The Relationship of Experience, Education, and Tennessee Career Ladder Status to Teachers' Perceptions of Staff Development Needs in Block Scheduled Programs

Rita S. Mullins

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THE RELATIONSHIP OF EXPERIENCE, EDUCATION, AND TENNESSEE CAREER LADDER STATUS TO TEACHERS’ PERCEPTIONS OF STAFF DEVELOPMENT NEEDS IN BLOCK SCHEDULED PROGRAMS

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
Rita S. Mullins

May 1997
APPROVAL

This is to certify that the Graduate Committee of

Rita S. Mullins

met on the

7th day of March, 1997

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

Chair, Graduate Committee

Interim Dean, School of Graduate Studies

Signed on behalf of the Graduate Council

Signed on behalf of the Graduate Council
ABSTRACT

THE RELATIONSHIP OF EXPERIENCE, EDUCATION, AND TENNESSEE CAREER LADDER STATUS TO TEACHERS' PERCEPTIONS OF STAFF DEVELOPMENT NEEDS IN BLOCK SCHEDULED PROGRAMS

by

Rita S. Mullins

The problem related to this study was to develop a clearer understanding of the staff development needs of high school classroom teachers implementing block scheduled programs. The purpose of this study was to determine if teachers' perceptions of staff development needs differed when teaching experience, education (highest degree earned), and Tennessee Career Ladder status were considered. Four levels of each independent variable were analyzed by six categories of perceptions, the dependent variables. The categories were: (a) Planning, (b) Knowledge, (c) Satisfaction with staff development, (d) Adult learning strategies, (e) Level of involvement, and (f) Impact on student testing and grades.

The 181 classroom teachers from eight Northeast Tennessee county school systems were surveyed using an instrument containing 50 response items. The return rate was 79% (N=143). Three research questions were answered by analyzing three null hypotheses using one-way analysis of variance (ANOVA) and post hoc Tukey multiple comparison tests. The alpha level was .05.

The null hypothesis for all levels of teaching experience was retained. For all education or degree levels, the null hypothesis was retained except for the Educational Specialist group in the planning category and the Bachelor's group in the knowledge category. The null hypothesis for Tennessee Career Ladder status was retained except for the Level III group in the knowledge category.

Beyond the analyses of hypotheses, other survey results indicated that policy makers must involve teachers in decisions about block scheduling implementation and staff development through inclusive, school-based planning committees. Teacher comments implied that periodic needs assessments, teacher support, program evaluation, and assessment of student learning are critical to block scheduling.
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 The Relationship of Experience, Education, and Tennessee Career Ladder Status To Teachers' Perceptions of Staff Development Needs in Block Scheduled Programs

IRB # 96-006E

Principal Investigator Rita S. Mullins

Department Educational Leadership and Policy Analysis

Date Submitted, July 12, 1996

Institutional Review Board, Chair

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DEDICATION

As the sun rises across the coastal waters near my new home in North Carolina, I consider those important persons in my life who have helped me to become who I am. To them, I dedicate this book.

To my much-loved husband Charlie who has been my main supporter, my counselor, my sounding board, but most importantly--my friend.

To my son Matthew who teaches me each day what love, patience, and miracles are all about.

To my daughter Katherine who has overcome many obstacles in life and still perseveres.

To my Father for his pride in me, to my Mother for her incredible strength and will, to my sister Gladys who early introduced me to books and to the possibilities of college, and to my sister Vada whose emotional support and love are always there.

To my Aunt Mattie who taught me what unconditional love is all about.

To my friend and colleague Dr. Koleta Tilson who was my inspiration and my mentor for fifteen productive years.

To my friend Sue O’Dell who opened her home to me and was always ready to listen and to advise.

To all my teachers who looked for and found the best in me.
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I wish to express profound appreciation and gratitude to the following:

To Dr. Donn Gresso, my committee chair, for his expertise and leadership, for his kindness and patience, for his compassion for others, but above all, for modeling the kind of teacher that I always strive to be.

To Dr. Gunapala Edirisooriya, for his expertise in statistics and research, for his willingness to help, and for his good humor and wisdom in admonishing me to listen more and talk less.

To Dr. Marie Hill, for her encouragement, for her practical wisdom, but most of all, for being an outstanding role model and an example of all that is good in our field.

To Dr. Norma MacRae, a kindred spirit, for being an outstanding teacher and advisor.

To my husband, Charles Mullins, who was my resident math and statistics expert and my computer consultant, always ready to listen to one more chapter or to run just one more database.

To the Faculty of Sullivan Central High School, particularly the English Department and the Library Staff, for their encouragement and willingness to help.

To all Tennessee teachers, for their support and help.
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CHAPTER 1
INTRODUCTION

From the eighties into the nineties, through the presidential administrations of Ronald Reagan, George Bush, and into that of Bill Clinton, our public school system has borne the brunt of a "rhetoric of disaster" in which American schools have been portrayed as failures--responsible for the economic problems that this country has experienced (Berliner, 1992, p. 2). School reform continues to be the focus of considerable media attention. Reports about the condition of public education have proliferated, and states have scrambled to devise their own unique school reform agendas.

Tennessee policy makers, led by Governors Lamar Alexander and Ned McWherter, have developed school reform packages. Alexander’s Better Schools plan of 1984, which included the Tennessee Career Ladder program (Bellon, 1992), was followed in 1992 by McWherter’s Education Improvement Act (1992). This bill directed the Tennessee State Board of Education to develop “a high school curriculum that will prepare students to be successful in the twenty-first century, including a two-track high school curriculum, one for college bound and one for students entering the work force” (p. 15). In response to this mandate, the State Board of Education
adopted *The High School Policy: A New Vision for Tennessee High Schools* (1993), as a blueprint for improving the high school program through emphasis on preparing students for living and working in the twenty-first century. This "vision" statement for the future Tennessee high school focused on providing adequate school to work transition, improving the high school curriculum and the methodology of teaching and learning, and encouraging more parental involvement (Tennessee State Board of Education, 1993).

*The High School Policy* (1993) provided the following directive: "... To optimize student learning and teacher planning, schools are encouraged to consider alternative ways of organizing the school day. The number of class periods during the day, variations of the length of class periods, blocking interdisciplinary classes, and rotating schedules are among the options available" (p. 10). Although *The High School Policy* (1993) represented an effort by the Tennessee Board of Education to redesign the high school program in Tennessee, the focus of the reform was the individual high school and improvement of student learning in that school. According to many reformers, the biggest hindrance to meeting the learning needs of high school students is the time structure of the school day (Campbell County Board of Education, 1995). In many Northeast Tennessee high schools, educational policy makers have
chosen block scheduling as the vehicle for restructuring the high school program.

The most recent and comprehensive data about the use of block scheduling in American high schools were reported in *High School Restructuring: A National Study* (Cawelti, 1994). The research indicated that block scheduling was in general use in 11% of American high schools, was partially implemented in 12% of high schools, and was not planned for next year in 61% of high schools responding to the survey. The report concluded that block scheduling was a means to “overcome fragmentation of the school day and facilitate a more integrated curriculum and a greater variety of teaching activities” (p. 66).

In adopting block scheduling as an educational change, many school systems in Northeast Tennessee have sought to achieve improvement of the high school program. Well-planned and delivered staff development programs for block scheduled programs are regarded as a key to achieving successful educational change and the reshaping of school culture. Staff development must have an integral role in implementation of block scheduling if lasting change in how teachers teach and how students learn is to be achieved (Fullan, 1990). The success of a new venture such as block scheduling depends upon the willingness of professional educators to adopt new
approaches to teaching. Further, the teachers’ years of teaching experience, their educational degrees, and their Tennessee Career Ladder status may affect the success of block scheduling. Without attention to these factors and to the relationship between new teaching strategies and the school culture, block scheduling will not succeed, and active learning, cooperative learning, integrated instruction, knowledge of learning styles, and other innovations seen as vital to Tennessee’s “vision” for the high school may prove to be only the latest fad in education (Instructional Improvement With the 4:4 Block Schedule: Principles of Implementation, 1994).

Statement of the Problem

Successful implementation of block scheduling in high school programs requires an assessment of perceptions of staff development needs of those teachers involved in the innovation. Staff development planners must realize that these identified needs may differ based on teachers’ levels of experience, education, and Tennessee Career Ladder status. If systemic reform is to take place in American public schools, educational policy makers must understand the positive relationship between changing school culture and meeting the staff development needs of teachers, and then they must develop those policies that will support that relationship and sustain the implementation of block scheduling.
Purpose of the Study

The purpose of this study is to determine perceptions of staff development needs of randomly selected Northeast Tennessee high school teachers implementing block scheduled programs. The relationships between these perceptions of staff development needs and the teachers' levels of experience, education, and Tennessee Career Ladder status are being examined. Recommendations will be made to policy makers about staff development models for block scheduled high school programs that support teachers' perceived needs and the "vision" for the Tennessee high school. It is imperative to assess if the high school program envisioned by the Tennessee State Board of Education is becoming a reality--a part of each school's culture. This study will contribute to that assessment.

Research Questions

The following research questions will guide this study:

Research Question 1

Was there any difference among high school classroom teachers with various levels of teaching experience in their perceptions of staff development needs for block scheduling?
Research Question 2

Was there any difference among high school classroom teachers with various degrees in their perceptions of staff development needs for block scheduling?

Research Question 3

Was there any difference among high school classroom teachers at various levels of Tennessee Career Ladder status in their perceptions of staff development needs for block scheduling?

Significance of the Problem

reform of the high school program: a core curriculum, two paths (university and technical), a focused plan of study, active learning, integrated curriculum, extra support to meet students' needs, assessment of learning, school-wide improvement, and professional development (pp. 8-13). Of these, "School-Wide Improvement" directed policy makers "to consider alternative ways of organizing the school day" and included block scheduling as a way to achieve that reorganization. The last element, "Professional Development," referred to in an earlier draft of The High School Policy (Tennessee State Board of Education, 1993) as "Staff Development," asserted that "the school will become a learning community"(p. 13) and directed that adequate time and support for professional development be provided to educators. These two components of the "vision" for Tennessee high schools, re-organization of the school day and staff development, must be studied to determine if the staff development needs of educators in block scheduled programs are being addressed.

Limitations

1. This study will be limited to high school classroom teachers in selected Northeast Tennessee high schools where block scheduling was implemented in the 1995-96 school year.

2. This study will be based on responses from classroom teachers in those selected high schools.
Definitions

The following definitions will be applied in this study:

Staff Development

Staff development is “a process designed to foster personal and professional growth for individuals within a respectful, supportive, positive organizational climate having as its ultimate aim better learning for students, and continuous, responsible self-renewal for educators and schools” (Richardson, Flanigan, & Prickett, 1990, p. 4). Determined by school and district goals, staff development is a group activity aimed at helping educators move in a common direction for the purpose of achieving similar skills and concepts (Duke, 1990). A key factor in school reform, “effective staff development is the vehicle for school improvement and strategic planning” (Blackburn, 1992, p. 267).

Professional Development

Professional development is “a dynamic process of learning that leads to a new level of understanding or mastery and a heightened awareness of the context in which educators work that may compel them to examine accepted policies and routines.” While staff development is aimed at the group, professional development
“is designed for individuals, fosters the cultivation of uniqueness and individuality, is guided by the individual’s judgment, and leads to increased personal understanding and awareness” (Duke, 1990, p. 71). Professional development refers to activities that “help individual staff members become more effective or more competent in specific areas of identified needs” (Blackburn, 1992, p. 267).

**Inservice**

Inservice, “a generic term used to include all training activities in schools and districts, . . . encompasses any activity of any duration where teachers and administrators are brought together to receive information and/or training” (Blackburn, 1992, p. 267). Inservice is generally planned by the administration, presented at specific times for specific groups, and required by higher authorities in the school system (Orlich, 1989). Such single-event inservice opportunities are used “to disseminate information, to inspire, to entertain, or to raise awareness” (Blackburn, 1992, p. 267).

**School Culture**

School culture is the set of values, understandings, and meanings held collectively within a school. School culture can have several dimensions: (a) “the artifacts of culture as manifested in what people say, how people behave, and how things look”; (b) “the
perspectives of people . . . the shared rules and norms”; (c) “values [which] provide the basis for people to evaluate the situations they face,” and (d) “assumptions”--commonly held beliefs which govern relationships and the organization itself (Sergiovanni & Starratt, 1993, pp. 92-93).

**Block Scheduling**

Block scheduling, sometimes referred to as “4 x 4” or “4-bell,” is a method of scheduling classes within longer blocks of times (generally 90 minutes) and allows students to complete four academic courses during the first half of the school year and four courses during the second half of the school year, for a possible total of eight credits (McGee, 1995). Adopted as a means for improving student learning, block scheduling allows more flexibility in teaching strategies and accommodation of learning styles, more time on task, and more emphasis on active involvement of students in varied learning activities (Barnes, 1995; Cawelti, 1994).

**Tennessee Career Ladder Program**

The Tennessee Career Ladder Program, introduced by Governor Lamar Alexander as a “Master Teacher Plan” and subsequently passed by the state legislature in 1984, is a multi-level incentive plan that offers exemplary educators merit pay of $1000 for Career
Ladder I teachers, $2000 for Career Ladder II teachers, and $3000 for Career Ladder III teachers. Those qualifying for a Level II or III certificate can earn additional pay for working an extended contract of one or two months (Bellon, 1992). The Career Ladder Program has several purposes: (a) recognition of outstanding teachers, (b) improvement of instruction and student learning, and (c) retention of quality teachers in the classroom (Tennessee Department of Education, 1996a). In addition to teachers, evaluation models have been developed for principals, assistant principals, instructional and attendance supervisors, school psychologists, librarians, counselors, and school social workers. Participation in the program is optional, but all teachers must hold a Professional License after an initial four-year apprenticeship (Jordan, 1996).

Overview 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, significance of the problem, limitations, definitions, and overview of the study.

Chapter 2 presents a review of selected literature related to planning for differences in teachers' staff development needs,
concerns about educational change such as implementation of block scheduling, and improvement of staff development programs.

Chapter 3 describes the methods and procedures used in conducting this study. A survey of teachers' perceptions of staff development needs for implementing block scheduling is described, and analysis of variance and post hoc testing are explained. Further, it includes a description of the population, the sampling method, the research design, instrumentation, procedures used in conducting the pilot study, data collection, and data analysis.

Chapter 4 contains the statistical analysis of the data collected about the perceptions of needs for staff development from classroom teachers in block scheduled programs.

Chapter 5 includes the summary, conclusions, and recommendations/implications of the study.
Since the intense scrutiny of public education began in the 1980s, signaled by the publication of *A Nation at Risk* (National Commission on Excellence in Education, 1983), terms such as reforming, restructuring, and transforming have become common descriptors of change efforts in public schools. Change has become a key ingredient in the national push to raise test scores and to improve student learning. Educational leaders across the nation have generated reform plans and initiatives to improve local schools. Educators continue to seek better ways to educate children, but the task of schooling has been made more difficult by societal changes and the realignment of traditional family structures. Teachers are expected to perform better—to raise proficiency scores while encouraging individuality and cultural diversity—with fewer resources (Lieberman & Miller, 1979, p. ix). Teachers have borne the brunt of the failure of many education reforms while having little input into reform measures.

Successful change cannot be imposed from without. Teachers must become full partners in the transformation of public schools. Change and school improvement must take place school by school.
(Fullan, 1991). Revitalized staff development programs, driven by teacher identification of needs, planned by teachers, and taught by teacher experts within individual school buildings, offer an excellent opportunity for teacher involvement in successful change (Orlich, 1989).

Block scheduling, adopted by many Northeast Tennessee high schools as a means of restructuring, is an educational change that requires good staff development for success. The purpose of this research study is to explore the relationship between the needs for staff development identified by secondary teachers in recently-implemented block scheduled programs of studies and those same teachers' levels of experience, education, and Tennessee Career Ladder status. In this review of the literature, research about the following topics will be explored: explanation of concepts related to block scheduling, block scheduling and staff development planning as a means to improve learning in Tennessee high schools, description and evolution of staff development, the relationship between staff development and educational reform, staff development models and teachers' levels of experience, education, and Tennessee Career Ladder status, characteristics of successful staff development models, needs assessments, and staff development for educational change.
What Is Block Scheduling?

Block scheduling, also called "concentrated model," "intensive model," "4 x 4," "straight block model," or "four block model" (Schoenstein, 1995, p. 35), is a method of scheduling secondary classes that "allows students to accumulate the credits they need for graduation through four periods of 90-minute duration a day" (Cawelti, 1994, p. 23). Block scheduling, which can incorporate many alternative schedules, was used in selected high schools in Ontario, Canada, beginning in 1984 (Canady & Rettig, 1994). Block scheduling is an educational change which necessitates preparing educators for implementation through well-planned staff development programs (Canady & Rettig, 1995). Gerking (1995) stated: "A change to block scheduling must be accompanied by teacher inservice" (p. 23). Several key concepts related to block scheduling must be a part of the staff development schedule if successful change is to occur. These concepts are: (a) pacing guides, (b) cooperative learning strategies, (c) variation of teaching strategies, (d) integrated curriculum, (e) active learning, and (f) knowledge of learning styles (Instructional Improvement With the 4:4 Block Schedule: Principles of Implementation, 1994).

