March 1997

Stages of Implementation of Block Scheduling: Perceptions of School Climate in High Schools in the First Tennessee Regional District

Chele L. Dugger
East Tennessee State University

Follow this and additional works at: http://dc.etsu.edu/etd

Part of the Curriculum and Instruction Commons, Elementary and Middle and Secondary Education Administration Commons, and the Secondary Education and Teaching Commons

Recommended Citation

This Dissertation - Open Access is brought to you for free and open access by Digital Commons @ East Tennessee State University. It has been accepted for inclusion in Electronic Theses and Dissertations by an authorized administrator of Digital Commons @ East Tennessee State University. For more information, please contact dcadmin@etsu.edu.
INFORMATION TO USERS

This manuscript has been reproduced from the microfilm master. UMI films the text directly from the original or copy submitted. Thus, some thesis and dissertation copies are in typewriter face, while others may be from any type of computer printer.

The quality of this reproduction is dependent upon the quality of the copy submitted. Broken or indistinct print, colored or poor quality illustrations and photographs, print bleedthrough, substandard margins, and improper alignment can adversely affect reproduction.

In the unlikely event that the author did not send UMI a complete manuscript and there are missing pages, these will be noted. Also, if unauthorized copyright material had to be removed, a note will indicate the deletion.

Oversize materials (e.g., maps, drawings, charts) are reproduced by sectioning the original, beginning at the upper left-hand corner and continuing from left to right in equal sections with small overlaps. Each original is also photographed in one exposure and is included in reduced form at the back of the book.

Photographs included in the original manuscript have been reproduced xerographically in this copy. Higher quality 6" x 9" black and white photographic prints are available for any photographs or illustrations appearing in this copy for an additional charge. Contact UMI directly to order.

UMI
A Bell & Howell Information Company
300 North Zeeb Road, Ann Arbor MI 48106-1346 USA
313/761-4700  800/521-0600

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
STAGES OF IMPLEMENTATION OF BLOCK SCHEDULING:
PERCEPTIONS OF SCHOOL CLIMATE IN HIGH SCHOOLS IN THE
FIRST TENNESSEE REGIONAL DISTRICT

A Dissertation
Presented to
the Faculty of the Department of
Educational Leadership and Policy Analysis
East Tennessee State University

In Partial Fulfillment
of the Requirements for the Degree
Doctor of Education

by
Chele L. Chaplain Dugger
March 1997
APPROVAL

This is to certify that the Graduate Committee of

Chele L. Chaplain Dugger

met on the

31st day of March, 1997

This committee read and examined her dissertation, supervised her
defense of it in an oral examination, and decided to recommend that her
study be submitted to the Graduate Council, in partial fulfillment of the
requirements for the degree of Doctorate in Education.

Signed on behalf of
the Graduate Council

Interim Dean, School of Graduate Studies
ABSTRACT

STAGES OF IMPLEMENTATION OF BLOCK SCHEDULING:
PERCEPTIONS OF SCHOOL CLIMATE IN HIGH SCHOOLS IN THE
FIRST TENNESSEE REGIONAL DISTRICT

by
Chele L. Chaplain Dugger

A descriptive study was conducted to identify teachers' and principals' perceptions of school climate in four stages of a change to block scheduling: Initiation, the first year of Implementation, the second year of Implementation, and the third year of Implementation or Institutionalization.

Data were collected from 442 teachers and principals in nine high schools in the First Tennessee Regional District in a stratified purposeful random sample using the Organizational Health Index (OHI), a 44-item survey, and a demographic information sheet. The survey has seven dimensions: Institutional Integrity, Initiating Structure, Consideration, Principal Influence, Resource Support, Morale, and Academic Support. These dimensions and the Total Climate scores were analyzed in the four stages of the change process. Demographic variables included gender, job title, age, level of education, years of experience, and subject assignment.

The data were analyzed with a t-test or an analysis of variance (ANOVA) to determine significant differences between and within groups, and a post-hoc test determined specific significant groups. There were no significant differences found in Total Climate scores or the Consideration dimension. There were also no significant differences in perceptions based on gender or education. There were significant differences found in all other dimensions and demographic variables. Block scheduling was found to have no effect to some positive effect on student learning and the way teachers teach. Block scheduling was not found to negatively affect school climate, and there is a need for continual professional development at each stage of the change process to address concerns revealed in this study.
INSTITUTIONAL REVIEW BOARD APPROVAL

This is to certify that the following study has been filed and approved by the
Institutional Review Board of East Tennessee State University.

Title of Project: Stages Of Implementation Of Block Scheduling:
Perceptions Of School Climate In High Schools
In The First Tennessee Regional District

Principal Investigator: Chele L. Chaplain Dugger

Department: Educational Leadership and Policy Analysis

Date Submitted: July 23, 1996

Institutional Review Board, Chair:

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
DEDICATION

With greatest love and appreciation to my brother, Darin Dwight Chaplain, for the gift of his kidney on June 17, 1986, without which I would not have the quality of life which I now enjoy or even life itself; to all of the doctors and the staff at Vanderbuilt who made it possible, and to Dr. Clarence Spanneth and his staff who have helped keep me healthy.

In memory of my father J. Dwight Chaplain and my grandmothers, Vada Underwood and Ella Robb Cook, who gave me many opportunities to comprehend the value of education and who would have been very proud if they had lived to see me accomplish this goal.

In appreciation of my mother, Nyela Chaplain Hand, and sister-in-law, Teresa Chaplain, for their examples and belief that I was able to do anything I made up my mind to do and for our long distance, meaningful conversations and discussions full of encouragement.

With much love and thankfulness to my husband, Richard, and daughter, Nikole, for their support, understanding of my determination and motivation, and the sacrifice of valuable time and resources devoted to this project.
ACKNOWLEDGMENTS

Appreciation and gratitude is extended to my committee chair, Dr. Louise MacKay, and to my committee members, Dr. Gunapala Edirisooriya, Dr. Elizabeth Ralston, and Dr. Marie Hill, for their willingness to serve on my advanced graduate committee. Much thankfulness is owed to Mrs. Sharon Barnett, ELPA administrative assistant, for aiding in the process and the paperwork. I am grateful for their assistance, encouragement, patience, wisdom, and friendship.

Special recognition is given to Lisa Crain Benfield who loaned me a book that triggered my decision to return to graduate school to obtain this degree; to the Carter County School Board who provided me with the motivation in their own, unique way to prove to myself and to others that I am qualified; to Dr. Loretta Bailey who told me after I finished the Ed.S. that I would one day return for the Ed.D.; to Pat Burgess who was always several steps ahead of me and whose friendship and constant support made this journey much less lonely; and to my students and colleagues, especially Larry Heaton, at Cloudland High School who checked on my progress and provided encouragement and support.

Thanks also goes to Dr. Melanie Narkawicz for her assistance with the statistical analysis for this project, to Dr. Eloise Jurgens for her final reading and editing assistance, and to Richard Dugger for his knowledge and help with computer skills.
# CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>APPROVAL</td>
<td>ii</td>
</tr>
<tr>
<td>ABSTRACT</td>
<td>iii</td>
</tr>
<tr>
<td>INSTITUTIONAL REVIEW BOARD</td>
<td>iv</td>
</tr>
<tr>
<td>DEDICATION</td>
<td>v</td>
</tr>
<tr>
<td>ACKNOWLEDGEMENTS</td>
<td>vi</td>
</tr>
<tr>
<td>LIST OF TABLES</td>
<td>x</td>
</tr>
</tbody>
</table>

**Chapter**

1. INTRODUCTION
   - Statement of the Problem                                       | 1
   - Research Questions                                              | 4
   - Significance of the Study                                       | 5
   - Assumptions                                                     | 5
   - Limitations                                                     | 5
   - Operational Definitions                                         | 6
   - Procedures                                                      | 8
   - Organization of the Study                                       | 9

2. REVIEW OF THE LITERATURE
   - Introduction to Public Education and the High School in the United States | 11
   - Effective Schools                                               | 16
<table>
<thead>
<tr>
<th>Chapter</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample Demographics</td>
<td>82</td>
</tr>
<tr>
<td>Research Questions, Hypotheses, and Data</td>
<td>89</td>
</tr>
<tr>
<td>Summary</td>
<td>126</td>
</tr>
<tr>
<td>SUMMAR Y, CONCLUSIONS, AND RECOMMENDATIONS</td>
<td>129</td>
</tr>
<tr>
<td>Summary and Discussion</td>
<td>129</td>
</tr>
<tr>
<td>Conclusions</td>
<td>141</td>
</tr>
<tr>
<td>Recommendations</td>
<td>142</td>
</tr>
<tr>
<td>REFERENCES</td>
<td>144</td>
</tr>
<tr>
<td>APPENDICES:</td>
<td></td>
</tr>
<tr>
<td>A. Letter of Request to Superintendent/Director</td>
<td>158</td>
</tr>
<tr>
<td>B. Follow-Up Letter to Superintendent/Director</td>
<td>161</td>
</tr>
<tr>
<td>C. Letter of Request to Principal</td>
<td>163</td>
</tr>
<tr>
<td>D. Follow-Up Letter to Principal</td>
<td>166</td>
</tr>
<tr>
<td>E. Instruction Letter to Colleague Administering Survey</td>
<td>168</td>
</tr>
<tr>
<td>F. Demographic Information</td>
<td>171</td>
</tr>
<tr>
<td>G. Organizational Health Index (OHI) Survey Instrument</td>
<td>174</td>
</tr>
<tr>
<td>H. Coding and Scoring of the OHI</td>
<td>178</td>
</tr>
<tr>
<td>VITA</td>
<td>181</td>
</tr>
<tr>
<td>Table</td>
<td>Description</td>
</tr>
<tr>
<td>-------</td>
<td>------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>1.</td>
<td>NUMBER OF HIGH SCHOOLS IN THE FIRST DISTRICT AND USAGE OF BLOCK SCHEDULING.</td>
</tr>
<tr>
<td>2.</td>
<td>SCHOOLS, STAGES OF IMPLEMENTATION OF BLOCK SCHEDULING, STUDENT ENROLLMENT, AND TEACHERS AND ADMINISTRATORS IN THE POPULATION.</td>
</tr>
<tr>
<td>3.</td>
<td>RANDOMLY SELECTED SCHOOLS, STAGE OF IMPLEMENTATION, STUDENT ENROLLMENT, AND TEACHERS/ADMINISTRATORS IN THE SAMPLE.</td>
</tr>
<tr>
<td>4.</td>
<td>HEALTH CLIMATE SCALES.</td>
</tr>
<tr>
<td>5.</td>
<td>TOTAL SAMPLE RESPONSE FROM TEACHERS AND ADMINISTRATORS.</td>
</tr>
<tr>
<td>6.</td>
<td>DEMOGRAPHIC VARIABLES.</td>
</tr>
<tr>
<td>7.</td>
<td>DIMENSIONS AND TOTAL CLIMATE SCORES IN FOUR STAGES OF THE CHANGE PROCESS.</td>
</tr>
<tr>
<td>8.</td>
<td>ANALYSIS OF VARIANCE OF DIMENSIONS AND TOTAL CLIMATE SCORES IN FOUR STAGES OF THE CHANGE PROCESS.</td>
</tr>
<tr>
<td>Table</td>
<td>Title</td>
</tr>
<tr>
<td>-------</td>
<td>----------------------------------------------------------------------</td>
</tr>
<tr>
<td>9.</td>
<td>DIFFERENCE IN MEAN SCORES OF PERCEPTIONS MEASURED IN THE DIMENSIONS AND TOTAL CLIMATE SCORES BASED ON GENDER</td>
</tr>
<tr>
<td>10.</td>
<td>ANALYSIS OF VARIANCE OF JOB TITLE IN THE DIMENSIONS AND TOTAL CLIMATE SCORES</td>
</tr>
<tr>
<td>11.</td>
<td>ANALYSIS OF VARIANCE OF AGE IN THE DIMENSIONS AND TOTAL CLIMATE SCORES</td>
</tr>
<tr>
<td>12.</td>
<td>ANALYSIS OF VARIANCE OF EDUCATION IN THE DIMENSIONS AND TOTAL CLIMATE SCORES</td>
</tr>
<tr>
<td>13.</td>
<td>ANALYSIS OF VARIANCE OF YEARS OF EXPERIENCE IN THE DIMENSIONS AND TOTAL CLIMATE SCORES</td>
</tr>
<tr>
<td>14.</td>
<td>ANALYSIS OF VARIANCE OF SUBJECT ASSIGNMENT IN THE DIMENSIONS AND TOTAL CLIMATE SCORES</td>
</tr>
<tr>
<td>15.</td>
<td>ANALYSIS OF VARIANCE OF PERCEPTIONS OF THE EFFECT OF BLOCK SCHEDULING ON STUDENT LEARNING AT THE STAGES OF THE CHANGE PROCESS</td>
</tr>
</tbody>
</table>
CHAPTER 1
INTRODUCTION

Approximately 4,680 hours in the lifetime of public high school students in the United States are spent in one of the nation's 22,733 high schools. The high school experience is one of the most common experiences that adult citizens share. The basic structure of high schools has not changed significantly since its beginning in 1890. Students are required to complete a prescribed number of credits in required courses and electives and to pass certain standardized tests to obtain a high school diploma. They attend social functions, sports activities, and other extracurricular activities as the transition is made to young adulthood and post-high school training or entrance into the job market.

Because of changes in educational requirements, experience with technology required by the nation's work force, and the advancement and successes of other industrialized nations, the nation's high schools have been criticized and targeted for reform and restructuring. National goals and standards have been adopted by many states, and the public is demanding accountability for money spent on education. Quality in education requires effective schools. In 1979 Walberg, Schiller, and Haertel reported a selective summary of more than 2,700 research efforts made to determine the characteristics of effective schools and classrooms. While the number of characteristics have differed, an important, common characteristic is found: effective schools must have
a safe and orderly organizational climate that is conducive to learning and student achievement. For a school to be effective, a good school climate must be present.

A healthy school climate must allow the needs of students and school personnel to be met. School climate can be determined and measured by the perceptions of its organizational membership. Variables have been identified to determine if they influence the way members of an organization perceive the climate (Wilson, Pentecoste, & Bailey, 1984; Pearlin & Schooler, 1978; Kalis, 1980; Hoy & Woolfork, 1993; Litt & Turk, 1985; Moos, 1979).

The process of change can also affect perceptions of school climate. Schools must be able to successfully undergo change and innovations. Fullan (1991) has identified stages in a change process: Initiation, Implementation, and Institutionalization. The different stages involved in the implementation of change, however, may cause differences in perceptions at each stage.

Current reform and change efforts are now being directed toward restructuring the high school. One that is presently being implemented in over 40% of the nation’s high schools is block scheduling. The purpose of this scheduling format is to allow students to meet higher standards required for graduation (Lammel, 1996). These high schools have departed from a traditional daily schedule consisting of six or seven class periods meeting for 180 days to one of many forms of block scheduling. Block scheduling involves fewer classes per day with each class having longer periods of daily
instructional time; classes may also meet fewer days per year. For example, in a 4 X 4 block schedule, classes meet for ninety minutes per day for 90 days. There are, of course, other block scheduling structures. Block scheduling enables a student to earn eight credits in an academic year instead of the traditional six or seven.

Research about block scheduling is relatively scant, and a strong data base has not yet been formed. What has been reported thus far is that block scheduling can help to influence a climate that encourages good attendance, academic emphasis, fewer interruptions and time lost changing classes, a smaller student load for teachers, more personalized instruction, and better teacher-student relationships. Teachers and students have consistently reported that they like the changes and would not want to return to a traditional schedule ("Block Scheduling," 1995; Edwards, 1995a; Huff, 1995; Jablonski, 1994; O'Neil, 1995b; Schoenstein, 1995; Wilson, 1995).

Teaching methods, requirements for graduation, field trip and attendance policies, athletic eligibility, testing schedules, curriculum guides, textbooks, and other elements involving the scheduling changes are undergoing evaluation as the high school structure changes. It is still too early to tell if block scheduling is a significant, lasting restructuring effort or just a passing trend. This research effort attempted to illustrate how perceptions of the school climate may change in various stages as block scheduling is being studied and implemented in one educational district in Tennessee. This study and others will help to determine if this reform attempt is successfully accomplishing its goals and give insight as to how perceptions vary in the different stages of this change process.
Statement of the Problem

Much effort has been expended by high school teachers and administrators in the First Tennessee Regional District to change from a traditional school schedule to one using a block schedule. This study focused on determining whether the teachers’ and administrators’ perceptions of the school climate differ in four stages of a change process involving block scheduling: Initiation, first year of Implementation, second year of Implementation, and third year of Implementation or Institutionalization.

Research Questions

1. How do teachers and administrators perceive their school climates in the Initiation, first year of Implementation, second year of Implementation, and third year of Implementation or Institutionalization stages of a change to block scheduling?

2. Will perceptions of school climate differ when the following independent variables are taken into consideration: current job title, gender, age, education, years of experience, and subject assignment.

3. What are the teachers' and administrators' perceptions of the effect that block scheduling has on student learning and will these perceptions differ in the stages of the change process?

4. What are the teachers' and administrators' perceptions of the effect that block scheduling has on the way that teachers teach and will perceptions differ in the stages of the change process?

The research questions are relevant to perceptions of teachers and administrators concerning the school climate as measured by the Organizational Health Inventory for
Hypotheses, given in Chapter 4, were tested at the .05 level of significance and stated and reported in the null, the form more suited to the application of statistical tests.

**Significance of the Study**

Although a good school climate has been identified as an indicator of an effective school, few studies measure climate influenced by block scheduling in high schools at the stages of implementation of the change. This research collected and analyzed data about perceptions of school personnel from the State of Tennessee’s First Educational Regional District who were studying block scheduling or had made a decision and taken action involving implementation of block scheduling in their high schools. Results may influence other systems and schools who are considering block scheduling and show how perceptions of climate may change during stages of implementation. Perceived strengths or problems affecting perceptions of school climate could help schools make adjustments and improvements at various stages in a change process. It could also help to improve morale and school climate simply by showing that perceptions normally change during a change process. This research will also add to the knowledge base being created by block scheduling and other attempts at restructuring high schools.

**Assumptions**

1. The participants respond candidly, seriously, and honestly to the survey instruments.
2. November and/or December is an appropriate time to measure the climate of a school.

Limitations

1. The measures of school climate were limited to the dimensions measured by the Organizational Health Index (OHI).

2. Participants in the study were limited to the teachers and administrators from schools involved in various stages of implementation of block scheduling in the First Tennessee Regional District of the Tennessee Department of Education.

3. The results of this study, conducted in the First Tennessee Regional District, are not necessarily an accurate representation of conditions elsewhere.

Operational Definitions.

High School Teacher. An individual who is certified by the Tennessee State Department of Education and employed in a school system to perform assigned duties in grades 9 through 12.

High School Principal. The chief administrator in the school housing grades 9 through 12. He/She is responsible for the overall leadership and management of the facility, personnel, and students. The term is used interchangeably with secondary school principal or administrator.

Perceptions. The conscious awareness and observation of the elements of the environment and climate interpreted in the light of experience in the school by teachers and administrators.
**Climate.** The culture and environment that reflect a school’s atmosphere, personality, and attitudes.

**Block Scheduling.** A way of changing the schedule of a traditional school day to create longer “blocks” of instructional time and to allow more credits to be earned in a school year.

**Institutional Integrity.** The school’s ability to cope with its environment in a way that maintains the educational integrity of its programs. Teachers are protected from unreasonable community and parental demands.

**Principal Influence.** The principal’s ability to influence the actions of superiors. Being able to persuade superiors, to get additional consideration, and to proceed unimpeded by the hierarchy are important aspects of the principal’s influence.

**Consideration.** Principal behavior that is friendly, supportive, open, and collegial; it represents a genuine concern on the part of the principal for the welfare of the teachers.

**Initiating Structure.** Principal behavior that is both task and achievement-oriented. Work expectations, standards of performance, and procedures are clearly articulated by the principal.

**Resource Support.** A school where adequate classroom supplies and instructional materials are available and extra materials are readily supplied if requested.

**Morale.** A collective sense of friendliness, openness, enthusiasm, and trust among faculty members. Teachers like each other, like their jobs, help each other, are proud of their school, and feel a sense of accomplishment in their jobs.
Academic Emphasis. The extent to which the school is driven by a quest for academic excellence. High but achievable academic goals are set for students; the learning environment is orderly and serious; teachers believe in their students’ ability to achieve; and students work hard and respect those who do well academically.

Procedures

The following procedures were followed in conducting this study:

1. A review of the current literature was conducted using the print and microfilm resources at the Sherrod Library at East Tennessee State University. The computer services at the Sherrod Library were used to search Dissertation Abstracts and ERIC documents. ERIC documents were also searched on a home computer. The inter-library loan department was used to locate articles and books not available in the Sherrod Library.

2. An appropriate instrument was researched and selected for the assessment of the perceptions of administrators and teachers regarding the climate influenced by block scheduling.

3. The population was selected and identified.

4. A purposeful stratified random sample from the population was selected and identified.

5. Proper permission and authorization were obtained to conduct the survey.

6. The survey was administered in November and December 1996 to selected teachers and administrators in the First Tennessee District of the Tennessee Department
of Education identified as being in one of four stages in a change process involving implementation of block scheduling.

6. Data from the instrument were interpreted and analyzed. Frequencies and percentages were determined for each demographic and survey item. The Organizational Health Index (OHI) was scored, and the health profile was determined. A t-test and ANOVA were performed. When needed, a post-hoc test, Least Significant Differences (LSD) was used to determine where differences were found.

7. Null hypotheses were tested at the .05 level of significance, and the results of the study were compiled.

8. Summaries, conclusions, and recommendations were presented.

Organization of the Study

This study is organized into five chapters. Chapter 1 contains the introduction, statement of the problem, purpose of the study, research questions, hypotheses, significance of the study, assumptions, limitations, definitions, procedures, and organization of the study.

Chapter 2 provides a review of literature related to public secondary school education, effective schools, school climate, measurements of school climate, change, and block scheduling.

Chapter 3 describes the methodology and procedures used in the study to obtain the relevant data. The research design, population, measurement instrument, data analysis techniques, and research questions are identified in this chapter.
Chapter 4 contains the data analysis.

Chapter 5 includes the summary, conclusions, and recommendations of the study.
CHAPTER 2
REVIEW OF LITERATURE

Literature and research related to public secondary school education, effective schools, school climate and measurements of school climate, change, and block scheduling are reviewed in this chapter. The first section is an introduction to public education and the high school in the United States. Major evaluations are briefly reviewed. The second section lists the characteristics of effective schools. School climate and its various definitions and measurements are given in the third section. Change is addressed in the fourth section. The last section covers block scheduling, a restructuring effort being tested in many of the nation's high schools. A summary concludes this chapter.

Introduction to Public Education and the High School in the United States

Ninety percent of children from every socioeconomic background attend public schools in the United States (Coleman & Hoffer, 1987). These students are taught by over 2 million teachers (Levine, 1986) in 15,000 school districts and 100,000 individual schools in the nation. More than 20,000 of these schools are high schools (Carroll, 1994a, 1994b). Due to compulsory education laws, students spend approximately 4,680 hours in high school, grades 9 through 12. According to Sizer (1983), "The American
high school may be this century's most far reaching and generous social invention" (p. 34).

As a social invention, the American high school serves as an important step in the transition to adult life, for it is here that students develop interpersonal skills and decision-making skills needed to function in adult society. Participation in clubs, school-sponsored dances and proms, athletic contests, and decision-making skills in course selection represent activities that facilitate the rite of passage to adulthood (Riley, 1984). Carroll (1990) called the high school experience one of the "nation's most widely shared experiences" (p. 360). These experiences occur in a structure that has experienced little change.

The basic structure of the high school has changed little since its 1890 beginning. Students are grouped by age levels; learning is organized through academic departments; lecturing is the primary method of transmission of knowledge in time blocks of less than one hour; schools are in session from September to June; and student accomplishment is measured by the number of credits earned for each year (Sizer, 1983).

During most of the twentieth century, the structure and the learning process in high schools has been molded by the Carnegie Standard. The Carnegie unit allows time spent in a class passed successfully to be awarded a certain number of credits. These credits are applied toward graduation and college entrance requirements. The roots for this measurement are found in the industrial age and the influence of individuals such as Frederick Taylor, who at the beginning of the twentieth century had a significant
influence on the schools through scientific management theory. The Carnegie unit sought to bring about a uniformity in the educational process (Kruse & Kruse, 1995).

Establishing the number of credits required for high school graduation was another attempt at uniformity and standardization. According to Stuart (1983), the average number of credits required for graduation in most high schools is 20. This, of course, requires students to attain an average of five credits a year for four years. However, many experts recommend more credits to allow "a well organized, sequential, planned curriculum that requires basic courses and stringent academic electives" (p. 17).

Coleman and Hoffer (1987) reported that two-thirds of the nation's public high schools, which serve three quarters of all public high school students, are organized as comprehensive high schools. These schools provide opportunities for academic, vocational, and general program enrollment (Lewin-Epstein, 1982). This structure contains complex goals to meet different students’ needs.

Students’ educational needs have changed over the years as the needs of society have changed. Before 1930, most students entered the work force after the eighth grade (Carroll, 1990). According to Wagner (1993), in 1960, 80% of the work force was not required to have graduated from high school or have any college education. The work force now requires 75% of workers to have an education beyond the high school level. David Kearns, former head of Xerox, stated that today’s workers should be able to learn new skills and be flexible enough to allow change because “even if an employee of that
company never leaves the corporation, he or she will change jobs five to seven times in 20 years” (Wagner, 1993, p. 699).

