principals' perceptions of organizational climate during the first year of operation in new elementary schools. Organizational climate was measured three times during the school year using

the eight subtests of the Organizational Climate Description Questionnaire (OCDQ). Data for each of the eight subtests of the OCDQ were analyzed for (a) the principal of each new elementary school and (b) the total group of principals participating in the study.

Part A of Research Question II dealt with the analysis of data for the principal of each new elementary school. The difference in the climate types identified for each school by the principal's scores on the OCDQ for the three assessments of climate indicated that each principal's perceptions of climate had changed during the school year. Each of the five principals identified only two climate types for the three assessments of climate. Four of the five principals identified the same climate type for the first two assessments and identified a different climate type for the third assessment. The fifth principal identified the same climate type for the first and third assessments and identified a different climate type for the second assessment. None of the principals identified the Paternal climate as the type of climate existing in the school. The Open and Controlled climate types were identified once each; the Closed climate type was identified twice; the Familiar climate type was identified three times; and the Autonomous climate type was identified eight times. Three of the five principals identified a more closed type of climate for the third assessment than they had identified for the first assessment. One principal identified

the same climate type for the first and third assessments. For the five principals in this study, each principal's perceptions of the climate in the school changed during the school year with the majority of the principals viewing the climate as more closed at the end of the school year than it had been at the beginning of the school year.

Since the data indicated that each principal's perceptions of climate had changed during the year, a profile of scores for the OCDQ subtests for each of the three assessments was constructed for each principal. Tests of significance between the scores were not used since differences between principals or subtests were not examined at this point. The scores for each of the eight OCDQ subtests for the three assessments of climate were compared for each principal to determine which of the subtests had the greatest numerical difference among the three scores. Based on the calculation of the simple numerical difference between the paired scores for each subtest, the principals had greatest differences on the Production Emphasis, Intimacy, Esprit, and Consideration subtests. Three principals had only one greatest difference identified, and two principals had two greatest differences identified. Two principals had a greatest difference identified for the Production Emphasis subtest. The scores for these principals on the Production Emphasis subtest were lower for each subsequent assessment. These principals perceived themselves as becoming less directive and less

task-oriented as the school year progressed. Two principals had a greatest difference identified for the Intimacy subtest. A comparison of the scores for these two principals on the Intimacy subtest shows that for one principal the score decreased for each assessment and for the other principal the score decreased sharply for the second assessment and then rose slightly for the third assessment. These principals believed that social relations among the teachers were less friendly at the end of the school year than they had been at the beginning of the school year. Two principals had a greatest difference identified for the Consideration subtest. The pattern of scores for the two principals with a greatest difference on the Consideration subtest was different. One principal had the lowest of the three scores for the third assessment while the other principal had the highest of the three scores for the third assessment. One principal perceived himself as more concerned with the human needs of the teachers at the end of the school year than he had been at the beginning of the year. The other principal viewed himself as less concerned about these needs at the end of the year than he had been at the beginning of the school year. One principal had a greatest difference identified for the Esprit subtest. For this principal, the scores decreased sharply for the third assessment indicating the principal perceived the morale of the teachers as much lower at the end of the school year. In each instance in which the

numerical difference in the scores for a subtest indicated that the principal's perceptions had changed more for that subtest than for the other subtests, the pattern of scores indicated that there was a definite difference between the scores for the first and third assessments. Even when a change was indicated for the mid-year assessment, the principals' perceptions of the climate dimensions measured by the subtests where the greatest differences were found were very different at the end of the year when compared to the perceptions held at the beginning of the school year.

In summary, when the data were analyzed for the principal of each new elementary school, each principal's perceptions of climate changed during the course of the year. Three of the five principals believed that the climate in the school they administered was more closed at the end of the school year than it had been at the beginning of the school year. One principal perceived the climate of the school as more open at the end of the school year than at the beginning of the year. One principal viewed the climate of the school as the same at the beginning and end of the year with change in climate occurring at mid-year only. Since the analysis of the data was based on the set of scores for each individual principal, statistical tests were not used. The differences in the scores for each principal varied from subtest to subtest and only the subtests with the greatest numerical differences were examined. Differences were found

for the Production Emphasis, Intimacy, Esprit, and Consideration subtests, but there was not a discernible pattern for the occurrence of the differences. For the subtests in which the greatest differences occurred, there was a definite difference in each instance between the first and third assessments.

Part B of Research Question II dealt with the analysis of data for the total group of principals participating in the study. The findings from Part A of this research question and the scores for the total group of principals indicated that principals' perceptions of climate changed during the school year. Since the data indicated that principals' perceptions had changed, statistical tests were used to determine which dimensions of climate were perceived differently and when the changes in perceptions occurred. As a preliminary procedure to the tests comparing the subtest means, tests for homogeneity of variance were performed using the three variances associated with the principals' scores for the eight OCDQ subtests. For the total group of principals, the Hartley Fmax test for homogeneity of variance was used to determine if the degree of variability within the group of scores for each of the three assessments remained approximately the same. Based on the results of the Hartley Fmax tests, the assumption of equal variances was retained for each of the eight OCDQ subtests.

A one-factor ANOVA for repeated measures was performed on the group of scores for the total group of principals for each of the OCDQ subtests. This ANOVA for repeated measures examines the differences among the repeated assessments. A significant difference was found only for the Production Emphasis subtest. As one of the four OCDQ subtests examining the principal's behavior, the Production Emphasis subtest measures behavior by the principal which is task-oriented, directive, and marked by close supervision of the teachers. A comparison of the mean scores for the Production Emphasis subtest for the three assessments of climate shows that the scores decreased in value for each subsequent assessment. As a total group, principals believed that they were becoming less directive and less task-oriented as the school year progressed.

For the significant difference found by the ANOVA for repeated measures tests, the Scheffé test for comparison of means was used to determine which of the assessments were actually different. For the Production Emphasis subtest, the comparison of means showed a significant difference between the means for both the first and second assessments and the first and third assessments. The principals believed they were less directive and less task-oriented at mid-year than at the beginning of the school year, and the principals believed they were less task-oriented and less directive at the end of the year than at the beginning of the year.

In summary, when the data for the total group of principals were analyzed, principals' perceptions of climate changed during the school year. The results of the tests of variability indicated that group variance remained approximately the same across the three assessments of climate. A significant difference was found for the Production Emphasis subtest using the one-factor ANOVA for repeated measures procedure. Significant differences between the means for the first and second assessments and the means for the first and third assessments were found using the Scheffé test for comparison of means. Based on the results of these tests, principals perceived themselves as becoming less directive and less task-oriented as the school year progressed.

Research Question III concerned changes in teachers' perceptions of principal leadership behavior during the first year of operation in new elementary schools. Principal leadership behavior was measured three times during the school year using the Consideration and Structure dimensions of the Supervisory Behavior Description (SBD) questionnaire. Data for each of the dimensions were analyzed for (a) the group of teachers in each of the five elementary schools and (b) the total group of 146 teachers participating in the study.

Part A of Research Question III dealt with the analysis of data for the group of teachers in each of the five new elementary schools. The difference in the mean scores for each of the dimensions of the SBD indicated that in each of

the schools the teachers' perceptions of principal leadership behavior had changed. An examination of the mean scores and the associated standard deviations for each school for each assessment shows that none of the means were identical. In several instances, however, two of the three means for a school were very close in value separated by only fractional differences. For four of the five schools, the mean scores for the Consideration dimension decreased in value for each subsequent assessment. In the fifth school, the mean score for the Consideration dimension decreased in value for the second assessment and then increased for the third assessment. The value of the mean for the third assessment did not exceed the value of the mean for the first assessment. For the Structure dimension, the pattern of the three mean scores varied from school to school with the most obvious change for four of the five schools occurring between the first and second assessments. For the three assessments of principal leadership behavior, teachers in the new elementary schools indicated that they believed the principal was becoming more impersonal in his relations with the teachers as the school year progressed. The teachers also believed that by mid-year there was a change in the principal's organizing and directing behavior although some groups of teachers viewed the behavior as decreasing while other groups of teachers viewed the behavior as increasing.