Pacing guides are used by teachers in block scheduled programs to pace the introduction of concepts and content so that
key concepts and information can be successfully assimilated by students within a 90 day course of study (Sullivan Central High School Pacing Guides, 1995, and Cougar Blocking: Frequently Asked Questions, 1994). Canady and Rettig (1994) asserted that the development of pacing guides for every course are crucial to curriculum planning. They further suggested that summer staff development opportunities be provided so that classroom teachers can concentrate on joint planning.

Cooperative learning, a social model which involves students studying and learning together, was investigated by Joyce, Showers, and Rolheiser-Bennett (1987), who concluded that emphasis on such cooperative models of learning led to "increasing feelings of empathy for others, reducing intergroup tensions and aggressive and antisocial behavior, improving moral judgment, and building positive feelings towards others" (p. 17). Use of block scheduling encouraged more group learning activities at Pulaski (Virginia) High School (Four-Four Block Schedule Survey, 1994).

Variation of teaching strategies produced several important results, according to the Four-Four Block Schedule Survey: Summary of Findings (1994). Those were:

1. Most teachers were doing more experimenting with new instructional strategies;
2. Students generally found the variety in teaching and learning strategies enjoyable and working in small groups advantageous (p. 1).

Barnes (1995) cited use of a variety of instructional techniques as a benefit of block scheduling.

Integrated curriculum encouraged teachers "to integrate [meld together] the curriculum both within a subject and across subjects" and "to do work in teams to plan and deliver instruction" (Tennessee State Board of Education, 1993, p. 10).

Active, hands-on learning was one of the results noted by teachers in the Pulaski (Virginia) High School survey, *Four-Four Block Schedule Survey* (1994). Further, active learning, one of the nine "Elements of School-Wide Reform" in *The High School Policy* (Tennessee State Board of Education, 1993), required that curriculum be designed so that "students ... participate in their own learning" through use of strategies such as "cooperative learning, peer tutoring, technology, and the application of knowledge to real life situations" (p. 10).

Knowledge of and adjustment to students' individual styles of learning was integral to successful implementation of block scheduling (*Staff Development Workshop: Learning Styles*, 1995). "Personalization of teaching and learning" resulted from the smaller
student-teacher ratio in most block scheduled programs (Cougar Blocking: Frequently Asked Questions, 1994, pp. 1 and 7).

Adopted in many school systems in the state of Tennessee, block scheduling was an important first step in restructuring the high school to improve student learning. Edwards (1993) cited three results from implementation of block scheduling in Virginia high schools. These were:

1. Improving the graduation rate,
2. Increased opportunities for advanced studies, and
3. A common core of learning (pp. 80-83).

Dempsey and Traverso (1983) defined scheduling as “a program and time design bringing students, teachers, curriculum materials, and space into a systematic arrangement for the purpose of creating an optimal learning climate” (p. 3). They further defined block scheduling as “placement of students with common subject selections into . . . class groupings, often scheduled for longer blocks of time throughout the school day” (p. 78).

Although block scheduling in Tennessee high schools is a relatively recent phenomena, high school programs of study have been dominated by the Carnegie unit for almost a century. Use of time in the student’s day has been measured by the Carnegie unit, with attendance for one hour of class per day, five days a week for
180 days, representing one Carnegie unit earned. Graduation requirements are set according to the number of Carnegie units earned by the high school student. Called "an article of educational faith," Carroll (1994) observed that the Carnegie unit encouraged lecture and large group-oriented instruction instead of individualized and personalized teaching and learning. Further, he concluded that "the Carnegie unit is a system under which teachers can't teach effectively and students can't learn effectively" (p. 106). The typical schedule for most high school students consists of five to six courses (each equal to one Carnegie unit) offered in 50-55 minute class periods in a six and one-half hour day within a 180 day school year. The typical block scheduled student day consists of a four-period day with about 90 minutes per period and a 30 minute lunch period. At the end of each 90 day term, the student receives a final grade and credit for each course successfully completed (Edwards, 1993).

Canady and Rettig (1993) touted the value of block scheduling by stating that educators must "view a schedule not simply as a barrier blocking the path to school improvement, but as an untapped resource that can be drawn on to solve problems and implement needed programs" (p. 310). They cited several benefits from modified scheduling:
1. It facilitated variety in the use of instructional approaches.
2. Students saw fewer teachers each term, and teachers saw fewer students.
3. Discipline problems were reduced.
4. Instructional time was increased.
5. Teachers and students were able to focus on fewer subjects.
6. "Summer school" could be offered to all students at no additional cost to the students or the school district.
7. Possibilities for acceleration were provided during the regular school year.
8. Students could repeat a failed course during the regular school year (pp. 312-313).

Tewel (1991) cited improvements in school climate--taking care of students' emotional and intellectual development, fostering teacher collaboration, and preparing a new schedule aligned with educational goals. He defined scheduling as "the management of time--finding the best possible way to bring together students, staff, and programs of instruction in sensible, organized and feasible time segments" (p. 107).
What Is Staff Development?

Staff development, a term used since the mid-seventies, is currently used to denote those long-range activities and programs in which staff members take part, both for professional improvement of teaching and learning and for building the resources of the organization. According to Orlich (1989), “The totality of building human and institutional resources in the organization becomes the goal of staff development” (p. 6). Described as both an “evolutionary” and a “dynamic” process, staff development goes beyond the traditional inservice training mode of remediation of deficiencies or inspection of teaching performance (Andrews & Gilman, 1992, p. 248). Staff development includes inservice education oriented to immediate training, but it is also associated with long-term improvement in teaching and learning which is coordinated and purposeful, not piecemeal (Doll, 1992).

Evolution of Staff Development

Staff development is often used synonymously with terms such as inservice education, on-the-job training, renewal, human resource development, continuing education, professional growth, and professional development (Harris, 1989). In earlier decades, the activities associated with staff development were called “inservice” and were generally job-oriented, immediately useful to the
individual, focused on the needs of teachers as a group, and planned by the employer (Orlich, 1989).

Early Inservice Training

Inservice education, the philosophical predecessor to staff development, has had a long and somewhat checkered history. In American communities, those chosen to teach have often been those persons who had some rudimentary schooling and who simply wanted to teach. Few requirements (and little pay) were placed on those who chose to be teachers. Inservice education developed over the last one hundred years because teachers always seemed to need additional training. From the mid 1800s, teachers were recruited who were ill-prepared to deal with increasing numbers of children as the national commitment to universal elementary education evolved (Orlich, 1989).

Inservice Into the Twentieth Century

Between 1900 and the beginning of World War I, summer training sessions to improve teacher preparation were often held at state normal schools. Remediation was in the form of institutes. As states moved to regulate teacher certification, a requirement for a college degree became the norm. Orlich (1989) observed: "Early inservice education was not designed for individual teacher growth
but was apparently based on external institutional or agency requirements developed by state departments of education and colleges and universities” (p. 3).

Prior to the Eight Year Study, begun in 1933, inservice education had been remedial for all intents because those who taught were often ill-prepared for the job. The results of the study, reported in 1942, encouraged a transition from remedial training for teachers to more creative, workshop-type formats of presentation. In the World War II era, as service men headed overseas, a severe shortage of teachers resulted. Thousands of emergency teaching certificates were issued, effectively slowing the shift in inservice education from remediating deficiencies to teacher improvement.

During the ensuing period in American education from 1945 to 1960, personal improvement and curriculum development became the focus. From the 1960s to the present, a gradual move has taken place from content learning about new programs and new technologies to learning as a process (Orlich, 1989).

Problems With the Traditional Models

According to Fallon, Blackwell, Ewing, Weis, and Wilkinson (1992), traditional approaches to staff development have many problems. The individual choice model has led to fragmentation; only individual interests are dealt with, not school system needs.
Prepackaged programs presented by consultants or university professors have excluded teachers from a feeling of connection or a sense of ownership. The once-a-year day-long shopping mall style staff development program does not address the systemic changes which lead to better schools. A focus on short-term needs leads to teacher skepticism regarding new ideas and an antipathy to outside experts. A solution, proposed by Fallon, Blackwell, Ewing, Weis, and Wilkinson (1992), was that staff development "must be tied more closely with the visioning process of the school faculty and become more personalized to individual school faculty based on a faculty's collective desire for change. It should respond to group goals and involve staff in decisions affecting them" (p. 250).

Lieberman and McLaughlin (1992) asserted that a solution to teachers' lack of interest in traditional development opportunities which do not meet their needs was to combat problems of quality, application, ownership, expanding objectives, leadership, and evaluation by building "communities of teacher learners" (p. 677).

**Staff Development and Education Reform**

Building learning communities in American schools has been the focus of much of the research and literature about current education reform. Darling-Hammond (1994) stated that "the central task of the current reform movement in education is nothing less
than building and transforming schools that are struggling to achieve democratic ideals" (p. v). Professionals must expand their knowledge base by "putting research into practice--and practice into research" (p. 1).

Senge (1990) noted that "humans are designed for learning" but laments that the "primary institutions of our society are oriented predominantly toward controlling rather than learning" (p. 19). Senge further described learning as both adaptive (a coping behavior) and generative (a creative behavior). Only with emphasis in public schools on the creative learning, abandoning old paradigms and seeking new ways, would teachers and students view learning and schools as synergetic activities filled with creative tension. As Senge (1990) concluded, "The old model, 'the top thinks and the local acts,' must now give way to integrating thinking and acting at all levels" (p. 19).

Leithwood (1993) identified two premises of transformational leadership related to building learning communities. These were: (a) emphasis on "commitment" rather than "control" and (b) the need for first and second order changes in school restructuring. Further, Leithwood observed that these first order changes involved new models of learning and forms of instruction, but that exclusive attention to these types of changes would lead to failure. The
equally important second order changes involved organizing—
developing shared vision, creating productive work cultures, and
distributing leadership among all. Leithwood (1993) identified
several specific behaviors for successful leaders: developing strong
school cultures, sharing power and responsibility, using direct and
frequent communication, using symbols and rituals to express
cultural values, and learning from colleagues through staff
development.

Reformers have long emphasized that old bureaucratic models
on which public schools have been structured must give way to new
models which emphasize the involvement of all school community
members as learners and facilitators of learning—students, teachers,
and administrators. Old models of staff development must be
replaced with new paradigms. Such learning communities as those
described by Senge (1990) and Leithwood (1993) would engender a
staff development model that reflects teachers as the experts,
emphasizes self empowerment and development of a personal theory
base, encourages teaching based on action research, and supports a
personal view of learning in which there is “no end product . . .
only new questions” (McNiff, 1993, p.19). As Lewis (1994)
indicated, “Through smaller classes, flexible grouping and
scheduling, networking, and the use of new technologies, schools
must create professional environments for teachers” (p. 509). An important component of creating such a professional environment involves using sound principles of adult learning in planning staff development programs.

**Staff Development and Adult Learning**

If schools are to become learning communities, the needs of adult learners must be addressed. Good staff development practices must follow research based on sound theories of adult learning (Senge, 1990). Knowles (1984, 1986) who formulated the andragogy concept, a theoretical framework for adult learning based on several research studies, believed that adult learners are different from young learners in that adults are self directed, have experiences as a knowledge base, and learn best by solving problems. Based on Knowles research, Orlich (1989) offered five implications for staff development: (a) adults wanted to plan and carry out their own learning, (b) adults' experiences led to self-actualization, (c) the best learning resulted when the need for learning was tied to the training, (d) adults wanted to apply their learning immediately and in practical ways, and (e) adults wanted options from which to choose and input into those options (p. 8). Knox (1986) concluded that adults wanted active roles “as users of education instead of recipients of education” (p. 35). Praxis or hands-on, active learning,
is "a collaborative and critically reflective learning [which] must be a combination of contemplation and action," (p. 35) and is supported by adult learning researchers, Freire (1973), Brookfield (1986), and Vella (1994).

Several characteristics of successful adult programs have been gleaned from research on adult learning by Galbraith (1991). These programs: (a) had a philosophy which viewed learners as partners and teacher/facilitator as guide or mentor, (b) demonstrated an understanding of the adult learner, (c) were conducive to a positive psychological and social climate, (d) provided challenging interaction among all participants, (e) encouraged critical reflection and praxis, learning by doing, and (f) promoted independence which allowed the learner to explore alternative ways of doing things.

**Staff Development and Teachers’ Levels of Experience**

Not only must successful staff development programs incorporate sound adult learning principles, but planners must also consider teachers’ levels of experience, education, and career ladder status. The American teaching corps is an aging one, and staff development programs must address the needs of beginning, developing, and experienced educators (Liebes, 1983). Several research studies have explored differences in staff development needs based on levels of experience.
Holmes (1988) reached several conclusions from his study of staff development needs of experienced teachers in the District of Columbia Public Schools. Isolated, one-shot workshops with little coordination or linkage to teacher needs, especially those offered after school hours or on weekend, were not effective. What did work was school-based programs that were planned and conducted in the local school site and tailored to the needs of teachers and to school improvement plans. Released time during the school day was provided. Topics of interest to experienced teachers were new teaching techniques, hands-on workshops to create new teaching materials, and released time to observe in other teachers' classrooms. The most favored format was a full day, released time activity; the second choice was for a half-day, released time activity. Staff development planning committees in each school were favored by a majority of the respondents.

Rubin (1978) researched the needs of inexperienced teachers and made the following recommendations: (a) need for more clinical experiences for preservice university students and (b) increased emphasis on development of basic teaching skills, classroom management skills, effective use of time and energy, and effective enhancement of self-image and skills. Richardson, Flanagan, and Prickett (1990) advocated using experienced teachers as supervising
teachers or mentors for inexperienced teachers. Liebes (1983) described the "aging" of the teaching force as both positive and negative. The positive aspects were the predominance of mature, professional educators "whose expertise contributes to the quality of education offered within the school system" (p. 1). The negative effect was that often experienced teachers were dissatisfied, stressed, and facing a midlife career crisis.

The problem was often not the age of the teacher but the number of years in teaching. Forced to stay put because of economics, these "burn-ins" present a special challenge for planners of staff development. The short term solution, supported by Liebes (1983), was counseling on career strategies coupled with individual conferences and assessment of congruence between personality and work environment. The long-term solution was a comprehensive school-based staff development program which provided opportunities for getting energized by new teaching strategies and new opportunities to learn. Hopfengardner and Leahy (1988) developed a collegial training model that encouraged experienced teachers "to become the agents of their own development" (p. 48). Their collegial model included: "voluntary participation, a focus on formative, not summative, evaluation, . . . and provision for a safe environment in which new teaching behaviors could be tested" (p. 48).
The most comprehensive research model on correlations between experience and types of staff development was done by Fessler and became the basis for *The Teacher Career Cycle* (1992). The model described eight career cycles and recommended specific staff development activities for each level. These were:

**Level 1  Preservice**
Teacher as learner; emphasis on mentoring and observation; seeking new experiences.

**Level 2  Induction**
Survival based; resolve concerns about ability; professional growth involving learning how to think and act in ways to meet demands of teaching; preferred presentation was one-on-one and practical (situation specific).

**Level 3  Competency building**
Seeking new ideas; readily attends workshops and graduate school; variety of professional growth needs; teacher as learner; knowledge production; peer supervision.

**Level 4  Enthusiastic and growing**
High level of competency and enthusiasm for teaching are evident; professional growth is based on interests rather than deficiencies; these teachers are ready to assume more responsibility in helping others.
Level 5  Career frustration
Teacher burnout; professional growth that retrains skills; need for immediate feedback in the classroom; recognition of personal and professional competency.

Level 6  Stability
Plateau in career; professional growth must encourage diversity and movement toward growth; emphasis on renewal, experimentation but controlled by the individual.

Level 7  Career wind-down
Preparation to leave the profession; professional development must use these teachers as a valuable resource.

Level 8  Career exit
Professional growth should offer transition to other roles in education.

Planners of staff development for block scheduling must be cognizant of these career cycles in order to plan successful staff development models. Teachers may be at different levels in the cycle and will require adjustments in staff development programs. In addition to teacher experience, another factor that may affect teachers' perceptions of staff development needs may be their Tennessee Career Ladder status.
Staff Development

and the Tennessee Career Ladder Program

Career ladder and master teacher plans were pursued in the 1980s by lawmakers and policymakers in many states as a means to provide monetary incentives to teachers identified as “master” or exemplary practitioners. In *A Nation At Risk: The Imperative for Educational Reform* (1983), the National Commission on Excellence in Education recommended: “Salaries for the teaching profession should be increased and should be professionally competitive, market-sensitive, and performance-based” (Parker, 1985, p. vii). Other groups, including the National Science Board Commission and a Congressional Merit Pay Task Force, encouraged states and local school districts to institute incentive pay plans.

Parker (1985) delineated a basic difference between career ladder and master teacher programs. Master teacher plans usually offered only two levels of advancement in pay, recognition, and responsibility; career ladder plans usually involved multi-level steps to rewards and advancement. The Tennessee incentive pay plan was a blend of both concepts.

The Tennessee Career Ladder Program, first introduced by Governor Lamar Alexander in his “State of Education” address to the Tennessee Press Association in December, 1982, as a “Master
Teacher Plan,” evolved into a multi-step plan whereby exemplary teachers could receive some funds as merit pay, but could also participate in extended contract teaching responsibilities at the Career Ladder II and Career Ladder III levels (Bellon, 1992).