Public high schools in the United States have been criticized for not producing students who are capable of competing effectively in a global economy. They are also accused of not educating students to function effectively in a democratic system of government. (Carroll, 1994b).

This criticism became prominent following the launch of Sputnik in 1957 and led to many educational reform efforts. However, the publication in 1983 by The National Commission on Excellence in Education, A Nation At Risk, was the major impetus for much of the change that is now occurring. The report concentrated on high schools, even though the Commission had been authorized to address all levels of education. (Carroll, 1990). This report listed 13 "educational dimensions of risk" that indicated a crisis in education and a need for drastic reform. Recommendations included: raising standards; setting higher requirements for high school graduation and college admission; mandating a common core of curriculum for all students; increasing requirements in mathematics, science, and foreign language; testing achievement more regularly; lengthening the school day and year; and requiring more from all involved with education. Many reports followed confirming serious problems with education in the United States and the need for improvement.
Sizer (1983) recommended radical changes in the structure of high schools after a five-year study of high schools co-sponsored by the National Association of Secondary School Principals and the Commission on Educational Issues of the National Association of Independent Schools. Goodlad (1984) noted that “We are not without goals for schooling. But we are lacking an articulation of them and a commitment to them” (p. 56).

America 2000 and Goals 2000 were attempts to bring articulation and commitment to national goals and educational reform. America 2000 was introduced after the 1989 Charlottesville Education Summit convened by Bush and the nation’s governors. This summit led to the established of six national goals for education to help American education to be unequaled in the 21st Century. The Goals 2000: Educate America Act, the Clinton version of America 2000, became law in 1994. National guidelines for education focused on the following areas: ability to enter into schools, graduation rates, competency in challenging subjects, achievement in mathematics and science, improvement of teachers' professional skills and knowledge, partnerships to increase parental involvement and the presence of “a disciplined environment conducive to learning” (U.S. Department of Education, 1994; Eisner, 1995). The states were to develop their own standards for these national goals.

Both reform efforts and criticisms have common themes: The United States wants higher goals for all of its students, students must be able to meet "world class standards," and reform is a continual process (Goodlad, 1992). Bulach and Malone (1994) suggested that possibly the process of reform is like planting a seed. There must be proper soil or
"climate" for the seed of reform to sprout, take off, and grow in order to produce a desired plant or effective education.

**Effective Schools**

Many educational studies have been conducted to define an effective school. In 1979, Walberg, Schiller, and Haertel identified more than 2,700 research findings related to effective schools and classrooms in a summary of 10 years of educational research. The research has involved case studies, survey studies, and work which used data from other studies obtained from elementary and secondary schools. Effective schools were labeled in part by performance on standardized tests, but additional characteristics of effective schools have also been identified. (Rogus, 1983). Based upon 40 years of effective school research, Stockard and Mayberry (1992) identified four consistent characteristics: strong school leadership, strong academic emphasis, high teacher and student morale, and an orderly, coherent environment.

Good leadership is an important component of effective schools. Kelley (1981) noted, "More than half of what happens in a building for better or for worse, can be directly traced to the actions or inactions of the building principal, if the principal has been in the building for three years or longer." (p. 183). Lightfoot (1983) saw good leadership as being "strong, consistent, and inspired " (p. 323). Good school leaders had a clear mission and an understanding of the politics of the organization and were "fueled by partnerships and alliances with intimate, trusted associates." They had a "visible ideological stance that guards them against powerful societal intrusions" (p. 75).
The principal has an important influence on a school’s climate. It is possible that “the only thing of real importance that leaders do is to create and manage culture” (Butler, Kenney, & Chandler, 1994, p. 4). He/She is responsible for the tone and climate that is molded by his/her vision and actions and the inspiration and commitment of all in the building. A climate of mutual trust and respect is achieved because “individual visions...interact” until the vision becomes shared (O’Neil, 1995a, p. 22).

The principal must be known to be “the hardest working person” in the building (Elcholtz, 1984, p. 22). He/She should be very visible and known to be an expert instructional manager. High expectations for all are held and communicated (Brookover, Beady, Flood, Schweitzer, & Wisenbake, 1979; Levine, 1990). Classes are visited regularly, and priority is given to academics (Hoy, Tarter, & Kottkamp, 1991). On-going assessments of the school and its program and climate should be conducted and used in plans for improvement. Teachers are treated as professionals and are encouraged to participate in decisions made in the school (Rutter, Maughan, Mortimore, Ouston, & Smith, 1979; Levine 1990). Support of in-service instruction, necessary materials, praise, and encouragement are provided by the leader, and good feelings and relationships are encouraged and demonstrated (Lightfoot, 1983; Levine, 1990; Rutter et al., 1979; Winter & Sweeney, 1994).

Sergiovanni and Moore (1989) used a popular metaphor of the principal being like a lead saxophone player in a jazz band. “He/She carries the tune part of the time, but also extemporizes and allows fellow musicians the same freedom. In the end, they make
pretty music together by using everyone's skills to the fullest.” The “beautiful music” produced creates a climate where the product and the process is appreciated and enjoyed by all (p. 390).

The teacher has the same leadership responsibility in the classroom that the principal has in the school (Curran, 1983). Teachers must also know their students well and recognize that other people and situations affect their learning (Sudzina & Newman, 1994). They should shower students with attention and be comfortable with the special needs of adolescents (Lightfoot, 1983). They should have high expectations for students, assume responsibility for student achievement, and monitor student progress carefully, should communicate clearly with students and parents, enforce school rules and standards, have a positive attitude toward learning and teaching. Rewards rather than punishment should be stressed, and homework should be required (Rutter et al., 1979). Ultimately, they should model the behavior expected of their students.

Teachers must know how to teach. Proper methodology, planning, and classroom management must be used to make best use of the time available and to match the learning style of students. Rapport with students must be evident in the learning process (Coppedge & Exendine, 1987). Good teachers are an important factor in a school having a strong academic emphasis.

A frequent characteristic of effective schools is the high expectations that teachers and principals have in a school. Rosenthal and Jacobson (1968) viewed expectations as being “a self-fulfilling prophecy“ (p. 403). In high achieving schools the
staff has confidence that students will succeed in the learning process (Brookover et al., 1979; Rutter et al., 1979; Phi Delta Kappa, 1980).

Schools with high morale exhibit specific characteristics. Murphy and Hallinger (1985) found effective schools to have "clear missions, high expectations, a commitment to fully educate each student, a sense of community, and a safe, orderly environment" (p. 23). The U.S. Department of Education (1986) concluded that all involved in an effective school "agree on the goals, methods, and content of schooling" (p. 46). Strong leadership in instruction, emphasis on basic skills, high expectations, assessment of student achievement and "a safe orderly climate" are all considered to be important to morale.

A safe, orderly climate is another important characteristic of an effective school. According to Squires, Huitt, and Segars (1983), a school with an orderly climate encourages appropriate behavior, attitudes and beliefs, has high expectations, an academic emphasis, and is consistent in punishment. Stressing rewards over punishment, treating students consistently, and having enthusiastic students who actively participate in school activities were also characteristics common to effective school climate (Norton, 1984; Stuart, 1983).

The climate of an effective school is one that is "distinguished by its culture, a structure process, and a climate of values and norms that channel staff and students in the direction of successful teaching and learning" (ERIC Clearing House on Educational Management, 1984, p. 5). Effective schools have "a sense of purpose, an atmosphere of
order and quiet, and a feeling of pleasure in learning. There are high expectations for
students to do well academically... And, there is a clearly defined academic mission”
which is understood and supported by all.” (Maloy & Sedin, 1983, p. 65).

The way an effective school is often identified to the public is “the degree to
which students attain outcomes that are measures of goals which the school and its
community have established as important outcomes of schooling” (NASSP, 1989, p. 3).
Curran (1983) defined an effective school as “a purposeful organization whose members
seek through common effort” to meet standards which have been set forth (p. 73).

The research on effective schools offers no "distinct, detailed blueprint" for an
effective school. (Walberg & Lane, (Eds.) 1989, p. 1). The number of characteristics
found in studies varies, and the characteristics have been expressed differently. No
common recipe is available (D'Amicos, 1982). No guarantee exists that a school can
duplicate the models of effective schools and receive the same results. Some critics claim
that educators have learned a great deal about an effective school’s characteristics, but
have not mastered the actual process involved to bring about improvement (Miller,
1982). Common characteristics of effective schools can, however, provide a framework
upon which schools can build.

School Climate

A consistent characteristic found in the effective school studies involves school
climate. As Lindelow, Mazzarella, Scott, Ellis, and Smith (1989) said, "Although a
favorable school climate does not guarantee school effectiveness, it is a necessary ingredient for such effectiveness" (p. 176). School effectiveness concepts have provided an impetus for research on school climate, school culture and school environment.

For an organizational climate to be effective, an individual's basic needs must be satisfied. Maslow's (1954) Hierarchy of Needs identified five important needs: physiological, safety, acceptance and friendship, recognition, and self-actualization. The physiological needs focus on the personal, body needs of an individual. The safety needs include all aspects of an environment necessary to allow the individual to feel non-threatened and secure. Acceptance and friendship stress good relationships among those with whom the individual associates and recognizes the need for support from family and friends. Recognition of achievement should be given to an individual, and a reward system should be in place to encourage desired behavior. Self-actualization is illustrated when an individual grows personally and professionally and has high self esteem (Maslow, 1954).

The extensive literature on school settings uses the terms climate, culture, and environment interchangeably. However, the definitions of these terms vary extensively. Stockard and Mayberry (1992) have found that climate is the term more often used and researched. The climate, culture, or environment has been described as the "distinct differences in school atmosphere" or the "personality" that is found in each educational institution (Hartley & Hoy, 1972, p. 17). According to Maloy and Sedin (1983) this "personality" or "atmosphere" involves "the impressions, moods, and feelings one
experiences when walking the corridors, sitting in the classrooms, or standing on the playground" (p. 65).

A report on the early history of climate in educational literature was given by Van der Sijde (1987). School climate was first discussed in an article by Withall (1949) and represented an emotional tone involving interpersonal interactions. Cornell, Lindvall, and Saupe (1952) looked at the climate in classrooms, and Brown (1960) reported on emotional climates created by a teacher's personality and verbal behavior. For decades "school climate" was called "school morale" in the literature (Lindalow et al., 1989). For only 32 years or so has school climate been so labeled and addressed.

Even though many studies concerning organizational climate exist from the past few decades, the term is still difficult to define. (Anderson, 1982; Halpin, 1966; Tagiuri, 1968). While no standard definition exists, Tagiuri (1968) is usually credited with providing the first definition. (Anderson, 1982). Organizational culture is an enduring quality of the internal environment of an organization that is experienced by its members; Organizational culture influences behavior, and is described according to the characteristics of the organization. The culture of an organization involves four dimensions: ecology, the physical environment in which a group interacts; milieu, the social characteristics of individuals and groups involved in the organization; social systems, the patterned relationships of individuals and groups; and culture, the collectively accepted beliefs, values and meanings of the group (Tagiuri, 1968).
Organizational climate is the "set of internal characteristics that distinguishes one school from another and influences the behavior of people in it" according to Hoy and Miskel, 1978, (p. 185). Rutter et al. (1979) called climate "ethos," and Lezotte, Hathaway, Miller, Passalacqua, and Brookover (1979) defined it as "the norms, beliefs and attitude reflected in institutional pattern and behavioral patterns that enhance or impede student achievement" (p. 1).

The term "personality" for organizational climate was first applied by Halpin and Croft (1963). They claimed that "climate" is to the organization as "personality" is to the individual. Deal and Kennedy (1983) added a pragmatic definition to a culture of an organization. It was seen as "the way we do things around here" or that which "keeps the herd moving roughly west" (p. 14). School climate is displayed by "those qualities of the school, and the people in the school, which affect how people feel while they are there" Howard, 1981, p. 8).

Keefe, Kelley, and Miller (1985) reported that the National Association of Secondary School Principal's [NASSP] Task Force on Effective School Climate, formed in 1982, defined school climate as those "relatively enduring patterns of shared perceptions about the characteristics of an organization and its members" (p. 74). Shared perceptions were found to be a "high degree of consensus about what is and what is not important—in the primary description of climate." (p. 74). The "spirit" of the school is evident because of shared perceptions by the primary stakeholders.
Brookover and Erickson (1989) remind that culture is learned behavior. To Erickson (1987), it is a framework for meaning. An individual's ideas about the role of culture will depend upon the conceptions of the "eclectic mix" of culture accepted and developed (p. 23). Anderson (1982) noted that individuals can react and behave differently with groups in different organizational climates.

According to the ERIC Clearinghouse on Educational Management (1984), climate is hardly noticed by staff and students in effective schools. Once established, that climate becomes part of the school's reputation and tradition. Butler et al. (1994) reported that school climates often did not change much over time, even though attempts may have been made to change them. Levine (1986), however, indicated that even long established cultures may need to be modified, especially if achievement "is mediocre or worse" (p. 153).

Classroom climate was defined very similarly to school climate by Culver and Hoban (1973). They added, however, that a classroom should be concerned with "setting the stage so that circumstances will facilitate constructive interaction among group members in a communicative atmosphere" (p. 16). Lindelow et al. (1989) reported that like schools and classrooms, school districts also had their own personalities. A chain effect occurs: the climate in the classroom contributes to the overall school climate, and the climate of the various schools in a district contribute to the district's overall climate. Climates in all settings of education react with and influence each other.
The consistency and stability of an orderly environment have been found to promote a higher level of student achievement (Rutter et al., 1979; Lightfoot, 1983). A pleasant, orderly environment includes a clean, tidy, nicely painted and decorated building, and good quality furniture. Readily available teachers to help with problems and consensus on curriculum and discipline were also very important (Rutter et al., 1979).

Ambrosie and Haley (1988) held that an effective school is a collective responsibility. A good climate affects every aspect of a school: attendance, morale, achievement, pride, confidence, self-esteem, self-image, and commitment to the school and its programs (Elcholtz, 1984). Hoyle, English, and Steffy (1985) claimed that "Without a climate that creates a harmonious and well functioning school, a high degree of academic achievement is difficult, if not downright impossible to obtain" (p. 15).

Two basic goals of school climate were identified by Brainard and Fox (1974): productivity and satisfaction. The school must provide a wholesome, stimulating, and productive learning environment that will help to bring about academic achievement and personal growth. The school climate should also be a satisfying one for those who work, learn, and grow in it. Winter and Sweeney (1994) added that the school environment and the people in it affect what is done, how well it is done, and how people feel about what is being done.

According to Gottfredson and Hollified (1988) a school with a bad climate is likely to have a bad public image. Pallas (1988), however, noted that most research has
observed positive school environments of effective schools and high academic achievement. It was usually concluded that the positive school climate produces high academic achievement.

Pallas (1988) also cautioned that secondary schools are very different from elementary schools. Secondary schools are often larger and more complex organizations. Principals usually have less contact with teachers. Teachers are organized into departments. Vice-principals are more consistently present in administrative roles. More diverse goals are present, and high schools are more heterogeneous. These differences could explain why Sweeney (1992) found that elementary schools usually have more positive climates than secondary schools.

Firestone and Herrott's (1982) research found less agreement among high school faculty members concerning school climate than among elementary teachers. High school teachers reported more control of daily classroom management decisions. Secondary teachers were often viewed as subject matter specialists and were generally members of larger school staffs. Elementary teachers reported a shared sense of purpose and greater influence on basic skill instruction. Elementary principals reported more opportunities to serve as instructional leaders, although secondary principals were seen as having as much influence. Teachers at both levels reported communication problems with principals about curriculum, discipline, and management.

Characteristics of a positive school climate include respect, trust, high morale, opportunities for input, continued academic and social growth, cohesiveness, school
renewal, and caring (Brainard & Fox, 1974). Evidence of these characteristics in the school environment are indicative of the school's ability to meet student needs. Characteristics of an effective school are reflected in measurements of the school climate.

Measurements of School Climate

Five reasons for gathering information on school climate in addition to conducting research to test hypotheses about the environment have been identified by Wilson and McGrail (1987): identification of a school's strengths and weaknesses that could be used as a baseline for planning school reform, a school program evaluation, descriptions and comparisons of schools, improvement of communication in the schools, and identification of groups requiring attention. It is necessary to take a close look at variables selected for a comprehensive study. The purpose of the study should be used to help determine whose opinions are valuable and how the data should be gathered. All individuals within a population should be used in the study, if possible.

A school climate instrument is most useful for measuring climate and fulfilling these purposes (Lindelow et al., 1989). Most of these instruments are surveys which rely on members' perceptions. Differences in perceptions may vary among members of an organization, even though all are present in the same environment (Hoy & Tarter, 1992; Lindelow et al., 1989). Studies using climate instruments have confirmed that schools and classrooms do have different climates or personalities and that in a school or classroom most members' perceptions of the climate are in agreement. These perceptions
can be described in quantitative data form and used to determine factors which may be
affected by the climate (Stockard & Mayberry, 1992).

Halpin and Croft (1963) are credited with developing the first instrument for
measuring school climate. The Organizational Climate Description Questionnaire
(OCDQ) consists of 64 items with four dimensions of faculty groups and four dimensions
of teacher-principal interaction. Teachers and principals provide the data that describe
the school climate. Six climate types were identified: Open, Autonomous, Controlled,
Familiar, Paternal, and Closed. Other instruments have been developed over the years,
but most of these resemble the OCDQ format. Hoy, Tarter, and Bliss (1990) reported
that the OCDQ has had problems with "conceptual vagueness and psychometric
problems" (p. 265). The major criticism is that it lacks a theoretical basis causing
limitations to its usefulness.

Witcher (1993) provided a good review of other climate measuring instruments.
One such instrument is the Organizational Climate Index (OCI) that was created in 1965
and contained over 300 items. The short form, developed in 1975, consists of 40 true-false items. Teachers complete the form that measures factors found in a school:
intellectual climate, achievement standards, supportiveness, organizational effectiveness, 
orderliness, and impulse control.

Another climate instrument, the Effective School Battery (ESB), presents four profiles based on 34 climate aspects that indicate teachers' and students' perceptions.
The profiles involve what teachers report, what students report, characteristics of teachers, and characteristics of the students.

The Charles K. Kettering Ltd. School Climate Profile is an instrument that addresses four areas of school climate: general climate factors, program determinants, process determinants, and material determinants. The survey is completed by principals, teachers, students, parents, and other school personnel.

The Comprehensive Assessment of School Environment (CASE) instrument measures climate and satisfaction surveys. Subscales address teacher-student, student-peer, and parent and community-school relationships; student academic orientation, behavioral values, and activities; instructional management, security and maintenance, administration, and guidance.

The National Association of Secondary Principal’s [NASSP] Task Force on Effective School Climate developed the Comprehensive Assessment of School Environments instrument in 1982. The School Climate Survey is one of several instruments in that battery. Other instruments measure the satisfaction of students, teachers, and parents. Three areas of influence are measured: beliefs, attitudes, and values; organizational characteristics; and group and individual characteristics. Ten subscales are present.

A climate instrument for secondary schools was developed in 1987 by Kottkamp, Mulhern, and Hoy. The Organizational Climate Descriptive Questionnaire-Rutgers Secondary (OCDQ-RS) contains 34 items that measure five dimensions: principal
behavior, supportive and directive, and teacher behavior, engaged, frustrated, and intimate. The openness and intimacy of the school are described based on these five dimensions.

The Organizational Health Inventory for Secondary Schools (OHI) was developed as a 44-item survey instrument that measures seven attributes of student-teacher, teacher-teacher, teacher-principal, and principal-superior relationships. The seven dimensions of organization health measured are Institutional Integrity, Initiating Structure, Consideration, Principal Influence, Resource Support, Morale, and Academic Emphasis.

The OHI was based on the theory of Parson, Bales and Shils (1953) cited by Hoy et al., (1991). The seven climate dimensions of the OHI fall into Parsons' (1967) three distinct levels of control over needs that schools have: Technical, Managerial, and Institutional. The broad Parsonian framework provides that "a healthy school is one in which the Technical, Managerial, and Institutional levels are in harmony and the school is meeting both its instrumental and expressive needs as it successfully copes with disruptive external forces and directs its energies toward its mission" (p. 68).

The seven climate dimensions assessed by the OHI include one dimension at the Institutional Level, Institutional Integrity, that measures the school's ability to remain independent from its environment; four dimensions of the Managerial Level, Initiating Structure, Consideration, Principal Influence, and Resource Support, measuring principal behavior and influence; and two dimensions at the Technical Level, Morale and

The idea of using a health metaphor in the context of school climate came from Miles (1969) who described a healthy organization as one that “not only survives in its environment, but continues to cope adequately over the long haul, and continuously develops and extends its surviving and coping abilities” (p. 378).

Hoy et al. (1991) claimed that the OHI is a better predictor of school effectiveness than the OCDQ-RS. The OHI is “a better predictor of variables linked to functional imperatives such as innovation, goal achievement, loyalty, and cohesiveness.” (p. 141). The OCDQ-RS is “the better predictor of variables linked to measures of interaction such as open communication, principal authenticity, and teacher participation in decision making” (p. 141). It is recommended that “...if practitioners or researchers are to use only one measure to map the domain of the climate of secondary schools, the OHI may be a more useful vehicle than the OCDQ-RS” (p. 140).

Although many climate instruments have been identified, there is not a commonly agreed upon set of variables involved in school climate research. The school itself is most often the boundary of research with little of no regard given to other impacting variables such as economic, political, and historical factors or the policy makers. Measurement of communication and interaction among teachers and teachers and administrators is generally the major focus in most climate studies (Lindelow et al., 1989).
Common variables in school climate studies were examined in a study by Wilson, et al. (1984). Age and gender of teachers were identified as two main influences on perceptions of school climate. Males tended to be more negative than females, even though Pearlin and Schooler (1978) found that males reported the use of coping strategies more successfully in order to reduce work stress. The most positive age ranges were 30-39 and 50-59. The range of 40 to 49 was most negative. Teaching experience, level of education, and race did not seem to effect teachers' perceptions. Race, however, was a factor when communication and leadership were examined as separate components in the study. In these areas, African Americans tended to perceive school climate more negatively than whites (Wilson et al., 1984).

Kalis' (1980) study did not agree with Wilson et al.'s (1984) research relative to teaching experience. Kalis found in her earlier study that nontenured teachers had a more positive perception of the school environment than tenured teachers. The longer a teacher was in a school, the more negative perceptions would be.

Hoy and Woolfork (1993) also disagreed with Wilson et al. (1984) as to level of education. They found that teachers who attended graduate school were more likely to have a personal teaching efficacy, "a feeling that they can motivate even the most difficult student" (p. 365). Their perceptions about their job and their school, therefore, would be more positive than those who had not attended graduate school.

The subject taught by a teacher could be a variable worthy of exploration in studies involving teacher perceptions (Litt & Turk, 1985). Bromley (1981) found that
mathematics and science teachers in the 1980s were leaving education to take higher paying jobs in industry. Litt and Turk (1985) raised the possibility that employability outside a school setting could be related to mathematics and science teachers' perception of less job satisfaction with their work environment or that they could have different concerns and goals than their colleagues.

The size of a school has been found to affect climate. Much of the early literature suggested that larger schools and school districts attained higher achievement. John Conant (1959) reported that small schools were not able to provide curriculum as appropriately as a comprehensive high school.

Goodlad (1984), however, found that schools where teachers and students reported satisfaction tended to be smaller. Coleman and Hoffer (1987) added that while larger schools may be able to offer more programs and have more qualified teachers, they tend to provide less quality in teacher-student relationships. Smaller proportions of students attending larger schools participate in extracurricular activities, and smaller proportions of parents are involved in the school. Discipline can also be a more serious problem in larger schools.

In a meta-analysis study Glass and Smith (1979) examined 76 studies of class size, the conclusion was made that there was a positive relationship between smaller class size and student achievement. As class size falls below 15, differences in achievement "can be striking." Smaller classes are more often friendlier; climates are more conducive to learning; individualized instruction is more likely to occur; students
are more interested; and less frustration and apathy are present. Teachers of smaller classes were found to have higher morale, more planning time, and more satisfaction with their students.

Hartley and Hoy (1972) found that it is extremely difficult to find large high schools with open climates. In fact, extremely open secondary schools were not even found in their study that tested a hypothesis that the more open a school is, the less a sense of alienation is present.

Urban, suburban, and rural schools were found to have different climates by Sweeney (1992). Suburban schools were found to be more positive than rural schools, while urban schools tended to have the fewest positive climates. Schools with a lower enrollment reported more control over classrooms, cooperation with staff members, student behavior, greater agreement on school practices and goals, and higher morale. Large schools and small schools were found to be similar in views on the leadership of the principal (Pallas, 1988).

Rutter and Madge (1976), however, suggested that variations between schools in financial resources and the size of schools or classes had no clear relationship with differences in academic achievement. Levine (1986) also held that it is not the size of the school that matters. Instead, she postulated that the ability of the leader to create a positive climate and feelings of community is the key. While this may be more possible in a small school, it is not impossible in larger ones.
Wallich (1981) cautioned that school leaders sometimes see the climate of their school as they would like for it to be rather than the way it is, and Moos (1979) reported that teachers, like principals, often tend to view what they are directly responsible for more positively than others might view the same situation. Teachers often believe their climate is more positive than students report it to be, but Maloy and Seldin (1983) demonstrated that students felt more positive about their school environment than did their parents and teachers. Students were found to be more satisfied in classes where order and organization are evident. Moos (1979) found no relationship between years of teaching experience and types of classroom climates.