Since the data indicated that in each of the five new schools the teachers' perceptions of principal leadership behavior had changed during the year, statistical tests were used to determine which of the SBD dimensions were perceived differently and when the changes in perceptions occurred. As a preliminary procedure to the tests comparing the means, tests for homogeneity of variance were performed for the three variances associated with the teachers' scores for the Consideration and Structure dimensions of the SBD. Since the variances tested were for the same group of subjects, the purpose of the tests for homogeneity of variance was to determine if the degree of variability within each group of scores remained approximately the same for the three assessments. Based on the results of the tests for homogeneity of variance, the assumption of equal variances was rejected only once.

Based on the results of the Hartley Fmax test for homogeneity of variance, the assumption of equal variances was rejected for the Consideration dimension for one school group. An examination of the variances for this group shows that the size of the variance for the second assessment was more than three times the size of the variance for the first assessment. The variance for the third assessment decreased slightly but was also three times larger than the variance for the first assessment. For this group of teachers, the scores for the second assessment were very dissimilar with

some teachers rating the principal very high on Consideration and some teachers rating the principal very low on Consideration. There was only a marginal change in this within group variability for the third assessment.

A one-factor ANOVA for repeated measures was performed on the scores for both SBD dimensions for the teachers in each of the schools to determine if significant differences existed among the mean scores for the three assessments of principal leadership behavior. For three of the five school groups, a significant difference was found for the Consideration dimension of the SBD. The Consideration dimension measures leader behavior which is indicative of friendship, mutual trust, and good human relations between the principal and the teachers. For one of the five school groups, a significant difference was found for the Structure dimension of the SBD. The Structure dimension measures behavior which reflects the way the leader organizes and defines relationships between himself and the group. The Structure dimension also measures the way the leader establishes methods for getting the tasks of the organization done. One school group had no significant differences associated with the ANOVA for repeated measures tests for the teachers' scores for the SBD dimensions.

When a significant difference was found using the ANOVA for repeated measures procedure, the Scheffé test for comparison of means was used to determine which of the three assessments were actually different. For the three

significant differences found for the Consideration dimension, the pattern of differences varied from school to school. One school group had a significant difference between the first and second assessment, one school group had significant differences between both the first and third and the second and third assessments, and one school group had a significant difference between the first and third assessments. The significant difference found for the Structure dimension occurred between the first and second assessments.

In summary, when the data for the group of teachers in each of the five new elementary schools were analyzed, teachers' perceptions of principal leadership behavior had changed during the course of the school year. Teachers in four of the five schools had a decrease in mean score for the Consideration dimension for each subsequent assessment. Teachers in these schools perceived the principal of the school as becoming more impersonal in his relations with the teachers as the school year progressed. The ANOVA for repeated measures tests for each school group indicated that there was a significant difference for the Consideration dimension of the SBD in three of the five schools. The mean scores for the Structure dimension varied in pattern from school to school and the ANOVA for repeated measures tests indicated there was a significant difference in only one school. One school group had nonsignificant differences resulting from the tests performed on the scores for both SBD dimensions.

A limited comparison of the teachers' perceptions of principal leadership behavior in the five schools in terms of the demographic data collected on the school groups shows that the one school with the significant difference on the Structure dimension was the school in which the principal had previously worked with the majority of the teachers as an administrator. The group of three schools with the significant differences on the Consideration dimension of the SBD included both the school with the smallest number of staff members and the school with the largest number of staff members.

Part B of Research Question III dealt with the analysis of data for the total group of teachers participating in the study. For this subsection of the research question, the teachers were grouped by two methods for the analysis of the data. The teachers were grouped (a) as members of the five school groups and (b) as members of one group. Grouping the teachers as members of school groups permitted limited statistical comparisons between the schools. Grouping the teachers as members of one group provided a more generalized view of teachers' perceptions of principal leadership behavior during the first year of operation in new elementary schools.

The findings from Part A of this research question and the scores for the total group of teachers indicated that teachers' perceptions of principal leadership behavior changed during the course of the school year. Since the data

indicated that teachers' perceptions of principal leadership behavior had changed, statistical tests were used to determine which SBD dimensions were perceived differently and when the changes in perceptions occurred. As a preliminary procedure to the tests comparing the means, test for homogneity of variance were performed using the three variances associated with the teachers' scores for the two dimensions of the SBD. Since the teachers were grouped by two methods, two different tests for homogeneity of variance and two different ANOVA for repeated measures tests were used.

For the total group of teachers as members of the five school groups, the Cochran C test for homogeneity of variance was used to determine if the scores for the five groups had approximately the same degree of variance for each assessment of principal leadership behavior. This test was employed since the five groups did not contain the same number of subjects. Using the results of the Cochran C tests, the assumption of equal variances was rejected for the variances associated with the Consideration dimension for the second assessment. The variances for this dimension ranged from 45.97 to 194.32.

For the total group of teachers as members of one group, the Hartley Fmax test for homogeneity of variance was used to determine if the degree of variability within the group of scores remained approximately the same for the three assessments. Based on the results of the Hartley Fmax tests, the

assumption of equal variances was rejected for the Consideration dimension. A comparison of the three variances for the Consideration dimension shows that the variability within the group of scores increased for each subsequent assessment. For the total group of teachers, the behavior of the principal measured by the Consideration dimension of the SBD was viewed from both ends of the attitude continuum with some teachers rating the principal very high in Consideration and some teachers rating the principal very low in Consideration. Across the three assessments, the existing attitudes within the group concerning the Consideration behavior of the principal were reinforced and more extreme attitudes were produced.

An ANOVA for repeated measures was performed on the group of scores for each dimension of the SBD for each of the two methods of grouping the total group of teachers. For the total group of teachers as members of school groups, a two-factor ANOVA for repeated measures was used. This ANOVA for repeated measures examines the differences among the groups (the between-subjects factor), the differences among the assessments (the within-subjects factor), and possible interaction between the groups and the assessments. For the total group of teachers as members of one group, a one-factor ANOVA for repeated measures was used. This ANOVA for repeated measures examines the within-subjects factor only.

For the two dimensions of the SBD, three significant differences were found using the two-factor ANOVA for repeated

procedures. Significant differences were found for both the Consideration and Structure dimensions on the between-subjects factor. A significant difference was also found for the Consideration dimension for the within-subjects factor. Since the between-subjects factor answers the question of whether significant differences exist among the groups, the results of the tests for the Consideration and Structure dimensions indicate that group membership differentially affected the teachers' perceptions of principal leadership behavior. Since the within-subjects factor answers the question of whether significant differences exist among the repeated assessments, the results of the tests for the Consideration dimension indicate that for this dimension the teachers perceptions did not remain constant across the three assessments.

For the total group of teachers grouped as members of one group, a significant difference was found for the Consideration dimension by the within-subjects factor of the two-factor ANOVA for repeated measures and the one-factor ANOVA for repeated measures tests. The results of the two types of ANOVA for repeated measures tests had only fractional differences in the calculated F-values.

For the significant differences found using the ANOVA for repeated measures procedures, the Scheffé test for comparison of means was used as a means of determining which of the groups and assessments were actually different. Significant differences were found for the between-subjects factor

of the two-factor ANOVA for repeated measures for both the Consideration and Structure dimensions of the SBD. For the Consideration dimension, School 1 differed significantly from Schools 3, 4, and 5. A comparison of the means for the four school groups shows that the mean scores for School 1 were higher than the mean scores for the other schools for each assessment. For the Consideration dimension, School 2 differed significantly from Schools 3 and 5. A comparison of the means for Schools 2, 3, and 5 shows that School 2 had a higher mean for each assessment than did the other two schools. For the Structure dimension, School 1 differed significantly from Schools 3, 4, and 5; School 2 differed significantly from Schools 3, 4, and 5; and School 3 differed significantly from Schools 4 and 5. A comparison of the means for Schools 1, 3, 4, and 5 shows that School 1 had a lower mean for each assessment than did the other three schools. A comparison of the means for Schools 2, 3, 4, and 5 shows that School 2 had a lower mean for each assessment than did the other three schools. A comparison of the means for Schools 3, 4, and 5 shows that the significant difference between the pairs of schools was caused by the fact that School 3 had a higher mean for each assessment.