Introduced in the state legislature in 1983, the bill sparked a year-long debate and wide media coverage before its passage by the Tennessee State Legislature in 1984 as the Comprehensive Education Reform Act (CERA) (Handler & Carlson, 1984). The original plan was vigorously opposed by the Tennessee Education Association, which represented 90% of the state's teachers. TEA pushed for major changes in the legislation. Objections from TEA included the bill's circumvention of the Teacher Tenure Act and local collective bargaining agreements, the political nature of merit pay evaluation systems, the quota system for the number of teachers who may achieve Levels II and III, and the evaluation of teachers based on standards not yet defined (Cheshier, 1983). CERA was passed in 1984 with numerous revisions (Pike & Cheshier, 1984).

The Tennessee Career Ladder Program has been operational for 12 years. According to the most recent 21st Century Schools Program Report Card (Tennessee Department of Education, 1996a), the Career Ladder Program “evaluates educators' knowledge and skills and serves two main purposes: 1) to reward outstanding and
distinguished educators and 2) to improve instruction/services to the students of Tennessee” (p. 1). The Career Ladder Certificate is an optional one, although all teachers must hold a Professional License after an initial four years of successful teaching and evaluations. Both the Professional License and the Career Ladder Certificate are valid for 10 years and renewable upon completion of two evaluations approved by the State Board of Education. Evaluation systems are available for teachers, librarians, counselors, special populations teachers, school psychologists, attendance and instructional supervisors, consulting teachers, school social workers, principals, and assistant principals (Jordan, 1996). The State Certification Commission, originally called the Interim Commission, was designated to oversee the evaluation process for the Career Ladder Certificate (Better Schools Task Force, 1983).

Entrance to Career Ladder I requires completion of four years of successful teaching experience with the last year in a Tennessee public school and participation in a local evaluation program approved by the state. The incentive pay is $1000. Eight years of experience for Career Ladder II and 12 years for Career Ladder III are required for entering the evaluation process. For these top levels, the evaluation consists of classroom observations, dialogues, questionnaires, a summary of professional development activities,
and a written test. Those who achieve Levels II and III will be evaluated two times in 10 years, the first as an interim evaluation and the last for recertification. Merit pay for Career Ladder II and III is $2000 and $3000, respectively. Teachers on Career Ladder II may choose to work an additional month in programs designed to meet specific student needs. Those on Career Ladder III may choose to work two additional months (Jordan, 1996).

At the end of the 1995 school year, 95% of those teachers with sufficient experience were participating in the Tennessee Career Ladder Program (Tennessee State Board of Education, 1995). Twenty-three percent of those eligible teachers were at Career Ladder Levels II and III (Tennessee Department of Education, 1996b).

Table 1 shows level of participation in the upper levels of the Tennessee Career Ladder Program in the eight county school systems used in this study.
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<th>System</th>
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Tennessee

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Implementation of the Tennessee Career Ladder Program, a part of the Comprehensive Education Reform Act of 1984, did have impact upon the kinds of professional and staff development activities offered in the local school districts. Teacher training about the Tennessee Instructional Model (TIM), which teachers were to incorporate into their teaching practices, became a part of the training module for "fast tracking" the majority of teachers into Career Ladder I level. Leadership academies for administrators were also implemented. Further, each school system was required to complete "a locally developed staff development program . . . approved by the State Board of Education" (Tennessee Education Association, 1984, p. 10).

Bellon (1988) made several recommendations to the State Commissioner of Education about professional development. They were:

1. Professional development programs should be differentiated based on the experience and success of the participants. Programs for less experienced teachers should focus on a teaching model that provides fundamental skills and strategies needed by all teachers. A wider range of teaching models and strategies should be the basis for professional development
programs for those who have mastered the first level model [Career Ladder I].

2. Professional development programs for administrators and supervisors should focus on: improving leadership skills, developing understandings and skills to evaluate instruction, and understanding the factors that can improve the quality of school life.

3. The state should provide technical assistance to LEAs [Local Education Agencies] in organizing professional development programs to meet the goals that are the basis for these recommendations (p. 10).

With the implementation of the Comprehensive Education Reform Act of 1984, including the Career Ladder Program, the importance of teaching experience in staff development planning was recognized, and a wider involvement of the State Department of Education in local staff development programs was initiated. The focus was improved staff development opportunities for teachers and administrators.

Characteristics of Successful Staff Development Models

Lieberman and Miller (1979) identified three models of successful staff development--an individualized model, a "helping teacher" model, and the teacher center model which was popular in the seventies and
early eighties (pp. 161-189). A fourth model that incorporated characteristics of all three for the nineties might be called the reform model because much of the research since the mid-eighties has resulted from efforts to reform or restructure all aspects of public schools, including staff development, to improve student learning.

An extensive research base exists on the characteristics of successful reform-based models of staff development. This researcher prepared a summary of these characteristics by examining eight comprehensive studies related to successful staff development programs. These 11 characteristics are listed in descending order, beginning with the characteristic appearing in all eight of the studies and ending with that which appeared in only two of the studies. They were:

1. Encouragement of collegiality and collaboration characterized by teachers helping each other through peer observation, coaching, and continuous reflective practice or feedback (Berman & Laughlin, 1978; Joyce & Showers, 1983, 1988; Lawrence, 1974; Loucks-Horsley et al., 1987; Mohlman-Sparks, 1986; Orlich, 1989; Pink & Hyde, 1992; Woods & Thompson, 1993).

2. Active participation by all stakeholders, especially teachers, in planning, goal-setting, implementation, evaluation, and decision-making (Berman & Laughlin, 1978; Lawrence, 1974; Loucks-Horsley et al., 1987; Orlich, 1989; Pink & Hyde, 1992; Woods & Thompson, 1993).
3. Follow-up support for teachers in implementing and sustaining changes in professional practices (Joyce & Showers, 1983, 1988; Lawrence, 1974; Orlich, 1989; Pink & Hyde, 1992; Woods & Thompson, 1993).

4. Focus for all activities provided by school improvement and individual professional learning goals (Lawrence, 1974; Loucks-Horsley et al., 1987; Pink & Hyde, 1992; Woods & Thompson, 1993).


6. Visionary leadership and sustained multi-level administrative support (Loucks-Horsley et al., 1987; Orlich, 1989; Pink & Hyde, 1992; Woods & Thompson, 1993).

7. Basis in sound principles of adult learning and organizational change (Lawrence, 1974; Loucks-Horsley et al., 1987; Pink & Hyde, 1992; Woods & Thompson, 1993).

8. Specific, concrete training activities based on individual and group needs, using locally developed materials (Berman & Laughlin, 1978; Lawrence, 1974; Orlich, 1989; Woods & Thompson, 1993).
9. Provision of sufficient time and appropriate incentives or rewards to encourage active participation in staff development (Loucks-Horsley et al., 1987; Orlich, 1989; Pink & Hyde, 1992).

10. Assistance from experts such as collaboration with a university (Berman & Laughlin, 1978; Orlich, 1989; Pink & Hyde, 1992).

11. Training characterized by intensity, risk-taking and experimentation (Loucks-Horsley et al., 1987; Orlich, 1989).

**Staff Development Planning and Needs Assessments**

Planning staff development is a continuous process, not an isolated one-time event. Effective staff development requires an adequate planning process which includes a needs assessment. Harris (1989) identified nine essential components of a staff development planning module. These were: (a) a statement of needs or problems, (b) goals and objectives which constitute outcomes, (c) participants who know needs of constituents, (d) distribution of a calendar of important events, (e) operating strategies, (f) responsible persons in leadership, (g) required resources provided, (h) evaluation plan, and (i) procedures for monitoring and adjusting plan.

Harris (1989) stated that “selecting goals and objectives presumes that some needs assessment has been undertaken, formally or informally. Assessing needs is a part of the goal setting process”
Herman and Herman (1992) addressed the need for strategic planning, an essential component being a needs assessment. They described the needs assessment as "discrepancies between 'what is' and 'what could be' in strategic planning" and defined needs assessment as "... a structured process devised to stimulate new ideas and to arrive at consensus. It encouraged all to participate; it spotlighted discussions on specific questions, and it eventually reached consensus by a series of voting exercises" (p. 139). Wall (1993) endorsed the value of conducting needs assessments and cited several supportive research projects developed by individuals and organizations (Center for Vocational, Technical, and Adult Education, 1979; Glatthorn, 1981; Mohamed, 1983; and Smith, 1982). He concluded that the needs assessment survey should be developed by the local staff development committee.

**Successful Staff Development Programs**

These characteristics of successful staff development programs, including needs assessments, can be found in several exemplary, research-based models of staff development described by researchers across the United States. These included the Process Model for Planning and Implementing an Effective School-Based Staff Development program in Prince George's County, Maryland (Liebes, 1983); the Advisory Model of Staff Development in the Jackson,
Mississippi, Public School System (Leigh & Thompson, 1985); the Dayton, Ohio Model for Experienced Teachers (Hopfengardner & Leahy, 1988), and the Richmond County, Georgia Model (Joyce, Murphy, Showers, & Murphy, 1989).

**Staff Development and Student Learning**

Research studies have shown that better staff development leads to improved student learning. Recent emphasis on measuring the outcomes of student learning requires that educators reexamine how they practice their profession. Teachers must consider their teaching practices; administrators must look at school structures which hinder learning, and central office staff and policy makers must look at changes in policy which facilitate better learning.

Improvement of student learning through use of incentives for students and teachers was supported by Edwards (1993) who asserted that “if high schools are to successfully educate all students, they need the efficiency of the four-period day and concrete incentives to promote learning” (p. 77). Such incentives included extending the high school calendar to offer enrichment and remediation to those who fail and vacation days to those who succeed, extended pay and training for teachers, and tuition payments (for college and technical schools) to students who completed a core curriculum in less than four years. Edwards concluded, “If America’s schools are to
successfully educate all students . . . , then it is time for educators to heed William Glasser's admonition: 'If what you are doing isn't working, you ought to seriously consider doing something else.' The four-period day would be an important first step in restructuring high schools to improve student performance” (p. 88).

Improvement in student learning through improved staff development was the focus of an effort by researchers Joyce, Showers, and Rolheiser-Bennett (1987) to synthesize the research on models of teaching. They stated that “the content of staff development programs should be selected from those options which promise substantial increases in student learning and aptitude to learn” (p. 11). They identified several areas of inquiry for staff development crucial to improved student learning--teaching and learning models which produce measurable gains in learning, including cooperative learning strategies, information processing models which increase students' ability “to process information more powerfully” through use of tools such as organizers and mnemonics (memory linkage aids) (p. 17).

The findings of Joyce and Showers (1988) about student learning were based on their joint participation in more than 300 case studies related to staff development, training, and improvement
of student learning. Their study made six assumptions regarding staff
development and student learning. These were:

First is the belief that we should develop comprehensive
resource-development resources for education personnel.
Second is the assumption that student learning can be greatly
increased through human resource programs. Third, recent
research on staff development has demonstrated that virtually
all teachers can learn the most powerful and complex teaching
strategies provided that staff development is designed properly.
Fourth, the norms of the workplace of teaching—the school—
need to change if powerful staff development is to be
implemented; reciprocally, when it is implemented, the energy
of the workplace increases considerably. Fifth, embedded staff
development will have a great effect on the ethos of the
profession of education—the beliefs and behavior of the
professional community. Finally, we will stress throughout that
professional knowledge consists of three overlapping
components: the study of academic content, that which
undergirds the content that is learned by students; the study of
curricular and instructional strategies; and the process of
school improvement, the cooperative work by faculties to make
the school better (pp. 2-4).
Joyce and Showers (1988) concluded that "learning how to learn may well be the key—the one that unlocks the door to using research to improve school practice" (p. 165). Such use will mean improved student learning because of improved teacher learning through well-planned staff development programs. If staff development is a key to improved student learning, then examining current paradigm shifts as they relate to staff development is necessary.

**Staff Development and Educational Change**

A problem with earlier educational changes was that often the change had little or no impact on organizational structures and roles of administrators. Teachers seldom had any say in the decision-making for staff development planning for educational change. Scott (1994) stated that staff development for educational change must be treated as a "process that integrates several phases of the curriculum integration/staff development interface . . . . [These are] planning curriculum implementation and staff development, conducting staff development, and monitoring or evaluating staff development" (pp. 157-158).
Levels of Concern Regarding Educational Change

Research related to personal levels of concern about change was carried out in the late 1970s by Hall and Loucks (Lieberman & Miller, 1979). The study presented guiding concepts in diagnosing teacher needs and delivering relevant staff development. Hall and Loucks listed four basic assumptions about change from the Concerns-Based Adoption Model (CBAM) developed at the University of Texas at Austin. Those assumptions were:

1. “Change is a process, not an event.”
2. The individual must be the “focus of interventions designed to facilitate change in the classroom.”
3. “Change is a highly personal experience.”
4. Change involves stages.
5. Researchers must look to diagnosis of teacher’s needs in relation to innovation.
6. They must “work in adaptive, yet systemic ways” (pp. 38-39).

Hall (1979) outlined the resulting stages or levels of concern (ordered from lowest to highest level of concern) as follows:

Stage 0. Awareness: Little concern about or involvement with the innovation is indicated.
Stage 1. Informational: A general awareness of the innovation and interest in learning more detail about it is indicated. The person seems not to be worried about himself/herself in relation to the innovation. She/he is interested in substantive aspects of the innovation in a selfless manner such as general characteristics, effects, and requirements for use.

Stage 2. Personal: Individual is uncertain about the demands of the innovation, his/her inadequacy to meet those demands, and his/her role with the innovation. This includes analysis of his/her role in relation to the reward structure of the organization, decision making, and consideration of potential conflicts with existing structures or personal commitment. Financial or status implications of the program for self and colleagues may be reflected.

Stage 3. Management: Attention is focused on the processes and tasks of using the innovation and the best use of information and resources. Issues related to efficiency, organizing, managing, scheduling, and time demands are utmost.

Stage 4. Consequence: Attention focuses on impact of the innovation on students in his/her immediate sphere of influence. The focus is on relevance of the innovation for
students, evaluation of student outcomes, including performance and competencies, and changes needed to increase student outcomes.

Stage 5. Collaboration: The focus is on coordination and cooperation with others regarding use of the innovation.

Stage 6. Refocusing: The focus is on exploration of more universal benefits from the innovation, including the possibility of major changes or replacement with a more powerful alternative. Individual has definite ideas about alternatives to the proposed or existing form of the innovation (p. 205).

Research on Successful Educational Change and Staff Development

One of the earliest research studies that addressed successful change was the Rand Change Agent Study (1977), a review of federal projects based on implementation of educational change efforts. The study identified four groups of factors (here stated as questions) that were necessary to the successful implementation and continued attempts to achieve local change. They were:

1. Was the motivation of the institution teacher-driven? Were teachers personally committed? Did school system administrators support the change? Had there been collaborative planning?
2. Did the project foster staff learning and change through training and support?

3. Did the project have good institutional leadership?

4. Was there evidence of good teacher characteristics such as positive attitudes, good teaching ability, verbal ability, teacher efficacy? (Lieberman & Miller, 1979).

Fullan (1991) has written extensively about the concept of successful educational change in schools. A blueprint for successful change based on his years of research about the nature of change and its implementation, his book, *The New Meaning of Educational Change*, dealt with the effect of educational change on elementary and secondary schools.

According to Fullan (1991), "The purpose of educational change is to help schools accomplish their goals more effectively by replacing some structures, programs, and/or practices with better ones . . . . Change for change sake will not help. New programs either will make no difference, help improve the situation, or make it worse." He continued: " . . . The failure of educational change may be related just as much to the fact that many innovations and reforms were never implemented in practice (i.e. real change was never accomplished) as to the fact that societal, political, and economic forces inhibit change within the educational system" (p. 

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15). Fullan (1991) delineated first order and second order changes. First order changes were those which made schools more efficient and effective with what they were currently doing. Second order changes were those which sought to change fundamentally the goals, structures, and roles with the school as an organization. "The challenge of the 1990s will be to deal with more second order changes--changes that affect the culture and structure of schools, restructuring roles and organizational responsibilities, including those of students and parents" (p. 29).

Fullan (1991) summarized his views about why staff development has failed. They were:

1. One-shot workshops are widespread but are ineffective.
2. Topics are frequently selected by people other than those for whom the in-service is intended.
3. Follow-up support for ideas and practice introduced in inservice programs occurs in only a very small minority of cases.
4. Follow-up evaluation occurs infrequently.
5. In-service programs rarely address the individual needs and concerns.
6. The majority of programs involve teachers from many different schools and/or school districts, but there is no
recognition of the differential impact of positive and negative factors within the systems to which they return.

7. There is a profound lack of any conceptual basis in the planning and implementing of in-service programs that would ensure their effectiveness (p. 316).

Staff development planners must avoid the mistakes described by Fullan if substantive change is to happen.

Joyce, Wolf, and Calhoun (1993) cited a research basis for their four dimensions of substantive change:

1. The dimension of content or substance of innovations (curriculum, instruction, and technology) defines how the student's learning environment will be changed, including the models of learning that will be used.

2. The dimension of procedures for mobilizing energy and providing support creates the common understandings and the organizational moves necessary to generate collective activity and cooperative problem-solving.

3. The dimension of staff development describes the system for learning new curricular, instructional, technological, and organizational procedures.

4. The dimension of cultural change defines the social relationships and understandings that generate the self-
renewing organization and allow the other dimensions to function in an appropriate social matrix (p. 17).

Studies of school renewal programs (Joyce, Wolf, & Calhoun, 1993) revealed five characteristics of successful programs: (a) use of good research, (b) focus on curriculum and instruction and integration of technology, (c) use of effective staff development, (d) participation by everyone, and (e) reliance on formative evaluation as an ongoing system for tracking successes (pp. 52-54).