The morale of teachers has been found to be associated with perceptions of climate. Teachers who are satisfied with their work setting are more likely to have high morale and to perceive their school climate as being open and supportive (Kalis, 1980). Teachers who have great pride in their work “appear to be most effective in classrooms where actual student achievement provides support for their sense of satisfaction” (p. 30). Stockard and Mayberry (1992) identified many studies that found that higher attendance rates and student achievement are present when students believe that their teachers are satisfied with their job situation.

Dissatisfaction, low morale, problems with achievement, and bad school climate can all be reasons which signal a need for change. School climate instruments can help to indicate challenges and strengths in stages of implementing change.
Change

Daft (1994) defines organizational change as "the adoption of a new idea or behavior by an organization" (p. 362). Change involves "behavior, opinions, attitudes, goals, needs, values, and all other aspects of a person's psychological field" (French & Raven, 1968, p. 260). Lippitt, Langseth, and Mossop (1985) see planned change as change involving "purpose and intent rather than something that happens accidentally" (p.28). In planned change decisions must be made concerning "the direction or process" that should be taken (p. 28). There must be ability to foresee the result "of the process through the implementation of strategies to accomplish the desired outcomes" (p. 28). Cummings and Worley (1993) held that planned changed is "characterized as falling along a continuum, ranging from incremental changes that involve fine-tuning the organization to quantum changes that entail fundamentally altering how it operates" (p. 63).

Change in the culture of an organization involves the presence of influence and how it is used. People in an organization will be more involved and committed to change if they have been active in the change process and have helped in the change process (Lippitt et al., 1985).

Cuban (1988) categorizes change as being either first or second order. First order changes bring about a desired change in "efficiency and effectiveness" of the process or product "without disturbing the basic organizational features and without substantially altering the way" roles are performed (p. 342). Second order changes, however, address
the major structure of an organization, "including new goals, structures, and roles" (p. 342). Fullan (1991) concludes that changes in the twentieth century have been first order changes that seek to "improve the quality of what already existed" (p. 29).

**Forces Behind Change**

Levin (1976) identifies three sources from which pressure to change educational policy originates: natural disasters, external forces, and internal contradictions. The quality or appropriateness of a change must be carefully evaluated. The main change agents should be involved in the process for more than two years.

Hall and Guzman (1984) found that most innovations begin outside individual schools and are mandated by the school system's central office. It then becomes the duty of the principal to introduce the change in the school. School leaders, therefore, are seldom recognized as change initiators. Instead, they are expected to respond to directions for change from supervisors.

According to Fullan (1991) there are three dimensions at stake whenever change is introduced. These dimensions are the possible use of new or revised materials, new teaching approaches, and a possible change or alternation of beliefs. Change must occur in all three of these dimensions in order to alter an outcome. Individuals can choose to "implement none, one, two, or all three dimensions" (p. 37). The change can also vary within individuals and within groups. The change must affect what people do and what they think in order for the intended goal to be realized.
Lippit et al. (1985) agree with Fullan, but believe that change must take place in four areas. There must be a change in knowledge, skill, values, and attitude. Values are defined as "the adoption of a rearrangement of one's beliefs, and attitude involves the "adoption of new feelings through experiencing success with them" (p. 35).

The Change Process

Levin (1951) identified three sequential phases to a change process: unfreezing, moving, and refreezing. In the first phase currently held ideas, beliefs, knowledge, and attitudes are realized and are open to change. The moving state allows new attitudes and behaviors to be absorbed. The last stage involves "refreezing" oneself in the new change. Beckhard and Pritchard (1992) also refer to three phases of the change process, but in slightly different terms. They present the change process as having a present or current state, a transition state, and a changed state. The change is introduced in the transition phase, and the changed state is in the future when the change has been completed and the goals for the change are realized.

When a problem is diagnosed data should be collected with an open mind and no preconceived or predetermined orientation. Most change comes about through hard work of individuals in an organization. The individuals in the organization have "a desire, a readiness, and a capacity to change" (Lippitt et al., 1985, p. 31). If a change agent is used, he/she must define what can reasonably can be expected in the change process and must secure any supplementary resources which are required. There must also be an ongoing
training program and flow of communication that facilitates feedback to the policymakers.

Dalziel and Schoonover (1988) list ten steps in the life history of a change project: (1) idea formation stage, (2) feasibility exploration stage, (3) project proposal, (4) design specification, (5) test or model development, (6) pilot test and review, (7) full development, (8) project revision, (9) implementation, and (10) evaluation and revision (p. 146). Complex change efforts "often have multiple cycling or iterations" of the process (p. 145). During each stage of the change project data are obtained, weaknesses are determined, issues are resolved, and plans are refined.

Lippitt et al. (1985) caution that change is often followed by a return to the previous patterns after the change process and its pressures are reduced and are not a major focus in the organization. Fullan (1991) noted that factors that strongly influence sustained change are continued funding, and other support, leadership that maintains momentum and continues to empower newly hired personnel, and an embedding of the change into the structure or culture of the school.

The United States Department of Education (1993) summarized the research and categorical change strategies into four "fix it" categories. These are identified as follows: fix the parts, such as curriculum and teaching methods; fix the people; fix the schools; and fix the system.

Fullan (1991) is credited for simplifying the change process into three broad phases: Initiation, Implementation, and Institutionalization or Continuation. Initiation is
often labeled as mobilization or adaptation. It is the process that leads up to and includes a decision to adopt or to proceed with a change. During this phase a direction of change is investigated.

Implementation involves initial or attempted use of a change. It involves the first experiences of attempting to put the change into practice. This phase usually takes one to two years, although some say that three years may be involved. The line between implementation and continuation is "hazy and arbitrary" (Fullan, 1991, p. 49).

Institutionalization or Continuation is sometimes called Incorporation. It involves sustaining the change beyond the first year or two, and the change becomes an integral part of the system. If this does not happen, the change disappears for lack of support and follow through. Fullan claims that complex changes take three to five years from implementation to institutionalization. Major restructuring efforts could take five to ten years. Institutionalization involves making the change "a regular part of daily life" (Dalin, 1993, 145).

Fullan (1991) adds a final phase in the change process- outcome. This phase demonstrates the final result of the change and the change process. Some outcomes can be assessed in a short amount of time, but many results are not evident until after full implementation. Fullan suggests that information "can and should be gathered and assessments made throughout" the entire change process, and reminds that "change is a process, not an event" (p. 49).
Leadership in the Change Process

Huddle (1987) emphasizes the important role that principals play in a school's change process. In the initiation phase the principal must assure that the change does not conflict with existing philosophy and goals and create motivation and the need for change. He/She must ascertain any change efforts or programs being introduced at the same time are supportive of one another. The faculty must have experience in working together without major problems. This helps to ensure a better chance for success in the change process. Staff development, technical assistance, and peer support should be provided. The principal should collect data to determine effects on the students and to reward desired behaviors and outcomes. There must be clear communication throughout the process and a willingness to a long-term commitment.

Dalziel and Schoonover (1988) add that change leaders "must prepare their organization for changing, choose the right people for effective teamwork, and implement the right interventions to produce visible results" (p. 133). They must be "proactive planners" and use "repeated planning" to refine activities and to achieve goals (p. 133).

Fullan (1991) points out that serious reform involves a change in the culture and structure of the school. The principal, therefore, is crucial as the leader of the school to lead the change. He is convinced that "if a principal does not lead changes in the culture of the school, or if he or she leaves it to others, it normally will not get done. Improvement will not happen" (p. 169).
Resistance to Change

Resistance to change is natural. Beckhard and Harris (1987) have proposed a mathematical equation to explain the resistance process; \( C = (A + B + D) > X \). \( C = \) change; \( A = \) level of dissatisfaction with the status quo; \( B = \) desirability of the proposed change or end state; \( D = \) practicality of the change and \( X = \) "cost" of changing. Factors \( A \), \( B \), and \( D \) must outweigh the costs (\( X \)) in order for change to occur. If any individual or group whose commitment is needed is not sufficiently unhappy with the present state of affairs (\( A \)), anxious to arrive at the proposed end state (\( B \)), and convinced that the change can and should happen (\( D \)), then the cost of changing (\( X \)) is too high, and that individual or group will resent and resist the change.

Fullan (1991) identifies eight specific sources from change literature which could affect initiation by causing resistance to change. These sources are (1) the existence and quality of the innovation, (2) access to innovations, (3) advocacy from the central administration, (4) teacher advocacy, (5) external change agents, (6) community pressure, support, or apathy, (7) new policy or funds, and (8) problem solving abilities and bureaucratic orientation.

Fullan (1991) is convinced that principals and teachers are either the main blockers or agents for change. There must be a good quality of working relationships in a school. "Collegiality, open communication, trust, support and help, learning on the job,
getting results, and job satisfaction and morale are closely interrelated" and strongly related to implementation (p. 77).

Louis and Miles (1990) found that unsuccessful schools did not use effective coping strategies during change. Avoidance, denial, procrastination, and relocation of people are examples of such unsuccessful strategies. Successful schools were found to use problem solving strategies such as redesign, creation of new roles, and providing plenty of support, assistance, and time.

During initiation a decision may be made not to implement the change. Fullan (1991) suggests that sometimes "resisting certain changes may be more progressive than adopting them" (p. 4). It may be that after considering and evaluating the change and the school, it is decided that the change would not produce the desired outcome or bring about improvement. At that time, the change may be delayed for possible reconsideration if a need for it becomes evident.

The more factors that support the implementation of a change, the better chance there is that the change in practice will be accomplished. These factors become "a system of variables that interact and determine success or failure" (Fullan, 1991, p. 67).

Those changes that require a new structure can be met with great resistance during implementation. This is especially true when individuals and groups have benefited from the structure in practice before the change. Teachers should use the extent to which the quality of instruction is improved as the most important criteria in school improvement programs. Many teachers feel that quality is reduced as change is
implemented. This is known as the concept of "the implementation dip" (Dalin, 1993, p. 145; Fullan, 1982).

Dalziel and Schoonover (1988) point out that a major hurdle involved in making a change is that one must enter into new territory. There is no proven road map. Those involved in the change must be "very organized, very specific, and very persistent. You succeed by slogging through the details and overcoming misjudgments and mistakes. You've got to handle the change in small steps so that you don't get lost" (p. 134).

Change and the Individual

A major stumbling block that often inhibits successful implementation of a change is a lack of consideration for the personal upheaval change brings to the individuals involved. Seldom do those leading the effort consider what change means to individuals who are involved in the change process and the way it affects them on a personal level. Fullan (1991) states that, "The crux of change is how individuals come to grips with this reality" (p. 30). Change involves a "serious personal and collective experience characterized by ambivalence and uncertainty; and if the change works out it can result in a sense of mastery, accomplishment, and professional growth" (p. 32). Marris (1975) adds that through the process feelings of loss, anxiety, and struggle will be experienced. Lippit et al. (1985) see change involving "an element of experimentation, risk, insecurity, challenge, and fear" (p. 35). Courage and confrontation are needed. Individuals in the change process must face "the tangled web of relationships, issues, problems, challenges, values, and potentialities that invariably hang like a curtain..."
between the entities into which people are divided and which they divide themselves" (p. 35).

Change is a continuous process with innovation and implementation as two sides of the change process coin. Thus everyone involved in the change process can function as a change facilitator provided their perceptions are recognized and supported (Hall & Hord, 1987).

Sarason (1971) is convinced that educational change depends "on what teachers do and think. It's as simple and as complex as that. It would be so easy if we could legislate changes in thinking" (p. 193). Fullan (1991) adds that, "For both stability and change, the mental health and attitudes of teachers are absolutely crucial for success" (p. 117). Change is seen as being "highly personal" and those involved must have a chance to work through the experience so that "the rewards at least equal the cost" (p. 127). Teachers often get little credit for a successful change, but they get most of the blame for unsuccessful change.

Herman and Herman (1994) have identified eight stages that an individual travels through in the change process: denial, defensiveness, interest, involvement, acceptance, internalization, adaptation, and ownership. Individuals will experience these steps at different times in the change process.

Fullan (1991), however, adds that, "At the initial stages, teachers are often most concerned about how the change will affect them personally, in terms of their classroom and extra classroom work, than about a description of the goals and supposed benefits of
the program" (p. 35). At other stages, teachers are concerned about the impact on benefits to students and about managing the change. Later in the process the focus shifts to refining the change.

Beckhard and Pritchard (1992) state that the most important process involved in change is the one that individuals go through in learning by doing. Learning by doing involves fundamental changes in attitudes and values. Learning is essential for reaching a positive outcome to the change process. After all, "Change is a learning process, and learning is a change process" (p. 14).

Climate and Change

Brandt (1995) found that successfully restructured schools possess a climate that is concerned about the "intellectual quality of student learning" and a "professional community" that is able to transform student commitment and talent into high student achievement in the learning process (p. 73). Gottfredson and Gottfredson (1985) reported that clarity and fairness of school rules and a good working relationship between teachers and principals in planning school improvement efforts were found to be very important in producing an orderly school environment. MacKenzie (1985) held that before any change or reform could take place, a climate of caring needed to be present. A well-designed and managed organization will have members who hold a commonly shared value: "We can and will create our own destiny" (Beckhard & Pritchard, 1992, p. 94). This type of organization will value data and use it for planning and evaluating change. It will have an
open culture with open communication and have a commitment to becoming a learning organization.

Attempts at reform of an organization must be consistent with the organization's climate. If consistency is not present, reform will not last. A healthy school climate allows the development of innovations that work and good working relations (Clark, 1977). The building of community links all members in the organization. There can be no effective change or commitment to change if a shared set of ideals and goals are not present (NASSP, 1994).

O'Neil (1995a) claimed that after change is initiated and implemented, collective learning must follow which allows time for reflection and "working simultaneously to create a totally different environment" resulting in created and implemented solutions (p. 21). Change is a natural process in life. It is the "lifeblood of successful schools," and schools that are successful "adapt to society's existing needs and ever-changing student demographics" ("NASSP, 1994, p. 1).

For reform or change to occur in an organization, perceptions of members must change (NASSP, 1989). How time is spent in an educational setting and the activities and experiences which occur in this setting are often determined and directed by the school's schedule. Many high school schedules are in the process of dramatic changes which could affect and alter perceptions of the school climate.
Block Scheduling

Time is a resource that concerns all facets of a school experience. The school schedule requires a certain number of days and blocks of time within those days to be used for various classes and activities. The length of the school year has increased from an average of 132.2 days in 1869-70, 157.5 days in 1909-1910, 172.7 days in 1929-1930, to the present average length of 180 days (Knezevich, 1975). A Nation at Risk indicated that many industrialized countries have much longer school days, eight hours instead of six, and 220 days instead of 180 per year (Passow, 1984).

Three kinds of time spent in a school day have been identified by Herman and Stephens (1989): allocated time, instructional time, and academic learning time. Allocated time is the length of time in each school day from the first bell until dismissal. Instructional time is time for learning after lunch, breaks, announcements, and all interruptions are subtracted. Academic learning time occurs when students are actively involved “as individuals in the learning process at an 80% or higher level of mastery” (p.57). Carroll (1963) identified time-on-task as the amount of time that the learner is actually paying attention and attempting to learn.

The amount of time in a school day allocated for instruction varies from school to school. Rutter et al. (1979) reported that 65 to 85% of class time is actually spent on the topic of instruction. Student behavior was found to be better when more time was spent covering a topic. Teachers in more successful schools were found to spend more time
interacting with the entire class, rather than with individual students. Lessons included time for students to work individually in silence.

The amount of time allowed for each class is determined through a school's master schedule and scheduling process. In many schools a computer program determines what classes are offered at certain times of the day and how many students are scheduled to be present in each class (Jones, 1995). The schedule also controls the use of space in the building (Kruse & Kruse, 1995).

Traditionally, each subject in a high school is allotted an equal amount of time. Knezevich (1975) called scheduling “instructional programming” and defined it as the “process of relating the learning opportunities available to the pupil needs and the instructional resources such as time, space, and personnel” (p. 516).

The structure of the school day has been questioned and has become an important focus of reform efforts. W. Edwards Deming said that the structure of an organization is more often the source of problems rather than the inadequacies of the workers (Walton, 1986). The basic structure of a high school schedule is six or seven periods per day averaging 50 minutes per period. A six period day is most common, although some schools have an activity period as the seventh period (Knezevich, 1975).

Because form follows function, and the schedule should follow the needs of students, Sizer (1992) proposed “breaking the house down into a few major blocks of time” (p. 164). Goals of the school should be accomplished through the structure and the schedule, and if they are not, changes need to be made (Houston, 1983).
Many problems have been cited when a six or seven period day is the schedule of choice. Frequent class changes account for 25 to 60 minutes lost each day. Teachers have up to six preparations and many students to teach each day. As a result, teachers spend an average of 200 minutes daily in activities other than teaching, such as calling roll, making announcements, and other maintenance activities (Cusick, 1973).

When scheduling practices were questioned in an Oregon high school, a shadowing project was conducted. Eight teachers followed eight students around for a day to experience the school and the schedule as their students did. The schedule was found to be inadequate for meeting students' needs and the goals of the school. A new schedule that allowed longer blocks of time for instruction more conducive to learning was implemented (Sagor, 1981).

Large blocks of time consisting of 60 minutes or more have been suggested for a more workable school schedule. This extra time could allow time for varied activities and encourage classes to experience a greater sense of community (Cawelti, 1995). Time lost in passing from one class to another would be significantly reduced (Boarman & Kirkpatrick, 1995).

When a new structure known as block scheduling was put into practice in the 1993-94 school year at Huntington Beach High School in California, test scores rose, the climate became more personalized and greatly improved. Ted Sizer's theory that "personalization is the single most important factor that keeps kids in school" was tested and favorable results were achieved (Shore, 1995, p. 76). Block scheduling does provide
an opportunity for teachers to have more time to get to know their students better and to plan more accurately to meet their needs (Reid, 1995).

Block scheduling gives students the opportunity to earn 32 credits in a four-year program. The State of Tennessee currently requires 20 credits for graduation and 133 contact hours to earn a unit of academic credit. The traditional schedule allows only 24 possible credits, 20 of which represent required courses. To allow students' exploration of other courses and participation in desired courses such as band and chorus, a change in structure was needed. Block scheduling seems to address these problems. ("Block Scheduling," 1995).

The number of credits needed for graduation has been adjusted in each high school that has implemented block scheduling to allow for students who had already received credits under a traditional system. Schoenstein (1995) reported that in the beginning, of course, there were no experts on block scheduling. There were inevitable problems that developed and had to be solved whenever change was introduced. Interscholastic athletic eligibility was one such problem that had to be resolved. An athlete, it was decided, had to pass three out of four block classes. Teachers had to become their own experts in determining problems and solutions to the problems. Increasing the number of credits for graduation was determined to be the best way to assure that students used the additional credits appropriately, instead of using the model as a way to graduate early.
History of Block Scheduling

Block scheduling is not be an entirely new concept. A military academy in Fort Union, Virginia, has reportedly been using a form of block scheduling for the past 30 years. The teachers and students are very happy with the structure and report it as the best method for learning (Jones, 1995).

Van Mondtrans, Schott, and French (1972) presented a paper, “Comparing Block Scheduling and Traditional Scheduling in Student Achievement and Attitudes,” at the annual convention of the American Educational Research Association in Chicago, Illinois, in April 1972. This study described interdisciplinary teams of teachers teaching three block scheduled courses to 90-110 students in grades 9-12 and three traditionally scheduled courses with 30-35 students for 40 minutes.

The block scheduled teams had 140 minutes daily to use according to the team’s purposes, needs, and desires. Twelve teachers who had a block scheduled team for one-half of the day and a traditional schedule for the other half were selected to participate in a comparison of the two methods. Test scores in freshmen and sophomore English had higher means under the traditional schedule. The mean test scores for juniors were similar under both schedules, while the senior test scores were higher under the block schedule. When all scores for all subjects were combined, the means for the freshmen and sophomores were similar under both schedules; the mean for the juniors was higher under the traditional schedule; and the mean for the seniors was higher under the block schedule. The attitudes and interests scores did not differ under either schedule.
Joseph Carroll’s “The Copernican Plan,” a concept paper presented in 1983 is credited with introducing block scheduling to American high schools. This plan proposed reform involving the schedule of the school in order to reduce class size and extend class time (Carroll, 1990, 1994a, 1994b).

Carroll first began exploring the possibility for reform in the mid 1960s as assistant superintendent for research, budget, and legislation for the District of Columbia Public Schools. He noticed that in a remedial summer school math and English students were able to achieve in four hours a day, five days a week for six weeks what was equal to two years of regularly scheduled classes. In addition, teachers reported good class attendance and a positive climate in the summer session.

In the early 1970s Carroll, as superintendent of the Los Alamos Public Schools in New Mexico, found similar results. A summer school class meeting four hours a day, five days a week for six weeks with regular students produced excellent results in achievement.

In 1983, as Superintendent of the Masconomet Regional School District in Massachusetts, Carroll presented “The Copernican Plan; A Concept Paper Concerning the Restructuring of Secondary Education at the Masconomet Regional School District.” Like its namesake, Nicolous Copernicus from the 16th century, Carroll's Copernican Plan also proposed a revolutionary idea. Copernicus had proposed that the sun, instead of the earth, was the center of the universe. His theory brought strong resistance because it challenged Biblical beliefs about creation and “man’s role on earth” (Carroll, 1994b, p.
106). Carroll’s Copernican Plan, likewise, challenged existing beliefs in the Carnegie unit and the class structure that had characterized high schools for years.

In 1989 the first Copernican pilot program at the Masconomet Regional High School took place. A volunteer “Renpro” group was found to be more successful than the traditional “Tradpo” group of students. The “Renpro” group was also found to be more satisfied with relationships with teachers and found their smaller classes allowed for better group discussions and more in-depth mastery of course material. Their parents indicated increased motivation, better student-teacher relations and academic achievement. What was mentioned consistently in this research was improved relationships and interactions between teachers and students (Carroll 1994a; Fallon, 1995). Publications appeared, and the restructuring reform effort gathered momentum.

The original Copernican Plan called for one class a day for four hours for 30 days. Six of these would occur in an academic year (macro-block classes with trimesters). Lunch, non-academic classes such as art, music and physical education, and seminars dealing with complex topics requiring application of material learned in academic classes took place in the afternoon. A teacher’s daily student load decreased from 150-200 students to 20-30 (Fallon 1995). Students had only one class to prepare for daily. Carroll claimed that “the success of the plan depends upon the change of the classroom environment” (Carroll, 1994b, p. 106).

Carroll (1994a & 1990) claimed that a Copernican Plan could allow every high school in the United States to reduce its average class size by 20%; reduce a teacher’s
daily student load by 60 to 80%; provide a productive instructional climate that allowed mastery learning; and do all of this with no additional funding (Carroll 1994a).

Over 40% of the nation’s high schools are currently using some form of block scheduling or were preparing to do so by September 1996. It is estimated that by the year 2000 more than 50% of all high schools in the United States will experience schedule changes. Some experts predict that as many as 75% will have a structure other than the traditional schedule by 2010 (Lammel, 1996). Block scheduling has been identified as one of seven kinds of restructuring efforts “affording the highest probability of increasing productivity” (Caswelti, 1995, p. 5).

Although there has been no legislative mandate, the Tennessee Department of Education estimated in August 1995 that approximately 25 of its public high schools operated on some form of block scheduling during the 1994-95 school year. It was predicted that 100 of the 350 high schools, 28.6%, would be using a block scheduling structure for the 1995-96 academic year ("Block Scheduling," 1995).

The Knox County school system piloted a block schedule in two high schools during the 1994-95 school year. All 12 of the system’s high schools were using that schedule for the 1995-96 school year. Knox County, which has 14,500 students and 800 teachers, was the first large urban school system in the State of Tennessee to change their secondary school structure system-wide. Bruce Opie, Executive Director of Curriculum and Instruction for the Tennessee Department of Education sees block scheduling “as a
significant trend in this state. It is a grass roots effort that has not been mandated or required from the state” ("Block Scheduling," 1995, p. 2).

The implementation of block scheduling is not exclusive to Tennessee. O’Neil reported that 133 (46%) of Virginia’s 290 high schools use some form of block scheduling. He reported that comparable data do not exist for all states, but schools in states such as North Carolina, Colorado, Florida, and Texas are also experimenting with block scheduling. Within the past four years, 192 of North Carolina’s 300 high schools adopted a form of block scheduling. Because of this, Edwards (1995b) claimed that “the movement is spreading rapidly” (p. 16).

Kinds of Block Schedules

Many types of block schedules as alternatives to the traditional six or seven period day have emerged. Although there are many variations, the key element in all alternatives is the use of longer class periods (O’Neil, 1995b).

High school classes which meet three hours or more with one teacher are using macro-block or intensive block scheduling. Classes which meet for four hours for 30 days meet with a teacher for 120 hours, the equivalence of a Carnegie unit. Field trips are ideal in a class following this schedule since no other classes do not need to be interrupted (Fallon, 1995).

In a two two hour class schedule, each student enrolls in three of the two-course trimesters each year. Each trimester is 60 days (Jones, 1995). One variation allows two
classes to meet for two hours in the morning, and after lunch each class meets again for 45 minutes of extended learning time (Canady & Rettig, 1995).

A/B Schedule, Alternating Day Schedule, Block 8 or Rotating Block are all names for another type of block scheduling. Students attend eight blocks of classes over a two-day period for an entire school year. Each class is approximately 90 minutes long, and four classes meet every other day. The days continually rotate. A variation allows students to take only seven credit classes and one period for individual advisement (Reid, 1995; Huff, 1995).