For the significant difference found for the Consideration dimension by the within-subjects factor of the one-factor and two-factor ANOVA for repeated measures tests, significant differences were found between the means for

the first and second assessments and the means for the first and third assessments. A comparison of the means for the three assessments shows that the mean score for the Consideration dimension decreased in value for each subsequent assessment indicating that the teachers perceived that the principal was becoming more impersonal in his relations with the teachers as the school year progressed.

In summary, when the data for the total group of teachers were analyzed, teachers' perceptions of principal leadership behavior had changed during the year. For the total group of teachers as members of the five school groups, significant differences were found among the groups for both SBD dimensions using the two-factor ANOVA for repeated measures. For the dimensions of the SBD as perceived by the teachers in the new schools in this study, the results of the statistical analyses indicate that it would be erroneous to assume that the school groups viewed these aspects of principal leadership behavior in the same way. The number of significant differences found for the comparison of each group with the other four groups ranged from one to three for the Consideration dimension and from two to four for the Structure dimension. The school group with the smallest number of staff members had significant differences between itself and the three schools having the largest number of staff members for both of the SBD dimensions. One school had significant differences between itself and the other four schools on the

Structure dimension. For the Structure dimension, the school group where the majority of the teachers had previously worked with the principal as a school administrator had significant differences between itself and the three groups with the largest number of staff members.

For the total group of teachers as members of one group, the within-subjects factor of the one-factor and two-factor ANOVA for repeated measures tests indicated that there was a significant difference for the Consideration dimension. For the total group of teachers, the value of the mean for the Consideration dimension decreased for each subsequent assessment. Teachers viewed the principal as more impersonal in relations with the teachers as the year progressed. The results of the statistical analyses indicate that it would be erroneous to assume that teachers' perceptions of the Consideration behavior did not change during the school year.

Research Question IV concerned changes in principals' perceptions of principal leadership behavior during the first year of operation in new elementary schools. Principal leadership behavior was measured three times during the school year using the Consideration and Structure dimensions of the Supervisory Behavior Description (SBD) questionnaire. Data for each dimension of the SBD were analyzed for (a) the principal of each new elementary school and (b) the total group of principals participating in the study.

Part A of Research Question IV dealt with the analysis of data for the principal of each new elementary school. The difference in the scores for the two dimensions of the SBD indicated that in each of the five schools the principal's perceptions of principal leadership behavior had changed. An examination of the scores for the three assessments shows that for three of the principals the principal's score for the Consideration dimension decreased in value for each subsequent assessment. The fourth principal had an increase in score value for the second assessment and then had a decrease for the third assessment score which made that score lower in value than the first assessment score. The fifth principal had a decrease in the score value for the second assessment and then had an increase for the third assessment score which made this score the largest of the three scores. For the Structure dimension of the SBD, all of the principals had a decrease in the value of the score for the second assessment, and four of the five principals had an increase in the value of the score for the third assessment. One principal had a decrease in the value of the scores for the second assessment and a decrease in the value of the score for the third assessment. The majority of the principals appeared to perceive that they were becoming more impersonal in their relations with the teachers as the year progressed, and that they were least effective in their organizing and directing behavior at mid-year.

Since the data indicated that each principal's perceptions of principal leadership behavior had changed during the school year, profiles of scores for the Consideration and Structure dimensions of the SBD were constructed for each principal. Tests of significance among scores were not made since differences between the principals or dimensions were not examined at this point. The scores for each of the SBD dimensions for the three assessments of principal leadership behavior were compared for each principal to determine where the greatest change between the two dimension scores occurred. Based on the simple numerical difference between the scores for the Consideration and Structure dimensions, two greatest changes were found for the second assessment and three greatest changes were found for the third assessment.

In summary, when the data were analyzed for the principal of each new elementary school, each principal's perceptions of principal leadership behavior had changed during the school year. For the Consideration dimension, three of the five principals viewed their behavior as more and more impersonal as the school year progressed. The other two principals viewed their behavior from different perspectives. One principal viewed his behavior as less impersonal at mid-year and the other principal viewed his behavior as less impersonal at the end of the school year. For the Structure dimension, all five principals viewed their behavior as least effective at mid-year. Four of the five principals indicated that

they believed their Structure behavior improved by the end of the school year. The fifth principal viewed his behavior as becoming less structured as the school year progressed.

Part B of Research Question IV dealt with the analysis of data for the total group of principals participating in the study. The findings from Part A of this research question and the scores for the total group of principals indicated that principals' perceptions of principal leadership behavior had changed during the course of the school year. Since the data indicated that principals' perceptions of principal leadership behavior had changed, statistical tests were used to determine which dimensions of principal leadership behavior were perceived differently and when the changes in the perceptions occurred. As a preliminary procedure to the tests comparing the means, tests for homogeneity of variance were performed using the three variances associated with the principals' scores for the three assessments. For the total group of principals, the Hartley Fmax test for homogeneity of variance was used to determine if the degree of variability within the group of scores remained approximately the same for the three assessments. Based on the results of the Hartley Fmax tests, the assumption of equal variances was retained for both SBD dimensions.

A one-factor ANOVA for repeated measures was performed on the group of scores for the total group of principals for the Consideration and Structure dimensions. This ANOVA for

repeated measures examines the differences among the repeated assessments (the within-subjects factor) only. A significant difference was not found for either the Consideration or Structure dimension.

In summary, when the data for the total group of principals were analyzed, principals' perceptions of principal leadership behavior had changed during the school year. The results of the tests of variability within the group scores for each assessment of principal leadership behavior showed that group variance remained approximately the same across the three assessments. The one-factor ANOVA for repeated measures performed on the scores for the Consideration and Structure dimensions did not produce significant F-values. For the total group of principals, the changes in principals' perceptions indicated by changes in mean scores were not statistically significant.

Research Question V concerned changes in the difference between teachers' and principals' perceptions of organizational climate during the first year of operation in new elementary schools. The existence of the difference in teachers' and principals' perceptions of climate was documented in the Review of the Literature, Chapter II. Organizational climate was measured for this research question using the openness score of the OCDQ. Organizational climate was measured three times during the school year and the data were analyzed for (a) the principal and teachers in each new elementary school

and (b) the total group of teachers and principals participating in the study.

Part A of this research question dealt with the analysis of data for the principal and group of teachers in each of the new elementary schools. To test for the existence of a significant difference between the principal's perceptions and the teachers' perceptions of organizational climate, the *t* test for independent samples was used. The test for independent samples was used since the size of the groups varied. For the three assessments of climate in the five elementary schools, only one significant difference between the principal's and teachers' perceptions of climate was found. For School 4 on the third assessment, the difference between perceptions was found to be statistically significant. Since the openness score of the OCDQ is derived by performing computations involving the scores for the Disengagement, Esprit, and Thrust subtests, the principal's scores and the teachers' scores for the third assessment for these subtests were compared.

For the group of teachers in School 4, the mean scores for the Disengagement subtest increased in value for each subsequent assessment while the mean scores for the Esprit and Thrust subtests decreased in value for each subsequent assessment. The teachers in School 4 perceived the climate of their school as more closed for each assessment. For the principal of School 4, the scores for the Disengagement

subtest decreased in value for each subsequent assessment. The principal's scores for the Esprit and Thrust subtests fluctuated. For the Esprit subtest, the principal's scores decreased in value for the second assessment and increased in value for the third assessment. The principal's scores for the Thrust subtest increased in value for the second assessment and decreased in value for the third assessment. The principal of School 4 perceived the climate of the school as more open than the teachers perceived it to be. This difference in perceptions is reflected in the types of climate identified by the principal and teachers for the third assessment. The teachers identified the Paternal climate type while the principal identified the Open climate.

Using the numerical difference between the principal's score and the teachers' mean score, greatest and least differences were calculated and compared. For three of the five schools, the greatest difference in principal's and teachers' perceptions of climate occurred on the second assessment. For two of the schools, the greatest difference occurred on the third assessment. No greatest differences occurred on the first assessment. The least differences were spread over the three assessments with two least differences for the first and third assessments.