Glickman, Allen, and Lunsford (1994), collaborators in the League of Professional Schools associated with the University of Georgia, analyzed member schools in seeking those key factors which led to a positive climate for educational change. The factors were:

1. Having a free, open exchange with other schools about research, ideas, and actions geared toward educational renewal.

2. Having a tendency to be inclusive and involve all faculty in governance and participation.

3. Using time as a validation of important work.

4. Having the ability to work with district offices in making school-based decisions (pp. 39-40).
They concluded: “A network such as ours provides schools with ongoing, collegial relationships both within and outside the school. This feeling of community provided educators with an ongoing stimulus to reflect and restructure their practice and, most importantly, to sustain the renewal with their students” (p. 41). A second study at Stanford University also supported this role of supportive colleagues. “The Five Year Study by the Center for Research on the Context of Secondary School Training” confirmed that without a network of supportive colleagues, teachers would resume using old teaching practices or would quit their jobs (Bradley, 1994).

Vision and Paradigm Shifts for Educational Change

Joel Barker theorized that vision must drive educational change: “Vision without action is merely a dream. Action without vision just passes time . . . . [The] major means for articulating, shaping, and monitoring a vision is a district’s staff development program” (Melchior, Grube, & Knoll, 1992, p. 256). Barker defined a paradigm shift as “a set of rules and regulations that defines boundaries and establishes how to behave within these boundaries in order to be successful. A change in educational practice, a new game, or a new set of rules can be characterized as a paradigm shift” (Gallegos, 1994, p. 34). A paradigm shift in education, a
change or transition, is underway in American schools. Gallegos (1994) described this shift as "defining education as what is learned instead of what is attempted to be learned" (p. 34).

**Staff Development, Block Scheduling, and Educational Change in Tennessee**

As a result of the paradigm shift in American education, national standards have been written for many subjects; an emphasis on outcomes testing has ensued, and state and local educational agencies have developed numerous reform initiatives. The state of Tennessee joined that same movement toward increased testing, accountability, and adoption of innovations and educational changes to facilitate improved student learning. One of the most noticeable educational changes in secondary schools in Tennessee has been the adoption of block scheduling. Many school systems are at various stages in the process of planning staff development programs for implementation of block scheduling.

**The High School Policy**

Implementation of block scheduling resulted from a statement of policy passed by the Tennessee State Board of Education, The High School Policy: A New Vision for Tennessee High Schools (1993). Passed on September 17, 1993, the policy was not slated to
be implemented in Tennessee public high schools until the 1995-96 school year. However, because of intervention by key state legislators, the actual implementation was moved to April, 1994, a full year before the planning dates originally set by the State Board of Education. Plans were formulated in school systems to begin meetings among the rising freshmen, their parents or guardians, and representatives of the students’ respective schools for the purpose of planning a four-year course of study. A process was set in motion for implementation of the most comprehensive high school reform measure in Tennessee’s history (Tennessee State Board of Education, 1993).

Why had the Tennessee State Legislature and the Tennessee State Board of Education set out to reform Tennessee’s high schools? Education literature had dealt extensively with schools reform during the 1980s. One of the first reports about the American high school, Ernest Boyer’s *High School: A Report on Secondary Education in America*, was issued in 1983 by the Carnegie Foundation for the Advancement of Teaching. This report called for a school-improvement plan and identified twelve priorities for high school reform which constituted an “agenda for action” (p. 301). Schools must have (a) clearly stated goals and a shared vision; (b) emphasis on language skills; (c) a core curriculum that includes
literature, United States history, civilizations, science, technology, mathematics, foreign language, the arts, civics, health, and work; (d) transition to the world of work and further learning; (e) student service to the community; (f) improved education of and working conditions for teachers; (g) improved instructional practices; (h) technology, including computers, being used to meet school objectives; (i) flexibility in scheduling and organization; (k) the principal as instructional leader; (l) connections with other schools, and (m) public commitment to supporting education.

Many problems related to effecting such changes in the high school were identified by Larson (1992). These problems were size, departmental organization which fostered separateness of teachers and focus on specific students, older students with less parental interest, external pressures on students, and the social phenomena of drugs, alcohol, and sex at an early age (pp. 39-40).

American high schools were compared to shopping malls by Powell, Farrar, and Cohen (1985). Three crucial institutional features were criticized: (a) schools offered a wide variety of consumer opportunities, (b) schools placed choices squarely in the hands of student consumers, and (c) the schools were generally neutral about the choices that students made (p. 11).
Cawelti (1994) cited seven criticisms of modern high schools from his review of numerous research studies. These were:

1. Low student achievement, both on tests of basic skills and on tests of general knowledge in core subjects.

2. The need to move beyond only teaching basic skills and factual information to developing higher-order intellectual skills such as critical thinking and problem solving, and to provide classroom learning experiences that help students derive their own meaning from learning.

3. Curriculum fragmentation which prevents students from seeing the connections between school subjects and real life.

4. The impersonality of large high schools in which many students feel little or no sense of belonging to the institution.

5. The failure to foster learning experiences that provide students with skills needed for transition to meaningful jobs in the work world after graduation.

6. The predominance of students as passive learners and the failure to actively engage them in the learning process.

7. Failure to provide the challenging curriculum needed by language-minority students and a culturally diverse student population (pp. 1-3).
The High School Policy (Tennessee State Board of Education, 1993) incorporated many of these reform components. Sizer's (1992) nine common principles of his "essential schools" were studied. These principles were: (a) "focus on helping adolescents learning to use their minds well," (b) students mastering simple skills and having competence in specific areas of knowledge, (c) school's goals applying to all students, (d) personalized teaching and learning, (e) student as worker, teacher as coach, (f) emphasis for receiving a diploma resting on what students can do, (g) "stress [on] the values of unanxious expectation, . . . of trust, and . . . of decency," (h) principals and teachers who were generalists first (meeting the needs of students) and specialists second, and (i) adequate budgeting for collective planning, competitive salaries, and staff development (pp. 208-209).

Many of the components of reform literature from the 1980s were included in the reform plan. Further, many elements, including the broader Master Plan for Tennessee Schools (1991) of the Tennessee State Board of Education, can be related item by item to the Goals 2000 legislation passed under President Clinton and included earlier in President Bush's America 2000 education plan (Hoff, 1994). The most innovative portion of the policy--the two path curriculum--can be traced from The High School Policy, back

This last section of the document, "The Elements of School-Wide Reform," listed the components of reform for every Tennessee high school. These elements were:

1. Core Curriculum: All students will have access to a rigorous core curriculum that includes challenging subject matter, emphasizes depth rather than breadth of coverage, emphasizes critical thinking and problem solving, and promote responsible citizenship and life-long learning. The curriculum will be tied to the vision of the high school graduate. Teachers, parents, and students will hold high expectations for all students. Schools will communicate high expectations to students, parents, business, and the community.

2. Two Paths: University or Technical: All students will pursue a focused program of study preparing them for postsecondary study in either university or technical training. While all students may not enter postsecondary training immediately following high school, they must be prepared for
lifelong learning. The two paths will be flexible so a student can change from one path to the other. Students in both paths will acquire essential skills and knowledge.

3. A Focused Plan of Study: Prior to 9th grade, all students will develop a four-year plan of focused and purposeful study. The plan will be reviewed annually and will connect the student’s academic and career goals to school.

4. Active Learning: Schools will design curriculum and implement instruction in ways that invite students to participate in their own learning. In this teaching and learning environment the teacher serves as facilitator. In both academic and technical courses, teachers will emphasize active learning strategies like cooperative learning, peer tutoring, technology, and the application of knowledge to real life situations. Students will focus on fewer topics but will engage them in greater depth.

5. Integrated Curriculum: Schools will strive to integrate the curriculum, especially during the first two years. Teachers will be encouraged to integrate the curriculum both within a subject and across subjects. Teachers will be encouraged to work in teams to plan and deliver instruction.
6. Extra Support To Meet Students' Needs: Teaching and learning will become more personalized as teachers work together in teams and students assume more responsibility for their own learning. Extra help and extra time will be provided for students needing it, and all students will be held to the same high standards.

7. Assessment of Learning: Assessment will reflect the concept of teaching and learning as collaboration between teachers and students. Assessment will be an integral part of instruction. In addition to paper and pencil examinations, assessment will include portfolios of students' work, performances, and demonstrations. Schools are encouraged to develop graduation requirements that include demonstrations of competency.

8. School-Wide Improvement: Each high school will develop a shared vision, school-wide goals, and a school-wide improvement plan focused on what we want graduates to know and be able to do. The academic, technical, and special education faculty will work together to develop a plan that reflects the school goals. In working for continuous improvement, the school will collect and use student assessment and evaluation information.
9. Professional Development: The school will become a learning community with administrators, faculty, and students engaged in continuous learning. The faculty will have adequate support for staff development and time to work together to improve teaching and learning (Tennessee State Board of Education, 1993, pp. 8-13).

The original draft of the above document used the term "staff development" instead of "professional development." Karen Weeks, a staff member at the State Board of Education Executive Offices and author of much of the reform document, indicated that the change was made to emphasize the role of the individual educator in planning his or her own activities to improve professional skills (Interview, May 19, 1995).

The research project described in Chapter 3 will explore teachers' perceptions about staff development needs in block scheduled programs.
CHAPTER 3
METHODS AND PROCEDURES

Chapter 3 is a description of the methods and procedures used to collect and analyze data about perceptions of staff development needs of high school classroom teachers in block scheduled programs. It contains the following sections: purpose, research methodology, population, instrumentation, description of the research sample, data collection, and data analysis.

Purpose

The purpose of this research project was to gather data about teachers' perceptions of staff development needs in block scheduled programs and to determine if differences existed in those perceptions based on the teachers' levels of teaching experience, education, and Tennessee Career Ladder status. The adoption of block scheduling in many Tennessee high schools as a school improvement strategy has led to increased attention to staff development programs in some schools. Fullan (1990) asserted that "staff development and successful innovation or improvement are intimately related" (p. 3) and further, that staff development must be refocused "so that it becomes part of an overall strategy for professional and institutional
reform” (p. 16). Results from this research plan will help staff development planners in that effort.

**Research Methodology**

This researcher used a quantitative research design in this study. Data were collected using survey research. According to Borg and Gall (1989), “Studies involving surveys account for a substantial proportion of the research done in the field of education” (p. 416).

The researcher developed a survey instrument to measure perceptions of staff development needs of high school classroom teachers in block scheduled programs (Appendix A). The independent variables were teaching experience, education, and Tennessee Career Ladder status of those high school classroom teachers; the dependent variables were their perceptions about staff development needs. The research study was conducted to determine if differences in these perceptions could be attributed to teaching experience, level of education, or career ladder status.

The population of this study was high school classroom teachers in county school systems where block scheduling was adopted in the 1995-96 school year. A random sample was drawn from that population, using Statistical Package for the Social Sciences (SPSS), Studentware version (1991).
To validate the survey instrument, this researcher conducted a field test of the instrument, had the survey instrument reviewed and validated by a panel of experts, and carried out a pilot study of the instrument. After revisions, the survey instrument was mailed to 181 classroom teachers. Follow-up letters went to every recipient, and a second survey packet was sent to anyone who had not responded within four weeks. The return of 143 surveys represented a 79% response rate.

Survey data were organized, coded, and statistically analyzed with SPSS (1991), using one-way analysis of variance (ANOVA) and post hoc Tukey multiple comparison tests. An alpha level of .05 was used for the study. The one-way ANOVA was used to examine variations in mean scores among groups, by level of experience, education, and career ladder status. The post hoc Tukey tests identified pairs of groups with statistically significant differences in perceptions at the .05 alpha level.

**Population**

The population in this research project consisted of classroom teachers in 18 high schools from eight county school systems in Northeast Tennessee. All of the county schools systems included in the research project were from Tennessee District 1. A total of 856 teachers were employed in these 18 high schools during the 1995-96
school year, ranging from 16 teachers at North Greene High School (Greene County) to 92 teachers at Jefferson County High School. The student enrollment in these 18 schools ranged from 219 at Cloudland High School (Carter County) to 1625 at Jefferson County High School. Block scheduling was implemented in each of the 18 high schools during the 1995-96 school year. Table 2 summarizes data about the high schools included in the study.
TABLE 2
DEMOGRAPHIC DATA ON TENNESSEE COUNTY SCHOOL SYSTEMS
PARTICIPATING IN RESEARCH STUDY

<table>
<thead>
<tr>
<th>County</th>
<th>High Schools</th>
<th>Student Enrollment</th>
<th>No. of Teachers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carter</td>
<td>Cloudland High School</td>
<td>219</td>
<td>29</td>
</tr>
<tr>
<td></td>
<td>Hampton High School</td>
<td>414</td>
<td>26</td>
</tr>
<tr>
<td></td>
<td>Happy Valley High School</td>
<td>579</td>
<td>34</td>
</tr>
<tr>
<td></td>
<td>Unaka High School</td>
<td>384</td>
<td>24</td>
</tr>
<tr>
<td>Greene</td>
<td>Chuckey Doak High School</td>
<td>447</td>
<td>22</td>
</tr>
<tr>
<td></td>
<td>North Greene High School</td>
<td>342</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>South Greene High School</td>
<td>556</td>
<td>23</td>
</tr>
<tr>
<td></td>
<td>West Greene High School</td>
<td>496</td>
<td>23</td>
</tr>
<tr>
<td>Hamblen</td>
<td>Morristown Hamblen East</td>
<td>1250</td>
<td>80</td>
</tr>
<tr>
<td></td>
<td>Morristown Hamblen West</td>
<td>1075</td>
<td>74</td>
</tr>
<tr>
<td>Hawkins</td>
<td>Cherokee High School</td>
<td>1060</td>
<td>61</td>
</tr>
<tr>
<td></td>
<td>Volunteer High School</td>
<td>963</td>
<td>60</td>
</tr>
<tr>
<td>Jefferson</td>
<td>Jefferson County High School</td>
<td>1625</td>
<td>92</td>
</tr>
<tr>
<td>Johnson</td>
<td>Johnson County High School</td>
<td>596</td>
<td>47</td>
</tr>
<tr>
<td>Sullivan</td>
<td>Sullivan Central High School</td>
<td>1009</td>
<td>65</td>
</tr>
<tr>
<td></td>
<td>Sullivan East High School</td>
<td>1130</td>
<td>69</td>
</tr>
<tr>
<td></td>
<td>Sullivan North High School</td>
<td>815</td>
<td>59</td>
</tr>
<tr>
<td>Unicoi</td>
<td>Unicoi County High School</td>
<td>770</td>
<td>52</td>
</tr>
<tr>
<td>Totals</td>
<td></td>
<td>13,730</td>
<td>856</td>
</tr>
</tbody>
</table>
School system demographic personnel data for high school teachers were also compiled for the average number of years of teaching experience, the number of persons holding the Bachelor's degree, the Master's degree, the Master's degree plus additional credit hours, the Educational Specialist degree, and the Doctor of Education degree, and the number of persons at Career Ladder I, II, or III. Those data are presented in Table 3.
TABLE 3
YEARS OF TEACHING EXPERIENCE, EDUCATION, AND TENNESSEE CAREER LADDER STATUS OF HIGH SCHOOL TEACHERS

<table>
<thead>
<tr>
<th>School System</th>
<th>Yrs. of Experience</th>
<th>Degrees</th>
<th></th>
<th></th>
<th></th>
<th>Career Ladder</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>B.S.</td>
<td>M.</td>
<td>M.+</td>
<td>Ed. S.</td>
<td>Ed. D</td>
</tr>
<tr>
<td>Carter</td>
<td>15</td>
<td>57</td>
<td>20</td>
<td>6</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Greene</td>
<td>22</td>
<td>44</td>
<td>40</td>
<td>3</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>Hamblen</td>
<td>15.7</td>
<td>71</td>
<td>52</td>
<td>28</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Hawkins</td>
<td>14.6</td>
<td>64</td>
<td>39</td>
<td>16</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Jefferson</td>
<td>16</td>
<td>29</td>
<td>26</td>
<td>28</td>
<td>8</td>
<td>1</td>
</tr>
<tr>
<td>Johnson</td>
<td>16.6</td>
<td>35</td>
<td>10</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Sullivan</td>
<td>17.5</td>
<td>84</td>
<td>82</td>
<td>51</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Unicoi</td>
<td>16.2</td>
<td>30</td>
<td>4</td>
<td>18</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Totals</td>
<td>16.7</td>
<td>414</td>
<td>273</td>
<td>151</td>
<td>18</td>
<td>5</td>
</tr>
</tbody>
</table>

Note(s): Yrs. = Years; B.S. = Bachelor of Science degree; M. = Master's degree; M. + = Master's degree plus additional credit hours; Ed. S. = Educational Specialist degree; Ed. D. = Doctor of Education degree.
Instrumentation

This researcher developed a cross-sectional survey that was used to collect demographic data and information about teachers’ perceptions of staff development needs for block scheduling. The researcher included survey questions about staff development planning for block scheduling, knowledge about block scheduling, level of teacher satisfaction with staff development programs, use of adult learning strategies in staff development currently offered for block scheduling, and needs assessment. Sources for the survey content were The High School Policy (1993), a document of the Tennessee State Board of Education; research on adult learning (Brookfield, 1986; Freire, 1970; Galbraith, 1991; Knowles, 1984, 1986; Knox, 1986; Orlich, 1989; Vella, 1994), and school-based surveys about block scheduling from Wasson High School in Colorado Springs, Colorado (Kraetzer, 1991; Schoenstein, 1994); Governor Thomas Johnson High School in Louisville, Kentucky (Guskey & Kifer, 1994); North Carolina State Department of Public Instruction (School Time Study, 1994); Pulaski High School in Pulaski, Virginia (Four-Four Block Schedule Survey, 1994); and Laramie High School in Laramie, Wyoming (Gerking, 1995).
Thirty-two Likert-type items were included in the survey to measure research variables. The survey was validated by a panel of experts, consisting of a university professor, Dr. Robert Canady (University of Virginia); Mr. Jim Heaton, Principal, Science Hill High School (Johnson City, Tennessee) where block scheduling had already been implemented; Mr. Jack Barnes, Director of Secondary Education, Sullivan County, Tennessee, and Karen Weeks, a Tennessee State Board of Education researcher. Twelve teachers in the Sullivan Central High School (Sullivan County, Tennessee) English Department participated in a field test of the survey instrument. This researcher then conducted a pilot study among 25 Sullivan County (Tennessee) high school teachers not selected in the first random sample.