A horizontal timetable schedule is a variation in which students take two classes for a 10-week period. This is repeated for four quarters, allowing eight subjects per school year. A 30 minute tutorial session is available every day before a 60 minute lunch (Reid, 1995).

Another modification allows students to take six classes in three periods a day for two days. Each class is 105 minutes in length. Teachers have one 105 minute planning period every other day. A common 55 minute planning period is held every day after school for meetings with the entire faculty or specific teachers (Jones, 1995).

Boarman and Kirkpatrick (1995) reported that one school in the nation had a hybrid schedule. There is no typical schedule in place at this school. Classes are offered in different formats to best suit students’ needs. The first part of the restructuring combined two periods into one. Teachers had fewer students; better teacher-student relationships were created; cooperative learning teams were able to work more
efficiently; and students' grades improved. Surveys showed that teachers were most happy with the change, followed by students. Parents expressed the most concern with the schedule.

Jones (1995) and Shortt and Thayer (1995) reported another variation of this hybrid block format. It involves meeting four classes a day for four days a week, and then offering a traditional seven or eight period day of electives on Friday, or it involves enrollment in two block courses and three single class periods each day. Block classes end after a semester, but single classes continue for an entire school year. The single classes could be courses such as music and foreign language that might require daily sessions. The form is sometimes referred to as 75-75-39 or 75-30-75. Two 75-day block scheduled classes are taken for a semester, then the ones at the end or in the middle create a short semester of electives or special classes.

The most commonly used block scheduling structure is the 4 X 4, also called the 2 X 4 semester, semester block, or accelerated block (Edwards 1995a; Lammel, 1996; Jones, 1995). The A-B alternating day block schedule structure is the next most widely used block schedule, followed by trimester schedules, quarterly schedules and hybrid combinations of block and traditional schedules (Lammel, 1996).

The 4 X 4 block schedule allows students to take four 90 minute classes in each semester, although the time length for each class can vary from 85 to 100 minutes (Jones, 1996). Using this schedule, a full year of course content is taught in one semester or 18 weeks. Teachers teach three classes and have one 90 minute planning period each day.
Modifications in the schedule can be made for classes to meet daily for an entire year, but the modifications must occur within the 90 minute time structure (Reid, 1995).

Research on Block Scheduling

Many see this restructuring effort as a way of organizing the allotted time in a day to maximize instructional and mastery learning time. The school day is considered to be more efficient and effective. Students receive two more credits and teachers teach one more class each year than the traditional schedule allowed (Fallon 1995; Schoenstein 1995). It is believed that the 4 X 4 block gives students better preparation for post secondary education or training ("Block Scheduling", 1996).

Some schools using the 4 X 4 block schedule in their school report smaller class size. This has been found to be untrue in other schools because one-fourth of the faculty is having a planning period during each of the four daily class periods. The creation of in-school suspension programs or any other programs that require teachers' presence can also effect class size in the building. However, even if an individual class load is larger, teachers experience a lower daily student load due to teaching fewer classes than with a traditional schedule (Fallon, 1995).

For school systems considering block scheduling as an option, improving the environment is usually pointed out as an advantage. Block scheduling is said to “improve the learning environment of the school” by providing longer, more intensified classes which use a variety of teaching methods, provide more opportunities for active learning and greater personalization. In addition the block schedule offers “a more humane
structure through which students learn" by allowing time for socialization, fewer classes each day, improved teacher and student morale, better attendance, a less hurried routine, and fewer failures and drop-outs (Knox County Secondary Schools, 1994-95).

Because block scheduling is regarded as a new reform attempt, its long-term success has yet to be determined (Jones, 1995). Even though there is not much data available on these restructuring attempts, it generally appears "that teachers and students like longer classes, and that students perform at least as well on measures of academic achievement" (O'Neil, 1995b, p. 15).

Restructuring the school schedule to benefit teachers and students to create a better climate will eventually affect academic achievement (Lammel, 1996). To determine its successes or failures, it has been recommended that innovators should allow "a three or four year commitment to try it out" (Schoenstein, 1995, p. 21). Many problems are not discovered and effects realized until after several years of use in areas such as athletic eligibility, basic understanding of the schedule by all participants, district and state policies, state mandated requirements for length of instructional time in a course, the maximum and minimum number of students a teacher may teach without a waiver, and the effects of accreditation. Areas such as these must be considered and evaluated in the change process.

Changing the structure of a school requires changes in methodology. "Methodology drives structure, and the structure in turn sets the frame for the methodology" (Cardellichio, 1995, p. 632). With block scheduling teachers are free to
stress procedural knowledge over factual knowledge. This allows more development and application of useful skills which can lead to more interesting classes and active student participation.

What is to be evaluated in the change process needs to be determined before the new schedule is implemented. This will help in data collection and in making adjustments in the process to allow success for all involved (Shortt & Thayer, 1995). Data on student discipline referrals, attendance rates, dropout rates, graduation rates, enrollment in advanced classes, grade point averages, standardized test scores, number of students on the honor rolls, and survey information provided by teachers, students, and parents should be collected before implementation in order to obtain baseline information (Hackman, 1995). In the literature available, the importance of evaluating the climate in schools using the new scheduling structure is not often stressed.

Two high schools in the Orange County Public School District in Orlando, Florida, undergoing implementation of block scheduling were studied by Buckman, King, and Ryan (1995). At Evans High, block scheduling began in the fall of 1992. The results revealed "a school environment more conducive to learning" after the first semester (p. 12). After the first year, attendance rates were up, and 54% of the students had increased their grade-point averages. Colonial High School, in the same district reported fewer suspensions and disciplinary problems, higher grades and a better average-daily-attendance rate. Fifty-four percent of the students had increased their grade point averages (Buckman et al., 1995).  

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
Advantages listed by teachers in the two schools included having more time for individualization of lessons, time for creative and meaningful work, time for discussions and complete coverage of a given topic, and an opportunity to get to know the students better. Both schools had a common goal: “to provide a healthy learning environment and success for all students” (Buckma, et al., 1995, p.18).

A year end evaluation of block scheduling at a high school in Austin, Texas, was not as positive. An increase in failure rates, especially among freshmen, occurred. The District Technology Coordinator commented that “To be honest, we do not know whether it’s a case of just having a weak freshman class coming in. That would be something we would have to track over a year or two or three before we can tell for sure” (Jones, 1995, p.16).

Salvaterra and Adams (1995) reported on School A and School B undergoing block schedules. They found that “innovative scheduling may indeed increase student achievement, foster critical thinking, and encourage collaborative learning” and stressed that “any major change may hinge more on teachers’ perceptions of the change than on its actual merits” (p. 25).

In research by Reid (1995), it was determined that the majority of teachers liked block schedules and that the majority of the students believed they had improved in their writing ability. This had been a concern expressed by the National Teachers of English Commission on Composition. Teachers also reported that they had more time to get to
know their students and work with those who needed their help. More cooperative learning and group activities took place than under a traditional schedule.

Mayshark (1996) reported that attendance rates improved and discipline problems decreased after one semester of the 4X4 block schedule in the Knox County school system. Teachers worked more with other teachers and were able to personalize work with students. Algebra I teachers had problems covering the course content in 90 days. However, teachers were said to prefer the new schedule over the traditional one. West High School Principal Donna Wright said, “For the school, it was probably the best thing that ever happened” (Mayshark, 1996, p. A1)

In the five years that Roy J. Wasson High School in Colorado Springs, Colorado, has used a block schedule, the average daily attendance, the number of students on the honor roll, the number of credits earned by students, college enrollment rates, and the number of students taking the ACT have increased. The average class size and student daily load have dropped. However, the average SAT verbal and math scores have dropped from 455 to 428 and 493 to 482 (Schoenstein, 1995).

The school climate is reported to be “calmer and quieter.” The “hectic pace has slowed down. Stress has been reduced. Block scheduling has changed the entire culture of our school We’ve never been able to graph the change in ‘smiles per hundred students’ but if we could, I know we’d see a sizable increase” (Schoenstein, 1995, p. 20). The school “is a better school now than it was five years ago” (p. 18).
After two semesters with the 4 X 4 schedule at Orange County High School in Virginia, 94% of the teachers and 93% of the students favored the new schedule. The number of A’s rose from 21 to 28%, but the number of F’s also rose from 9 to 12%. Students reported that absences made it difficult to keep up with material and increased the chances of failure. Teachers reported experimenting with new methods of instruction at the end of the first semester and at the end of the first full year of implementation. Evaluations pointed out that there can be a difference in perceptions depending upon what time of year the perceptions are measured (Edwards, 1995a).

A change in the scheduling structure at Howard Middle School in Ocala, Florida, was credited with causing a change in the school’s climate. Block scheduling was said to have brought “a sense of calm on the campus and a decrease in disciplinary infractions” (Koepke, 1990, p. 11).

The Avery County High School (1995) in Newland, North Carolina, conducted an unpublished survey of teachers, students, and parents during the second semester of a 4 X 4 block schedule. The results from the spring semester of 1995 indicated that of the 563 students responding, 67% wanted to keep the new schedule. The majority of the parents strongly agreed that their children like the four-period day better than the seven period day, that block scheduling has helped their children retain more in their classes, that they believed that block scheduling is a better way to organize a school, and that the high school should continue block scheduling. Teachers reported a drop from 103 to 59 in daily student load and from 6 to 2 different preparations each day.
After one school year, 1994-95, on a 4 x 4 block schedule, teachers at Hope High School in southwest Arkansas realized a decrease in their average daily student load from 135 to 90. Students reported more homework but less stress because of fewer class preparations. Transfer students, taking classes in succession, and absenteeism were problems identified that needed evaluation and refinement. Students were found to “learn more in a personalized classroom environment because teachers know their strengths and needs better (Wilson, 1995, p. 64).

An evaluation of the block schedule after three semesters at Governor Thomas Johnson High School in Frederick, Maryland, was done by Guskey and Kifer (1995). Achievement levels have remained stable or improved. Discipline referrals decreased, and “Nearly all teachers and the vast majority of students “ have expressed preference of the new block schedule over a traditional schedule (p. 19).

Teachers indicated that curriculum guides and textbooks often were not designed for 90 minute classes, and longer classes required more resources in the form of supplies and equipment. The short time between semesters caused a difficult transition from one semester to the next, and scheduling Advanced Placement classes caused a problem because of testing schedules. Transfer students were often difficult to schedule and to be helped in the adjustment to the new schedule. In addition, teachers have to teach differently than when teaching shorter classes. A problem identified by students concerned substitutes who were not prepared to “handle” a class for 90 minutes (p. 15).
Advantages of the schedule included the need for fewer textbooks, a shorter loss of time caused by changing classes only three times each day, and having a new group of students and classes for the second semester. Dropouts found it easier to re-enter school. Other positive features reported included more time for planning and meeting with other teachers, and students receiving more individual help and increased personal interaction with their teachers. Students have more time to work on group projects and often turn in better quality work. Teachers reported that block scheduling resulted in an improved climate in the school. Having fewer class changes resulted in fewer disruptions in the school day, and "Overall, the four period format seems to provide an environment more conducive to learning." (Guskey & Kifer, 1995, p. 17).

Results of studies of block scheduling seem to indicate that it brings about "impressive" improvements in the high schools. It must be remembered that block scheduling will not cure all the problems of a school that were present before the new schedule was put into place. "Those schools struggling with the initiative were often in disarray to begin with, or implemented the reform poorly" (Lammel, 1996, p. 5).

What is clear in studies on block scheduling is that "Overall school climate improves as students and teachers spend more concentrated time with one another" (O'Neil, 1995b, p. 14). Of course, a key issue in block scheduling is how the time in longer classes is organized and managed to allow learning and achievement to take place.
Summary

Demands placed upon the nation's public high schools continue to increase. Public high school students spend over 4,680 hours of their life attempting to earn a high school diploma and experiencing the climate of their school. Despite criticisms and calls for reform, few restructuring efforts have taken place in the high schools since their 1890 beginning. What has changed are the goals and the need for education in our society.

Schools are expected to be effective. While there are no precise formulas for an effective school, effective schools have been found to share common characteristics: strong school leadership, good teachers, an emphasis on academics, high expectations and morale, and an orderly environment or climate.

A good school climate will allow the needs of students to be met. Each school will have its own "personality" or climate that affects not only how people feel and act, but every aspect of the school. A good school climate reflects common goals and missions, and values and norms. The climate of an organization can be measured by instruments which have been developed to determine the perceptions of the members of the organization. Many climate instruments exist; the Organizational Health Index (OHI) is a particularly good instrument to measure perceptions involving innovation. Many variables are also explored with climate instruments.

Change may take place as needs are identified. The change process can affect perceptions of the culture of a school. The change process requires individuals to go
through stages that are often experienced at different times in the process. In the beginning, teachers are often more concerned with how the change will affect them personally. As the change continues, more focus is put on benefits to students and to refining and improving the change.

One change effort which has been implemented in 40% of the nation's schools involves restructuring or reorganizing the traditional schedule of the high school to a block schedule format. The effort addresses the problem of inefficient and unproductive use of time in educational settings and meets the demands of increased requirements necessary for the nation's work force and college and university entrance requirements. All involved in the school are affected by the master schedule which dictates how much time will be spent teaching and learning and the school's climate. Research demonstrates that students learn more in schools and classrooms that have positive climates. The success or failure of block scheduling may depend upon the perceptions teachers and administrators have of the reform and its effect on their schools' and their classrooms' climate.

Change is a continuing process. Block scheduling presents one current change effort. Perceptions of school climate may differ in the stages of the block scheduling change process. If perceptions of school climate are not negative or improve as block scheduling is implemented, the improved school climate may allow students to achieve higher academic levels. This could restore the nation's confidence in public education during the transition into the twenty-first century.
CHAPTER 3

METHODS AND PROCEDURES

This chapter describes methods and procedures used to conduct this study. The research design, identification of the population, a description of the instrument used to collect the data, the procedures used in data collection, an explanation of the data analysis, and research questions are explained in this chapter.

Research Design

The techniques of descriptive research were used in determining the expressed perceptions of administrators and teachers of the climate influenced by block scheduling in their high schools. A survey was conducted to collect the data.

Population

The population in this study included the high schools in the First Tennessee Regional District. The First District consists of 17 school systems, 10 county systems and seven city systems. Two school systems do not have high schools. Within the 15 school systems, there are 27 high schools. Five are city schools and 22 are county schools. Student enrollment in these schools ranges from 342 to 1581. A total population of 1,482 teachers and administrators are employed.

A list of high schools using block scheduling in the State of Tennessee during the 1995-96 school year was obtained in the fall of 1995. The Tennessee Directory of Public Schools, 1992-93 and a September 3, 1996 Update were used to obtain telephone
numbers for these schools and the other schools in The First Tennessee Regional District.

Telephone calls were made to each school to determine if block scheduling was being used and, if so, how long it had been in place. Twenty-three of the high schools were found to be using block scheduling, and four were not (Table 1)

<table>
<thead>
<tr>
<th>TABLE 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>NUMBER OF HIGH SCHOOLS IN THE FIRST DISTRICT AND USAGE OF BLOCK SCHEDULING</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>City</th>
<th>County</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Using Block scheduling</td>
<td>4 (15%)</td>
<td>19 (70%)</td>
</tr>
<tr>
<td>Not Using Block Scheduling</td>
<td>1 (4%)</td>
<td>3 (11%)</td>
</tr>
<tr>
<td>Total</td>
<td>5 (19%)</td>
<td>22 (81%)</td>
</tr>
</tbody>
</table>

Schools were placed into categories according to their use of block scheduling. The categories were Initiation, First year of Implementation, Second year of Implementation, and Third Year of Implementation or Institutionalization. A stratified purposeful random sampling method was used to select two or three high schools from each category. Three of the four categories had three high schools selected for the sample. One category had two high schools selected for the sample because it had only
three high schools in the category. This sampling method was chosen because "By including several cases of each type" it is possible to "develop insights into the characteristics of each type, as well as insights into the variations that exist across types." (Gall, Borg, & Gall, 1996, p. 233).

Four schools were not using block scheduling but were researching and observing its use in other schools, the Initiation stage. Three schools were in the first year of Implementation of block scheduling. Eighteen schools were in the second year of Implementation, but one school was eliminated from the study due to the researcher's employment at that school. Two schools were in the third year of Implementation (Table 2).

The sampling method included three of four schools in the Initiation stage: a small county school, a large county school, and a large city school. Two of three schools were randomly selected cases for schools in their first year of Implementation: a large city school and a large county school. This was changed to the two county schools when the city school superintendent declined to allow his school to participate in the study. Three of 17 schools were randomly selected from those in the second year of implementation: a small county school, a large city school, and a large county school. One of two schools using block scheduling for the third year was randomly selected. Both of these schools in this category were large city schools.

A sample of 586 teachers and administrators was involved in the study from the sample schools (Table 3). This represents 39.54% of the total population. Sixty percent
### TABLE 2

SCHOOLS, STAGES OF IMPLEMENTATION OF BLOCK SCHEDULING, STUDENT ENROLLMENT, AND TEACHERS AND ADMINISTRATORS IN THE POPULATION

<table>
<thead>
<tr>
<th>Schools</th>
<th>Student Enrollment</th>
<th>Teachers/Administrators</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>482</td>
<td>36</td>
</tr>
<tr>
<td>INITIATION ♦2</td>
<td>883</td>
<td>57</td>
</tr>
<tr>
<td>3</td>
<td>1,016</td>
<td>61</td>
</tr>
<tr>
<td>4</td>
<td>1,467</td>
<td>72</td>
</tr>
<tr>
<td>FIRST YEAR ♦5</td>
<td>848</td>
<td>56</td>
</tr>
<tr>
<td>6</td>
<td>1,097</td>
<td>67</td>
</tr>
<tr>
<td>7</td>
<td>1,168</td>
<td>77</td>
</tr>
<tr>
<td>8</td>
<td>342</td>
<td>22</td>
</tr>
<tr>
<td>9</td>
<td>381</td>
<td>23</td>
</tr>
<tr>
<td>SECOND YEAR 10</td>
<td>438</td>
<td>29</td>
</tr>
<tr>
<td>11</td>
<td>503</td>
<td>26</td>
</tr>
<tr>
<td>12</td>
<td>548</td>
<td>25</td>
</tr>
<tr>
<td>13</td>
<td>570</td>
<td>25</td>
</tr>
<tr>
<td>14</td>
<td>607</td>
<td>37</td>
</tr>
<tr>
<td>15</td>
<td>748</td>
<td>42</td>
</tr>
<tr>
<td>16</td>
<td>837</td>
<td>58</td>
</tr>
<tr>
<td>17</td>
<td>864</td>
<td>62</td>
</tr>
<tr>
<td>18</td>
<td>960</td>
<td>62</td>
</tr>
<tr>
<td>19</td>
<td>1,064</td>
<td>70</td>
</tr>
<tr>
<td>20</td>
<td>1,102</td>
<td>65</td>
</tr>
<tr>
<td>♦21</td>
<td>1,128</td>
<td>79</td>
</tr>
<tr>
<td>22</td>
<td>1,154</td>
<td>71</td>
</tr>
<tr>
<td>23</td>
<td>1,183</td>
<td>73</td>
</tr>
<tr>
<td>24</td>
<td>1,397</td>
<td>80</td>
</tr>
<tr>
<td>THIRD YEAR ♦25</td>
<td>1,285</td>
<td>107</td>
</tr>
<tr>
<td>♦26</td>
<td>1,581</td>
<td>102</td>
</tr>
<tr>
<td>TOTAL</td>
<td>26</td>
<td>17,643</td>
</tr>
</tbody>
</table>

NOTE: ♦ = city school

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
<table>
<thead>
<tr>
<th>Initiation Phase</th>
<th>Schools</th>
<th>Student Enrollment</th>
<th>Teachers/Administrators</th>
</tr>
</thead>
<tbody>
<tr>
<td>INITIATION</td>
<td>1</td>
<td>482</td>
<td>36</td>
</tr>
<tr>
<td>*2</td>
<td></td>
<td>883</td>
<td>60</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>1,016</td>
<td>72</td>
</tr>
<tr>
<td>FIRST YEAR</td>
<td>6</td>
<td>1,097</td>
<td>67</td>
</tr>
<tr>
<td>7</td>
<td></td>
<td>1,168</td>
<td>70</td>
</tr>
<tr>
<td>SECOND YEAR</td>
<td>9</td>
<td>381</td>
<td>29</td>
</tr>
<tr>
<td>16</td>
<td></td>
<td>827</td>
<td>56</td>
</tr>
<tr>
<td>*21</td>
<td></td>
<td>1,128</td>
<td>88</td>
</tr>
<tr>
<td>THIRD YEAR</td>
<td>*26</td>
<td>1,581</td>
<td>108</td>
</tr>
<tr>
<td>TOTAL</td>
<td>9</td>
<td>7,715</td>
<td>586</td>
</tr>
</tbody>
</table>

NOTE: * = city school
of the school systems in the First Tennessee Regional District are included in the study. Involving 460 participants allows a 99% confidence level. A confidence level of 97.5% is obtained with 376 participants, and a 95% confidence level is obtained with 305 participants (Hendel, 1977).

The names of the superintendents and principals, the number of teachers, the enrollment, and the addresses for each school system and for each school were also obtained from The Tennessee Directory of Public Schools, 1992-93 and the September 3, 1996 Update.

**Data Collection Instruments**

Data were collected using a demographic information sheet and the Organizational Health Index (OHI) survey. The demographic information collected included the following: current job title, gender, approximate age, highest educational degree completed, years of experience as a certified educator, and dominant subject assignment for the current year. Data were also obtained on perceptions of the effect of block scheduling on student learning and the way teachers teach. Principals identified the number of years they have served as principal at the present school (See Appendix F).

In February, 1996, a letter was written to Dr. Wayne Hoy of Ohio State University to obtain permission to use the OHI instrument. Permission was granted with the recommendation that climate measurement questions might be found in Hoy et al.'s 1991 Open Schools/Healthy Schools. This book contains, describes, and compares the Organization Health Index (OHI) and the Organizational Climate Descriptive
Questionnaire (OCDQ). The authors gave permission for use of the instruments. The instruments are not copyrighted, and there is no charge for their use. It was recommended that the OHI be administered during 10 minutes of a faculty meeting. Anonymity should be guaranteed, and someone other than the principal should collect the data.

**Procedures**

After the sample and the instrument were selected, initial contact was made with the superintendents/directors of the nine school districts in the sample. An explanation of the study and its intent was made along with a request for permission to use the schools in their districts. A return form was enclosed for the superintendent’s/director’s use in granting permission to contact the principals in the selected schools (Appendix A). If the reply was not received within two weeks, a follow-up call or letter was made/sent to the appropriate superintendent/director (Appendix B).

After permission was obtained, a letter was written to each principal explaining the purpose of the study and the procedures for collecting the data. Each principal was asked to enclose with his/her permission to participate, the number of teachers and administrators in the school, the name of the guidance counselor or another staff member who would distribute and collect the completed questionnaires from the staff during the first faculty meeting in November or December, and the approximate date of the faculty meeting scheduled for November or December (Appendix C). A follow-up call or letter was made/sent to principals who did not return the permission and information requested within two weeks (Appendix D).
A letter of instruction for administration of the instrument (Appendix E), demographic data collection sheet, (Appendix F), a copy of the OHI, (Appendix G), and a self-addressed stamped envelope for returning the completed instruments were mailed to the designated person at each school. The return envelope contained information needed to monitor the return of survey instruments. A return rate of 75.43% was obtained for this study.

**Data Analysis Process**

For statistical testing, the research hypotheses were stated in the null form. The alpha level of significance, .05, was established for the study. An explanation of the coding and the scoring of the OHI can be found in Appendix H.

After the OHI was scored, comparisons were made with the prototype profiles prepared by the instrument creators for healthy and unhealthy schools. Normative data from "a large diverse sample of schools from New Jersey" were used for these prototypes (Table 4), (Hoy et al., 1991, p. 188). A score of 500 is the mean for the "average school."

According to the OHI instrument, a healthy school has high institutional integrity. It is protected from unreasonable community and parental pressures. The school board is able to resist all narrow efforts of vested interest groups to influence policy. High consideration and initiating structure are present. The principal is a dynamic leader who integrates both task-oriented and relations-oriented leader behavior. He/She is supportive of teachers and provides high standards of performance. High influence is also present.
TABLE 4

HEALTH CLIMATE SCALES

<table>
<thead>
<tr>
<th>Health Dimensions</th>
<th>Healthy School</th>
<th>Unhealthy School</th>
</tr>
</thead>
<tbody>
<tr>
<td>Institutional Integrity</td>
<td>605 (H)</td>
<td>443 (L)</td>
</tr>
<tr>
<td>Initiating Structure</td>
<td>659 (H)</td>
<td>403 (L)</td>
</tr>
<tr>
<td>Consideration</td>
<td>604 (H)</td>
<td>390 (L)</td>
</tr>
<tr>
<td>Principal Influence</td>
<td>634 (H)</td>
<td>360 (L)</td>
</tr>
<tr>
<td>Resource Support</td>
<td>598 (H)</td>
<td>404 (L)</td>
</tr>
<tr>
<td>Morale</td>
<td>603 (H)</td>
<td>383 (L)</td>
</tr>
<tr>
<td>Academic Emphasis</td>
<td>603 (H)</td>
<td>383 (L)</td>
</tr>
<tr>
<td>Overall Health</td>
<td>615 (H)</td>
<td>398 (L)</td>
</tr>
</tbody>
</table>

The principal is able to get what is needed for effective operation of the school from his/her superiors. Further, academic emphasis is present. Teachers are committed to teaching and learning. High, but achievable, goals are set. A serious, orderly learning environment is found in the school and classrooms. Students work hard, are highly motivated, and respect others who are academic achievers. High resource support is evident. Supplies and materials are available for use. High morale is evident because teachers like and respect each other and are enthusiastic and proud of their school. An unhealthy school is found to be at the opposite end of the healthy schools continuum in
all of the seven dimensions. Thus, a school is considered to be healthy if "the technical, managerial, and institutional levels are in harmony and the school is meeting both its instrumental and expressive needs as it successfully copes with disruptive external forces and directs its energies toward its mission" (Hoy et al., 1991, p. 68).