Part B of this research question dealt with the analysis of data for the total group of teachers and principals participating in the study. The t test for independent samples

was used to compare the means for the teachers and principals for each of the three assessments of climate. None of the calculated t-values were statistically significant. For the total group of teachers and principals, the greatest difference in scores was found on the second assessment and the least difference was found on the third assessment.

In summary, when the data were analyzed for the comparison of means for the teachers and principals for individual schools and for the total group, only one significant difference between teachers' and principals' perceptions was found. The significant difference between perceptions was caused by the principal viewing the climate of the school as more open than did the teachers of the school.

Research Question VI concerned changes in the difference between teachers' and principals' perceptions of principal leadership behavior during the first year of operation in new elementary schools. The existence of the difference between teachers' and principals' perceptions was documented in the Review of Literature, Chapter II. Principal leadership behavior was measured for this research question by the two dimensions of the SBD. Principal leadership behavior was measured three times during the school year and the data were analyzed for (a) the principal and teachers in each new school and (b) the total group of teachers and principals participating in the study.

Part A of this research question dealt with the analysis of data for the principal and group of teachers in each of the new elementary schools. To test for the existence of a significant difference between the principal's perceptions and the teachers' perceptions of principal leadership behavior, the t test for independent samples was used. The test for independent samples was used since the size of the groups varied. For the three assessments of the Consideration and Structure dimensions, none of the differences in means were significant. Using the numerical difference between the principal's score and the teachers' mean score for the Consideration and Structure dimensions, the greatest and least differences were found for each school. For the Consideration dimension, three greatest differences occurred on the third assessment and two greatest differences occurred on the first assessment. For the Structure dimension, three greatest differences occurred on the first assessment; one greatest difference occurred on the second assessment; and one greatest difference occurred on the third assessment.

Part B of this research question dealt with the analysis of data for the total group of principals and teachers participating in the study. The t test for independent samples was used to compare the means for the principals and teachers for each of the three assessments of principal leadership behavior. None of the calculated t-values were statistically significant. For the total group of teachers and principals,

the greatest difference for the Consideration dimension occurred on the second assessment and the greatest difference for the Structure dimension occurred on the first assessment. The least difference for the two dimensions occurred on the third assessment.

In summary, when the data were analyzed for the comparison of means for the teachers and principals for individual schools and for the total group, no statistically significant differences were found between principals' and teachers' perceptions of principal leadership behavior. For the two dimensions of the SBD, the greatest difference between teachers' and principals' scores occurred randomly across the three assessment.

Research Question VII concerned the relationship between the openness factor of organizational climate and the principal leadership factors of consideration and structure. Openness was measured for this research question by the openness score of the OCDQ. Consideration and structure were measured for this research question by the Consideration and Structure dimensions of the SBD. Using the OCDQ and the SBD, the climate and principal leadership behavior factors were measured three times during the school year and the data were analyzed for each school group and for the total group of schools.

Part A of this research question dealt with the analysis of data for each school group. To determine if a relationship existed between the openness factor and the consideration and

factors, Pearson product-moment correlation coefficients were computed for each assessment of climate and principal leadership behavior. To test the significance of the relationship between the factors, a test of significance was performed for each correlation coefficient. For the three assessments, two significant correlation coefficients were found. For the relationship between openness and consideration, significant correlation coefficients were found for Schools 4 and 5. For School 4, the significant correlation coefficient occurred on the third assessment and for School 5 the significant correlation coefficient occurred on the first assessment.

To determine if there was a significant difference in the three correlation coefficients computed for the relationships between (1) openness and consideration and (2) openness and structure, the correlation coefficients for each school were tested by pairs for significance of the difference between two correlation coefficients for independent samples. Two significant differences between the correlation coefficients computed for the openness and consideration relationship were found. A significant difference was found for Schools 4 and 5. For School 4, there was a significant difference between the correlation coefficients computed for the second and third assessments. For School 5, there was a significant difference between the correlation coefficients for the first and second assessments.

Part B of this research question dealt with the analysis of data for the total group of schools in the study. To determine if a relationship existed between the openness factor and the consideration and structure factors, Pearson product-moment correlation coefficients were computed for each assessment of climate and principal leadership behavior. To test the significance of the relationship between the factors, a test of significance was performed for each computed correlation coefficient. For the total group of schools, all three correlation coefficients for the relationship between openness and consideration were significant. For the relationship between openness and structure only the correlation coefficient for the first assessment was not significant.

To determine if there was a significant difference between the correlation coefficients computed for the relationships between the climate and principal leadership behavior factors, the correlation coefficients for the total group of schools were tested by pairs for significance of the difference between two correlation coefficients for independent samples. None of the differences between the correlation coefficients were significant.

In summary, when the data were analyzed for the relationship between the climate openness factor and the two principal leadership factors, for the total group of subjects the correlation coefficients for (1) all three assessments of openness and consideration and (2) two of the three

assessments of openness and structure were significant. The correlation coefficients for the openness and consideration relationship were all positive and the correlation coefficients for the openness and structure relationship were all negative.

CHAPTER VI

REPORT OF FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

Research in educational administration during the past twenty-five years has focused attention on three areas of concern: (a) the school as a social system, (b) the leadership behavior of the principal, and (c) the organizational climate of the school as a measure of institutional well-being. From this research, conflicting evidence has been reported about the relationship between the leadership behavior of the school principal and the organizational climate of the school. Almost without exception, research efforts have excluded from study the organizational climate of new schools and the leadership behavior of the principal in his first year of service in a new school.

This study monitored both organizational climate and the leadership behavior of the principal, as perceived by the principals and teachers in five new elementary schools, to provide data on developmental changes in climate during the first year of operation. Organizational climate was measured by the Organizational Climate Description Questionnaire (OCDQ) and principal leadership behavior was measured by the Supervisory Behavior Description (SBD) questionnaire.

The purposes of the study were to (1) determine the extent of change in organizational climate during the first year of operation of new elementary schools as climate was perceived by the teachers in each school and as a total group and by the principals of each school and as a total group; (2) determine the extent of change in the leadership behavior of the principal during the first year of operation of new elementary schools as leadership behavior was perceived by the teachers in each school and as a total group and by the principals of each school and as a total group; (3) determine the difference between teachers' perceptions and principals' perceptions of organizational climate and principal leadership behavior, and determine the changes that occurred in these perceptions during the first year of operation; and (4) determine the relationship between the openness factor of organizational climate and the two principal leadership behavior factors of consideration and structure and the changes which occurred in these relationships during the first year of operation in new elementary schools.

Procedures for the Study

Organizational climate and principal leadership behavior were measured three times during the 1978-1979 school year in five new elementary schools. The elementary schools participating in the study were identified through a survey of school districts listed in the Texas School Directory with

1,000 or more students and located in either the Dallas-Fort Worth or Houston metroplex areas. Permission for participation in the study was obtained from both the central administration of each school district and the principal of each elementary school. The subjects in the study were five elementary school principals and 146 elementary school classroom teachers.

The Organizational Climate Description Questionnaire (OCDQ) and the Supervisory Behavior Description (SBD) questionnaire were administered at the beginning of the school year. The results of the tests were keypunched and scored by computer. Descriptive and comparative analyses were performed on the data. For the statistical analysis, the data were analyzed using tests for homogeneity of variance, one-factor and two-factor analysis of variance for repeated measures tests, t tests for independent samples, Pearson product-moment correlation coefficients, and tests for the significance of the difference between correlation coefficients.

Presentation and Analysis of Data

To carry out the purposes of the study, seven research questions were formulated; data were collected from 151 subjects in five new elementary schools; and the data were analyzed descriptively and statistically. In addition to the data collected using the scores for the three assessments of the OCDQ and SBD, background information on the subjects

and schools was supplied by the responses of the subjects to five items on the demographic information section of the OCDQ and to the background information survey included in the packets for the second administration of the instruments. For the reporting of the demographic data, the data were organized into tables and descriptive comparisons between the subjects were made. For the seven research questions, each subsection of the question was stated and the results of the statistical tests associated with the question were reported. The findings of the descriptive and statistical analyses were reported in a separate section of the study.