Based on results from the field test, panel of experts' responses, and the pilot study, the researcher made recommended changes in content, scope, and sequence of survey questions and clarification of quantitative terms used in responses. Because of the mismatch between the sample size in the field test and pilot study and the number of items in the survey, a reliability analysis was not warranted at this stage. However, once the final data were collected, a reliability analysis was conducted. Results indicated that the instrument satisfied the professional reliability standards for internal
consistency. The alpha values were: Item 11, .7752; Item 12, .5850; Item 13, .6816; Item 15, .7186; Item 16, .7972; Item 17, .8531; Item 18, .7721; Item 19, .7831; Item 20, .7838; Item 21, .7980; Item 24, .6939; Item 27, .7025; Item 34, .8387; Item 35, .8372; Item 36, .8374; Item 37, .8233; Item 38, .8318; Item 39, .8641; Item 40, .6869; Item 41, .6126; Item 42, .6111; and Item 43, .6006.

Description of the Research Sample

The research sample for this study was randomly selected from the names of all high school classroom teachers from eight Northeast Tennessee county school systems in District 1 where block scheduling was implemented in the Fall of 1995. Of the other county school systems in District 1, Washington County chose to implement a seven-period day, and Cocke, Hancock, and Sevier Counties did not adopt block scheduling.

Data for each county school system, for the high school(s) in each system, and for all high school professional employees were solicited from contact persons designated by the school superintendent. A letter describing the research study (Appendix B) and a copy of the survey instrument were sent to superintendents or to his or her designated contact person. Included with the letter was an authorization form for participation in the study (Appendix C) and a stamped, self-addressed envelope. Next, the researcher
scheduled visits with contact persons and with principals or assistant
principals to solicit support for the project. A follow-up phone call
was made to each of the superintendents or contact persons to
answer questions and to encourage participation in and support of
the research study. This researcher visited schools to speak
personally with the principal or assistant principal about the
research study.

Eight hundred fifty-six teachers were in the population. The
SPSS (1991) computer program was used to randomly select 181
names (20%) from the lists of classroom teachers provided by each
school system. Principals, assistant principals, librarians, and
guidance counselors were not included in the study. Sample size was
sufficient to make conclusions about differences in teachers'
perceptions of needs for staff development (Borg & Gall, 1989). A
larger sample than 10% was chosen because of the limited size of
the pool and for further assurance of a representative sample.

Data Collection

One hundred eighty-one surveys were mailed in June, 1996, to
Northeast Tennessee high school classrooms teachers in eight county
school systems in which block scheduled programs had been
implemented in the Fall of 1995. An envelope containing a survey, a
personalized letter to the recipient (Appendix D), a stamped return
envelope, and a postcard was mailed to each randomly selected classroom teacher. A self-addressed postcard was included in each packet to be mailed separately when the survey had been completed and placed in the U.S. Mail. This procedure ensured that the researcher knew which surveys had been returned but had no knowledge of which respondent had completed each survey. Two surveys could not be delivered by the U.S. Postal Service.

Two weeks following the original mailing of the survey instrument, a follow-up letter was sent to every teacher in the sample. The letter thanked those who had returned the survey and encouraged returns from those who had not.

Four weeks later, this researcher sent a letter and a second copy of the survey instrument to each teacher who had not responded. This calendar was used for the data collection procedures:

- **February, 1996**  Letters to superintendents and contact persons and visits to schools
- **February, 1996**  Field test of the survey instrument
- **March, 1996**  Pilot study to validate the instrument
- **June, 1996**  Mailing of survey instrument and letter to each teacher in the sample population
June 15, 1996  Follow-up letter to all teachers in the sample population

July 15, 1996  Second letter and copy of survey instrument to each teacher from the sample who had not responded

August, 1996- Analysis of data.

One hundred forty-three surveys were returned which represented an overall response rate of 79%. Three of the surveys returned were not included in the analysis of data. These surveys were unusable because they were incomplete. After all survey responses were received, the researcher divided the surveys by county and numbered each in consecutive order. The number of each survey was coded as the identification number (ID) in the computer file prepared for all responses. Table 4 summarizes data about the surveys by county school system.
## TABLE 4
**ANALYSIS OF RETURNS BY COUNTY SCHOOL SYSTEM**

<table>
<thead>
<tr>
<th>County</th>
<th>No. of Mailings</th>
<th>No. Returned</th>
<th>% Returned</th>
<th>% of Total</th>
<th>Not Used</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carter</td>
<td>26</td>
<td>23</td>
<td>88</td>
<td>16</td>
<td>2</td>
</tr>
<tr>
<td>Greene</td>
<td>18</td>
<td>14</td>
<td>78</td>
<td>10</td>
<td>0</td>
</tr>
<tr>
<td>Hamblen</td>
<td>25</td>
<td>18</td>
<td>72</td>
<td>13</td>
<td>1</td>
</tr>
<tr>
<td>Hawkins</td>
<td>33</td>
<td>23</td>
<td>69</td>
<td>16</td>
<td>0</td>
</tr>
<tr>
<td>Jefferson</td>
<td>18</td>
<td>14</td>
<td>78</td>
<td>10</td>
<td>0</td>
</tr>
<tr>
<td>Johnson</td>
<td>12</td>
<td>10</td>
<td>83</td>
<td>7</td>
<td>0</td>
</tr>
<tr>
<td>Sullivan</td>
<td>37</td>
<td>32</td>
<td>86</td>
<td>22</td>
<td>0</td>
</tr>
<tr>
<td>Unicoi</td>
<td>12</td>
<td>9</td>
<td>75</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>181</strong></td>
<td><strong>143</strong></td>
<td><strong>100</strong></td>
<td><strong>3</strong></td>
<td></td>
</tr>
</tbody>
</table>

Notes: No. = Number; % = Percentage; % Returned = Percentage of return of total mailed to that county; % of Total = Percentage of total return for all counties; Not used = Surveys not used in the analysis of data.
Summary of Demographic Data

Demographic data were collected about survey respondents' teaching experience, education, Tennessee Career Ladder status, age, subject area and grade level of major assignment, and the total hours of staff development about block scheduling in which the respondent participated. A summary of those data is presented.

The average years of teaching experience for the research population in all eight high schools was 16.7 years. The average for survey respondents was 17.8 years. Twenty-six percent had one to nine years of experience; 30% had 10 to 19 years; 36% had 20 to 29 years, and 8% had 30 or more years of experience. Almost half had at least 20 years of teaching experience.

Forty-six percent of the survey respondents had bachelor's degrees, and 54% had master's degrees or above. Career ladder status of survey respondents showed 66% at Career Ladder I, 10% at Career Ladder II, and 14% at Career Ladder III. The average for the state of Tennessee in Levels II and III for 1995-96 was 23%. Nine percent of respondents did not have enough experience to participate in the program. Two-thirds of the survey respondents were age 40 or older. Fifty-four percent were female, and 46% were male. Seventy percent of the respondents taught academic subjects; 25% taught
vocational, business, or computer courses; and 5% taught students with special needs. More than three-fourths of the respondents taught a combination of grades 9 through 12. More than half of the survey respondents participated in 10 or more hours of staff development about block scheduling; one-fourth had only three hours or less. In addition to demographic data, the researcher examined statistical relationships among variables.

**Data Analysis**

After data collection was completed to the extent necessary for statistical accuracy, data were coded, entered into a computer database, and results analyzed using SPSS (1991). Each question in the survey was assigned an item number (Item 11 to Item 50). A computer file was created for 50 variables. The first 10 variables were demographic data, and the last 40 variables were survey items.

The purpose of this data analysis was to determine if high school classroom teachers' perceptions of staff development needs for block scheduling were significantly different, based on their years of teaching experience, education as measured by the highest degree earned, and Tennessee Career Ladder status.

Table 5 summarizes demographic data for the 140 respondents for the independent variable of years of teaching experience.
TABLE 5
YEARS OF TEACHING EXPERIENCE
FOR SURVEY RESPONDENTS

<table>
<thead>
<tr>
<th>Variable: Total Years of Teaching Experience</th>
<th>Frequency</th>
<th>Percentage</th>
<th>Cumulative Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-9 years</td>
<td>36</td>
<td>26</td>
<td>26</td>
</tr>
<tr>
<td>10-19 years</td>
<td>42</td>
<td>30</td>
<td>56</td>
</tr>
<tr>
<td>20-29 years</td>
<td>51</td>
<td>36</td>
<td>92</td>
</tr>
<tr>
<td>30+ years</td>
<td>11</td>
<td>8</td>
<td>100</td>
</tr>
<tr>
<td>Totals</td>
<td>140</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

Table 6 summarizes demographic data for 139 respondents for the independent variable, highest degree earned. This table displays one less respondent than Table 5 because one respondent failed to indicate highest degree earned, and the responses from that one survey were not included in the tally.
TABLE 6
RESPONDENTS' HIGHEST DEGREE EARNED

<table>
<thead>
<tr>
<th>Variable: Highest Degree Earned</th>
<th>Frequency</th>
<th>Percentage</th>
<th>Cumulative Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bachelor’s</td>
<td>64</td>
<td>46</td>
<td>46</td>
</tr>
<tr>
<td>Master's</td>
<td>29</td>
<td>21</td>
<td>67</td>
</tr>
<tr>
<td>Master's plus graduate hours</td>
<td>39</td>
<td>28</td>
<td>95</td>
</tr>
<tr>
<td>Educational Specialist</td>
<td>7</td>
<td>5</td>
<td>100</td>
</tr>
<tr>
<td>Totals</td>
<td>139</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

Table 7 summarizes demographic data for 139 survey respondents for the independent variable, Tennessee Career Ladder status. One respondent chose not to reveal his or her status; therefore, only 139 of the 140 surveys returned were tallied for career ladder status.
TABLE 7
RESPONDENTS' TENNESSEE CAREER LADDER STATUS

<table>
<thead>
<tr>
<th>Variable: Career Ladder Status</th>
<th>Frequency</th>
<th>Percentage</th>
<th>Cumulative Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level I</td>
<td>93</td>
<td>67</td>
<td>67</td>
</tr>
<tr>
<td>Level II</td>
<td>14</td>
<td>10</td>
<td>77</td>
</tr>
<tr>
<td>Level III</td>
<td>19</td>
<td>14</td>
<td>91</td>
</tr>
<tr>
<td>Not enough experience</td>
<td>13</td>
<td>9</td>
<td>100</td>
</tr>
<tr>
<td>Totals</td>
<td>139</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

Description of Variables

The independent variables in this study of classroom teachers' perceptions about staff development needs for block scheduling were teaching experience, education, and career ladder status. Independent variables may be described as those factors that cause or predict changes in the dependent variables. The dependent variables were the teachers' perceptions about their staff development needs.

Description of Perception Categories

To facilitate comparison of perceptions, the researcher formulated six groups of perceptions from the survey instrument. Table 8 illustrates the grouping of items by perception category.
<table>
<thead>
<tr>
<th>Perception Category</th>
<th>Description</th>
<th>Corresponding Item Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percept1</td>
<td>Planning staff development activities for block scheduling</td>
<td>Items 1-3</td>
</tr>
<tr>
<td>Percept2</td>
<td>Knowledge about block scheduling</td>
<td>Items 6-11</td>
</tr>
<tr>
<td>Percept3</td>
<td>Satisfaction with staff development programs for block scheduling</td>
<td>Items 14-16</td>
</tr>
<tr>
<td>Percept4</td>
<td>Effectiveness of adult learning strategies used in presenting staff development about block scheduling</td>
<td>Items 24-29</td>
</tr>
<tr>
<td>Percept5</td>
<td>Level of involvement in staff development programs for block scheduling</td>
<td>Items 13 and 15</td>
</tr>
<tr>
<td>Percept6</td>
<td>Impact or effect of block scheduling on student testing and grades</td>
<td>Items 22-23</td>
</tr>
</tbody>
</table>
Type of Statistical Analysis

The purpose of statistical analysis was to identify significant differences in survey responses based on the independent variables. The researcher used SPSS (1991) to complete the following procedures:

1. Descriptive statistics, including means and standard deviations, were compiled for the 50 items in the survey.

2. One-way analysis of variance (ANOVA) for all perception categories (Percept1, Percept2, Percept3, Percept4, Percept5, Percept6) by teaching experience (TEXP), highest degree earned (DEGREE), and Tennessee Career Ladder status (CLADD) was conducted to analyze variations in the mean scores.

3. Tukey tests were used to determine pairs of groups with statistically significant differences in responses at the .05 level of significance. Post hoc t-tests (Tukey) were conducted to identify significant differences between specific groups or categories based on the experience, education, and career ladder variables.

Chapter 4 is a presentation and analysis of data about high school classroom teachers' perceptions of staff development needs in block scheduled programs.
CHAPTER 4
PRESENTATION AND ANALYSIS OF DATA

Introduction

Chapter 4 consists of the presentation and analysis of data about perceptions of staff development needs for block scheduling among Northeast Tennessee high school classroom teachers. The purpose of this research study was to determine if the perceived staff development needs of those teachers in block scheduled programs differed based on their teaching experience, education, and Tennessee Career Ladder status. The researcher analyzed survey responses, using one-way analysis of variance and post hoc Tukey multiple comparison tests to examine variation in mean scores. Results of those statistical analyses are presented in this chapter.

Addressing Research Questions and Hypotheses

Three research questions were the basis of this study. They were:

Research Question 1

Was there any difference among high school classroom teachers with various levels of teaching experience in their perceptions of staff development needs for block scheduling?
Research Question 2

Was there any difference among high school classroom teachers with various degrees in their perceptions of staff development needs for block scheduling?

Research Question 3

Was there any difference among high school classroom teachers at various levels of Tennessee Career Ladder status in their perceptions of staff development needs for block scheduling?

The null hypotheses for this study were:

$H_01$ There will be no difference in perceptions of staff development needs of high school classroom teachers in block scheduled programs when teaching experience is considered.

$H_02$ There will be no difference in perceptions of staff development needs of high school classroom teachers in block scheduled programs when education is considered.

$H_03$ There will be no difference in perceptions of staff development needs for high school classroom teachers in block scheduled programs when Tennessee Career Ladder status is considered.
In this chapter, the researcher will explain the statistical analyses conducted for testing the research hypothesis. The last section will review related information from the narrative comments.

The Statistical Relationship Between Perceptions of Staff Development Needs and Teaching Experience

Three research questions were the basis of this study. The first research question explored relationships between perceptions of staff development needs and teaching experience: Was there any difference among high school classroom teachers with various levels of teaching experience in their perceptions of staff development needs for block scheduling? The null hypothesis based on this research question was that no difference existed in high school classroom teachers’ perceptions of staff development needs in block scheduled programs when teaching experience was considered.