Frequencies and percentages were determined for each demographic and survey item. Analysis of Variance, ANOVA, comparing the amount of between group variance, was conducted to test for significant differences in the seven climate dimension scores and the total climate scores in the four stages of the change process involving block scheduling: Initiation, first year of Implementation, second year of Implementation, and third year of Implementation or Institutionalization. ANOVA was also used to analyze the differences in the stages in various levels of independent variables such as job title, age, education, years of experience, and subject assignment, and perceptions of the effect of block scheduling on student learning and the way teachers teach. A t-test was used to test for significant differences between perceptions of school climate between male and female respondents. When needed, a post-hoc test, Least Significant Differences (LSD), was used to determine where differences were found.

Research Questions

Four research questions serve as the basis of this study that will be tested and evaluated:
1. How do teachers and administrators perceive their school climates in the Initiation, first year of Implementation, second year of Implementation, and third year of Implementation or Institutionalization stages of a change to block scheduling?

2. Will perceptions of school climate differ when the following independent variables are taken into consideration: current job title, gender, age, education, years of experience, and subject assignment?

3. What are the teachers' and administrators' perceptions of the effect that block scheduling has on student learning and will these perceptions differ in the stages of the change process?

4. What are the teachers' and administrators' perceptions of the effect that block scheduling has on the way that teachers teach and will perceptions differ in the stages of the change process?
CHAPTER 4
DATA ANALYSIS

Much effort has been expended by high school teachers and administrators in the East Tennessee District to study and to change from a traditional school schedule to one using a block schedule. The purpose of this study was to determine the perceptions of high school teachers and administrators of their school climate during four stages of a block scheduling change process. These stages include Initiation, first and second years of Implementation, and the third year of Implementation or Institutionalization. The study is based upon four research questions and 16 hypotheses.

The study was limited to a stratified purposeful random sampling of nine high schools in the First Tennessee Regional District comprised of 586 teachers and administrators in November and December of 1996. Measurements involved nine demographic questions and seven dimensions of the 44 question Organizational Health Index (OHI) and the total climate scores.

Data were analyzed by using analysis of variance (ANOVA) to test for significant differences in the seven climate dimension scores and the total climate scores in the four stages of the change process involving block scheduling. ANOVA was also used to analyze the differences in the stages in various levels of independent variables such as job title, age, education, years of experience, and subject assignment, and perceptions of the effect of block scheduling on student learning and the way teachers teach. A t-test was used to test for significant differences of perceptions of school climate between male
and female respondents. When needed, a post-hoc test, Least Significant Differences (LSD) test, was used to determine where differences were found. The level of significance to reject or not to reject the null hypothesis was set at .05.

This chapter contains four sections. A description of the sample is presented in the first two sections, The Sample Size and Response Rates, and Sample Demographics. The third section, Research Questions, contains the research questions, data, and tables. The last section, Summary, concludes the chapter.

Sample Size and Response Rates

The total sample included 586 teachers and administrators of nine high schools in the First Tennessee Regional District. Responses were received from 442 educators, making a total sample response rate of 75.43%. The mean number of teachers and administrators at these schools was 65.

Official reports showed that 168 teachers and administrators were employed in the sample of three of four schools in the Initiation stage of the block scheduling change process. Responses were received from 118 educators. The overall response rate was 70.24%. The mean number of teachers and administrators assigned to these schools was 56.

In two of the three schools in the sample of schools in the first year of Implementation of block scheduling, the official count of professional employees employed was 137. Responses were received from 91 educators. The overall response
rate among these schools was 66.42%. The mean number of teachers and administrators assigned to these school was 53.5.

In three of the seventeen schools in the second year of Implementation, 173 were employed. Responses were received from 158 educators. The overall response rate among these schools was 91.33%. The mean number of teachers and administrators assigned to these school was 57.6.

One hundred eight teachers and administrators were employed in the sample of one of two schools in the third year of Implementation or the Institutionalization stage. Responses were received from 75 educators. The overall response rate for this school was 69.4%. The total sample size and response rates are presented in Table 5.

Sample Demographics

Demographic data concerning participants in the total sample revealed that 385 were teachers, while 10 reported being principals, and 46 held other professional positions. The other professional category included such job titles as assistant principals, counselors, and vocational directors. There were more females than males. One hundred eighty eight reported being 40-49 years of age, and 140 reported being 50 or older. Most of the participants had masters degrees; 17 had educational specialist degrees, and 3 had doctorate degrees. The majority of the total sample reported having 16 or more years of teaching experience. The three most reported subject assignments were "other," such as music, art, band, special education, assistant principal, and counselor; language arts; and vocational courses. One principal reported having 0-2 years of experience in his present
### TABLE 5

**TOTAL SAMPLE RESPONSE FROM TEACHERS AND ADMINISTRATORS**

<table>
<thead>
<tr>
<th>Stage</th>
<th>School</th>
<th>Number Surveyed</th>
<th>Number Responding</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>INITIATION</td>
<td>1</td>
<td>36</td>
<td>26</td>
<td>72.2</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>60</td>
<td>36</td>
<td>60.0</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>72</td>
<td>56</td>
<td>77.7</td>
</tr>
<tr>
<td></td>
<td>Subtotal</td>
<td>168</td>
<td>118</td>
<td>70.2</td>
</tr>
<tr>
<td>FIRST YEAR</td>
<td>4</td>
<td>67</td>
<td>63</td>
<td>94.0</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>70</td>
<td>28</td>
<td>40.0</td>
</tr>
<tr>
<td></td>
<td>Subtotal</td>
<td>137</td>
<td>91</td>
<td>66.4</td>
</tr>
<tr>
<td>SECOND YEAR</td>
<td>6</td>
<td>29</td>
<td>25</td>
<td>86.2</td>
</tr>
<tr>
<td></td>
<td>7</td>
<td>56</td>
<td>49</td>
<td>87.5</td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>88</td>
<td>84</td>
<td>95.4</td>
</tr>
<tr>
<td></td>
<td>Subtotal</td>
<td>173</td>
<td>158</td>
<td>91.1</td>
</tr>
<tr>
<td>THIRD YEAR</td>
<td>9</td>
<td>108</td>
<td>75</td>
<td>69.4</td>
</tr>
<tr>
<td>Total</td>
<td>9</td>
<td>586</td>
<td>442</td>
<td>75.4</td>
</tr>
</tbody>
</table>
school; three reported having 3-4 years of experience; two reported 5-7; and five reported eight or more years of experience in their present schools.

Participants in the three schools in the Initiation stage of the block scheduling change process revealed that 106 were teachers, 3 were principals, and 9 were other professionals. There were 60 females and 58 males. The majority of the participants were 40-49 year of age, and 31.4% were 30-39 years of age. Most of the participants had a masters degree. Six participants had an educational specialist degree, and one had a doctorate. Most of the participants had 16 or more years of experience. The three most reported subject assignments reported by this group were "other," language arts, and vocational courses. The principals reported having 3 to 8 years or more of experience in their present school.

Participants in the two schools in the first year of the Implementation stage of the block scheduling change process involved 80 teachers, 2 principals, and 9 other professionals. There were 56 females and 35 males. Most of the participants were 40-49 years of age, and 31 were 50 years or older. Most had a masters degree. Six participants had an educational specialist degree, and one had a doctorate degree. Most of the sample had 16 years or more of experience. The three most reported subject assignments were "other," vocational courses, and language arts. The principals reported having either 3-4 or 8 years or more of experience at their present school.

Participants in the three schools in the second year of the Implementation stage of the block scheduling change process revealed the following: 136 were teachers, 4 were
principals, and 17 other professionals. The sample involved 84 males and 73 females. Most of the participants were in the 40-49 age category, and 30.4% reporting being 50 or older. Most of the participants also reported having a masters degree, while 4 participants had an educational specialist degree. No one reported having a doctorate. The majority of the participants also reported 16 or more years of experience. The three most reported subject assignments were "other," language arts, and vocational courses.

The principals reported 3-4 or 5-7 years of experience at their present school.

Participants in the one school in the third year of Implementation or Institutionalization stage of the block scheduling change process involved 63 teachers, one principal, and 11 other professionals. There were 45 females and 30 males. Most of the sample reported being 40-49 years of age, and 32% reported being 50 or older. A large portion of the sample had masters degrees. There was one participant who had an educational specialist degree, and one who had a doctorate degree. Sixty percent of the participants had 16 or more years of experience. The three most reported subject assignments were "other," language arts, and science. Two reported having experience as principal in the school. One indicated 0-2 years of experience and another indicated having 3-4 years of experience. All demographic variables are presented in Table 6.
### Table 6

<table>
<thead>
<tr>
<th>Demographic Variable</th>
<th>Initiation</th>
<th>First Year</th>
<th>Second Year</th>
<th>Third Year</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>JOB TITLE</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teacher</td>
<td>385</td>
<td>87.1</td>
<td>136</td>
<td>86.1</td>
</tr>
<tr>
<td>Principal</td>
<td>207</td>
<td>46.8</td>
<td>84</td>
<td>38.5</td>
</tr>
<tr>
<td>Other</td>
<td>41</td>
<td>2.2</td>
<td>17</td>
<td>10.8</td>
</tr>
<tr>
<td>Missing</td>
<td>3</td>
<td>0.6</td>
<td>1</td>
<td>0.6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>442</td>
<td>100.0</td>
<td>158</td>
<td>100.0</td>
</tr>
<tr>
<td><strong>GENDER</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>234</td>
<td>52.0</td>
<td>14</td>
<td>6.3</td>
</tr>
<tr>
<td>Female</td>
<td>40</td>
<td>9.0</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Missing</td>
<td>0</td>
<td>0.0</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>441</td>
<td>100.0</td>
<td>158</td>
<td>100.0</td>
</tr>
<tr>
<td><strong>AGE</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;30</td>
<td>40</td>
<td>9.0</td>
<td>18</td>
<td>11.4</td>
</tr>
<tr>
<td>30-39</td>
<td>74</td>
<td>16.7</td>
<td>29</td>
<td>18.4</td>
</tr>
<tr>
<td>40-49</td>
<td>140</td>
<td>31.7</td>
<td>63</td>
<td>39.9</td>
</tr>
<tr>
<td>50 or &gt;</td>
<td>0</td>
<td>0.0</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Missing</td>
<td>0</td>
<td>0.0</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>442</td>
<td>100.0</td>
<td>158</td>
<td>100.0</td>
</tr>
<tr>
<td>Demographic Sample Total</td>
<td>Initiation</td>
<td>First Year</td>
<td>Second Year</td>
<td>Third Year</td>
</tr>
<tr>
<td>--------------------------</td>
<td>------------</td>
<td>------------</td>
<td>-------------</td>
<td>------------</td>
</tr>
<tr>
<td></td>
<td>f</td>
<td>%</td>
<td>f</td>
<td>%</td>
</tr>
<tr>
<td><strong>EDUCATION</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bachelors</td>
<td>49</td>
<td>33.7</td>
<td>41</td>
<td>34.7</td>
</tr>
<tr>
<td>Masters</td>
<td>270</td>
<td>61.1</td>
<td>69</td>
<td>58.5</td>
</tr>
<tr>
<td>Specialist</td>
<td>17</td>
<td>3.8</td>
<td>6</td>
<td>5.1</td>
</tr>
<tr>
<td>Doctorate</td>
<td>3</td>
<td>0.7</td>
<td>1</td>
<td>0.8</td>
</tr>
<tr>
<td>Missing</td>
<td>3</td>
<td>0.7</td>
<td>1</td>
<td>0.8</td>
</tr>
<tr>
<td>Total</td>
<td>442</td>
<td>100.0</td>
<td>118</td>
<td>100.0</td>
</tr>
<tr>
<td><strong>YEARS OF EXPERIENCE</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0-2</td>
<td>22</td>
<td>5.0</td>
<td>3</td>
<td>2.5</td>
</tr>
<tr>
<td>3-5</td>
<td>46</td>
<td>10.4</td>
<td>10</td>
<td>8.5</td>
</tr>
<tr>
<td>6-10</td>
<td>40</td>
<td>9.0</td>
<td>9</td>
<td>7.6</td>
</tr>
<tr>
<td>11-15</td>
<td>61</td>
<td>13.8</td>
<td>15</td>
<td>12.7</td>
</tr>
<tr>
<td>16 or &gt;</td>
<td>273</td>
<td>61.9</td>
<td>81</td>
<td>68.6</td>
</tr>
<tr>
<td>Missing</td>
<td>0</td>
<td>0.0</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Total</td>
<td>442</td>
<td>100.0</td>
<td>118</td>
<td>100.0</td>
</tr>
<tr>
<td>Demographic Variable</td>
<td>Sample Total</td>
<td>Initiation</td>
<td>First Year</td>
<td>Second Year</td>
</tr>
<tr>
<td>----------------------</td>
<td>--------------</td>
<td>------------</td>
<td>------------</td>
<td>-------------</td>
</tr>
<tr>
<td></td>
<td>f</td>
<td>%</td>
<td>f</td>
<td>%</td>
</tr>
<tr>
<td><strong>SUBJECT ASSIGNMENT</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Language Arts</td>
<td>84</td>
<td>19.0</td>
<td>25</td>
<td>21.2</td>
</tr>
<tr>
<td>Math</td>
<td>53</td>
<td>12.0</td>
<td>4</td>
<td>11.9</td>
</tr>
<tr>
<td>Science</td>
<td>50</td>
<td>11.3</td>
<td>13</td>
<td>11.0</td>
</tr>
<tr>
<td>Social Studies</td>
<td>39</td>
<td>8.8</td>
<td>10</td>
<td>8.5</td>
</tr>
<tr>
<td>P.E./Wellness</td>
<td>21</td>
<td>4.8</td>
<td>5</td>
<td>4.2</td>
</tr>
<tr>
<td>Vocation</td>
<td>78</td>
<td>17.6</td>
<td>23</td>
<td>19.5</td>
</tr>
<tr>
<td>Other</td>
<td>115</td>
<td>26.0</td>
<td>28</td>
<td>23.7</td>
</tr>
<tr>
<td>Missing</td>
<td>2</td>
<td>0.5</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Total</td>
<td>442</td>
<td>100.0</td>
<td>118</td>
<td>100.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PRINCIPAL'S YEARS OF EXPERIENCE AT PRESENT SCHOOL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Principal</td>
</tr>
<tr>
<td>0-2</td>
</tr>
<tr>
<td>3-4</td>
</tr>
<tr>
<td>5-7</td>
</tr>
<tr>
<td>8 or &gt;</td>
</tr>
<tr>
<td>Missing</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>
Research Questions, Hypotheses, and Data

This study consists of four research questions and 16 hypotheses. Hypotheses one through eight address the first research question. Hypotheses 9 through 14 address the second research question. Hypothesis 15 addresses the third research question, and hypothesis 16 addresses the fourth research question. The appropriate data follow each hypothesis, and tables, where applicable, are provided at the end of the presentation of data for each research question.

1. How do teachers and administrators perceive their school climates in the Initiation, First and Second Years of Implementation, and Third Year of Implementation or Institutionalization stages of a change to block scheduling?

   1. H0: There will be no difference among the Total Climate scores on the Organizational Health Index in the sample of high schools at the stages of the block scheduling change process: Initiation, first year of Implementation, second year of Implementation, and third year of Implementation or Institutionalization.

   Analysis of data revealed that the total climate scores for all stages were average, ranging from 556.32 to 578.01. Schools in the second year of Implementation had the lowest climate score, with scores increasing in the following order: the first year, third year, and Initiation. The mean of these scores was 566.37 with a standard deviation of 120.31. ANOVA yielded an F (3, 421) of .729; p < .535, not significant at the .05 level.
2. \( H_0 \) There will be no difference among scores on the Institutional Integrity dimension of the Organizational Health Index in the sample of high schools at the stages of the block scheduling change process: Initiation, first year of Implementation, second year of Implementation, and third year of Implementation or Institutionalization.

The analysis of data revealed the Institutional Integrity mean score of the schools in the Initiation stage was 511.3. The schools in the first, second, and third years of Implementation all experienced declining scores ranging from a mean of 466.3 to 411.3. The mean of all scores was 462.3, with a standard deviation of 167.4. According to the climate scales created by Hoy et al., (1991), the schools in the Initiation stage had an average health score. The other stages had low health scores for Institutional Integrity. ANOVA yielded an \( F(3, 405) \) of 5.94; \( p < .0006 \), significant at the .05 level. The Least Significance Difference (LSD) post-hoc test showed statistically significant differences in the Institutional Integrity dimension scores between the following groups: the third year of Implementation and the Initiation stage; the third year of Implementation and the first year of Implementation; and the second year of Implementation and the Initiation stage.

3. \( H_0 \) There will be no difference among scores on the Initiating Structure dimension of the Organizational Health Index in the sample of high schools at the stages of the block scheduling change process: Initiation, first year of Implementation, second year of Implementation, and third year of Implementation or Institutionalization.

Analysis of data revealed the Initiating Structure score of the schools in the
Initiation stage had a mean of 665.43, indicating a high climate score. The schools in the first, second, and third years of Implementation all received average climate scores ranging from a mean of 631.04 to 527.90. The scores decreased from the third year of Implementation or Institutionalization to the first year of Implementation. The mean of these scores was 604.27, with a standard deviation of 176.28. ANOVA yielded an $F(3, 406)$ of 11.3; $p < .000$, significant at the .05 level. The Least Significance Difference test showed statistically significant differences in the Initiating Structure dimension scores between the following groups: the first year and the Initiation stage; the first year and the second year; the first year and the third year; and the second year and the Initiation stage.

4. $H_0$ There will be no difference among scores on the Consideration dimension of the Organizational Health Index in the sample of high schools at the stages of the block scheduling change process: Initiation, first year of Implementation, second year of Implementation, and third year of Implementation or Institutionalization.

Analysis of data revealed that the Consideration scores of the schools in all stages were high climate scores ranging from a mean of 654.6 to 617.1. Schools in the second year of Implementation had the highest score followed by the first year, the Initiation, and the third year of Implementation stages. The mean of these scores was 632.35, with a standard deviation of 165.7. ANOVA yielded an $F(3, 416)$ of 1.52; $p < .209$, not significant at the .05 level.

5. $H_0$ There will be no difference among scores on the Principal Influence dimension of the Organizational Health Index in the sample of high schools at the stages
of the block scheduling change process: Initiation, first year of Implementation, second year of Implementation, and third year of Implementation or Institutionalization.

Analysis of data revealed the Principal Influence scores of the schools in all stages were average climate scores ranging from a mean of 625.18 to 533.67. The schools in the first year had the highest score, followed by the third year, the second year, and the Initiation stages. The mean of these scores was 566.29, with a standard deviation of 167.27. ANOVA yielded an $F(3, 373)$ of 5.02; $p < .002$, significant at the .05 level. The Least Significance Difference test showed statistically significant differences in the Principal Influence dimension scores between the following groups: Initiation and the first year; the second year and the first year; and the third year and the first year stages.

6. $H_0$ There will be no difference among scores on the Resource Support dimension of the Organizational Health Index in the sample of high schools at the stages of the block scheduling change process: Initiation, first year of Implementation, second year of Implementation, and third year of Implementation or Institutionalization.

Analysis of data revealed the Resource Support scores of the schools in the Initiation, first year, and second year stages were average, and the third year had a high score. The scores got higher at each stage from 486.75 to 602.15. The mean of these scores was 539.51, with a standard deviation of 180.3. ANOVA yielded an $F(3, 427)$ of 8.69; $p < .000$, significant at the .05 level. The Least Significant Difference test indicated statistically significant differences in the Resource Support dimension scores between the
following groups: Initiation and the second year; Initiation and the third year; the first year and the second year; and the first year and the third year.

7. $H_0$ There will be no difference between scores on the Morale dimension of the Organizational Health Index in the sample of high schools at the stages of the block scheduling change process: Initiation, first year of Implementation, second year of Implementation, and third year of Implementation or Institutionalization.

Analysis of data revealed the Morale scores indicated that the second year of Implementation was an average climate score, and the Initiation, first year, and third year stages were high climate scores, ranging from a mean of 576.12 to 662.07. The mean of these scores was 620.6, with a standard deviation of 190.23. ANOVA yielded an $F (3, 416) = 4.70; p < .003$, significant at the .05 level. The Least Significant Difference test indicated statistically significant differences in the Morale dimension scores between the following groups: the second year and Initiation; the second year and the first year; and the second year and the third year.

8. $H_0$ There will be no difference among scores on the Academic Emphasis dimension of the Organizational Health Index in the sample of high schools at the stages of the block scheduling change process: Initiation, first year of Implementation, second year of Implementation, and third year of Implementation or Institutionalization.

Analysis of data revealed the Academic Emphasis scores of the schools all stages were average climate scores ranging from a mean of 582.16 to 601.33. Schools in the first year had the lowest score, followed by Initiation, the second year, and the third year.
The means of these scores was 577.68 with a standard deviation of 138.57. ANOVA yielded an F (3, 421) of 4.76; p < .002, significant at the .05 level. The Least Significant Difference test indicated statistically significant differences in the Academic Emphasis dimension scores between the following groups: the second year with Initiation; the second year with the first year; and the second year with the third year stages. Data for hypothesis concerning the first research question are presented in Table 7 and Table 8.

2. Will perceptions of school climate differ when the following independent variables are taken into consideration: gender, job title, age, education, years of experience, and subject assignment?

Discussions of the statistical testing for hypotheses 9-14 were limited to the cases where hypotheses were rejected. Nevertheless, all of the results of the statistical testing were given in tabular form at the end of each hypothesis' presentation.

9. H₀ There will be no difference in the dimensions or in the Total Climate scores based on gender.

A t-test for independent samples was used to compare the mean scores of males' and females' perceptions of school climate measured in the seven identified dimensions of school climate of the Organizational Health Index (OHI) and in their perceptions of the total climate score. There were no significant differences found in gender among any dimension or total climate score. Data for hypothesis 9 are presented in Table 9.
<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Initiation</th>
<th>First Year</th>
<th>Second Year</th>
<th>Third Year</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Climate</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>578.01</td>
<td>561.59</td>
<td>556.32</td>
<td>576.54</td>
<td>566.37</td>
</tr>
<tr>
<td>S.D.</td>
<td>145.71</td>
<td>93.03</td>
<td>109.57</td>
<td>127.03</td>
<td>120.31</td>
</tr>
<tr>
<td>N</td>
<td>97.00</td>
<td>71.00</td>
<td>123.00</td>
<td>44.00</td>
<td>335.00</td>
</tr>
<tr>
<td><strong>Institutional Integrity</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>511.27</td>
<td>466.33</td>
<td>446.43</td>
<td>411.27</td>
<td>462.23</td>
</tr>
<tr>
<td>S.D.</td>
<td>174.98</td>
<td>163.15</td>
<td>162.28</td>
<td>152.24</td>
<td>167.38</td>
</tr>
<tr>
<td>N</td>
<td>111.00</td>
<td>84.00</td>
<td>146.00</td>
<td>68.00</td>
<td>409.00</td>
</tr>
<tr>
<td><strong>Initiating Structure</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>665.43</td>
<td>527.90</td>
<td>591.42</td>
<td>631.04</td>
<td>604.27</td>
</tr>
<tr>
<td>S.D.</td>
<td>169.67</td>
<td>178.63</td>
<td>173.42</td>
<td>148.32</td>
<td>176.28</td>
</tr>
<tr>
<td>N</td>
<td>111.00</td>
<td>85.00</td>
<td>152.00</td>
<td>62.00</td>
<td>410.00</td>
</tr>
<tr>
<td><strong>Consideration</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>617.36</td>
<td>623.13</td>
<td>654.58</td>
<td>617.06</td>
<td>632.35</td>
</tr>
<tr>
<td>S.D.</td>
<td>191.07</td>
<td>162.73</td>
<td>144.78</td>
<td>167.44</td>
<td>165.70</td>
</tr>
<tr>
<td>N</td>
<td>113.00</td>
<td>88.00</td>
<td>156.00</td>
<td>63.00</td>
<td>420.00</td>
</tr>
<tr>
<td><strong>Principal Influence</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>533.67</td>
<td>625.18</td>
<td>558.55</td>
<td>560.87</td>
<td>566.29</td>
</tr>
<tr>
<td>S.D.</td>
<td>191.89</td>
<td>155.51</td>
<td>150.19</td>
<td>153.81</td>
<td>167.27</td>
</tr>
<tr>
<td>N</td>
<td>107.00</td>
<td>82.00</td>
<td>137.00</td>
<td>51.00</td>
<td>377.00</td>
</tr>
</tbody>
</table>
TABLE 7 (continued)

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Initiation</th>
<th>First Year</th>
<th>Second Year</th>
<th>Third Year</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Resource Support</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>486.75</td>
<td>508.75</td>
<td>567.45</td>
<td>602.15</td>
<td>539.51</td>
</tr>
<tr>
<td>S.D.</td>
<td>189.00</td>
<td>180.24</td>
<td>174.37</td>
<td>147.98</td>
<td>180.32</td>
</tr>
<tr>
<td>N</td>
<td>115.00</td>
<td>89.00</td>
<td>156.00</td>
<td>71.00</td>
<td>431.00</td>
</tr>
<tr>
<td><strong>Morale</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>635.21</td>
<td>645.66</td>
<td>576.12</td>
<td>662.07</td>
<td>620.58</td>
</tr>
<tr>
<td>S.D.</td>
<td>191.83</td>
<td>192.27</td>
<td>185.53</td>
<td>180.08</td>
<td>190.23</td>
</tr>
<tr>
<td>N</td>
<td>113.00</td>
<td>86.00</td>
<td>151.00</td>
<td>70.00</td>
<td>420.00</td>
</tr>
<tr>
<td><strong>Academic Emphasis</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>589.04</td>
<td>582.16</td>
<td>539.33</td>
<td>601.33</td>
<td>577.68</td>
</tr>
<tr>
<td>S.D.</td>
<td>141.69</td>
<td>135.17</td>
<td>136.43</td>
<td>131.19</td>
<td>138.57</td>
</tr>
<tr>
<td>N</td>
<td>113.00</td>
<td>87.00</td>
<td>154.00</td>
<td>71.00</td>
<td>425.00</td>
</tr>
</tbody>
</table>

10. $H_0$ There will be no difference in the dimensions or in the Total Climate scores based on job title.