Findings

Research Question I concerned changes in teachers' perceptions of organizational climate during the first year of operation in new elementary schools. Data were analyzed for the teachers in each new elementary school and for the total group of teachers participating in the study. The analysis of the data produced the following results.

A. Teachers in Each New Elementary School

1. The teachers in each of the five schools viewed the climate of the school as more closed at the end of the school year than at the beginning of the school year.

2. Four of the five schools had a significant difference between assessments for the Thrust subtest of the OCDQ. One school had a significant difference for the Esprit subtest in

addition to the significant difference for the Thrust subtest. In one school no significant differences were found for the three assessments of the eight OCDQ subtests.

3. In three of the four schools with significant differences on the Thrust subtest, the significant difference was between the first and third assessments. In the fourth school, the significant difference was between the first and second assessments.

B. Total Group of Teachers

1. Significant differences were found among the five schools for the Disengagement, Esprit, Intimacy, Aloofness, and Production Emphasis subtests of the OCDQ.

2. Significant differences were found among the three assessments for the Disengagement, Esprit, and Thrust subtests.

3. The significant difference found on the Disengagement subtest was between the first and third assessments. For the Esprit and Thrust subtests, significant differences were found between both the first and second assessments and the first and third assessments.

Research Question II concerned changes in principals' perceptions of organizational climate during the first year of operation in new elementary schools. Data were analyzed for the principal of each new elementary school and for the total group of principals participating in the study. The analysis of the data produced the following results.

A. Principal of Each New Elementary School

1. Each principal identified only two types of climate for the school for the three assessments of climate. Four of the five principals identified the same climate type for the first two assessments and then identified a different climate type for the final assessment.

2. Three of the five principals viewed the climate of the school as being more closed at the end of the school year than at the beginning of the school year; one principal viewed the climate as more open at the end of the year than at the beginning; and one principal perceived the climate as being the same at the beginning and end of the school year.

B. The Total Group of Principals

1. A significant difference between the assessments was found for the Production Emphasis subtest.

2. For the Production Emphasis subtest, significant differences were found between both the first and second assessments and the first and third assessments.

Research Question III concerned changes in teachers' perceptions of principal leadership behavior during the first year of operation in new elementary schools. Data were analyzed for the group of teachers in each school and for the total group of teachers participating in the study. The analysis of the data produced the following results.

A. Teachers in Each New Elementary School

1. Three of the five schools had a significant difference among the assessments for the Consideration dimension. One school had significant difference for the Structure dimension, and in one school no significant differences were found.

2. For the three schools with the significant difference on the Consideration dimension, the occurrence of the significant difference varied from school to school. For the school with the significant difference on the Structure dimension, the significant difference was between the first and second assessments.

B. Total Group of Teachers

1. Significant differences were found among the five schools for both the Consideration and Structure dimensions of the SBD.

2. A significant difference among assessments was found for the Consideration dimension.

3. For the Consideration dimension, significant differences were found between both the first and second assessments and the first and third assessments.

Research Question IV concerned changes in principals' perceptions of principal leadership behavior during the first year of operation in new elementary schools. Data were analyzed for the principal of each new elementary school and

for the total group of principals participating in the study. The analysis of the data produced the following results.

A. Principal of Each New Elementary School

1. For the Consideration dimension, three of the five principals had a decrease in score value for each subsequent assessment. For the other two principals, the scores for the three assessments fluctuated in different patterns with one principal having the lowest score for the third assessment, and one principal having the highest score for the third assessment.

2. For the Structure dimension, all five principals had a decrease in score value for the second assessment. Four of the five principals then had an increase in the value of the score for the third assessment.

B. The Total Group of Principals

The analysis of the data produced no significant differences for the three assessments of the Consideration and Structure dimensions of the SBD.

Research Question V concerned the differences between teachers' and principals' perceptions of organizational climate during the first year of operation in new elementary schools. Data were analyzed for the principal and teachers in each new elementary school and for the total group of principals and teachers participating in the study. The analysis of the data produced the following results.

A. Principal and Teachers in Each Elementary School

1. Only one significant difference was found between the principal's and teachers' perceptions of climate for the three assessments of climate in the five elementary schools.

2. The significant difference found for the difference in the principal's and teachers' perceptions of climate occurred on the third assessment.

3. Using on the simple numerical difference between the principal's score and the teachers' mean score for openness, three schools had the greatest difference on the second assessment and two schools had the greatest difference on the third assessment.

B. Total Group of Principals and Teachers

The analysis of the data produced no significant differences between principals' and teachers' perceptions of climate.

Research Question VI concerned the differences between teachers' and principals' perceptions of principal leadership behavior during the first year of operation in new elementary schools. Data were analyzed for the principal and teachers in each new elementary school and for the total group of principals and teachers participating in the study. For the principal and group of teachers in each new school, the analysis of the data found no significant differences between the principal's and teachers' perceptions of principal leadership behavior as measured by the two dimensions of the SBD. For the total group of principals and teachers participating

in the study, the analysis of the data found no significant differences between the principal's and teachers' perceptions of principal leadership behavior.

Research Question VII concerned the relationship between the openness factor of climate and the principal leadership behavior factors of Consideration and Structure. Data were analyzed for each new elementary school and for the total group of schools participating in the study. The analysis of the data produced the following results.

A. Each New Elementary School

1. For the relationship between openness and consideration, two schools had significant correlation coefficients. One significant correlation coefficient was associated with the first assessment and one correlation coefficient was associated with the third assessment.

2. For the relationship between openness and structure, no significant correlation coefficients were found.

3. For the tests for the significance of the difference between the correlation coefficients for the three assessments, two significant differences were found for the relationship between openness and consideration. For one school the significant difference was between the correlation coefficients for the second and third assessments, while in the other school the significant difference occurred between the first and second assessments.

B. The Total Group of Schools

1. The three correlation coefficients for the relationship between openness and consideration were all significant.

2. For the relationship between openness and structure, the correlation coefficients for the second and third assessments were significant.

3. None of the differences between the correlation coefficients for the relationships between (1) openness and consideration and (2) openness and structure were significant.

4. The correlation coefficients for the relationship between openness and consideration were all positive, and the correlation coefficients for the relationship between openness and structure were all negative.

Conclusions

The findings of this study are based on the analysis of data derived from the responses of 151 subjects in five new elementary schools. After examining the findings of the study, the following conclusions are drawn:

1. Teachers' and principals' perceptions of school climate and principal leadership behavior do not remain constant during the first year a new school is in operation. Changes in teachers' and principals' perceptions of climate and principal leadership behavior result from changes is perceptions of specific dimensions of organizational behavior.

2. In identifying changes in the climate of the school and the leadership behavior of the principal, teachers appear

most sensitive to changes in the social and human dimensions of organizational behavior while principals appear most sensitive to changes in the task and structural dimensions of organizational behavior.

3. Principals tend to view the climate of the school as more open than do the teachers of the school.

4. As the school year progresses, teachers view the principal as less and less authentic in his actions. Teachers view the behavior of the principal as more genuine at the beginning of the school year than at the end of the school year.

5. As the school year progresses, teachers view the principal as more and more impersonal and formal in his relations with the teachers. Teachers view the principal as more considerate of teachers' social and human needs at the beginning of the school year than at the end of the school year.

6. Changes in teachers' perceptions of the school climate are directly related to changes in teachers' perceptions of the authenticity of the principal's behavior and the authenticity of the group's behavior.

7. As the school year progresses, principals view their behavior as less and less supervisory and directive. Principals believe they monitor and check on the activities of the teachers less at the end of the school than at the beginning of the school year.

Implications

In view of the findings and conclusions of this study, the following implications appear appropriate:

1. The practice of measuring climate and principal leadership behavior once and then using this single measure to describe the climate of the school and the leadership behavior of the principal should be discouraged until there is conclusive evidence that there are points in the operational life-span of the school or the tenure of the principal's administration beyond which changes do not occur.