Based on results from one-way analysis of variance tests for all six perception categories, this researcher failed to reject the null hypothesis at all levels of teaching experience. No statistically significant differences in perceptions existed based on teaching experience. Therefore, the need for post hoc testing of individual group comparisons did not arise. The research findings about teaching experience are summarized in Table 9.
TABLE 9
RESULTS OF ONE-WAY ANALYSIS OF VARIANCE
BY YEARS OF TEACHING EXPERIENCE

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>SD</th>
<th>F Value</th>
<th>Significance of F</th>
<th>Research Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percept1</td>
<td>0.6048</td>
<td>0.6130</td>
<td>.6130</td>
<td>Fail to reject ( \text{H}_0 )</td>
<td></td>
</tr>
<tr>
<td>Group 1, 1-9 yrs.</td>
<td>7.4</td>
<td>1.3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group 2, 10-19 yrs.</td>
<td>7.4</td>
<td>1.5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group 3, 20-29 yrs.</td>
<td>7.1</td>
<td>1.9</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group 4, 30+ yrs.</td>
<td>6.9</td>
<td>1.9</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percept2</td>
<td>1.3298</td>
<td>0.2673</td>
<td>.2673</td>
<td>Fail to reject ( \text{H}_0 )</td>
<td></td>
</tr>
<tr>
<td>Group 1, 1-9 yrs.</td>
<td>13.0</td>
<td>3.4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group 2, 10-19 yrs.</td>
<td>11.5</td>
<td>2.7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group 3, 20-29 yrs.</td>
<td>12.8</td>
<td>4.5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group 4, 30+ yrs.</td>
<td>12.0</td>
<td>2.5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percept3</td>
<td>0.0768</td>
<td>0.9724</td>
<td>.9724</td>
<td>Fail to reject ( \text{H}_0 )</td>
<td></td>
</tr>
<tr>
<td>Group 1, 1-9 yrs.</td>
<td>7.8</td>
<td>3.2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group 2, 10-19 yrs.</td>
<td>7.5</td>
<td>3.3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group 3, 20-29 yrs.</td>
<td>7.6</td>
<td>3.6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group 4, 30+ yrs.</td>
<td>8.0</td>
<td>3.4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percept4</td>
<td>0.1979</td>
<td>0.8977</td>
<td>.8977</td>
<td>Fail to reject ( \text{H}_0 )</td>
<td></td>
</tr>
<tr>
<td>Group 1, 1-9 yrs.</td>
<td>14.4</td>
<td>5.5</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
TABLE 9 (continued)

<table>
<thead>
<tr>
<th>Variable</th>
<th>TEXP</th>
<th>Mean</th>
<th>SD</th>
<th>F Value</th>
<th>Significance of F</th>
<th>Research Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group 2, 10-19 yrs.</td>
<td>14.5</td>
<td>5.8</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group 3, 20-29 yrs.</td>
<td>14.2</td>
<td>5.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group 4, 30+ yrs.</td>
<td>13.1</td>
<td>3.9</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percept5</td>
<td></td>
<td></td>
<td></td>
<td>2.1231</td>
<td>.1002</td>
<td>Fail to reject $H_0$</td>
</tr>
<tr>
<td>Group 1, 1-9 yrs.</td>
<td>5.3</td>
<td>.8</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group 2, 10-19 yrs.</td>
<td>4.8</td>
<td>1.3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group 3, 20-29 yrs.</td>
<td>4.9</td>
<td>1.2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group 4, 30+ yrs.</td>
<td>4.5</td>
<td>1.4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percept6</td>
<td></td>
<td></td>
<td></td>
<td>.6693</td>
<td>.5723</td>
<td>Fail to reject $H_0$</td>
</tr>
<tr>
<td>Group 1, 1-9 yrs.</td>
<td>5.1</td>
<td>1.9</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group 2, 10-19 yrs.</td>
<td>4.7</td>
<td>1.8</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group 3, 20-29 yrs.</td>
<td>5.2</td>
<td>1.7</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group 4, 30+ yrs.</td>
<td>5.0</td>
<td>1.8</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note(s): To reject $H_0$, the significance of F would have been less than .05.

TEXP = Years of teaching experience; SD = Standard deviation; Yrs. = Years; F = Observed F value; $H_0$ = Null hypothesis; Percept1 = Planning staff development for block scheduling; Percept2 = Knowledge of block scheduling; Percept3 = Satisfaction with staff development for block scheduling; Percept4 = Effective use of adult learning strategies; Percept5 = Level of involvement in staff development for block scheduling; Percept6 = Impact or effect of block scheduling on student testing and grades.
The Statistical Relationship Between Perceptions of Staff Development Needs and Highest Degree Earned

The second research question examined relationships between perceptions of staff development needs and highest degree earned: Was there any difference among high school classroom teachers with various degrees in their perceptions of staff development needs for block scheduling? The related null hypothesis for this research study was that no difference existed in high school classroom teachers' perceptions of staff development needs in block scheduled programs when education was considered.

Based on the research data for all six perception groupings, this researcher rejected the null hypothesis for Percept 1, Planning Staff Development for Block Scheduling, and for Percept 2, Knowledge of Block Scheduling. At an alpha level of .05, differences in perceptions of teachers were statistically significant in two areas--participation in planning staff development activities and the level of knowledge of block scheduling concepts. No statistically significant differences in mean scores existed in the remaining four of six perception categories. For perception categories 3, 4, 5, and 6, the researcher failed to reject the null hypotheses. At an alpha level of .05, the teachers with various degrees had no significantly different perceptions about level of satisfaction with staff
development, effective use of adult learning strategies, level of involvement in staff development, and impact of block scheduling on student testing and grades. These results are shown in Table 10.

**TABLE 10**

RESULTS OF ONE-WAY ANALYSIS OF VARIANCE

BY HIGHEST DEGREE EARNED

<table>
<thead>
<tr>
<th>Variable</th>
<th>DEGREE</th>
<th>Mean</th>
<th>SD</th>
<th>F Value</th>
<th>Significance of F</th>
<th>Research Decision</th>
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</tr>
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<td>.2435</td>
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<td>.2373</td>
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<td>1.5</td>
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<tr>
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<td>.48</td>
<td>.70</td>
<td>.6979</td>
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<td>Group 4, Ed. S.</td>
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<td>.9</td>
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</table>
After completing the one-way analysis of variance testing, the researcher ran post hoc t-tests, Tukey multiple comparison tests, to determine which pairs of groups within each perception category showed statistically significant differences in perceptions of staff development needs at an alpha level of .05. This procedure allowed the researcher to pinpoint exactly where the variance in means occurred.

For Percept1, Planning Staff Development for Block Scheduling, the perceptions of teachers with Educational Specialist degrees were significantly different from perceptions of teachers with Bachelor's degrees, those with Master's degrees, and those with Master's degrees plus additional graduate hours. A lower mean score
for Percept1 indicated that the teacher was more involved in planning staff development for block scheduling, and a higher mean score indicated less involvement. The mean score for persons with Educational Specialist (Ed. S.) degrees was much lower (5.5 on a scale of 3 to 9) as compared to Bachelor’s degrees (7.2), Master’s degrees (7.7), or Master’s degrees with additional hours (7.3).

Even though persons with Ed. S. degrees perceived themselves to be more involved in planning staff development for block scheduling, one cannot extrapolate that the higher the degree, the greater the degree of participation. The group that perceived itself to have the next highest level of involvement was the Bachelor’s degree group with a mean score of 7.2. The Bachelor’s degree group represented almost 50% of the total group. For Percept2, Knowledge about Block Scheduling, the perceptions of the group with Bachelor’s degrees were significantly different from both the group with Master’s degrees plus additional credit hours and that with Educational Specialist degrees.

The Statistical Relationship Between Perceptions of Staff Development Needs and Tennessee Career Ladder Status

The third research question examined relationships between perceptions of staff development needs and Tennessee Career Ladder status: Was there any difference among high school classroom
teachers at various levels of career ladder status in their perceptions of staff development needs for block scheduling? The related null hypothesis for this research study was that no difference existed in high school classroom teachers' perceptions of staff development needs in block scheduled programs when Tennessee Career Ladder status was considered.

Based on the research findings for all six perception categories, this researcher failed to reject the null hypothesis in five out of six perception groupings. In these five perception categories, Planning Staff Development for Block Scheduling, Satisfaction With Staff Development, Effective Use of Adult Learning Strategies, Level of Involvement in Staff Development, and Impact or Effect of Block Scheduling on Student Testing and Grades, no differences in perceptions of the sample group were detected that could be ascribed to any factor except normal group variability. Only in Percept2, Knowledge of Block Scheduling, did this researcher reject the null hypothesis. At an alpha level of .05, there were significant differences in perceptions about knowledge of block scheduling according to the respondents' career ladder status. The research findings are summarized in Table 11.
### TABLE 11

RESULTS OF ONE-WAY ANALYSIS OF VARIANCE

BY TENNESSEE CAREER LADDER STATUS

<table>
<thead>
<tr>
<th>Variable</th>
<th>CLADD</th>
<th>Mean</th>
<th>SD</th>
<th>F Value</th>
<th>Significance of F</th>
<th>Research Decision</th>
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<td>1.5</td>
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</tr>
<tr>
<td>Group 2, C. L. II</td>
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<td>1.5</td>
<td></td>
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<td></td>
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<tr>
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<td>2.3</td>
<td></td>
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</tr>
<tr>
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<tr>
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</tr>
<tr>
<td>Variable</td>
<td>CLADD</td>
<td>Mean</td>
<td>SD</td>
<td>F Value</td>
<td>Significance of F</td>
<td>Research Decision</td>
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</table>

Note(s): * = p < .05; CLADD, C. L. = Tennessee Career Ladder status; SD = Standard deviation; F = Observed F value; Ho = Null hypothesis; Percept1 = Planning staff development for block scheduling; Percept2 = Knowledge of block scheduling; Percept3 = Satisfaction with staff development for block scheduling; Percept4 = Effective use of adult learning strategies; Percept5 = Level of involvement in staff development for block scheduling; Percept6 = Impact or effect of block scheduling on student testing, grades.
While groups with various levels of teaching experience were not significantly different in their perceptions about knowledge of block scheduling, distinct differences were found for persons with Career Ladder III status. Statistically significant differences at an alpha level of .05 did exist, both between those with Career Ladder III and ones with Career Ladder I status and between those with Career Ladder III and ones with Career Ladder II status. The null hypothesis that no differences existed was rejected. Based on mean scores, the persons with higher career ladder status perceived themselves to have higher levels of knowledge about block scheduling.

The results of Tukey procedures for teaching experience, education, and Tennessee Career Ladder status are shown in Table 12.
<table>
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<th>DEGREE</th>
<th>CLADD</th>
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<td>Not significant</td>
</tr>
<tr>
<td></td>
<td></td>
<td>between B.S. and Ed.S.; M.+</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>and Ed.S.; M. and Ed.S.</td>
<td></td>
</tr>
<tr>
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<td>Significant differences</td>
<td>Significant differences</td>
</tr>
<tr>
<td></td>
<td></td>
<td>exist between B.S. and Ed.S.; B.S. and M.+</td>
<td>exist between CL I and CL III</td>
</tr>
<tr>
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<td>Not significant</td>
<td>Not significant</td>
</tr>
<tr>
<td>Percept4</td>
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</tr>
<tr>
<td>Percept6</td>
<td>Not significant</td>
<td>Not significant</td>
<td>Not significant</td>
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</tbody>
</table>

Note(s): TEXP = Years of teaching experience; DEGREE = Highest degree earned; CLADD, CL = Tennessee Career Ladder status; B.S. = Bachelor’s degree; M. = Master’s degree; M. + = Master’s degree plus additional credit hours; Ed. S. = Educational Specialist degree; Percept1 = Planning staff development for block scheduling; Percept2 = Knowledge of block scheduling; Percept3 = Satisfaction with staff development for block scheduling; Percept4 = Effective use of adult learning strategies; Percept5 = Involvement in staff development for block scheduling; Percept6 = Impact or effect of block scheduling on student testing and grades.
The Statistical Relationship Between Perceptions of Staff Development Needs and Gender

This researcher also analyzed respondents' perceptions of staff development needs for block scheduling on the basis of gender by teaching experience, education, and Tennessee Career Ladder status. In two areas of study, Percept2 (Knowledge of Block Scheduling) and Percept3 (Satisfaction with Staff Development for Block Scheduling), this researcher found differences based on gender. Statistically significant differences were revealed in respondents' knowledge of block scheduling concepts and levels of satisfaction with staff development for block scheduling. The results indicated that females perceived that they had more knowledge about block scheduling and were more satisfied with staff development for block scheduling.

Females had lower mean scores than males in both perception categories. Because the lowest values were assigned to responses indicating "completely knowledgeable" about block scheduling concepts and "very satisfied" with staff development programs for block scheduling, female respondents' perceptions about their own level of knowledge about block scheduling concepts and their level of satisfaction with staff development were higher than that of male survey respondents. However, this researcher must emphasize that
mean scores for both parties were low, indicating that both groups perceived themselves to be "completely knowledgeable" to "somewhat knowledgeable" about block scheduling concepts and were "very satisfied" to "somewhat satisfied" with staff development for block scheduling.

In the remaining perception categories, Percept1 (Planning Staff Development for Block Scheduling), Percept4 (Effective Use of Adult Learning Strategies), Percept5 (Level of Involvement in Staff Development for Block Scheduling), and Percept6 (Impact or Effect of Block Scheduling on Student Testing and Grades), no statistically significant differences existed at an alpha level of .05 between perceptions of males and females. The research findings are summarized in Table 13.
### TABLE 13
RESULTS OF ONE-WAY ANALYSIS OF VARIANCE BY GENDER

<table>
<thead>
<tr>
<th>Variable</th>
<th>Number</th>
<th>Mean</th>
<th>SD</th>
<th>F Value</th>
<th>Significance of F</th>
<th>Research Decision</th>
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<tr>
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<td>2.9</td>
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<td>5.8</td>
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<tr>
<td>Male</td>
<td>63</td>
<td>4.9</td>
<td>1.0</td>
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</table>
TABLE 13 (continued)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Number</th>
<th>Mean</th>
<th>SD</th>
<th>F Value</th>
<th>Significance of F</th>
<th>Research Decision</th>
</tr>
</thead>
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<tr>
<td>Percept6</td>
<td></td>
<td>.001</td>
<td>.972</td>
<td>.972</td>
<td></td>
<td>Fail to reject H₀</td>
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<tr>
<td>Female</td>
<td>76</td>
<td>5.0</td>
<td>1.9</td>
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<td>Male</td>
<td>63</td>
<td>5.0</td>
<td>1.7</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note(s): * = p < .05; CLADD and C.L. = Tennessee Career Ladder status; SD = Standard deviation; F = Observed F value; H₀ = Null hypothesis; Percept1 = Planning staff development for block scheduling; Percept2 = Knowledge of block scheduling; Percept3 = Satisfaction with staff development for block scheduling; Percept4 = Effective use of adult learning strategies; Percept5 = Level of involvement in staff development for block scheduling; Percept6 = Impact or effect of block scheduling on student testing and grades.

**Trends in Mean Scores for All Perception Categories**

This researcher examined several trends in mean scores that will have an impact on decisions of policy makers about school system staff development programs for block scheduling.

**Experienced Teachers in All Perception Categories**

Some interesting trends can be noted about perceptions and level of teaching experience. Mean scores indicated those teachers with more teaching experience were more involved in planning staff
development programs in their school systems and had somewhat more knowledge about block scheduling concepts. Further, they were less satisfied with currently-offered staff development programs and were more concerned that staff development presenters use appropriate adult learning strategies. However, significant statistical variations in means at an alpha level of .05 were not revealed. Mean scores did indicate that the higher the level of teaching experience, the greater the perceived level of involvement in planning staff development. Lower mean scores were associated with higher levels of planning involvement.

**Career Ladder III Teachers and All Perception Categories**

Based on mean scores, those persons at Career Ladder III were more frequently involved in planning staff development opportunities for block scheduling. They were more satisfied with currently-offered staff development programs than Career Ladder I persons or those lacking the four years of experience. They were least satisfied with staff developers’ use of appropriate adult learning strategies. However, these variations in mean scores were not statistically significant.
Perception Category 3. Satisfaction With Staff Development for Block Scheduling

Teachers with the most teaching experience (30 or more years) and those with the least experience in the classroom (9 years or less) were most dissatisfied with the staff development program currently used to prepare teachers for transition to block scheduling. Those teachers with Educational Specialist degrees and those with Bachelor's degrees were most satisfied with the currently-offered staff development program. Teachers at Career Ladder I and those lacking sufficient experience for Career Ladder (less than four years) were most dissatisfied with current block scheduling staff development. Males were somewhat less satisfied than females.

Perception Category 4. Effective Use of Adult Learning Strategies

Trends in Perception Category 4 revealed that perceptions about the attitudes of survey respondents towards the effective use of appropriate adult learning strategies in staff development programs became more positive as teaching experience increased. Respondents who lacked the experience to qualify for Career Ladder were most positive about effective use of appropriate adult learning strategies, while those at Career Ladder I, II, and III were about the same in their perceptions. Male mean scores were more negative than were female scores.
Perception Category 5. Level of Involvement in Staff Development for Block Scheduling

For Percept5, the groups who perceived themselves to be most actively involved in staff development for block scheduling were teachers with 30 or more years of teaching experience, those with Educational Specialist degrees, and those at Career Ladder II and Career Ladder III. Females and males were involved almost equally.