An Analysis of Variance (ANOVA) was used to compare the mean scores of teachers', principals', and other professionals' perceptions of school climate measured in the seven identified dimensions of school climate of the Organizational Health Index (OHI and in their perceptions of the total climate score. There were differences among job titles found in all climate dimensions except Initiating Structure.
TABLE 8
ANALYSIS OF VARIANCE OF DIMENSIONS AND TOTAL CLIMATE SCORES
IN FOUR STAGES OF THE CHANGE PROCESS

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of Squares</th>
<th>Degrees of Freedom</th>
<th>Mean Squares</th>
<th>F ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Climate Scores</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between groups</td>
<td>31760.45</td>
<td>3</td>
<td>10586.82</td>
<td>.729</td>
</tr>
<tr>
<td>Within groups</td>
<td>4802701.39</td>
<td>331</td>
<td>14509.67</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>4834461.84</td>
<td>334</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Institutional Integrity</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between groups</td>
<td>481407.47</td>
<td>3</td>
<td>160469.16</td>
<td>5.94*</td>
</tr>
<tr>
<td>Within groups</td>
<td>10948893.11</td>
<td>405</td>
<td>27034.30</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>11430300.57</td>
<td>408</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Initiating Structure</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between groups</td>
<td>980508.52</td>
<td>3</td>
<td>326836.17</td>
<td>11.31*</td>
</tr>
<tr>
<td>Within groups</td>
<td>11729598.70</td>
<td>406</td>
<td>28890.64</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>12710107.21</td>
<td>409</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Consideration</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between groups</td>
<td>124682.21</td>
<td>3</td>
<td>41560.74</td>
<td>1.52</td>
</tr>
<tr>
<td>Within groups</td>
<td>11379803.05</td>
<td>416</td>
<td>27355.29</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>11504485.27</td>
<td>419</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Principal Influence</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between groups</td>
<td>407929.69</td>
<td>3</td>
<td>135976.56</td>
<td>5.02*</td>
</tr>
<tr>
<td>Within groups</td>
<td>10112543.21</td>
<td>373</td>
<td>27111.38</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>10520472.90</td>
<td>476</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
TABLE 8 (Continued)

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of Squares</th>
<th>Degrees of Freedom</th>
<th>Mean Squares</th>
<th>F ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Resource Support</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between groups</td>
<td>804758.25</td>
<td>3</td>
<td>268252.75</td>
<td>8.69*</td>
</tr>
<tr>
<td>Within groups</td>
<td>13176696.77</td>
<td>427</td>
<td>30858.77</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>13981455.01</td>
<td>430</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Morale</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between groups</td>
<td>497204.42</td>
<td>3</td>
<td>165734.81</td>
<td>4.70*</td>
</tr>
<tr>
<td>Within groups</td>
<td>14664545.66</td>
<td>416</td>
<td>35251.31</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>15161750.08</td>
<td>419</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Academic Emphasis</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between groups</td>
<td>267193.38</td>
<td>3</td>
<td>89064.46</td>
<td>4.76*</td>
</tr>
<tr>
<td>Within groups</td>
<td>7872668.49</td>
<td>421</td>
<td>18699.93</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>8139861.87</td>
<td>424</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* p < .05.

For the Total Climate score, those in the other professional job category scored the climate highest, followed by principals, and teachers. The perceptions of other professionals differed significantly from teachers and principals. The other professionals had a mean of 647.83 with a standard deviation of 82.43; principals had a mean score of 614.70 with a standard deviation of 140.36, and teachers had a mean score of 554.76 with a standard deviation of 119.79. ANOVA yielded an F (2, 332) of 10.94; p < .000. Therefore, the hypothesis for the Total Climate score was rejected.
TABLE 9  
DIFFERENCE IN THE MEAN SCORES OF PERCEPTIONS  
MEASURED IN THE DIMENSIONS AND TOTAL CLIMATE SCORES  
BASED ON GENDER  

<table>
<thead>
<tr>
<th>Gender</th>
<th>N</th>
<th>Mean</th>
<th>S.D.</th>
<th>t- value</th>
<th>Degrees of Freedom</th>
<th>Two-Tail p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Climate Score</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>170</td>
<td>568.32</td>
<td>121.44</td>
<td>.30</td>
<td>333</td>
<td>.764</td>
</tr>
<tr>
<td>Female</td>
<td>165</td>
<td>564.37</td>
<td>119.47</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Institutional Integrity</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>198</td>
<td>475.35</td>
<td>152.15</td>
<td>1.47</td>
<td>406</td>
<td>.141</td>
</tr>
<tr>
<td>Female</td>
<td>210</td>
<td>451.11</td>
<td>179.69</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Initiating Structure</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>197</td>
<td>599.05</td>
<td>168.79</td>
<td>-.58</td>
<td>407</td>
<td>.561</td>
</tr>
<tr>
<td>Female</td>
<td>212</td>
<td>609.21</td>
<td>183.63</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Consideration</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>199</td>
<td>632.15</td>
<td>165.31</td>
<td>.01</td>
<td>417</td>
<td>.992</td>
</tr>
<tr>
<td>Female</td>
<td>220</td>
<td>631.97</td>
<td>166.60</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Principal Influence</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>186</td>
<td>563.39</td>
<td>165.18</td>
<td>-.35</td>
<td>374</td>
<td>.725</td>
</tr>
<tr>
<td>Female</td>
<td>190</td>
<td>569.48</td>
<td>170.05</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resource Support</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>202</td>
<td>555.26</td>
<td>183.58</td>
<td>1.72</td>
<td>428</td>
<td>.087</td>
</tr>
<tr>
<td>Female</td>
<td>228</td>
<td>525.39</td>
<td>176.99</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
For the Institutional Integrity dimension, those in the other professional job category scored the climate highest, followed by principals, and teachers. The perceptions of teachers and other professionals differed significantly. The other professionals had a mean of 516.37 with a standard deviation of 147.94; principals had a mean score of 507.14 with a standard deviation of 181.42, and teachers had a mean score of 454.23 with a standard deviation of 168.25. ANOVA yielded an F (2, 406) of 3.09; p < .047. Therefore, the hypothesis for the Institutional Integrity dimension was rejected, although the probability level of 0.047 is very close to .05.

For the Initiating Structure dimension, those in the other professional job category scored the climate highest, followed by teachers, and principals. However, there were no significant differences found in their scores.
For the Consideration dimension, those in the other professional job category scored the climate highest, followed by principals, and teachers. The perceptions of teachers and other professionals differed significantly. The other professionals had a mean of 707.61 with a standard deviation of 126.88; principals had a mean score of 690.64 with a standard deviation of 152.36, and teachers had a mean score of 621.65 with a standard deviation of 168.05. ANOVA yielded an F (2, 416) of 6.16; p < .002. Therefore, the hypothesis for the Consideration dimension was rejected.

For the Principal Influence dimension, principals scored the climate highest, followed by those in the other professional job category and teachers. The perceptions of teachers differed significantly with principals and other professionals. Principals had a mean score of 677.72 with a standard deviation of 173.19; other professionals had a mean score of 671.51 with a standard deviation of 142.17, and teachers had a mean score of 549.09 with a standard deviation of 164.55. ANOVA yielded an F (2, 373) of 12.97; p < .000. Therefore, the hypothesis for the Principal Influence dimension was rejected.

For the Resource Support dimension, those in the other professional job category scored school climate highest, followed by principals, and teachers. The perceptions of teachers and other professionals differed significantly in this dimension. The other professionals had a mean of 632.37 with a standard deviation of 153.14; principals had a mean score of 631.22 with a standard deviation of 124.71, and teachers had a mean score of 526.67 with a standard deviation of 180.08. ANOVA yielded an F (2, 427) of 8.70;
p < .000. Therefore, the hypothesis for the Resource Support dimension was rejected.

For the Morale dimension, those in the other professional job category scored the climate highest, followed by principals, and teachers. The perceptions of teachers and other professionals differed significantly. The other professionals had a mean of 725.38 with a standard deviation of 135.06; principals had a mean score of 626.89 with a standard deviation of 207.62, and teachers had a mean score of 606.22 with a standard deviation of 192.15. ANOVA yielded an F (2, 416) of 7.51; p < .0006. Therefore, the hypothesis for the Morale dimension was rejected.

For the Academic Emphasis dimension, those in the other professional job category scored the climate highest, followed by principals, and teachers. The perceptions of other professionals differed significantly from teachers and principals. The other professionals had a mean of 673.32 with a standard deviation of 110.29; principals had a mean score of 578.62 with a standard deviation of 177.70, and teachers had a mean score of 559.43 with a standard deviation of 135.97. ANOVA yielded an F (2, 421) of 14.09; p < .000. Therefore, the hypothesis for the Academic Emphasis dimension was rejected. Data for hypothesis 10 are presented in Table 10.

11. H₀ There will be no difference in the dimensions or in the Total Climate scores based on age.

An Analysis of Variance (ANOVA) was used to compare the mean scores of perceptions of school climate measured in the seven identified dimensions of school climate of the Organizational Health Index (OHI) and in their perceptions of the
<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of Squares</th>
<th>Degrees of Freedom</th>
<th>Mean Squares</th>
<th>F ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Climate Scores</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between groups</td>
<td>298990.37</td>
<td>2</td>
<td>149495.19</td>
<td>10.94*</td>
</tr>
<tr>
<td>Within groups</td>
<td>4535471.47</td>
<td>332</td>
<td>13661.06</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>4834461.84</td>
<td>334</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Institutional Integrity</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between groups</td>
<td>171470.47</td>
<td>2</td>
<td>85735.24</td>
<td>3.09*</td>
</tr>
<tr>
<td>Within groups</td>
<td>11258830.10</td>
<td>406</td>
<td>27731.11</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>11430300.57</td>
<td>408</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Initiating Structure</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between groups</td>
<td>82988.06</td>
<td>2</td>
<td>241494.03</td>
<td>1.34</td>
</tr>
<tr>
<td>Within groups</td>
<td>2611717.88</td>
<td>406</td>
<td>31063.34</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>12694705.94</td>
<td>408</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Consideration</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between groups</td>
<td>330526.26</td>
<td>2</td>
<td>165263.13</td>
<td>6.16*</td>
</tr>
<tr>
<td>Within groups</td>
<td>1168363.71</td>
<td>416</td>
<td>26847.03</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>11498889.96</td>
<td>418</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Principal Influence</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between groups</td>
<td>683679.52</td>
<td>2</td>
<td>341839.76</td>
<td>12.97*</td>
</tr>
<tr>
<td>Within groups</td>
<td>9834351.89</td>
<td>373</td>
<td>26365.55</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>10518031.42</td>
<td>375</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
TABLE 10 (continued)

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of Squares</th>
<th>Degrees of Freedom</th>
<th>Mean Squares</th>
<th>F ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Resource Support</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between groups</td>
<td>542046.31</td>
<td>2</td>
<td>271023.16</td>
<td>8.70*</td>
</tr>
<tr>
<td>Within groups</td>
<td>13291233.96</td>
<td>427</td>
<td>31127.01</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>13833280.27</td>
<td>429</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Morale</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between groups</td>
<td>528534.01</td>
<td>2</td>
<td>264267.00</td>
<td>7.51*</td>
</tr>
<tr>
<td>Within groups</td>
<td>14631028.37</td>
<td>416</td>
<td>35170.74</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>15159562.37</td>
<td>418</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Academic Emphasis</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between groups</td>
<td>510556.02</td>
<td>2</td>
<td>255278.01</td>
<td>14.09*</td>
</tr>
<tr>
<td>Within groups</td>
<td>7629180.83</td>
<td>421</td>
<td>18121.57</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>8139736.85</td>
<td>423</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p < .05.

total climate score based on age. Only one dimension, Principal Influence, and the total climate score had age categories that varied significantly.

For the Total Climate score dimension, participants who were 50 or more years of age scored the climate highest, followed by those who were 40-49 years of age, those who were 30 or less years of age, and those 30-39 years of age. Significant differences were found in those who were 30-39 years of age and those who were 40-49 years of age and 50 or more years of age. Participants 50 or more years of age had a mean of 585.48
with a standard deviation of 124.33; those 40-49 years of age had a mean score of 569.86 with a standard deviation of 119.90; participants 30 or less years of age had a mean score of 558.58 with a standard deviation of 122.76; and those 30-39 years of age had a mean score of 524.98 with a standard deviation of 128.47. ANOVA yielded an F (3, 331) of 3.00; p < .031. Therefore, the hypothesis for the Total Climate score was rejected.

For the Institutional Integrity dimension, participants who were 50 or more years of age scored the climate highest, followed by those who were 40-49, those less than 30 years of age, and those 30-39 years of age. However, the perceptions of each age category did not differ significantly in this dimension.

For the Initiating Structure dimension, participants who were 30 or less years of age scored the climate highest, followed by those who were 40-49 years of age, those 30-39 years of age, and then, those 50 or more years of age. However, the perceptions of each age category did not differ significantly in this dimension.

For the Consideration dimension, participants who were 40-49 years of age scored the climate highest, followed by those who were 30 or less years of age, those 50 or more years of age, and then, those 30-39 years of age. However, the perceptions of each age category did not differ significantly in this dimension.

For the Principal Influence dimension, participants who were 50 or more years of age scored the climate highest, followed by those who were 40-49 years of age, those who were 30 or less years of age, and then, those 30-39 years of age. Perceptions of those 30-39 years of age differed significantly from those who were 40-49 years of age.
and those who were 50 or more years of age. Participants 50 or more years of age had a mean of 587.46 with a standard deviation of 177.60; those 40-49 years of age had a mean score of 573.25 with a standard deviation of 160.51; participants 30 or less years of age had a mean score of 564.71 with a standard deviation of 173.62; and those 30-39 years of age had a mean score of 510.22 with a standard deviation of 154.11. ANOVA yielded an $F(3, 373) = 3.06; p < .028$. Therefore, the hypothesis for the Principal Influence dimension was rejected.

For the Resource Support dimension, participants who were 50 or more years of age scored the climate highest, followed by those who were 30 or less years of age, those who were 40-49 years of age, and those 30-39 years of age. However, there were no significant differences in any age categories in this dimension.

For the Morale dimension, participants who were 50 or more years of age scored the climate highest, followed by those who were 40-49 years of age, those who were 30 or less years of age, and those 30-39 years of age. However, there were no significant differences in any age categories in this dimension.

For the Academic Emphasis dimension, participants who were 50 or more years of age scored the climate highest, followed by those who were 40-49 years of age, those who were 30 or less years of age, and those 30-39 years of age. However, there were no significant differences in any age categories in this dimension. Data for hypothesis 11 are presented in Table 11.
## TABLE 11

**ANALYSIS OF VARIANCE OF AGE**

IN THE DIMENSIONS AND TOTAL CLIMATE SCORES

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of Squares</th>
<th>Degrees of Freedom</th>
<th>Mean Squares</th>
<th>F ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Climate Scores</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between groups</td>
<td>128257.26</td>
<td>3</td>
<td>42752.42</td>
<td>3.00*</td>
</tr>
<tr>
<td>Within groups</td>
<td>4706204.58</td>
<td>331</td>
<td>14218.14</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>4834461.84</td>
<td>334</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Institutional Integrity</strong></td>
<td></td>
<td></td>
<td></td>
<td>.348</td>
</tr>
<tr>
<td>Between groups</td>
<td>29404.48</td>
<td>3</td>
<td>9801.49</td>
<td></td>
</tr>
<tr>
<td>Within groups</td>
<td>1400896.10</td>
<td>405</td>
<td>28150.36</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>11430300.57</td>
<td>408</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Initiating Structure</strong></td>
<td></td>
<td></td>
<td></td>
<td>.111</td>
</tr>
<tr>
<td>Between groups</td>
<td>10378.68</td>
<td>3</td>
<td>1259.56</td>
<td></td>
</tr>
<tr>
<td>Within groups</td>
<td>12699728.53</td>
<td>406</td>
<td>31280.12</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>12710107.21</td>
<td>409</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Consideration</strong></td>
<td></td>
<td></td>
<td></td>
<td>.567</td>
</tr>
<tr>
<td>Between groups</td>
<td>46865.48</td>
<td>3</td>
<td>15621.83</td>
<td></td>
</tr>
<tr>
<td>Within groups</td>
<td>11457619.79</td>
<td>416</td>
<td>27542.36</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>11504485.27</td>
<td>419</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Principal Influence</strong></td>
<td></td>
<td></td>
<td></td>
<td>3.06*</td>
</tr>
<tr>
<td>Between groups</td>
<td>252989.09</td>
<td>3</td>
<td>84329.70</td>
<td></td>
</tr>
<tr>
<td>Within groups</td>
<td>10267483.80</td>
<td>373</td>
<td>27526.76</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>10520472.90</td>
<td>376</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
12. $H_0$ There will be no difference in the dimensions or in the Total Climate scores based on education.

An Analysis of Variance (ANOVA) was used to compare the mean scores of perceptions of school climate measured in the seven identified dimensions of school climate of the Organizational Health Index (OHI) and in their perceptions of the total climate score based on education. There were no educational degree levels that were found to be significantly different.
For the Total Climate score, participants who had a masters degree scored the climate highest, followed by those with an educational specialist degree, those with a bachelors, and those with a doctorate degree. However, the perceptions at educational levels did not differ significantly in this dimension.

For the Institutional Integrity dimension, participants who had a bachelors degree scored the climate highest, followed by those who had a masters degree, those who had an educational specialist degree, and then, those with a doctorate. The perceptions at educational levels did not differ significantly in this dimension.

For the Initiating Structure dimension, participants who had a bachelors degree scored the climate highest, followed by those with an educational specialist, those with a masters and those having a doctorate. The perceptions at educational levels did not differ significantly in this dimension.

For the Consideration dimension, participants who had a bachelors degree scored the climate highest, and the scores declined the more education a participant had. The perceptions at each educational level did not differ significantly in this dimension.

For the Principal Influence dimension, participants who had a doctorate degree scored the climate highest, followed by those with a masters degree, those with an educational specialist, and those with a bachelors degree. The perceptions of each age category did not differ significantly in this dimension.

For the Resource Support dimension, participants who had a masters degree scored the climate highest, followed by those with a bachelors degree, those with a
doctorate, and those with an educational specialist degree. The perceptions at each educational level did not differ significantly in this dimension.

For the Morale dimension, participants who had an educational specialist degree scored the climate highest, followed by those with a masters degree, those with a bachelors, and those with a doctorate degree. The perceptions at educational levels did not differ significantly in this dimension.

For the Academic Emphasis dimension, participants who had a masters degree scored the climate highest, followed by those with a bachelors degree, those with an educational specialist, and those with a doctorate degree. The perceptions at educational levels did not differ significantly in this dimension. Data for hypothesis 12. are presented in Table 12.

13. H₀ There will be no difference in the dimensions or in the Total Climate scores based years of teaching experience.

An Analysis of Variance (ANOVA) was used to compare the mean scores of perceptions of school climate measured in the seven identified dimensions of school climate of the Organizational Health Index (OHI) and in their perceptions of the total climate score based on years of experience. There were three dimensions found to have significant differences based on years of experience: Principal Influence, Morale, and Academic Emphasis.

For the Total Climate score, participants who had 0-2 years of experience scored the climate highest, followed by those who had 3-5 years of experience, those who had
TABLE 12

ANALYSIS OF VARIANCE OF EDUCATION IN THE DIMENSIONS AND TOTAL CLIMATE SCORES

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of Squares</th>
<th>Degrees of Freedom</th>
<th>Mean Squares</th>
<th>F ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Climate Scores</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between groups</td>
<td>52806.81</td>
<td>3</td>
<td>17602.27</td>
<td>1.22</td>
</tr>
<tr>
<td>Within groups</td>
<td>4725955.04</td>
<td>328</td>
<td>14408.39</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>4778761.85</td>
<td>331</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Institutional Integrity</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between groups</td>
<td>42719.24</td>
<td>3</td>
<td>14239.75</td>
<td>.508</td>
</tr>
<tr>
<td>Within groups</td>
<td>11279421.07</td>
<td>402</td>
<td>28058.26</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>11322140.31</td>
<td>405</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Initiating Structure</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between groups</td>
<td>109717.42</td>
<td>3</td>
<td>36572.47</td>
<td>1.17</td>
</tr>
<tr>
<td>Within groups</td>
<td>12549190.05</td>
<td>403</td>
<td>31139.43</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>12658907.47</td>
<td>406</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Consideration</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between groups</td>
<td>12980.11</td>
<td>3</td>
<td>4326.70</td>
<td>.157</td>
</tr>
<tr>
<td>Within groups</td>
<td>11412302.24</td>
<td>413</td>
<td>27632.69</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>11425282.35</td>
<td>416</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Principal Influence</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between groups</td>
<td>93095.56</td>
<td>3</td>
<td>31031.85</td>
<td>1.12</td>
</tr>
<tr>
<td>Within groups</td>
<td>10267768.95</td>
<td>370</td>
<td>27750.73</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>10360864.51</td>
<td>373</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Source</td>
<td>Sum of Squares</td>
<td>Degrees of Freedom</td>
<td>Mean Squares</td>
<td>F ratio</td>
</tr>
<tr>
<td>------------------------</td>
<td>----------------</td>
<td>--------------------</td>
<td>--------------</td>
<td>---------</td>
</tr>
<tr>
<td><strong>Resource Support</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between groups</td>
<td>124281.39</td>
<td>3</td>
<td>41427.13</td>
<td>1.28</td>
</tr>
<tr>
<td>Within groups</td>
<td>13743604.90</td>
<td>424</td>
<td>32414.16</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>13867886.30</td>
<td>427</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Morale</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between groups</td>
<td>110471.09</td>
<td>3</td>
<td>36823.69</td>
<td>1.02</td>
</tr>
<tr>
<td>Within groups</td>
<td>14916598.17</td>
<td>413</td>
<td>36117.67</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>15027069.25</td>
<td>416</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Academic Emphasis</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between groups</td>
<td>114233.24</td>
<td>3</td>
<td>38077.75</td>
<td>2.00</td>
</tr>
<tr>
<td>Within groups</td>
<td>7951700.50</td>
<td>418</td>
<td>19023.21</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>8065933.74</td>
<td>421</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* p , .05.

16 or more years of experience, those who had 6-10 years of experience, and those who had 11-15 years of experience. However, the perceptions at each years of experience category did not differ significantly in this dimension.

For the Initiating Structure dimension, participants who had 0-2 years of experience scored the climate highest, followed by those who had 3-5 years of experience, those who had 16 or more years of experience, those who had 11-15 years of experience.
experience, and those who had 6-10 years of experience. The perceptions of those in each years of experience category did not differ significantly in this dimension.

For the Consideration dimension, participants who had 0-2 years of experience scored the climate highest, followed by those who had 3-5 years of experience, those who had 11-15 years of experience, those who had 16 or more years of experience, and those who had 6-10 years of experience. The perceptions of each years of experience category did not differ significantly in this dimension.

For the Principal Influence dimension, participants who had 0-2 years of experience scored the climate highest, followed by those who had 3-5 years of experience, those who had 16 or more years of experience, those who had 11-15 years of experience, and those who had 6-10 years of experience. The perceptions of those who had 6-10 years of experience varied significantly with those who had 0-2; those who had 6-10 and 16 or more; and those with 11-15 and 0-2 years of experience. Participants with a 0-2 years had a mean of 635.36 with a standard deviation of 118.41; those with 3-5 years had a mean score of 576.97 with a standard deviation of 164.21; participants with 16 or more years had a mean score of 575.27 with a standard deviation of 168.96; those with 11-15 years had a mean score of 527.85 with a standard deviation of 167.56; and those with 6-10 years had a mean of 512.13 with a standard deviation of 163.39. ANOVA yielded an F (4, 372) of 2.51; p < of .041. Therefore, the hypothesis for the Principal Influence dimension was rejected.
For the Resource Support dimension, participants who had 3-5 years of experience scored the climate highest, followed by those who had 16 or more years of experience, those who had 6-10 years of experience, those who had 0-2 years of experience, and those who had 11-15 years of experience. However, the perceptions in each years of experience category did not differ significantly in this dimension.