2. Principals need to be aware of the difference between their perceptions of the climate and their leadership behavior and the perceptions of climate and principal leadership behavior held by the teachers. Principals must learn what perceptions of climate and principal leadership behavior are held by the teachers and then work to achieve congruence between the two views.

3. Principals need to be aware that teachers tend to focus on the social and human dimensions of organizational behavior as indicators of climate and principal leadership behavior. Principals need to evaluate the climate continually, especially at stressful times of the year when additional demands are placed on the teacher.

4. Principals need to be aware of the importance of personal example as a role model for achieving teacher cooperation in meeting the task goals of the school. Teachers

view the principal's task-oriented leadership behavior favorably when it is accompanied by the principal's personal example.

Recommendations for Further Research

The review of the related literature and the conclusions drawn in this study indicate the need for further study and research in the areas related to school climate and the leadership behavior of the principal. The following recommendations do not exhaust the possibilities for research on these topics, but may provide direction for future study and research.

1. Longitudinal studies of climate and changes in school climate should be undertaken to determine if there is a pattern of change, and what effects are produced by a change in administrator or a majority of staff members. Despite the existence of a considerable body of research on climate, virtually no longitudinal data exists.

2. Further research and study on the concept of authenticity should be encouraged. If, as some of the literature suggests, teachers will accept almost any leadership style if the leader is active and does not overemphasize one aspect of leadership to the detriment of the other, then the concept of genuineness or "realness" needs to be studied.

3. Research is needed on the development of specific programs, materials, or techniques for changing or improving

the climate of a school. Application of these programs, materials and techniques should be made in a variety of school settings and longitudinal data gathered concerning the effects of such intervention.

APPENDICES

APPENDIX A

ORGANIZATIONAL CLIMATE DESCRIPTION QUESTIONNAIRE

A.W. Halpin and D.B. Croft

MARKING INSTRUCTIONS

Printed below is an example of a typical item found in Organizational Climate Description Questionnaire.

1. Rarely occurs
2. Sometimes occurs
3. Often occurs
4. Very frequently occurs

Teachers call each other by their first names 1 2 (3) 4

In this example the respondent marked alternative 3 to show that the interpersonal relationship described by this item "often occurs" at his school. Of course, any of the other alternatives could be selected, depending upon how often the behavior described by the item does, indeed, occur in your school.

Please mark your response clearly, as in the example.

PLEASE BE SURE THAT YOU MARK EVERY ITEM.

BIOGRAPHICAL INFORMATION

5-7 School: _____
(Write in the name of your school)

Please place a check mark to the right of the appropriate category.

8.	Position.	Principal	1. _____
		Teacher	2. _____
		Other	3. _____
9.	Sex:	Man	1. _____
		Woman	2. _____
10.	Age	20-29	1. _____
		30-39	2. _____
		40-49	3. _____
		50-59	4. _____
		60 or over	5. _____
11.	Years of experience in education:	0-9	1. _____
		10-19	2. _____
		20-29	3. _____
		30 or more	4. _____
12.	Years at this school:	0-4	1. _____
		5-9	2. _____
		10-19	3. _____
		20 or more	4. _____

ORGANIZATIONAL CLIMATE DESCRIPTION QUESTIONNAIRE

1. Rarely occurs
2. Sometimes occurs
3. Often occurs
4. Very frequently occurs

13. Teachers' closest friends are other faculty members at this school.

14. The mannerisms of teachers at this school are annoying.

15. Teachers spend time after school with students who have individual problems.

16. Instructions for the operation of teaching aids are available.

17. Teachers invite other faculty to visit them at home.

18. There is a minority group of teachers who always oppose the majority.

19. Extra books are available for classroom use.

20. Sufficient time is given to prepare administrative reports.

21. Teachers know the family background of the faculty members.

22. Teachers exert group pressure on non-conforming faculty members.

23. In faculty meetings, there is a feeling of "let's get things done."

24. Administrative paper work is burdensome at this school.

25. Teachers talk about their personal life to other faculty members.

26. Teachers seek special favors from the principal.

27. School supplies are readily available for use in classwork.

28. Student progress reports require too much work.

29. Teachers have fun socializing together during school time.

30. Teachers interrupt other faculty members who are talking in staff meetings.

31. Most of the teachers here accept the fault of their colleagues.

32. Teachers have too many committee requirements.

33. There is considerable laughter when teachers gather informally.

1. Rarely occurs
2. Sometimes occurs
3. Often occurs
4. Very frequently occurs

34. Teachers ask nonsensical questions in faculty meetings.

35. Custodial service is available when needed.

36. Routine duties interfere with the job of teaching.

37. Teachers prepare administrative reports by themselves.

38. Teachers ramble when they talk in faculty meetings.

39. Teachers at this school show much school spirit.

40. The principal goes out of his way to help teachers.

41. The principal helps teachers solve personal problems.

42. Teachers at this school stay by themselves.

43. The teachers accomplish their work with great vim, vigor, and pleasure.

44. The principal sets an example by working hard himself.

45. The principal does personal favors for the teachers.

46. Teachers eat lunch by themselves in their own classrooms.

47. The morale of the teachers is high.

48. The principal uses constructive criticism.

49. The principal stays after school to help teachers finish their work.

50. Teachers socialize together in small select groups.

51. The principal makes all class-scheduling decisions.

52. Teachers are contacted by the principal each day.

53. The principal is well prepared when he speaks at school functions.

54. The principal helps staff members settle minor differences.

55. The principal schedules the work for the teachers.

56. Teachers leave the grounds during the school day.

1. Rarely occurs
2. Sometimes occurs
3. Often occurs
4. Very frequently occurs

57. The principal criticizes a specific act rather than a staff member.

58. Teachers help select which courses will be taught.

59. The principal corrects teachers' mistakes.

60. The principal talks a great deal.

61. The principal explains his reasons for criticism to teachers.

62. The principal tries to get better salaries for the teachers.

63. Extra duty for teachers is posted conspicuously.

64. The rules set by the principal are never questioned.

65. The principal looks out for the welfare of teachers.

66. School secretarial service is available for teachers' use.

67. The principal runs the faculty meeting like a business conference.

68. The principal is in the building before teachers arrive.

69. Teachers work together preparing administrative reports.

70. Faculty meetings are organized according to a tight agenda.

71. Faculty meetings are mainly principal-report meetings.

72. The principal tells teachers of new ideas he has run across.

73. Teachers talk about leaving the school system.

74. The principal checks the subject-matter ability of teachers.

75. The principal is easy to understand.

76. Teachers are informed of the results of a supervisor's visit.

77. Grading practices are standardized at this school.

78. The principal insures that teachers work to their full capacity.

79. Teachers leave the building as soon as possible at day's end.

80. The principal clarifies wrong ideas a teacher may have.

ORGANIZATIONAL CLIMATE DESCRIPTION QUESTIONNAIRE

ANSWER SHEET

DIRECTIONS: Please circle the number which most closely matches your response to each statement.