Perception Category 6. Impact or Effect of Block Scheduling on Student Testing and Grades

For Perception Category 6, the following groups had lower mean scores as a group, indicating that they perceived block scheduling to have a more positive effect on testing and on grades: teachers with 10 to 19 years of experience and those with 30 or more years, the Educational Specialist group, and the Career Ladder I group. Those persons lacking the experience to participate in Career Ladder were most negative about the effect of block scheduling on testing and grades. There was no difference between females and males in their assessment of the effect of block scheduling on student testing and grades. Table 14 summarizes mean scores for all perception categories.
TABLE 14
MEAN SCORES FOR PERCEPT1, PERCEPT2, PERCEPT3, PERCEPT4, PERCEPT5, AND PERCEPT6

<table>
<thead>
<tr>
<th>Variable/ Descriptor</th>
<th>Percept1</th>
<th>Percept2</th>
<th>Percept3</th>
<th>Percept4</th>
<th>Percept5</th>
<th>Percept6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Descriptor</td>
<td>Mean SD</td>
<td>Mean SD</td>
<td>Mean SD</td>
<td>Mean SD</td>
<td>Mean SD</td>
<td>Mean SD</td>
</tr>
<tr>
<td>Range:</td>
<td>(3-9)</td>
<td>(6-30)</td>
<td>(3-15)</td>
<td>(6-30)</td>
<td>(2-6)</td>
<td>(2-10)</td>
</tr>
<tr>
<td>TEXP</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group 1, 1-9 years</td>
<td>7.4 1.3</td>
<td>13.0 3.4</td>
<td>7.8 3.2</td>
<td>14.4 5.5</td>
<td>5.3 .8</td>
<td>5.1 1.9</td>
</tr>
<tr>
<td>Group 2, 10-19 years</td>
<td>7.4 1.5</td>
<td>11.5 2.7</td>
<td>7.5 3.3</td>
<td>14.5 5.8</td>
<td>4.8 1.3</td>
<td>4.7 1.8</td>
</tr>
<tr>
<td>Group 3, 20-29 years</td>
<td>7.1 1.9</td>
<td>12.8 4.5</td>
<td>7.6 3.6</td>
<td>14.2 5.5</td>
<td>4.9 1.2</td>
<td>5.2 1.7</td>
</tr>
<tr>
<td>Group 4, 30+ years</td>
<td>6.9 1.9</td>
<td>12.0 2.5</td>
<td>8.0 3.4</td>
<td>13.1 3.9</td>
<td>4.5 1.4</td>
<td>5.0 1.8</td>
</tr>
<tr>
<td>DEGREE</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group 1, Bachelor's</td>
<td>7.2 1.6</td>
<td>13.4 3.4</td>
<td>7.3 3.1</td>
<td>13.6 5.0</td>
<td>5.0 1.0</td>
<td>5.0 1.7</td>
</tr>
<tr>
<td>Group 2, Master's</td>
<td>7.7 1.4</td>
<td>12.1 3.8</td>
<td>7.7 3.6</td>
<td>16.0 6.3</td>
<td>5.1 1.2</td>
<td>4.9 2.1</td>
</tr>
<tr>
<td>Group 3, Master's+</td>
<td>7.3 1.5</td>
<td>11.4 3.3</td>
<td>8.4 3.5</td>
<td>14.4 5.6</td>
<td>4.8 1.2</td>
<td>5.2 1.7</td>
</tr>
<tr>
<td>Group 4, Ed. S.</td>
<td>5.5 2.5</td>
<td>9.4 4.3</td>
<td>6.2 3.5</td>
<td>13.0 4.1</td>
<td>4.1 1.5</td>
<td>4.4 9</td>
</tr>
<tr>
<td>CLADD</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group 1, CL I</td>
<td>7.3 1.5</td>
<td>12.8 3.3</td>
<td>7.6 3.3</td>
<td>14.2 5.1</td>
<td>5.0 1.2</td>
<td>4.8 1.7</td>
</tr>
<tr>
<td>Group 2, CL II</td>
<td>7.3 1.5</td>
<td>13.9 4.5</td>
<td>7.1 3.4</td>
<td>14.1 4.3</td>
<td>4.7 1.0</td>
<td>5.0 1.9</td>
</tr>
<tr>
<td>Group 3, CL III</td>
<td>6.6 2.3</td>
<td>9.5 2.9</td>
<td>7.5 3.9</td>
<td>14.4 7.2</td>
<td>4.5 1.4</td>
<td>5.2 1.9</td>
</tr>
<tr>
<td>Group 4, Not exp.</td>
<td>7.4 1.5</td>
<td>11.6 4.0</td>
<td>8.6 3.5</td>
<td>13.5 6.2</td>
<td>5.5 .7</td>
<td>6.0 2.1</td>
</tr>
<tr>
<td>GENDER</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group 1, Female</td>
<td>7.2 1.7</td>
<td>11.4 3.0</td>
<td>6.9 2.9</td>
<td>13.8 5.2</td>
<td>5.0 1.3</td>
<td>5.0 1.9</td>
</tr>
<tr>
<td>Group 2, Male</td>
<td>7.3 1.6</td>
<td>13.6 4.0</td>
<td>8.5 3.7</td>
<td>14.8 5.8</td>
<td>4.9 1.0</td>
<td>5.0 1.7</td>
</tr>
</tbody>
</table>

Note(s): TEXP = Years of teaching experience; DEGREE = Highest degree earned; CLADD = Tennessee Career Ladder status; GENDER = Gender of the respondent; SD = Standard deviation; F = Observed F value; N = Number.
Percept1 = Planning staff development for block scheduling; Percept2 = Knowledge of block scheduling; Percept3 = Satisfaction with staff development for block scheduling; Percept4 = Effective use of adult learning strategies; Percept5 = Level of involvement in staff development; Percept6 = Impact of block scheduling on testing and grades.
Other Research Findings

Other findings were generated from this research study using Likert-scale survey questions. They included respondents' rankings of the importance of adult learning strategies to their own learning, levels of support for block scheduling among respondents, use of needs assessments instruments by school systems, use of block scheduling planning committees, and determination about who initiated block scheduling in the various school systems represented by the respondents.

Importance of Adult Learning Strategies to Respondents' Own Learning

In Items 28-33, survey respondents ranked several adult learning strategies, as they related to the teachers' own learning, on a scale from 1 (most important) to 6 (least important). This researcher ranked the results based on median scores. Those rankings follow:

- First: Median score of 2.0 Being able to learn by doing
- Second: Median score of 2.5 Being able to feel comfortable in my learning environment

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Third  Median score of 4.0  Being able to contribute my own experiences
(Tie)                                               Being able to apply strategies learned immediately
                                                 Being able to learn from knowledgeable peers
Fourth  Median score of 5.0  Being able to participate in planning the learning experience

These rankings by survey respondents of adult learning strategies important to their own learning support research in the field of adult learning (Knox, 1986; Orlich, 1989). However, other researchers asserted that participation in planning the learning experience was vital to successful adult programs (Galbraith, 1991; Vella, 1994).

**Level of Support for Block Scheduling**

Eighty-two percent of the survey respondents were very supportive or somewhat supportive of block scheduling. The mean was 1.7 on a scale of 1 (highest level of support) to 5 (lowest level of support).
Needs Assessments for Staff Development About Block Scheduling

Fewer than half of the survey respondents (42%) indicated that needs assessments for staff development programs for block scheduling were conducted by school system personnel in their school district. Fifty-five percent of respondents were asked about their staff development needs by building-level administrators, but only 35% were asked about their staff development needs by a planning committee at the building or system level.

Knowledge About Planning Committees for Block Scheduling

More than 50% of the respondents did not know if their own school system had a staff development planning committee for block scheduling. At the building level, only 30% said that their school had a planning committee; 41% said their school had no planning committee, and 29% did not know about the operation of such a committee in their school.

Findings About Who Initiated Block Scheduling in the School System

Over 70% of respondents said that a central office administrator or a school principal was responsible for initiating block scheduling in their school. That percentage was split about equally between central office administrators and school principals. In only 8% of the responses did a school-based committee of teachers and parents make
the decision. Another 20% indicated that the decision was made by a combination of people consisting mostly of central office administrators and school principals.

Comments From Survey Respondents

Comments were solicited from survey respondents about five topics. Those were:

1. Workshops, seminars, classes attended since block scheduling began--Question H

2. Honors, awards, achievements received in the past three years--Question I

3. How and where respondent learned about block scheduling--Question K

4. Comments on innovations which might work better than block scheduling to improve student learning--Question 37

5. Other comments relating to staff development and block scheduling--Question 38.

Workshops, Seminars, or Classes Attended

According to data from the 143 surveys, respondents attended a total of 171 workshops, seminars, and classes to prepare for block scheduling. The topics ranged from those specific to block scheduling concepts, such as pacing guides, cooperative learning, and learning
styles, to those such as information technology, mind mapping, Paideia, student differences, and Attention Deficit Disorder, to CPR and storytelling. The workshops lasted from several hours to several days; they were offered both in the individual school system and in other cities and states.

Honors, Awards, and Achievements

Forty-two survey respondents, representing 30% of the total, listed special honors, awards, and achievements. Ten of the 42 respondents, almost 25% of those who commented, had been recognized as Teacher of the Year, either by a school, a school system, or by a civic club. Another 25% were winners of grants or special awards. Forty percent listed subject-area or coaching awards. Several respondents listed elective offices that they held or projects in which they participated.

How or Where Survey Respondents Learned About Block Scheduling

Survey respondents were asked in a narrative question to relate how or where they learned about block scheduling. This researcher ranked the responses in Table 15.
### TABLE 15

**SOURCE OF KNOWLEDGE ABOUT BLOCK SCHEDULING**

<table>
<thead>
<tr>
<th>Ranking</th>
<th>Source of Knowledge</th>
<th>Number</th>
<th>Percentage of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Administration, principals, central office</td>
<td>54</td>
<td>38.2</td>
</tr>
<tr>
<td>2</td>
<td>Visits to and teachers at other schools</td>
<td>33</td>
<td>23.4</td>
</tr>
<tr>
<td>3</td>
<td>School staff development or inservice</td>
<td>21</td>
<td>14.8</td>
</tr>
<tr>
<td>4</td>
<td>Conferences, workshops, and seminars</td>
<td>11</td>
<td>7.8</td>
</tr>
<tr>
<td>5</td>
<td>Outside speakers; visiting teachers</td>
<td>8</td>
<td>5.6</td>
</tr>
<tr>
<td>6</td>
<td>University classes; student teaching</td>
<td>6</td>
<td>4.5</td>
</tr>
<tr>
<td>7</td>
<td>Professional reading</td>
<td>5</td>
<td>3.5</td>
</tr>
<tr>
<td>8</td>
<td>Newspapers</td>
<td>2</td>
<td>1.4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>141</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

All survey respondents (143) were included in this tally because the researcher had made no decisions about excluding the three surveys that were incomplete. Those commenting about their source of knowledge about block scheduling represented 98.6% of the survey respondents, 141 out of 143. In the first category, "Administration, principal, or central office," survey respondents gave no clarification about whether the administrators were central office level or school level. One individual received his or her information in a handout.
from the central office. Another learned about block scheduling at a forum arranged by a superintendent.

Comments About Other Innovations To Improve Student Learning

Classroom teachers had many interesting alternatives to suggest to block scheduling. The first choice was a seven-period day; second was combining elements of the traditional schedule with block scheduling; third was more curriculum integration; fourth was a tie between year-round school and better discipline. Other suggestions ranged from using technology for instruction, to more staff and team planning time, to improved efforts by students to be academically successful.

Comments Regarding Staff Development and Block Scheduling

The responses about staff development and block scheduling were generally positive ones. Forty-three percent of the respondents made written comments. Concerns were expressed about the length of the periods and about the need for more staff, for more staff development, and for more coordinated planning. Several math and science teachers indicated that their courses should be made year-long. Vocational teachers' comments were very positive, as were those of fine arts teachers and special education teachers.
Summary

The purpose of this research study was to determine if perceptions about staff development needs of high school classroom teachers in block scheduled programs differed when teaching experience, education, or Tennessee Career Ladder status were considered. The research sample consisted of 181 classroom teachers from Northeast Tennessee who were asked to respond to questions that measured their perceptions in six categories. One-way analysis of variance (ANOVA) and post hoc Tukey multiple comparison tests were used for hypotheses one, two, and three.

In Chapter 5, this researcher will summarize, draw conclusions, make recommendations, and reflect on implications of the research findings about teachers' perceptions of staff development needs in block scheduled programs.
CHAPTER 5
SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS/IMPLICATIONS

Summary

This study focused on high school classroom teachers’ perceptions of staff development needs for implementing block scheduling. The High School Policy: A New Vision for Tennessee High Schools, adopted by the Tennessee State Board of Education in 1993, had called for educational policy makers to consider alternative ways of organizing the school schedule as a means to improve student learning and to provide for more productive use of teacher planning time. Implementation of block scheduling in eight of the county school systems in the First Tennessee District resulted. Further, The High School Policy (1993) promised support for staff development as a critical component for building “a learning community with administration, faculty, and students engaged in continuous learning” (p. 13).

The purpose of this study was to determine if teachers’ perceptions of staff development needs differed based on their experience, education, and Tennessee Career Ladder status. Taken from the literature review, these three areas, used as independent
variables in this study, were analyzed by six categories of perceptions, the dependent variables. Those categories were:
(a) Planning staff development for block scheduling, (b) Knowledge of block scheduling, (c) Satisfaction with staff development for block scheduling, (d) Effective use of adult learning strategies, (e) Level of involvement in staff development for block scheduling, and (f) Impact or effect of block scheduling on student testing and grades.

Data for this study were gathered from high school classroom teachers in eight Northeast Tennessee county school systems where block scheduling had been implemented in the Fall of 1995. Of the 181 teachers who received surveys, 143 returned them, a response rate of 79%.

Analyses of data included one-way analysis of variance (ANOVA) and post hoc Tukey multiple comparison tests. Hypotheses were tested at an alpha level of .05. Findings of statistically significant differences in perceptions were reported.

Conclusions

Results and findings of this study led to the following conclusions:

1. Teaching experience was not a major determinant of perceptions about staff development needs for block scheduling.
These data about teaching experience seem to disprove conventional wisdom that teachers at various levels of experience have differing staff development needs for block scheduling. While no statistically significant differences were found among teachers' perceptions of staff development needs based on teaching experience, this researcher surmised that other more immediate concerns about an innovation such as block scheduling may have eclipsed the experience issue—the relative newness of a project only implemented in the previous fall, the often controversial nature of block scheduling, and the manner in which each county school system made the move to block scheduling. About half of the comments on the block scheduling concept that were solicited in the survey indicated that the perceived adequacy of staff development for block scheduling was related more to the individual school system and its respective staff development program.

2. As experience increased, so did participation in planning staff development and the general level of involvement in staff development for block scheduling.

Block scheduling enjoyed a highly favorable rating among almost all teachers, and undoubtedly, this situation contributed to a higher rate of participation in staff development activities.
3. Dissatisfaction with staff development for block scheduling was perceived to a higher degree among those with the most experience and among those with the least experience. Conversely, more experienced teachers were more satisfied with presenters’ effective use of appropriate adult learning strategies.

4. Persons with Educational Specialist (Ed. S.) degrees had significantly higher levels of participation in planning staff development.

The Ed. S. group was smaller but more active in the staff development activities of their respective school systems. A group willing to seek higher degrees would seem to be more willing to help create a community of learners such as that envisioned by Senge (1990) and Leithwood (1993).

5. Knowledge about block scheduling was highest for the Ed. S. group and lowest for those with the Bachelor’s degree.

Those groups with higher graduate degrees perceived themselves to have a higher level of knowledge about block scheduling. Such a conclusion would recognize that persons willing to seek higher degrees would also be willing to seek more knowledge about innovations or would have encountered discussions of these innovations in their advanced studies. Persons with higher degrees are
assumed to have more intellectual curiosity about things new and different, including such new concepts as block scheduling.

6. The Career Ladder III group perceived themselves to have higher levels of knowledge about block scheduling and more involvement in and more satisfaction with staff development activities. Further, they viewed the use of appropriate adult learning strategies by presenters most positively and assessed block scheduling to have the most positive impact or effect on student testing and grades.

7. Females perceived themselves to have higher levels of knowledge about block scheduling than did males. Conversely, males were more dissatisfied with the staff development program than were females. Female and male perceptions were equal in planning staff development, in their general level of involvement in staff development, and in their assessment of the impact of block scheduling on student standardized testing and on grades.

This researcher did not include gender as a primary variable for this study because she believed that no differences would exist when gender was considered. But this presumption proved partly wrong.

8. Block scheduling had a highly favorable rating among a large majority of teachers in this study.

Based on comments from the survey, support among teachers was high because block scheduling was effective for most teachers
and for students. Teachers generally had fewer students, less paperwork, and more planning time.

9. The majority of school systems did not conduct needs assessments for staff development nor did they have planning committees for staff development programs.

These findings that the majority of school systems did not conduct needs assessments for staff development contradicted the contention by staff development experts that all stakeholders must participate in decision-making—in planning, setting goals, implementing, and evaluating staff development programs (Berman & Laughlin, 1978; Lawrence, 1974; Loucks-Horsley et al., 1987; Orlich, 1989; Pink & Hyde, 1992; Woods & Thompson, 1993).

If indeed, a majority of the school systems represented in this survey did have some type of planning committee in place at the system level when block scheduling was implemented, then it behooves central office personnel to improve the information flow so that classroom teachers are more knowledgeable about their school system and its staff development activities.

10. The decision to initiate block scheduling in schools was made by central office administrators or by principals. Fewer than 10% of teachers indicated that a school-based committee made the decision.
For an innovation such as block scheduling to lead to school improvement, all stakeholders must have had some input into the decision to adopt block scheduling. If only 8% of stakeholders participated in the decision-making, other than central office personnel or principals, the success of block scheduling as a tool for school reform may be impeded. The narrative comments indicated a frustration with the lack of input. The overall comments about block scheduling were more positive than the level of participation in decision-making might indicate.

11. Most teachers felt that block scheduling would have a positive effect on student grades but a neutral effect on standardized test results.

12. In ranking the importance of adult learning strategies to their own learning, teachers ranked active learning--being able to learn by doing--first, and being made to feel comfortable in my learning environment as second in importance. They were least concerned with participation in planning the learning experience.

**Recommendations/Implications**

Based on the conclusions of this study, the following recommendations/implications are made:

1. Every school should have an active staff development planning committee comprised of teachers and administrators.
2. Although teachers’ concern with implementing an innovation such as block scheduling may have overridden the experience factor, staff development planning committees cannot ignore the “aging” of the teacher workforce. Because experienced teachers were least satisfied with their staff development for block scheduling, efforts must be made to better meet the needs of those teachers.

3. When implementing block scheduling or other curriculum innovations, school system personnel must pay close attention to Hall’s (1979) stages of concern about change described in the literature review of this dissertation. A school system cannot implement a change and have a majority of teachers only at the informational stage of concern.