For the Morale dimension, participants who had 0-2 years of experience scored the climate highest, followed by those who had 16 or more years of experience, those who had 3-5 years of experience, those who had 6-10 years of experience, and those who had 11-15 years of experience. The perceptions of those having 11-15 years differed significantly with those having 0-2 and 16 or more years of experience. Participants with 0-2 years had a mean of 672.00 with a standard deviation of 180.21; those with 16 or more years had a mean score of 645.39 with a standard deviation of 186.29; participants with 3-5 years had a mean score of 624.66 with a standard deviation of 164.79; those with 6-10 years had a mean score of 572.75 with a standard deviation of 194.15; and those with 11-15 years had a mean of 560.38 with a standard deviation of 213.21. ANOVA yielded an F (4,415) of 2.87; p < .023. Therefore, the hypothesis for the Morale dimension was rejected.

For the Academic Emphasis dimension, participants who had 16 or more years of experience scored the climate highest, followed by those who had 3-5 years of experience, those who had 6-10 years of experience, those who had 0-2 years of experience, and those who had 11-15 years of experience. The perceptions of those
having 11-15 years differed significantly with those having 16 or more years of experience. Participants with 16 or more years had a mean of 586.62 with a standard deviation of 136.58; those with 3-5 years had a mean score of 563.88 with a standard deviation of 119607; participants with 6-10 years had a mean score of 551.45 with a standard deviation of 143.99; those with 0-2 years had a mean score of 550.16 with a standard deviation of 133.69; and those with 11-15 years had a mean of 530.92 with a standard deviation of 151.31. ANOVA yielded an F (4,420) of 2.45; p < .045. Therefore, the hypothesis for Academic Emphasis dimension was rejected. Data for hypothesis 13 are presented in Table 13.

14. Ho There will be no difference in the dimensions of or in the Total Climate scores based on dominant subject assignment.

An Analysis of Variance (ANOVA) was used to compare the mean scores of perceptions of school climate measured in the seven identified dimensions of school climate of the Organizational Health Index (OHI) and in their perceptions of the total climate score based on their dominant teaching assignment. There were four dimensions, Consideration, Principal Influence, Resource Support, and Academic Emphasis, and the Total Climate scores that were found to have significant differences based on subject assignment.

For the Total Climate Score, participants who were assigned to other duties or subjects scored the climate highest, followed by science, vocational, language arts, physical education/wellness, math, and social studies teachers. The perceptions of those
### TABLE 13

**ANALYSIS OF VARIANCE OF YEARS OF EXPERIENCE IN THE DIMENSIONS AND TOTAL CLIMATE SCORES**

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of Squares</th>
<th>Degrees of Freedom</th>
<th>Mean Squares</th>
<th>F ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Climate Scores</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between groups</td>
<td>134266.26</td>
<td>4</td>
<td>33566.57</td>
<td>2.37</td>
</tr>
<tr>
<td>Within groups</td>
<td>4700195.58</td>
<td>330</td>
<td>14243.02</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>4834461.84</td>
<td>334</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Institutional Integrity</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between groups</td>
<td>163893.68</td>
<td>4</td>
<td>40973.42</td>
<td>1.47</td>
</tr>
<tr>
<td>Within groups</td>
<td>11266406.89</td>
<td>404</td>
<td>27887.15</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>11430300.57</td>
<td>408</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Initiating Structure</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between groups</td>
<td>153843.95</td>
<td>4</td>
<td>38460.99</td>
<td>1.24</td>
</tr>
<tr>
<td>Within groups</td>
<td>12556263.26</td>
<td>405</td>
<td>31003.12</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>12710107.21</td>
<td>409</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Consideration</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between groups</td>
<td>217720.38</td>
<td>4</td>
<td>54430.09</td>
<td>2.00</td>
</tr>
<tr>
<td>Within groups</td>
<td>11286764.89</td>
<td>415</td>
<td>27197.02</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>11504485.21</td>
<td>419</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Principal Influence</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between groups</td>
<td>276871.79</td>
<td>4</td>
<td>69217.95</td>
<td>2.51*</td>
</tr>
<tr>
<td>Within groups</td>
<td>10243601.11</td>
<td>372</td>
<td>27536.56</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>10520472.90</td>
<td>376</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
TABLE 13 (continued)

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of Squares</th>
<th>Degrees of Freedom</th>
<th>Mean Squares</th>
<th>F ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Resource Support</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between groups</td>
<td>56031.37</td>
<td>4</td>
<td>14007.84</td>
<td>.429</td>
</tr>
<tr>
<td>Within groups</td>
<td>13925423.64</td>
<td>426</td>
<td>32688.79</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>13981455.01</td>
<td>430</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Morale</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between groups</td>
<td>407813.53</td>
<td>4</td>
<td>101953.38</td>
<td>2.87*</td>
</tr>
<tr>
<td>Within groups</td>
<td>14753936.56</td>
<td>415</td>
<td>35551.65</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>15161750.08</td>
<td>419</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Academic Emphasis</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between groups</td>
<td>185935.69</td>
<td>4</td>
<td>46483.92</td>
<td>2.45*</td>
</tr>
<tr>
<td>Within groups</td>
<td>7953926.18</td>
<td>420</td>
<td>18937.92</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>8139861.87</td>
<td>424</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* p < .05.

who were assigned to other duties or subjects differed significantly from language arts, math, social studies, physical education/wellness, and vocational teachers. Social studies teachers perceptions also differed significantly from vocational teachers and science teachers. Those who were assigned to other duties or subjects had a mean of 609.62 with a standard deviation of 124.63; science teachers had a mean score of 570.72 with a standard deviation of 104.27; vocational teachers had a mean score of 568.26 with a standard deviation of 105.30; language arts teachers had a mean score of 552.21 with a...
standard deviation of 114.72; physical education/wellness teachers had a mean score of 544.46 with a standard deviation of 107.03; math teachers had a mean of 539.76 with a standard deviation of 130.85; and social studies teachers had a mean score of 513.91 with a standard deviation of 131.28. ANOVA yielded an F (6, 327) of 3.56; p < .002. Therefore, the hypothesis for the Total Climate score was rejected.

For the Institutional Integrity dimension participants who taught science scored the climate highest, followed by those who were assigned to other duties or subjects, and social studies, vocational courses, math, physical education/wellness, and language arts teachers. The perceptions of those in each subject assignment did not differ significantly in this dimension.

For the Initiating Structure dimension, participants who taught language arts scored the climate highest, followed by those who were assigned to other duties or subjects, and science, vocational courses, math, physical education/wellness, and social studies teachers. The perceptions of those in each subject assignment did not differ significantly in this dimension.

For the Consideration dimension, participants who were assigned to other duties or unspecified subjects scored the climate highest, followed by those who taught physical education/wellness, language arts, vocational courses, math, science, and social studies. Perceptions of those teaching other subjects differed significantly with those teaching language arts, math, science, social studies, and vocational courses. Social Studies teachers' perceptions also differed significantly from language arts, and
vocational teachers' perceptions. Those who were assigned to teach other unspecified subjects or duties had a mean of 683.03 with a standard deviation of 151.38; physical education/wellness teachers had a mean score of 644.43 with a standard deviation of 158.79; language arts teachers had a mean score of 626.99 with a standard deviation of 170.87; vocational teachers had a mean score of 624.63 with a standard deviation of 157.79; math teachers had a mean score of 614.78 with a standard deviation of 175.89; science teachers had a mean score of 605.87 with a standard deviation of 164.95; and social studies teachers had a mean score of 558.93 with a standard deviation of 171.98. ANOVA yielded an F (6, 411) of 3.42; p < .003. Therefore, the hypothesis for the Consideration dimension was rejected.

For the Principal Influence dimension, participants who were assigned to other duties or subjects scored the climate highest, followed by those who taught vocational courses, physical education/wellness, science, math, language arts, and social studies. The perceptions of those assigned to other subjects or duties differed significantly with those assigned to other subjects or duties. Vocational teachers also differed significantly from language arts, math, and social studies teachers. Those who were assigned to other duties or subjects had a mean of 645.63 with a standard deviation of 165.97; vocational teachers had a mean score of 588.11 with a standard deviation of 146.13; physical education/wellness teachers had a mean score of 547.36 with a standard deviation of 173.05; science teachers had a mean score of 540.76 with a standard deviation of 158.56; math teachers had a mean score of 519.36 with a standard deviation of 170.29;
language arts teachers had a mean score of 518.99 with a standard deviation of 155.51; and social studies teachers had a mean score of 502.40 with a standard deviation of 159.37. ANOVA yielded an F (6, 369) of 6.92; p < .000. Therefore, the hypothesis for the Principal Influence dimension was rejected.

For the Resource Support dimension, participants who taught physical education/wellness scored the climate highest, followed by those who were assigned to other duties or subjects, and math, vocational courses, language arts, science, and social studies teachers. Perceptions of social studies teachers differed significantly from those teaching math, physical education/wellness, and other subjects or duties. Perceptions of those teaching other subjects or assigned to other duties differed significantly with those teaching language arts, science, and social studies. Perceptions of social studies and physical education/wellness teachers also differed significantly. Those who taught physical education/wellness had a mean of 602.12 with a standard deviation of 130.14; those who were assigned to other duties or subjects had a mean score of 578.30 with a standard deviation of 183.70; math teachers had a mean score of 548.79 with a standard deviation of 170.38; vocational teachers had a mean score of 530.27 with a standard deviation of 173.70; language arts teachers had a mean score of 520.17 with a standard deviation of 179.54; science teachers had a mean of 512.69 with a standard deviation of 177.12; and social studies teachers had a mean score of 465.70 with a standard deviation of 194.66. ANOVA yielded an F (6, 422) of 2.82; p < .011. Therefore, the hypothesis for the Resource Support dimension was rejected.
For the Morale dimension, participants who were assigned to other duties or subjects scored the climate highest, followed by math, science, vocational courses, language arts, physical education/wellness, and social studies teachers. There were no significant differences in the perceptions of participants based on subject assignment in this dimension.

For the Academic Emphasis dimension, participants who were assigned to other duties or subjects scored the climate highest, followed by language arts, science, vocational, physical education/wellness, math, and social studies teachers. The perceptions of those who were assigned to other duties or subjects differed significantly from language arts, math, social studies, physical education/wellness, and vocational teachers. Those who were assigned to other duties of subjects had a mean of 611.23 with a standard deviation of 149.52; language arts teachers had a mean score of 568.30 with a standard deviation of 117.43; science teachers had a mean score of 582.69 with a standard deviation of 138.92; vocational teachers had a mean score of 562.44 with a standard deviation of 111.26; physical education/wellness teachers had a mean score of 543.25 with a standard deviation of 149.66; math teachers had a mean of 537.77 with a standard deviation of 139.19; and social studies teachers had a mean score of 527.14 with a standard deviation of 164.07. ANOVA yielded an F (6, 416) of 3.00; p < .007. Therefore, the hypothesis for the Academic Emphasis dimension was rejected. Data for Hypothesis 14 are presented in Table 14.
TABLE 14

ANALYSIS OF VARIANCE OF SUBJECT ASSIGNMENT
IN THE DIMENSIONS AND TOTAL CLIMATE SCORES

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of Squares</th>
<th>Degrees of Freedom</th>
<th>Mean Squares</th>
<th>F ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Climate Scores</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between groups</td>
<td>296786.92</td>
<td>6</td>
<td>49464.49</td>
<td>3.56*</td>
</tr>
<tr>
<td>Within groups</td>
<td>4537592.08</td>
<td>327</td>
<td>13876.43</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>4834378.99</td>
<td>333</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Institutional Integrity</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between groups</td>
<td>266881.86</td>
<td>6</td>
<td>44480.31</td>
<td>1.61</td>
</tr>
<tr>
<td>Within groups</td>
<td>11058282.67</td>
<td>400</td>
<td>27645.71</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>11325164.53</td>
<td>406</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Initiating Structure</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between groups</td>
<td>257038.14</td>
<td>6</td>
<td>42839.69</td>
<td>1.39</td>
</tr>
<tr>
<td>Within groups</td>
<td>12437667.81</td>
<td>402</td>
<td>30939.47</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>12694705.94</td>
<td>408</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Consideration</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between groups</td>
<td>546118.14</td>
<td>6</td>
<td>91019.70</td>
<td>3.42*</td>
</tr>
<tr>
<td>Within groups</td>
<td>10923318.61</td>
<td>411</td>
<td>26577.42</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>11469436.75</td>
<td>417</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Principal Influence</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between groups</td>
<td>1063514.83</td>
<td>6</td>
<td>177252.47</td>
<td>6.92*</td>
</tr>
<tr>
<td>Within groups</td>
<td>9454516.58</td>
<td>369</td>
<td>25621.99</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>10518031.42</td>
<td>375</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
### TABLE 14 (continued)

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of Squares</th>
<th>Degrees of Freedom</th>
<th>Mean Squares</th>
<th>F ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Resource Support</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between groups</td>
<td>534665.38</td>
<td>6</td>
<td>89110.89</td>
<td>2.82*</td>
</tr>
<tr>
<td>Within groups</td>
<td>1333392.50</td>
<td>422</td>
<td>31595.72</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>13868057.61</td>
<td>428</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Morale</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between groups</td>
<td>427965.39</td>
<td>6</td>
<td>71327.57</td>
<td>1.99</td>
</tr>
<tr>
<td>Within groups</td>
<td>14720611.50</td>
<td>411</td>
<td>35816.57</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>15148576.90</td>
<td>417</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Academic Emphasis</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between groups</td>
<td>1336304.38</td>
<td>6</td>
<td>56050.73</td>
<td>3.00*</td>
</tr>
<tr>
<td>Within groups</td>
<td>7767648.49</td>
<td>416</td>
<td>18672.23</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>8103952.87</td>
<td>422</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* p < .05.

15. H₀ There will be no difference in the mean scores in each stage of the change process on the effect that block scheduling has on student learning.

Analysis of Variance (ANOVA) was used to compare the mean scores of answers to this question on the demographic sheet concerning the effect that block scheduling had on student learning. Participants were given a Likert scale from 1-5 indicating strong negative effect, some negative effect, no effect, some positive effect, and strong positive effect. There were no significant differences in the mean scores on any stage of the
change process. The overall mean was 3.4 indicating that the effect was about halfway between no effect and some positive effect.

The means for the effect declined from those using block scheduling the longest to those who had never used it. The mean for the third year of Implementation or Institutionalization was 3.51 with a standard deviation of 1.07. The mean for the second year of Implementation was 3.34 with a standard deviation of 1.26. The mean for the first year of Implementation was 3.33 with a standard deviation of 1.08, and the mean for the Initiation stage was 3.30 with a standard deviation of 1.30. ANOVA yielded an F (3, 420) of .507; p < .678. Therefore, the hypothesis for the effect on student learning was not rejected. Results for 15. \( H_0 \) are presented in Table 15.

**TABLE 15**

ANALYSIS OF VARIANCE OF PERCEPTIONS OF THE EFFECT OF BLOCK SCHEDULING ON STUDENT LEARNING AT THE STAGES OF THE CHANGE PROCESS

<table>
<thead>
<tr>
<th>Source</th>
<th>Degrees of Freedom</th>
<th>Sum of Squares</th>
<th>Mean Squares</th>
<th>F ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Stages of Change Process</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between groups</td>
<td>3</td>
<td>2.19</td>
<td>.73</td>
<td>.507</td>
</tr>
<tr>
<td>Within groups</td>
<td>420</td>
<td>607.31</td>
<td>1.45</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>423</td>
<td>609.51</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\* p = .05.
4. What are the teachers' and administrators' perceptions of the effect that block scheduling has on the way that teachers teach and will perceptions differ in the stages of the change process?

16. $H_0$ There will be no difference in the mean scores in each stage of the change process on the effect that block scheduling has on the way that teachers teach.

Analysis of Variance (ANOVA) was used to compare the mean scores of answers to this question on the demographic sheet concerning the effect that block scheduling has on the way that teachers teach. Participants were given a Likert scale from 1-5 indicating strong negative effect, some negative effect, no effect, some positive effect, and strong positive effect. There were no significant differences in the mean scores on any stage of the change process. The overall mean was 3.55 indicating that the effect was half way between no effect and some positive effect.

The means for the effect were highest for the third year of Implementation or Institutionalization, followed by the first year of Implementation, the second year of Implementation, and the Initiation stages. The mean for the third year of Implementation or Institutionalization was 3.70 with a standard deviation of .947. The mean for the first year of Implementation was 3.63 with a standard deviation of 1.11. The mean for the second year of Implementation was 3.49 with a standard deviation of 1.14, and the mean for the Initiation stage was 3.43 with a standard deviation of 1.22. ANOVA yielded an
F(3, 416) of 1.14; p < .333. Therefore, the hypothesis for the effect that block
scheduling has on the way that teachers teach was not rejected. Results for 16. \( H_0 \) are
presented in Table 16.

**TABLE 16**

**ANALYSIS OF VARIANCE OF PERCEPTIONS OF THE EFFECT**

**OF BLOCK SCHEDULING ON THE WAY THAT TEACHERS TEACH**

**AT THE STAGES OF THE CHANGE PROCESS**

<table>
<thead>
<tr>
<th>Source</th>
<th>Degrees of Freedom</th>
<th>Sum of Squares</th>
<th>Mean Squares</th>
<th>F ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stages of Change Process</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between groups</td>
<td>3</td>
<td>4.32</td>
<td>1.44</td>
<td>.333</td>
</tr>
<tr>
<td>Within groups</td>
<td>416</td>
<td>525.83</td>
<td>1.26</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>419</td>
<td>530.14</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\* p = .05

**Summary**

The study addressed four research questions and sixteen hypotheses. All
hypotheses were tested in the null format. All but one used a one way analysis of
variance to determine if significant differences existed. The hypothesis dealing with
gender in research question two used a t-test for independent samples to determine
if significant differences existed. A posthoc test, Least Significant Differences (LSD) was used to determine where differences were found. The data were tested at the .05 level of significance.

Hypotheses one through eight addressed the first research question that asked how teachers and administrators perceive their school climates in the Initiation, Implementation, and/or Institutionalization stages of a change to block scheduling. The hypotheses examined the mean scores of the seven dimensions of the Organizational Health Index and the Total Climate scores. Significant differences were found on each dimension except Consideration and the Total Climate scores.

Hypotheses nine through 14 addressed the second research question that asked if perceptions of school climate differ when the following independent variables are taken into consideration: current job title, gender, age, education, years of experience, and subject assignment. These hypotheses also examined mean scores of the seven dimensions of the Organizational Health Index and the Total Climate scores based on the selected independent variables. No significant differences were found in any dimension based on gender or education. Job titles were not found to be significant in the Initiating Structure dimension, but were significant in the other six dimensions and the Total Climate score. No significant differences were found in age categories in any dimension but Principal Influence and Total Climate scores. No significant differences were found in years of experience in Institutional Integrity, Initiating Structure, Consideration, Resource Support, or Total Climate score. Significant differences were found in Principal...
Influence, Morale and Academic Emphasis dimensions. No significant differences were found in the Institutional Integrity, Initiating Structure, and Morale dimensions when the dominant subject assignment was considered. Differences did exist in the Consideration, Principal Influence, Resource Support, Academic Emphasis dimensions and the Total Climate scores.

Hypothesis 15 addressed the third research question that asked for the teachers' and administrators' perceptions of the effect that block scheduling has on student learning and if these perceptions would differ in the stages of the change process. There were no significant differences found in the mean scores of the stages of the change process. Participants believed that block scheduling had between no effect and some positive effect on the way that students learn.

Hypothesis 16 addressed the fourth research question that asked for the teachers' and administrators' perceptions of the effect that block scheduling has on the way teachers teach and if these perceptions would differ in the stages of the change process. No significant differences were found in the mean scores of the stages of the change process. Participants believed that block scheduling had between no effect and some positive effect on the way that teachers teach.

Further summary and discussion of these findings, conclusions, and recommendations follow in Chapter 5.
CHAPTER 5
SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary and Discussion
This study was conducted to identify teachers' and administrators' perceptions of school climate in four different stages of a change to block scheduling. The four stages of the change process are Initiation, those studying the possible change and not having made a decision to implement the change; the first year of Implementation; the second year of Implementation; and the third year of Implementation or Institutionalization.

A stratified purposeful random sample of nine high schools in the First Tennessee Regional District located in Northeast Tennessee was selected to participate in this study. A total of 586 teachers were surveyed. This represents 39.54% of the total population and 60% of the school systems in the First Tennessee Regional District. This study involved 118 participants from three schools in the Initiation stage of the change process, 91 participants from two schools in the first year of Implementation of block scheduling, 158 participants from three schools in the second year of Implementation, and 75 participants from one school in the third year of Implementation or Institutionalization. Responses were received from 442 educators, producing a return rate of 75.43%.

Perceptions were obtained using the Organizational Health Index (OHI), a 44-item survey (Hoy et al., 1991) and questions on a demographic information sheet. The OHI measures seven climate dimensions: Institutional Integrity, Initiating Structure,
Consideration, Principal Influence, Resource Support, Morale, and Academic Support. These dimensions and the Total Climate score were determined and analyzed in the four stages of the change process. Demographic factors investigated were gender, job title, age, level of education, years of experience, and subject assignment. The two questions on the demographic information sheet asked teachers and principals to rate the effect that block scheduling had on student learning and the way teachers teach from 1, indicating a strong negative effect, to 5, indicating a strong positive effect.

This study addressed four research questions involving 16 hypotheses. All hypotheses were tested in the null format at the .05 level of significance. Data were analyzed by using a one-way analysis of variance (ANOVA) to test for significant differences in the seven climate dimensions scores and the total climate scores in the four stages of the change process. ANOVA was also used to analyze the differences in the stages using various levels of independent variables such as job title, age, education, years of experience, subject assignment, and perceptions of the effect of block scheduling on student learning and the way teachers teach. A t-test was used to test for significant differences between perceptions of school climate between male and female respondents. When needed, a posthoc test, Least Significant Differences (LSD) test was used to determine where differences were found.

The first research question asked how teachers and principals perceived their school climate at the four stages of the change process. Eight hypotheses were examined, one hypothesis involving the total climate scores, and one for each of the seven
dimensions. There were important differences found in all dimensions except for the Consideration dimension and in the Total Climate scores.

In the Institutional Integrity dimension, important differences were found among three stages of the change process: the third year of Implementation and the Initiation stage; the second year of Implementation with the Initiation stage, and the third year of Implementation with the first year of Implementation. The schools not involved with a block scheduling change, those in the Initiation stage, had a higher Institutional Integrity score than the schools in the first, second, and third years of Implementation. It is not difficult to understand that schools undergoing a major restructuring change would not score the Institutional Integrity of their school as high as those whose school's structure had not changed significantly. This may confirm Fullan's (1991) claim that complex changes take three to five years from Implementation to Institutionalization, and that major restructuring efforts could take 5 to 10 years. Institutional Integrity may not improve until the change truly becomes "a regular part of daily life" (Dalin, 1993, p. 145). Therefore, during the change from Implementation to full Institutionalization, professional development should help incorporate change into each school day until the innovation is seen as a normal, vital part of the school.

In the Initiating Structure Influence dimension important differences were found among four stages of the change process: the first year of Implementation and the Initiation stage; the first year of Implementation and the second year of Implementation; the first year of Implementation with the third year of Implementation; and the second
year of Implementation with the Initiation stage. The third year of Implementation stage had the highest Initiating Structure score, followed by those in the Initiation stage. The first year of Implementation had the lowest Initiating Structure score as teachers and administrators in these schools are facing problems such as how to maintain or to improve standardized test scores while attempting to change teaching strategies and to manage the important structural change. Schools in the second year of Implementation are still struggling with these same problems but are feeling more comfortable about their school climate. Lippit, Langseth, and Mossop (1985) describe these feelings when they point out that change involves "an element of experimentation, risk, insecurity, challenge, and fear" (p. 35). Those in the process must face "the tangled web of relationships, issues, problems, challenges, values, and potentialities that invariably hang like a curtain between the entities into which people are divided and which they divide themselves" (p. 35). Professional development must address these concerns and help individuals manage the change.

In the Principal Influence dimension important differences were found among three stages of the change process: first year of Implementation and Initiation; the first year of Implementation and the second year of Implementation; and the first year of Implementation and the third year of Implementation. The schools in the first year of Implementation scored Principal Influence the highest, and the schools in the Initiation stage scored this dimension the lowest. Because of the important role that the principal has in the first year of Implementation of the change process, it follows that the principal
would be looked upon for direction and support. As Dalziel and Schoonover (1988)
suggest, principals are the change leaders who "must prepare their organization for
changing, choose the right people for effective teamwork, and implement the right
interventions to produce visible results" (p. 133).

In the Resource Support dimension important differences were found among four
stages of the change process: Initiation and the second year of Implementation; Initiation
and the third year of Implementation; the first and the second years of Implementation;
and the first and the third years of Implementation. The third year of Implementation had
the highest score for Resource Support, and the Initiation stage had the lowest score. It
takes time when implementing a change for teachers and administrators to realize what
resources are needed and to secure the funding for the materials. Those in the Initiation
stage have not experienced a major change and are left to acquire resources in the same
way as in the past. Professional development must inform teachers and principals of the
process involved in securing new resources and identifying what resources and sources
for resources are available.

In the Morale dimension important differences were found among three stages of
the change process: the second year of Implementation and the Initiation stage; the first
and the second years of Implementation; and the second and the third years of
Implementation. The school in the third year of Implementation reported the highest
Morale score, followed by the first year of Implementation. The second year of
Implementation reported the lowest Morale score. Those in the third year of
Implementation evidently are feeling comfortable with the change and their progress. Those in the Initiation stage are possibly beginning to wonder and to question why the majority of the other schools in the area have made a change and they have not. The schools in the second year of Implementation may be experiencing the "implementation dip" (Dalin, 1993, p. 145; Fullan, 1982) and feelings of insecurity mentioned by Lippit et al. (1985).