1. Rarely occurs
2. Sometimes occurs
3. Often occurs
4. Very frequently occurs

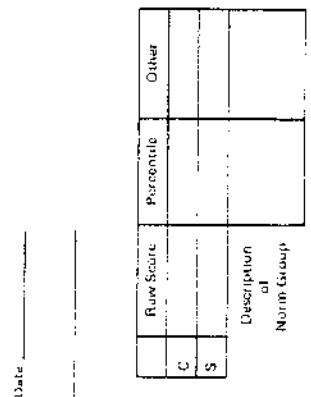
13.	1	2	3	4		37.	1	2	3	4		59.	1	2	3	4				
14.	1	2	3	4		38.	1	2	3	4		60.	1	2	3	4				
15.	1	2	3	4		39.	1	2	3	4		61.	1	2	3	4				
16.	1	2	3	4		40.	1	2	3	4		62.	1	2	3	4				
17.	1	2	3	4		41.	1	2	3	4		63.	1	2	3	4				
18.	1	2	3	4		42.	1	2	3	4		64.	1	2	3	4				
19.	1	2	3	4		43.	1	2	3	4		65.	1	2	3	4				
20.	1	2	3	4		44.	1	2	3	4		66.	1	2	3	4				
21.	1	2	3	4		45.	1	2	3	4		67.	1	2	3	4				
22.	1	2	3	4		46.	1	2	3	4		68.	1	2	3	4				
23.	1	2	3	4		47.	1	2	3	4		69.	1	2	3	4				
24.	1	2	3	4		48.	1	2	3	4		70.	1	2	3	4				
25.	1	2	3	4		49.	1	2	3	4		71.	1	2	3	4				
26.	1	2	3	4		50.	1	2	3	4		72.	1	2	3	4				
27.	1	2	3	4		51.	1	2	3	4		73.	1	2	3	4				
28.	1	2	3	4		52.	1	2	3	4		74.	1	2	3	4				
29.	1	2	3	4		53.	1	2	3	4		75.	1	2	3	4				
30.	1	2	3	4		54.	1	2	3	4		76.	1	2	3	4				
31.	1	2	3	4		55.	1	2	3	4		77.	1	2	3	4				
32.	1	2	3	4		56.	1	2	3	4		78.	1	2	3	4				
33.	1	2	3	4		57.	1	2	3	4		79.	1	2	3	4				
34.	1	2	3	4		58.	1	2	3	4		80.	1	2	3	4				
35.	1	2	3	4																
36.	1	2	3	4																

APPENDIX B

SUPERVISORY BEHAVIOR DESCRIPTION

by

Edwin A. Fleishman, Ph.D.



INSTRUCTIONS:

You have observed your own supervisor and probably you know pretty well how he operates. In this questionnaire, you are simply to *describe* some of the things your own supervisor does with your group.

For each item, choose the alternative which best describes how often your supervisor does what that item says. Remember...there are no right or wrong answers to these questions. The items simply *describe* the behavior of the supervisor over you; they do not judge whether his behavior is desirable or undesirable. Everyone's supervisor is different and so is every work group, so we expect differences in what different supervisors do.

1. HE IS EASY TO UNDERSTAND.
   a. always b. often c. occasionally d. seldom e. never — a b c d e

2. HE ENCOURAGES OVERTIME WORK.
   a. a great deal b. fairly much c. to some degree d. comparatively little e. not at all — a b c d e

3. HE TRIES OUT HIS NEW IDEAS.
   a. often b. fairly much c. occasionally d. once in a while e. very seldom — a b c d e

4. HE BACKS UP WHAT PEOPLE IN HIS WORK GROUP DO.
   a. always b. often c. occasionally d. seldom e. never — a b c d e

5. HE CRITICIZES POOR WORK.
   a. always b. often c. occasionally d. seldom e. never — a b c d e

6. HE DEMANDS MORE THAN WE CAN DO.
   a. often b. fairly often c. occasionally d. once in a while e. very seldom — a b c d e

7. HE REFUSES TO GIVE IN WHEN PEOPLE IN THE WORK GROUP DISAGREE WITH HIM.
   a. always b. often c. occasionally d. seldom e. never — a b c d e

8. HE EXPRESSES APPRECIATION WHEN ONE OF US DOES A GOOD JOB.
   a. always b. often c. occasionally d. seldom e. never — a b c d e

9. HE INSISTS THAT PEOPLE UNDER HIM FOLLOW STANDARD WAYS OF DOING THINGS IN EVERY DETAIL.
   a. always b. often c. occasionally d. seldom e. never — a b c d e

10. HE HELPS PEOPLE IN THE WORK GROUP WITH THEIR PERSONAL PROBLEMS.
    a. often b. fairly often c. occasionally d. once in a while e. very seldom — a b c d e

11. HE IS SLOW TO ACCEPT NEW IDEAS.
    a. always b. often c. occasionally d. seldom e. never — a b c d e

12. HE IS FRIENDLY AND CAN BE EASILY APPROACHED.
    a. always b. often c. occasionally d. seldom e. never — a b c d e

13. HE GETS THE APPROVAL OF THE WORK GROUP ON IMPORTANT MATTERS BEFORE GOING AHEAD.
    a. always b. often c. occasionally d. seldom e. never — a b c d e

14. HE RESISTS CHANGES IN WAYS OF DOING THINGS.
    a. a great deal b. fairly much c. to some degree d. comparatively little e. not at all — a b c d e

15. HE ASSIGNS PEOPLE UNDER HIM TO PARTICULAR TASKS.
    a. always b. often c. occasionally d. seldom e. never — a b c d e

16. HE STRESSES BEING AHEAD OF COMPETING WORK GROUPS.
    a. a great deal b. fairly much c. to some degree d. comparatively little e. not at all — a b c d e

17. HE CRITICIZES A SPECIFIC ACT RATHER THAN A PARTICULAR INDIVIDUAL.
    a. always b. often c. occasionally d. seldom e. never — a b c d e

18. HE LETS OTHERS DO THEIR WORK THE WAY THEY THINK BEST — a b c d e
a. always b. often c. occasionally d. seldom e. never

19. HE DOES PERSONAL FAVORS FOR THE PEOPLE UNDER HIM. — a b c d e
a. often b. fairly often c. occasionally d. once in a while e. very seldom

20. HE EMPHASIZES MEETING OF DEADLINES. — a b c d e
a. a great deal b. fairly much c. to some degree d. comparatively little e. not at all

21. HE SEES THAT A WORKER IS REWARDED FOR A JOB WELL DONE. — a b c d e
a. always b. often c. occasionally d. seldom e. never

22. HE TREATS PEOPLE UNDER HIM WITHOUT CONSIDERING THEIR FEELINGS. — a b c d e
a. always b. often c. occasionally d. once in a while e. very seldom

23. HE INSISTS THAT HE BE INFORMED ON DECISIONS MADE BY THE PEOPLE UNDER HIM. — a b c d e
a. always b. often c. occasionally d. seldom e. never

24. HE OFFERS NEW APPROACHES TO PROBLEMS. — a b c d e
a. often b. fairly often c. occasionally d. once in a while e. very seldom

25. HE TREATS ALL WORKERS UNDER HIM AS HIS EQUALS. — a b c d e
a. always b. often c. occasionally d. seldom e. never

26. HE IS WILLING TO MAKE CHANGES. — a b c d e
a. always b. often c. occasionally d. seldom e. never

27. HE ASKS SLOWER PEOPLE TO GET MORE DONE. — a b c d e
a. often b. fairly often c. occasionally d. once in a while e. very seldom

28. HE CRITICIZES PEOPLE UNDER HIM IN FRONT OF OTHERS. — a b c d e
a. often b. fairly often c. occasionally d. once in a while e. very seldom

29. HE STRESSES THE IMPORTANCE OF HIGH MORALE AMONG THOSE UNDER HIM. — a b c d e
a. a great deal b. fairly much c. to some degree d. comparatively little e. not at all

30. HE TALKS ABOUT HOW MUCH SHOULD BE DONE. — a b c d e
a. a great deal b. fairly much c. to some degree d. comparatively little e. not at all

31. HE "RIDES" THE PERSON WHO MAKES A MISTAKE. — a b c d e
a. often b. fairly often c. occasionally d. once in a while e. very seldom

32. HE WAITS FOR PEOPLE UNDER HIM TO PUSH NEW IDEAS BEFORE HE DOES. — a b c d e
a. always b. often c. occasionally d. seldom e. never

33. HE RULES WITH AN IRON HAND. — a b c d e
a. always b. often c. occasionally d. seldom e. never

34. HE TRIES TO KEEP THE PEOPLE UNDER HIM IN GOOD STANDING WITH THOSE IN HIGHER AUTHORITY. — a b c d e
a. always b. often c. occasionally d. seldom e. never

35. HE REJECTS SUGGESTIONS FOR CHANGES. a b c d e
a. always b. often c. occasionally d. seldom e. never ☐ ☐ ☐ ☐ ☐

36. HE CHANGES THE DUTIES OF PEOPLE UNDER HIM WITHOUT FIRST TALKING IT OVER WITH THEM. a b c d e
a. often b. fairly often c. occasionally d. once in a while e. very seldom ☐ ☐ ☐ ☐ ☐