4. Staff development planning committees should use persons seeking higher degrees in action research and in collaborative projects between universities and schools. Informed persons with higher degrees may be used as presenters and as mentors for persons with bachelor’s degrees. School systems should develop financial and professional incentives for all persons in the school system to seek higher degrees as part of their personal development plan.

5. The expertise of Career Ladder III persons should be used by planning committees. Persons from all career ladder levels should
participate in articulation groups to assess improvement of student learning resulting from implementation of block scheduling.

6. Schools systems (or individual schools) who are considering the implementation of an innovation such as block scheduling should involve classroom teachers in all phases of the decision-making process.

7. Needs assessments should be conducted before an innovation is implemented. Further, teachers must have adequate staff development opportunities provided before the innovation is implemented.

8. Because teachers favor released time staff development opportunities that are based in the teacher's own school and more time for collaborative planning, school system personnel must seek adequate funding and support from local and state agencies and funding bodies to meet the staff development needs of educators.

9. School system personnel should assess the impact of block scheduling on student achievement.

10. Planning committees should conduct periodic needs assessments and follow-up evaluations to use as planning tools for improving the program.

11. This study should be replicated in other districts, both urban and rural, in Tennessee to assess the validity of the findings.
12. Each school system must provide an inclusive support network, particularly among classroom teachers, which includes adequate funding for staff development and personnel, an on-going evaluation process, and follow-up support, so that block scheduling can be sustained as a school improvement tool structured to achieve better teaching and improved student learning.

While this researcher found only limited significant differences in perceptions about staff development needs based on experience, education, and career ladder status, teachers' survey responses indicate that they are very concerned about staff development planning, about their own role in educational decision-making, and about block scheduling as a tool of reform. To re-create the public high school as the "community of learners" envisioned by reformers and Tennessee policy makers will require that teachers become the strategists and leaders in change efforts. Only through inclusive, school-based decision-making can the needs of all stakeholders be met.
REFERENCES

127
REFERENCES


Instructional improvement with the 4 : 4 block schedule:


APPENDIX A

THE INSTRUMENT
Demographic Survey
Classroom Teachers

Instructions: Please supply the following information about yourself. This data will be confidential, and no individual person will be identified.

A. Age:
   ___ 20-29
   ___ 30-39
   ___ 40-49
   ___ 50-59
   ___ 60 or above

B. Gender:
   ___ Female
   ___ Male

C. Total number of years of teaching experience, including the current year. Note: Please check the category, and then circle the exact number of years.
   ___ 1-9 years: 1 2 3 4 5 6 7 8 9
   ___ 10-19 years: 10 11 12 13 14 15 16 17 18 19
   ___ 20-29 years: 20 21 22 23 24 25 26 27 28 29
   ___ 30-39 years: 30 31 32 33 34 35 36 37 38 39
   ___ 40+ years: 40 41 42 43 44 45 46 47 48 49 50

D. Grade level of major assignment:
   ___ Freshmen
   ___ Sophomores
   ___ Juniors
   ___ Seniors
   ___ Combination of the four levels
   ___ Ungraded or special category of students Specify:

E. Subject area of major assignment: ________________________________________

F. Highest degree earned:
   ___ Bachelor's degree
   ___ Masters' degree
   ___ Masters' degree + additional graduate hours
   ___ Educational Specialist degree
   ___ Doctorate degree
G. Career ladder status:
   _____ Career Ladder I
   _____ Career Ladder II
   _____ Career Ladder III
   _____ Chose not to participate in Career Ladder program
   _____ Insufficient years of experience needed to participate
   in Career Ladder

H. Workshops/Seminars/Classes attended since planning for block
   scheduling implementation began:
   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________

I. Honors/Awards/Achievements received in the past three years:
   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________

J. Number of hours during the last 12 months that you have spent in
   staff development (inservice) activities directly related to preparation
   for block scheduling:
   _____ No hours
   _____ 1-3 hours
   _____ 4-6 hours
   _____ 7-9 hours
   _____ 10 hours or more

K. How or where did you learn about block scheduling?
   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________
STAFF DEVELOPMENT FOR BLOCK SCHEDULING

For your information: The term staff development describes any growth-related activities engaged in for improvement of professional skills of the educator and achievement of school system goals. Staff development does not include administrative duties such as doing grades, preparing for the opening or closing of school, etc.

Instructions: Please answer the following questions concerning your level of participation in planning or developing staff development/inservice activities for block scheduling in your high school program. Circle the response that you have chosen.

Planning Staff Development Activities for Block Scheduling

1. How often have you participated in planning/developing a staff development activity since the concept of block scheduling in your high school program was introduced?
   A. Frequently (More than 3 times)
   B. Occasionally (3 times or less)
   C. Never

2. How often have you taken a leadership role in planning such a staff development activity?
   A. Frequently (More than 3 times)
   B. Occasionally (3 times or less)
   C. Never

3. How often have you conducted a staff development activity related to block scheduling?
   A. Frequently (More than 3 times)
   B. Occasionally (3 times or less)
   C. Never

4. Would you present a staff development activity related to block scheduling if asked to do so?
   A. Yes
   B. No
   C. Uncertain
5. Have you participated in any coordinated planning on block scheduling with your colleagues since block scheduling was implemented?
   A. Yes
   B. No

Knowledge about Block Scheduling

6. How knowledgeable are you about block scheduling?
   A. Completely knowledgeable
   B. Somewhat knowledgeable
   C. Borderline
   D. Somewhat lacking in knowledge
   E. Completely lacking in knowledge

7. How knowledgeable are you about this block scheduling concept: pacing guides?
   A. Completely knowledgeable
   B. Somewhat knowledgeable
   C. Borderline
   D. Somewhat lacking in knowledge
   E. Completely lacking in knowledge

8. How knowledgeable are you about this block scheduling concept: cooperative learning strategies?
   A. Completely knowledgeable
   B. Somewhat knowledgeable
   C. Borderline
   D. Somewhat lacking in knowledge
   E. Completely lacking in knowledge

9. How knowledgeable are you about this block scheduling concept: integrated curriculum?
   A. Completely knowledgeable
   B. Somewhat knowledgeable
   C. Borderline
   D. Somewhat lacking in knowledge
   E. Completely lacking in knowledge
10. How knowledgeable are you about this block scheduling concept: active “hands-on” learning?
   A. Completely knowledgeable
   B. Somewhat knowledgeable
   C. Borderline
   D. Somewhat lacking in knowledge
   E. Completely lacking in knowledge

11. How knowledgeable are you about this block scheduling concept: learning styles?
   A. Completely knowledgeable
   B. Somewhat knowledgeable
   C. Borderline
   D. Somewhat lacking in knowledge
   E. Completely lacking in knowledge

12. About which block scheduling concept do you most need to participate in a staff development activity?
   A. Pacing guides
   B. Scope and sequence
   C. Variation of teaching strategies
   D. Active “hands-on” learning
   E. Learning styles

Level of Involvement In and Satisfaction With Staff Development Programs for Block Scheduling

13. To what extent are you involved in planning and/or implementing staff development/inservice opportunities at the building level?
   A. Frequently involved (More than 3 times)
   B. Occasionally involved (3 times or less)
   C. Not involved
14. How satisfied are you with the staff development/inservice opportunities about block scheduling in which you have participated at the building level?
   A. Very satisfied (More than 75% of the time spent in the sessions was valuable)
   B. Somewhat satisfied (More than 50% of time spent in the sessions was valuable)
   C. Neutral (About half of the sessions were satisfactory; half were not)
   D. Somewhat dissatisfied (Most of the sessions were not worth the time spent)
   E. Very dissatisfied (Few to none of the sessions were worth the time spent)

15. To what extent are you involved in planning and/or implementing staff development/ inservice opportunities at the system level?
   A. Frequently involved (More than 3 times)
   B. Occasionally involved (3 times or less)
   C. Not involved

16. How satisfied are you with the staff development/inservice opportunities about block scheduling in which you have participated at the system level?
   A. Very satisfied (More than 75% of the time spent in the sessions was valuable)
   B. Somewhat satisfied (More than 50% of time spent in the sessions was valuable)
   C. Neutral (About half of the sessions were satisfactory; half were not)
   D. Somewhat dissatisfied (Most of the sessions were not worth the time spent)
   E. Very dissatisfied (Few to none of the sessions were worth the time spent)
17. How satisfied were you with any consultants who have presented staff development/inservice opportunities about block scheduling in your building or in your school system?
   A. Very satisfied (More than 75% of the time spent in their sessions was valuable)
   B. Somewhat satisfied (More than 50% of the time spent in their sessions was valuable)
   C. Neutral (About half of their sessions were satisfactory; half were not satisfactory)
   D. Somewhat dissatisfied (Most of their sessions were not worth the time spent)
   E. Very dissatisfied (Few to none of their sessions were worth the time spent)
   F. Not applicable

Effective Use of Adult Learning Strategies

18. The following questions (19-24) present strategies considered effective for adult learners. Rank these strategies from most important to least important (1 through 6) according to how you perceive their importance to your own learning. Use "1" for most important to "6" for least important.

   _____ A. Being able to “learn by doing.”
   _____ B. Being made to feel comfortable in the learning environment.
   _____ C. Being able to contribute my own experiences.
   _____ D. Being able to apply the strategies learned immediately.
   _____ E. Being able to participate in planning the learning experience.
   _____ F. Being able to learn from my peers who are knowledgeable.

For questions 19-24, evaluate how effectively the following adult learning strategies were used in presenting staff development about block scheduling.

19. Being able to “learn by doing.”
   A. Very effectively used
   B. Somewhat effectively used
   C. Somewhat ineffectively used
   D. Very ineffectively used
   E. Did not use at all

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20. Being made to feel comfortable in the learning environment.
   A. Very effectively used
   B. Somewhat effectively used
   C. Somewhat ineffectively used
   D. Very ineffectively used
   E. Did not use at all

21. Being able to contribute my own experiences.
   A. Very effectively used
   B. Somewhat effectively used
   C. Somewhat ineffectively used
   D. Very ineffectively used
   E. Did not use at all

22. Being able to apply the strategies learned immediately.
   A. Very effectively used
   B. Somewhat effectively used
   C. Somewhat ineffectively used
   D. Very ineffectively used
   E. Did not use at all

23. Being able to participate in planning the learning experience.
   A. Very effectively used
   B. Somewhat effectively used
   C. Somewhat ineffectively used
   D. Very ineffectively used
   E. Did not use at all

24. Being able to learn from my peers who are knowledgeable.
   A. Very effectively used
   B. Somewhat effectively used
   C. Somewhat ineffectively used
   D. Very ineffectively used
   E. Did not use at all

Needs Assessments for Staff Development Programs About Block Scheduling

25. Were you asked to complete a system-wide needs assessment survey for planning staff development activities in preparation for implementing block scheduling?
   A. Yes
   B. No
26. Were you asked about your staff development/inservice needs for implementing block scheduling by your building-level administrator?
   A. Yes
   B. No

27. Were you asked about your staff development/inservice needs for implementing block scheduling by your peers?
   A. Yes
   B. No

28. Were you asked about your staff development/inservice needs for implementing block scheduling by a planning committee?
   A. Yes
   B. No

29. Does your school system have a staff development/inservice planning committee for block scheduling?
   A. Yes
   B. No
   C. Don't know

30. Does your school building have a staff development/inservice planning committee for block scheduling?
   A. Yes
   B. No
   C. Don't know

31. To what extent were you involved in the decision to change to block scheduling?
   A. Very much involved
   B. Somewhat involved
   C. Involved an average or usual amount
   D. Involved just a little
   E. Not involved at all

32. Who initiated the change to block scheduling in your school?
   A. Central Office administrator(s)
   B. School principal(s)
   C. A school-based committee of teachers
   D. A school-based committee of teachers which also included parents
   E. School Board member(s)
   F. Other Specify:__________________________________________________
33. What impact or effect do you think block scheduling will have on your students' performance on standardized tests?
   A. Very positive effect
   B. Somewhat positive effect
   C. Neutral effect
   D. Somewhat negative effect
   E. Very negative effect

34. What impact or effect do you think block scheduling will have on the grades your students earn in your class?
   A. Very positive effect
   B. Somewhat positive effect
   C. Neutral effect
   D. Somewhat negative effect
   E. Very negative effect

35. Could your support and/or commitment to block scheduling in your school be described as
   A. Very supportive
   B. Somewhat supportive
   C. Neutral
   D. I would be reluctant to support
   E. I do not support at all

36. Have you thought of other innovations that might work better than block scheduling to improve student learning?
   A. Yes
   B. No
   C. I have no idea

   Please comment on these innovations (from question 36):

   __________________________________________
   __________________________________________
   __________________________________________

   Other comments relating to staff development and block scheduling:

   __________________________________________
   __________________________________________
   __________________________________________
APPENDIX B

LETTER TO SUPERINTENDENT ABOUT THE RESEARCH PROJECT
Dear Superintendent:

I am pursuing a Doctor of Education degree in the Department of Educational Leadership and Policy Analysis, College of Education, at East Tennessee State University. My dissertation prospectus, titled "Perceptions of Staff Development Needs of Northeast Tennessee High School Teachers in Block Scheduled Programs," has been accepted by my doctoral committee, chaired by Dr. Donn Gresso. I am now ready to begin my survey research.

I would appreciate it very much if you will agree for your school system to participate in this research project.

I became employed in the Carteret County (North Carolina) School System in October, 1995, as Technology Specialist, after twenty-two years as teacher and library media specialist in the Sullivan County Schools, first at Bluff City Elementary School and then at Sullivan Central High School. I hope that you will agree to help me complete this dissertation research.

I am enclosing with this letter copies of my survey instruments and a response form indicating whether your school system will be able to participate in this research project. I will follow up this letter with a telephone call to your office. The response form may be faxed to my school at 919/223-4107 or sent to me in the enclosed self-addressed envelope. My electronic mail address is: cn4105@coastalnet.com

Thank you so much for your help.

Sincerely,

Rita S. Mullins
APPENDIX C
RESPONSE FORM FROM SUPERINTENDENT
Response Form
School System Participation
Staff Development for Block Scheduling Research Project

To: School System Official
From: Rita S. Mullins
Re: Participation in Research Project on Block Scheduling
Date: March 1, 1996

Can you please supply the following information:

_____ I would like for the ________ County School System to participate in Rita Mullins’ dissertation research project and to receive results of the survey.

Signature __________________________________________________________

Title _______________________________________________________________

Address ___________________________________________________________

Phone Number _____________________________________________________

FAX Number _____________________________________________________

E-Mail Address ___________________________________________________

Please forward this document in the enclosed envelope to

Rita S. Mullins
2006 Farmstead Court
Morehead City, NC 28557

FAX Number: 919/223-4107
E-Mail Address:
        cn4105@coastalnet.com
Dear Colleague,

You have been chosen randomly to participate in a survey to gather information about teachers’ perceived needs for staff development (or inservice) in eighteen high school programs where block scheduling is currently being implemented. I am a fellow teacher with twenty-two years of high school experience in Sullivan County (TN) Schools. Your participation in this research project will help me to complete a Doctor of Education degree at East Tennessee State University. Further, the information from this survey will be used to evaluate staff development programs for block scheduling.

Individual respondents will not be identified, and confidentiality is ensured. Please complete all questions according to your knowledge and judgment. A copy of the results of this research study will be sent to you, upon request. The enclosed postal card should be dropped into the U.S. Mail after you have completed the survey. Put the survey into the stamped envelope and drop it into the U.S. Mail.

Thank you for your cooperation.

Sincerely,

Rita S. Mullins
VITA

Rita S. Mullins

Address: 2006 Farmstead Court
Morehead City, North Carolina 28557

Personal Data: Date of Birth: July 23, 1944
Marital Status: Married, 1 Child

Education: Public Schools, Burke County, North Carolina
Berea College, Berea, Kentucky
East Tennessee State University, Johnson City,
Tennessee; English and history, B.A., 1966
East Carolina University, Greenville, North Carolina;
library science, M.L.S., 1973
East Tennessee State University, Johnson City,
Tennessee; educational administration and
supervision, Ed.S., 1994
East Tennessee State University, Johnson City,
Tennessee; educational leadership and policy
analysis, Ed.D., 1997

Endorsements: English 9-12
Media Specialist K-12
History 9-12
Superintendent
Administration/Supervision K-8
Administration/Supervision 9-12

Professional Experience: Teacher, Church Hill High School, Church Hill,
Tennessee, 1966-1967
Teacher, Herndon High School, Herndon, Virginia,
1967-1971
Teacher, Newport Elementary School, Newport, North
Carolina, 1971-1972
Teaching Fellow, East Carolina University,
Greenville, North Carolina, 1972-1973
Media Specialist, Bluff City Elementary School,
Bluff City, Tennessee, 1973-1980
Adjunct Faculty, Northeast State Technical
Community College, Blountville, Tennessee,
1977-1982
Media Specialist, Sullivan Central High School,
Blountville, Tennessee, 1980-1995
Technology Coordinator, Newport Elementary School,
Newport, North Carolina, 1995-1997

Publications:
Tennessee Teacher, 62 (4), 16-18, 22.
Charleston, WV: Appalachian Educational Laboratory; Nashville, TN: Tennessee Education Association

Memberships:
National Education Association
North Carolina Association of Educators
Carteret County Chapter of NCAE
Ch.A.D.D. (Children and Adults With Attention Deficit Disorder), Carteret/Craven Chapter
Association for Supervision and Curriculum Development
Phi Delta Kappa
Alpha Delta Kappa

Interests:
genealogy
reading
traveling