In the Academic Emphasis dimension important differences were found among three stages of the change process: the second year of Implementation and the Initiation stage; the first and second years of Implementation; and the second and third years of Implementation. The second year of Implementation reported the lowest scores for Academic Emphasis, and the Initiation stage reported the highest scores for this dimension. These differences may be attributed to problems relating to curriculum and the feeling that teachers are not able to cover the course work adequately during the first and second years of Implementation, another possible example of the "implementation dip." It must be noted, however, that the school in the third year of Implementation did not experience these same feelings or had worked them out as they rated this dimension second only to the Initiating stage. Again, professional development should prepare teachers and principals for these experiences and monitor and report the feedback given on report cards and standardized testing.

All stages of the change process had average Total Climate scores and high Consideration scores. Principals in these schools are perceived as being very friendly,
open, and collegial. They are seen as having genuine concern for their teachers. Block scheduling did not negatively affect school climate, and the change process involving block scheduling also did not have any negative effects on the school climate.

The second research question asked if perceptions of school climate differ in stages of the change process when the following independent variables are taken into consideration: gender, job title, age, education, years of experience, and subject assignment. Six hypotheses were examined, one hypothesis for each independent variable.

There were no important differences found in climate scores based on gender or education. This contradicts research by Wilson et al. (1984) and Pearlin and Schooler (1978) who found gender to be a main influence on perceptions of school climate. Hoy and Woolfolk (1993) found that education made a difference in positive perceptions of professional ability to work with students. Individuals who had attended graduate school were found to have positive attitudes and feelings of being able to motivate difficult students.

One's job title was not found to be important factor in the Initiating Structure dimension of school climate, but was important in the other six dimensions and the Total Climate score. A difference was found in the Institutional Integrity dimension between teachers and other professions, those who were neither teacher nor principal, such as assistant principals and counselors. Other professionals scored this dimension highest, followed by principals and then, teachers. The same differences and rankings were found
in the Consideration, Resource Support, and Morale dimensions and the Total Climate scores. The Principal Influence dimension showed differences between teachers and other professionals; and teachers and principals. Principals ranked the Principal Influence dimension the highest, followed by other professionals, and teachers. The Academic Emphasis dimension showed differences in perceptions of teachers and other professionals, and principal and other professionals. Other professionals provided the highest score on this dimension, followed by principals, and teachers.

One important reason that teachers may have different opinions about climate dimensions and the Total Climate score than those in the other professionals category may be that standardized test scores are not collected or compared with these in other assignments. Wallich (1981) cautioned that school leaders sometimes see the climate of their school as they would like for it to be rather than the way it is. Moos (1979) reported that teachers, like principals, often tend to view what they are directly responsible for more positively than other professionals might view the same situation, yet in this study teachers were the most negative in the Total Climate score and in all dimensions except for Initiating Structure.

There were no important differences found in age categories in any dimension other than Principal Influence and Total Climate scores. In both of these, differences were found between those who were 30-39 years of age and 40-49 years of age; and those who were 30-39 years of age and 50 or more years of age. For Principal Influence and Total Climate scores those 30-39 years of age were found to be most negative, while
those 50 or more years of age were the most positive. Those 40-49 years of age scored
the climate the second highest in these areas. This conflicts with some of the research by
Wilson et al. (1984) who found that the most positive age category was 30-39, and those
40-49 were the most negative.

There were no important differences found in years of experience in the
dimensions of Institutional Integrity, Initiating Structure, Consideration, Resource
Support, or Total Climate scores. However, important differences were found in the
Principal Influence, Morale, and Academic Emphasis dimensions.

In the Principal Influence dimension, the differences in years of experience were
found in those having 0-2 and 6-10 years of experience; those having 6-10 and 16 years
or more of experience; and those having 0-2 and 11-15 years of experience. Those
having 0-2 years of experience were the most positive, followed by those having 3-5, 16
or more, 11-15, and 6-10 years of experience. Those having 6-10 years of experience
were the most negative. Obviously new teachers feel a greater amount of principal
influence than other teachers. While these findings generally agree with Kalis' (1980)
study which found that nontenured teachers had a more positive perception of the school
climate than tenured teachers, a conflict exists in that she found that the longer teachers
were in a school, the more negative perceptions would be.

In the Morale dimension, important differences were found between those with
0-2 years of experience and those with 11-15 years of experience; and those with 11-15
years of experience and those with 16 or more years of experience. Again, teachers with
0-2 years of experience scored the Morale dimension the highest, followed by those having 16 or more, 3-5, 6-10 and 11-15 years of experience. Those with 11-15 years of experience were the most negative. New teachers have many good feelings about being hired to do the job they have been trained for versus those who have taught for 11-15 years and are less than halfway through their career. Those with 16 or more years of experience reported the second highest morale scores possibly because they have accepted the reality of their work situation and are committed to making the best of their career. Kalis (1980) found that teachers who are more satisfied with their work setting were more likely to have high morale and to perceive their climate as being open and supportive. Those responsible for professional development should be aware that those with 11-15 years of experience could be more negative in the Morale dimension. Attempts should be made to boost morale and provide positive feedback and experiences for this group.

In the Academic Emphasis dimension, an important difference was also found in those having 11-15 and 16 years or more of experience. Those having 16 or more years of experience scored this dimension the highest, and those with 11-15 years of experience scored this dimension the lowest. This may also be attributed to the problem with the morale of those with 11-15 years of experience and Kalis' (1980) findings, although those having 16 years or more of experience were found to be more positive in this dimension.

When subject assignment was considered, no important differences in perceptions were found in the Institutional Integrity, Initiating Structure, and Morale dimensions.
Differences were found in the perceptions of teachers of different subjects in the Consideration, Principal Influence, Resource Support, and Academic Emphasis dimensions and the Total Climate scores.

In the Consideration dimension, important differences in perceptions were found among specific subject area teachers and those who were assigned to the "other" category, the category that includes all not assigned to teach language arts, math, science, social studies, physical education/wellness, or vocational classes. This would include teachers of band, art, special education, and assistant principals. The significant differences were found among these "others" and those who were language arts, math, science, social studies, and vocational teachers. Differences were also found among social studies teachers and language arts teachers and vocational teachers. Those in the "other" group rated the climate highest for the Consideration dimension. This may be explained by the fact that this dimension represents genuine concern and behavior by the principal, and those in "other" subjects and assignments often have a high amount of community interest and support. There also are not as many of these "other" categories assigned in a school, so more attention by the principal may be given to each individual in this category. This does not explain, however, why the social studies teachers had the most negative perceptions.

Important differences in perceptions in the Principal Influence dimension were found among those in the "other" category and those teaching all other courses. Vocational teachers' perceptions also differed significantly from language arts, math, and
social studies teachers. Those in the "other" category ranked this dimension the highest, followed by vocational teachers.

In the Resource Support dimension, important differences in perceptions were found with social studies teachers and those teaching math and physical education/wellness. The perceptions of those in the "other" category also differed significantly with those teaching language arts, science, and social studies. The perceptions of social studies teachers were found to differ with the physical education/wellness teachers' perceptions. Physical education/wellness scored this dimension the highest, followed by "others." Social studies teachers were the most negative.

In the Academic Emphasis dimension, important differences were found among the perceptions of those in the "other" category and those who taught language arts, math, social studies, physical education/wellness, and vocational courses. Differences were, therefore, found between others and all subject assignments but science. "Others" scored this dimension highest; social studies teachers again were the most negative.

For the Total Climate scores, important differences in perceptions were again found among the "other" category and all categories except science. Differences were also found among social studies teachers and science and vocational teachers. When looking at climate scores by subject assignment, those who were in the "other" category had more important differences than any other group. This same group had the highest
climate scores in the Total Climate scores, followed by science, vocational, language arts, physical education/wellness, math, and social studies teachers.

The third research question asked for teachers' and administrators' perceptions of the effect that block scheduling has on student learning and if these perceptions would differ in the stages of the change process. One hypothesis addressed this question. There were no important differences found in the scores in the stages of the change process. The overall mean for the sample was 3.4, indicating that the participants expressed that block scheduling had between no effect to some positive effect on the way students learn.

The fourth research question asked for teachers' and administrators' perceptions of the effect that block scheduling has on the way teachers teach and if these perceptions would differ in the stages of the change process. One hypothesis addressed this question. There were no significant differences found in the scores in the stages of the change process. The overall mean was 3.5, indicating that the participants expressed that block scheduling had between no effect to some positive effect on the way teachers teach.

Conclusions

Because the sampling method used in this study was a stratified purposeful random sample, insights into characteristics of schools in each stage of a change process involving block scheduling and into the variations that exist in each stage allow generalizations to be made about each stage of the process. However, generalizations can only be made about the findings for the schools in the First Tennessee Regional District.
Conclusions for the total population cannot be made because the sample was based upon the population of schools only in that district.

1. Total Climate scores do not differ in the stages of the change process, although differences can be found in all dimensions except Consideration.

2. Education and gender were not found to influence perceptions of school climate.

3. Job title and the dominant subject assignment were two variables that caused significant differences to be found in climate dimensions and Total Climate scores.

4. Teachers and principals reported that block scheduling has no effect to some positive effect on the way students learn.

5. Teachers and principals reported that block scheduling has no effect to some positive effect on the way teachers teach.

Recommendations

This study indicated that block scheduling has no significant differences on total climate scores and the Consideration dimension of the Organizational Health Index (OHI). This suggests that block scheduling does not negatively effect or harm the total school climate; however, more study is needed to determine if block scheduling can be used to improve school climate.
1. Results of the study should be used to develop effective staff development sessions for high schools in the First Tennessee Region implementing or contemplating block scheduling.

2. A study should be done to observe teaching methods used in block scheduled classes to determine why teachers indicated that block scheduling had between no effect to some positive effect on the way teachers teach and to determine if appropriate staff development on teaching methods is needed.

3. A study should be conducted using a random sample that would allow generalizations to be made to all high schools involved in block scheduling changes.

4. A study should be conducted that includes students', parents', and community members' perceptions of block scheduling and the school climate.

5. Further study using different climate instruments should be conducted to verify the validity of the conclusions.

6. Further study to develop an instrument more specific to block scheduling as a change process could be conducted and developed.
REFERENCES
References


Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.


APPENDIX A

LETTER OF REQUEST TO SUPERINTENDENT/DIRECTOR
Dear Superintendent/Director «Last name»:

I am currently involved in a research project which is a requirement for the Ed. D. degree in the Department of Educational Leadership and Policy Analysis at East Tennessee State University. I am planning to survey a sample of high school teachers and administrators in the First Tennessee Regional District who have made a decision concerning implementation of block scheduling to obtain their perceptions of school climate.

One school in your system has been selected for participation in this study by a stratified purposeful random sampling method. This purpose of this letter is to request your permission to survey the high school teachers and administrators in the following school:

«School 1»

Your permission will allow me to contact the principal of this school to arrange to have the teachers and administrators of the school complete a Demographic Information sheet and an Organizational Health Index Survey during a faculty meeting in November. No comparisons will be made between school systems or individual schools. No systems, schools or individuals will be identified by name in this study. Confidentiality will be maintained.

Enclosed is a consent form for you to grant or deny permission to contact your principal. Also enclosed is a stamped, self-addressed envelope for your convenience.

Your consideration and assistance in this research project is greatly appreciated.

Sincerely,

Chele L. Chaplain Dugger
Doctoral Student
East Tennessee State University
Consent for
Chele L. Chaplain Dugger
to Conduct Study and to Contact Principals

_____ Yes, You may contact the principal of the following high school in my district which has made a decision concerning implementation of block scheduling in order to collect data concerning teachers' and administrators' perceptions of school climate:

«School 1»

_____ No, You may not contact the principal of the high school in my district which has made a decision concerning implementation of block scheduling in order to collect data concerning teachers' and administrators' perceptions of school climate.

__________________________________________
Superintendent/Director

«School System»

__________________________
Date

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
APPENDIX B

FOLLOW-UP LETTER TO SUPERINTENDENT/DIRECTOR
Dear Superintendent/Director xxxx:

On xxxxxxxx, a letter was sent to you concerning a survey and research project dealing with school climate and block scheduling. In the letter I requested your permission to contact the principal of a school who were selected as making some decision involving block scheduling in his/her high school. My records indicate that I have not yet received a response from you.

I have enclosed a copy of the letter that was mailed to you previously and a copy of the response form. I certainly realize that you have many requests for your time and attention. Is it possible that you might be able to take a few minutes to complete that form and drop it in the mail to me today? I would greatly appreciate your assistance with this project.

Sincerely,

Chele L. Chaplain Dugger
Doctoral Student
East Tennessee State University
APPENDIX C

LETTER OF REQUEST TO PRINCIPAL
Dear Principal «Last Name»:

I am currently involved in a research project which is a requirement for the Ed.D. degree in the Department of Educational Leadership and Policy Analysis at East Tennessee State University. I am in the process of gathering data for a study concerning school climate in schools that have made a decision concerning implementation of block scheduling.

Your school was selected for participation by a stratified purposeful random sampling method. Your superintendent/director has granted permission for the teachers and administrators in your school to participate in a survey of their perceptions of school climate.

No comparisons will be made between systems, individual schools. No systems, schools or individuals will be identified by name in this study. Confidentiality will be maintained.

I am requesting that your school counselor or another faculty member of your choice be selected to pass out and to collect survey forms during a faculty meeting in November. There will be a Demographic sheet and an Organizational Health Index Survey to be completed. I will send the information with instructions to the faculty member of your choice along with a stamped, self-addressed envelope.

Would you please take a few minutes of your valuable time to fill out the enclosed form and return it to me in the enclosed stamped, self-addressed envelope so that I can prepare the packet to send to the faculty member you have selected?

Your assistance is greatly appreciated.

Sincerely,

Chele L. Chaplain Dugger
Doctoral Student
East Tennessee State University
Principal's Response to Chele L. Chaplain Dugger for the School Climate and Block Scheduling Study

I have selected the following faculty member to administer the survey during a faculty meeting in November:

____________________
(name)

____________________
(title/position)

____________________
(planning period time)

The number of professional, certificated faculty members in our school for the 1996-97 school year is _____________.
The number of students enrolled in our school this year is _____________.
Our faculty meeting in November will take place on or around _____________.
(approximate date)

____________________
Principal

«High School»

«School System»
APPENDIX D

FOLLOW-UP LETTER TO PRINCIPAL
Dear Principal xxx:

On xxxxxxxxxxxx, a letter was sent to you concerning a survey and research project dealing with school climate and stages of implementation of block scheduling. In the letter I requested the name of a faculty member of your choice to administer the survey during your next faculty meeting, the number of professional, certificated members of your faculty, and the approximate date of your November faculty meeting. My records indicate that I have not yet received a response from you.

I have enclosed a copy of the letter that was mailed to you previously and a copy of the response form. I certainly realize that you have many requests for your time and attention. Is it possible that you might be able to take a few minutes to complete that form and drop it in the mail to me today? I would greatly appreciate your assistance with this project.

Sincerely,

Chele L. Chaplain Dugger
Doctoral Student
East Tennessee State University
Dear Colleague:

The information enclosed is part of a study which is being conducted about school climate in high schools in the First Tennessee Regional District which have made a decision about block scheduling. You have been selected by your principal to administer the survey during your next faculty meeting. Having one of your own teachers to administer the survey during a faculty meeting will allow members to respond openly and freely in a non-threatening environment. This is also the way the creators of the survey have recommended that the Organizational Health Index data be collected.

I certainly appreciate your help. There are five steps involved in this procedure:

1. Distribute the instrument to all certificated members of your faculty during your next faculty meeting. Please pass out the forms at the beginning of the meeting, and allow approximately 15 minutes to complete the forms. Record the names of faculty members who may not be present.

2. Ask the faculty to read and to complete the Demographic Sheet, and the Organizational Health Index Survey.

3. Collect the forms. The forms must remained stapled.

4. The following day, please locate any faculty member who did not attend the faculty meeting, using your list recorded at the meeting. Ask members who did not attend to complete the forms and to return them to you.

5. When you have all of the completed forms, please count the number of forms returned and record the number on the enclosed sheet of paper. Put the sheet with the numbers on top of the surveys and place it and the surveys in the stamped, self-addressed envelope provided. Then drop the envelop in a mailbox indicating outgoing mail. The code on the envelope is to let me know which school has returned the surveys.

I really would love to have a 100% return rate for this study. Your principal has provided me with the total number of certificated personnel employed this year at your school, and I have enclosed that number of forms in your packet.

Thank you so much for your valuable time, and help with this project. Your assistance will help to broaden the base of knowledge of the effects of block scheduling.

If you have any questions about this project or if I can ever return the favor, please do not hesitate to contact me. My work number is xxx-xxxx. The best time to call is 11:30-12:30. I certainly do appreciate you! The enclosed is a token of my appreciation.

Sincerely,

Chele L. Chaplain Dugger
Number of Forms Collected

Demographic Sheets and Organizational Health Index Forms
APPENDIX F

DEMOGRAPHIC INFORMATION
Demographic Information

The following demographic questions are provided so better insight can be obtained regarding the perceptions of various groups of teachers and principals. Please respond to each statement by placing the appropriate number on the blank.

1. Current job title
   1. teacher
   2. principal
   3. Other (Please specify __________________)

2. Gender
   1. male
   2. Female

3. Approximate age
   1. Less than 30
   2. 30-39
   3. 40-49
   4. 50 or more

4. Highest educational degree completed
   1. Bachelors Degree
   2. Masters Degree
   3. Educational Specialist
   4. Doctorate

5. Years of experience as a certified educator
   1. 0-2 (Include this year)
   2. 3-5
   3. 6-10
   4. 11-15
   5. 16 or more

6. Dominant subject assignment this year
   1. Language arts
   2. Math
   3. Science
   4. Social Studies
   5. Physical Education
   6. Vocational Courses
   7. Other (Please specify __________________)
For the next two questions, please select a number from the following scale which bests answers the question:

1 - strong negative effect  
2 - some negative effect  
3 - no effect  
4 - some positive effect  
5 - strong positive effect

7. How much of an effect do you think block scheduling has on student learning?

8. How much of an effect do you think block scheduling has on the way teachers teach?

*****************************************************************************

Only principals are to respond to the last item.

10. Number of years of experience you have as principal of present school

1. 0-2
2. 3-4
3. 5-7
4. 8 or more

Thank you for your time and support of this research project!
APPENDIX G

ORGANIZATIONAL HEALTH INDEX (OHI) SURVEY INSTRUMENT
### Organizational Health Index (OHI)

**Directions:** The following are statements about your school. Please indicate the extent to which each statement characterizes your school by circling the appropriate response.

- **RO** = Rarely Occurs
- **SO** = Sometimes Occurs
- **O** = Often Occurs
- **VFO** = Very Frequently Occurs

<table>
<thead>
<tr>
<th>Statement</th>
<th>RO</th>
<th>SO</th>
<th>O</th>
<th>VFO</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Teachers are protected from unreasonable community and parental demands.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. The principal gets what he or she asks for from superiors.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. The principal is friendly and approachable.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. The principal asks that faculty members follow standards and regulations.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Extra materials are available if requested.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Teachers do favors for each other.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. The students in this school can achieve the goals that have been set for them.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. The school is vulnerable to outside pressures.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. The principal is able to influence the actions of his/her superiors.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. The principal treats all faculty members as his or her equals.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. The principal makes his or her attitudes clear to the school.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Teachers are provided with adequate materials for their classrooms.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. Teachers in this school like each other.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

15. Community demands are accepted even when they are not consistent with the educational program.

16. The principal is able to work well with the superintendent.

17. The principal puts suggestions made by the faculty into operation.

18. The principal lets faculty know what is expected of them.

19. Teachers receive necessary classroom supplies.

20. Teachers are indifferent to each other.

21. Students respect others who get good grades.

22. Teachers feel pressure from the community.

23. The principal's recommendations are given serious consideration by his or her superiors.

24. The principal is willing to make changes.


26. Supplementary materials are available for classrooms.

27. Teachers exhibit friendliness to each other.

28. Students seek extra work so they can get good grades.

29. Select citizen groups are influential with the board.

30. The principal is impeded by the superiors.
31. The principal looks out for the personal welfare of faculty members.  
32. The principal schedules the work to be done.  
33. Teachers have access to needed instructional materials.  
34. Teachers in this school are cool and aloof to each other.  
35. Teachers in this school believe that their students have the ability to achieve academically.  
36. The school is open to the whims of the public.  
37. The morale of the teachers is high.  
38. Academic achievement is recognized and acknowledged by the school.  
39. A few vocal parents can change school policy.  
40. There is a feeling of trust and confidence among the staff.  
41. Students try hard to improve on previous work.  
42. Teachers accomplish their jobs with enthusiasm.  
43. The learning environment is orderly and serious.  
44. Teachers identify with the school.
APPENDIX H

CODING AND SCORING OF THE OHI
Coding and Scoring of the OHI

The OHI is scored by coding a 1 for "rarely occurs," 2 for "sometimes occurs," 3 for "often occurs," and 4 for "very frequently occurs" for all items. Item numbers 8, 15, 20, 22, 29, 30, 34, 36, and 39 were reverse scored. Then each item is averaged for the population. The average population scores for the items comprising each dimension is added to yield population dimension scores. These seven dimensions represent the health profile for the population.

Institutional Integrity (II) = 1 + 8 + 15 + 22 + 29 + 36 + 39
Initiating Structure (IS) = 4 + 11 + 18 + 25 + 32
Consideration (C) = 3 + 10 + 17 + 24 + 31
Principal Influence (PI) = 2 + 9 + 16 + 23 + 30
Resource Support (RS) = 5 + 12 + 19 + 26 + 33
Morale (M) = 6 + 13 + 20 + 27 + 34 + 37 + 40 + 42 + 44
Academic Emphasis (AE) = 7 + 14 + 21 + 28 + 35 + 38 + 41 + 43

The scores must be standardized with a mean of 500 and a standard deviation of 100. This is called the SdS score. It is obtained by computing the differences between the population score and the mean for the normative sample. Then the difference is multiplied by 100. The product is then divided by the standard deviation of the normative sample and 500 is added. The process must be completed for each dimension using the following formulas:

SdS for II = 100 x (II - 18.61)/2.66 + 500.
SdS for IS = 100 x (IS - 14.36)/1.83 + 500.
SdS for C = 100 x (C - 12.83)/2.03 + 500
SdS for PI = 100 x (PI - 12.93)/1.79 + 500
SdS for RS = 100 x (RS - 13.52)/1.89 + 500
SdS for M = 100 x (M - 25.05)/2.64 + 500
SdS for AE = 100 x (AE - 21.33)/2.76 + 500

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
Next, an overall health index is computed using the following formula:
\[
\text{Health} = \frac{(\text{Sds for II}) + (\text{Sds for IS}) + (\text{Sds for C}) + (\text{Sds for PI}) + (\text{Sds for RS}) + (\text{Sds for M}) + (\text{Sds for AE})}{7}
\]
The mean of the "average" school is 500. Prototype profiles were created by the instrument creators for healthy and unhealthy schools using the normative data from "a large diverse sample of schools from New Jersey" (Table 4), (Hoy, et al., 1991, p. 188).

<table>
<thead>
<tr>
<th>HEALTH CLIMATE SCALES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health Dimensions</td>
</tr>
<tr>
<td>-----------------------</td>
</tr>
<tr>
<td>Institutional Integrity</td>
</tr>
<tr>
<td>Initiating Structure</td>
</tr>
<tr>
<td>Consideration</td>
</tr>
<tr>
<td>Principal Influence</td>
</tr>
<tr>
<td>Resource Support</td>
</tr>
<tr>
<td>Morale</td>
</tr>
<tr>
<td>Academic Emphasis</td>
</tr>
<tr>
<td>Overall Health</td>
</tr>
</tbody>
</table>
VITA
Chele Lynn Chaplain Dugger

Personal Data:  Date of Birth:  January 13, 1958
Place of Birth:  Knoxville, Tennessee

Education:  Public Schools, Palm Beach County, Florida
Johnson Bible College, Knoxville, Tennessee;
  Bible and Education, B.S., 1979, (3.66 GPA)
Milligan College, Milligan College, Tennessee;
  English, Sociology, and Secondary Education,
  B.A., 1979, (3.6 GPA)
East Tennessee State University, Johnson City, Tennessee;
  Education, M.Ed., 1983, (3.9 GPA)
East Tennessee State University, Johnson City, Tennessee;
  Supervision and Administration, Ed.S., 1985, (4.0 GPA)
East Tennessee State University, Johnson City, Tennessee;
  Educational Leadership, Ed.D., 1997, (4.0 GPA)

Professional Experience:  Teacher, Carter County School System, Elizabethton, Tennessee;
  Hampton High School, 1979-1992
  Cloudland High School, 1992-present
Carter County Education Association
  Editor, CCEA NEWS and VIEWS, 1995-present
  Building Representative
  Negotiations Committee

Professional Memberships:  Association for Supervision and Curriculum Development
  Carter County Education Association
  Tennessee Education Association
  National Education Association
  National Council of Teachers of English
  American Association of Teachers of Spanish and Portuguese
  Phi Delta Kappa
  Phi Kappa Phi

Honors and Awards:  Outstanding High School Student Teacher,
  Milligan College, Fall, 1978
  Career Level III teacher, 1987-present