37. HE DECIDES IN DETAIL WHAT SHALL BE DONE AND HOW IT SHALL BE DONE. a b c d e
a. always b. often c. occasionally d. seldom e. never ☐ ☐ ☐ ☐ ☐

38. HE SEES TO IT THAT PEOPLE UNDER HIM ARE WORKING UP TO THEIR LIMITS. a b c d e
a. always b. often c. occasionally d. seldom e. never ☐ ☐ ☐ ☐ ☐

39. HE STANDS UP FOR PEOPLE UNDER HIM EVEN THOUGH IT MAKES HIM UNPOPULAR. a b c d e
a. always b. often c. occasionally d. seldom e. never ☐ ☐ ☐ ☐ ☐

40. HE MAKES THOSE UNDER HIM FEEL AT EASE WHEN TALKING WITH HIM. a b c d e
a. always b. often c. occasionally d. seldom e. never ☐ ☐ ☐ ☐ ☐

41. HE PUTS SUGGESTIONS THAT ARE MADE BY THE PEOPLE UNDER HIM INTO OPERATION. a b c d e
a. always b. often c. occasionally d. seldom e. never ☐ ☐ ☐ ☐ ☐

42. HE REFUSES TO EXPLAIN HIS ACTIONS. a b c d e
a. often b. fairly often c. occasionally d. once in a while e. very seldom ☐ ☐ ☐ ☐ ☐

43. HE EMPHASIZES THE QUANTITY OF WORK. a b c d e
a. a great deal b. fairly much c. to some degree d. comparatively little e. not at all ☐ ☐ ☐ ☐ ☐

44. HE ASKS FOR SACRIFICES FROM HIS PEOPLE FOR THE GOOD OF THE ENTIRE DEPARTMENT. a b c d e
a. often b. fairly often c. occasionally d. once in a while e. very seldom ☐ ☐ ☐ ☐ ☐

45. HE ACTS WITHOUT CONSULTING THE PEOPLE UNDER HIM FIRST. a b c d e
a. often b. fairly often c. occasionally d. once in a while e. very seldom ☐ ☐ ☐ ☐ ☐

46. HE "NEEDLES" PEOPLE UNDER HIM FOR GREATER EFFORT. a b c d e
a. a great deal b. fairly much c. to some degree d. comparatively little e. not at all ☐ ☐ ☐ ☐ ☐

47. HE INSISTS THAT EVERYTHING BE DONE HIS WAY. a b c d e
a. always b. often c. occasionally d. seldom e. never ☐ ☐ ☐ ☐ ☐

48. HE ENCOURAGES SLOW-WORKING PEOPLE TO GREATER EFFORT. a b c d e
a. often b. fairly often c. occasionally d. once in a while e. very seldom ☐ ☐ ☐ ☐ ☐

ANSWER SHEET

DIRECTIONS. Please circle the letter which most closely matches your response to each statement

1. A B C D E
2. A B C D E
3. A B C D E
4. A B C D E
5. A B C D E
6. A B C D E
7. A B C D E
8. A B C D E
9. A B C D E
10. A B C D E
11. A B C D E
12. A B C D E
13. A B C D E
14. A B C D E
15. A B C D E
16. A B C D E
17. A B C D E
18. A B C D E
19. A B C D E
20. A B C D E
21. A B C D E
22. A B C D E
23. A B C D E
24. A B C D E
25. A B C D E
26. A B C D E
27. A B C D E
28. A B C D E
29. A B C D E
30. A B C D E
31. A B C D E
32. A B C D E
33. A B C D E
34. A B C D E
35. A B C D E
36. A B C D E
37. A B C D E
38. A B C D E
39. A B C D E
40. A B C D E
41. A B C D E
42. A B C D E
43. A B C D E
44. A B C D E
45. A B C D E
46. A B C D E
47. A B C D E
48. A B C D E

APPENDIX C

NAME OF SCHOOL_____

Please check the appropriate category or categories for each item.

1. LEVEL OF EDUCATIONAL PREPARATION

   _____ High School Diploma or GED Certificate

   _____ Bachelor's Degree

   _____ Master's Degree

   _____ Doctor's Degree

2. MAJOR AREA OF PROFESSIONAL PREPARATION

   _____ Early Childhood Education/Child Development

   _____ Elementary Education

   _____ Secondary Education

   _____ Special Education

   _____ Other - Please List _____

3. AREAS OF PROFESSIONAL CERTIFICATION

   _____ Early Childhood/Kindergarten

   _____ Elementary Education

   _____ Secondary Education

   _____ Special Education

   _____ Other - Please List _____

4. YEARS OF TEACHING EXPERIENCE

   _____ No previous teaching experience

   _____ 1 - 5 years

   _____ 6 - 10 years

   _____ 11 - 15 years

   _____ 16 - 20 years

5. NUMBER OF YEARS EXPERIENCE IN THIS DISTRICT

_____ No previous experience in this district

_____ 1 - 5 years

_____ 6 - 10 years

_____ 11 - 15 years

_____ 16 - 20 years

APPENDIX C

NAME OF SCHOOL _____

1. Number of classroom teachers in your school _____
2. Number of resource/special teachers in your school _____
3. Number of aides in your school

   instructional aides _____

   office/secretarial aides _____

   other - please list _____

   _____

4. Number of teachers in your school with whom you have previously worked as:

   an administrator _____

   a teacher _____

   a supervisor/consultant _____

   other - please list _____

   _____

5. Number of teachers you assisted in hiring for this school _____
6. Your number of years of experience as an administrator _____
7. Your number of years of experience as an administrator in this school district _____

APPENDIX E

Halpin and Croft identified six distinct climates, and they placed them on a continuum as follows: Open, Autonomous, Controlled, Familiar, Paternal, and Closed. The terms Open and Closed used for the two extremes of the continuum were influenced by the work of Rokeach and his concepts concerning the open and closed mind. These terminals and the four interior organizational climates on the continuum were described in the following manner:

1. The Open climate climate describes an energetic, lively organization which is moving toward its goals, and which provides satisfaction for the group members' social needs. Leadership acts emerge easily and appropriately from both the group and the leader. The members are preoccupied disproportionately with neither task achievement nor social-needs satisfaction; satisfaction on both counts seems to be obtained easily and almost effortlessly. The main characteristic of this climate is the "authenticity" of the behavior that occurs among all the members.

2. The Autonomous climate is described as one in which leadership acts emerge primarily from the group. The leader exerts little control over the group members; high Esprit results primarily from social-needs satisfaction. Satisfaction from task achievement is also present, but to a lesser degree.

3. The Controlled climate is characterized best as impersonal and highly task-oriented. The group's behavior is directed primarily toward task accomplishment, while relatively little attention is given to behavior oriented to social-needs satisfaction. Esprit is fairly high, but it reflects achievement at some expense to social-needs satisfaction. This climate lacks openness, or "authenticity" of behavior, because the the group is disproportionately preoccupied with task achievement.

4. The Familiar climate is highly personal, but undercontrolled. The members of this organization satisfy their social needs, but pay relatively little attention to social control in respect to task accomplishment. Accordingly, Esprit is not extremely high simply because the group members secure little satisfaction from task achievement. Hence, much of the behavior within this climate can be construed as "inauthentic."

5. The Paternal climate is characterized best as one in which the principal constrains the emergence of leadership acts from the group and attempts to initiate

most of these acts himself. The leadership skills within the group are not used to supplement the principal's own ability to initiate leadership acts. Accordingly, some leadership acts are not even attempted. In short, little satisfaction is obtained in respect to either achievement or social needs; hence, Esprit among the members is low.

6. The Closed climate is characterized by a high degree of apathy on the part of all members of the organization. The organization is not "moving"; Esprit is low because the group members secure neither social-needs satisfaction nor the satisfaction that comes from task achievement. The members' behavior can be construed as "inauthentic"; indeed, the organization seems to be stagnant.

Source: Eldon J. Null, Organizational Climate of Elementary Schools, Research Monograph No. 3, Minneapolis Educational Research and Development Council of the Twin Cities Metropolitan Area, Inc., 1967.

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