IMPACT OF TEACHERS' COMMON PLANNING TIME ON THE ACADEMIC

PERFORMANCE OF STUDENTS IN A MIDDLE SCHOOL SETTING

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The purpose of this study was to assess the impact of the common planning time for a team of middle school teachers by comparing the standardized test scores of middle school students selected from two school districts located in North Texas.

An analysis of variance (ANOVA) 2 * 4 design was utilized to measure the Texas Assessment of Knowledge and Skills (TAKS) math and reading scale score for 7th grade students from the test administered in spring 2005. The data for this study were compared by the variables of school, gender, and ethnicity. The measuring tool utilized in this study determined the ratio of the amount of variance of the scores for individuals of between-groups as opposed to the amount of variance of within-groups, indicating if there were a statistically significant difference on the scores in any one particular variable compared to the variances of scores for the other variables in this study.

The statistical results indicated that there were no statistical significant differences in the scores of students attending a middle school where the teachers received a common planning time. However, there was a noted difference in the percentage ratings on the Academic Excellence Indicator System (AEIS) report published by TEA for the African American students who attended the school with the common planning time. These students had higher scores on the TAKS reading test. The TAKS math scores did not indicate any notable differences.

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INTRODUCTION

Background

Time is perhaps the most important but least available resource in

American education. Teachers need time to plan curriculum and develop

assessments, refine instructional strategies, and engage in collaborative inquiry

to improve student work (Carnegie Council on Adolescent Development, [CCAD],

2000). Current and former editors of the *Middle School Journal*, Dickinson and

Erb, report that in the United States teachers do not have the needed hours to

plan, yet teach more hours than the teachers in all 15 European countries (1997).

Holland, a writer and investigative reporter specializing in education coverage,

reports that the National Commission on Teaching & America's Future, found

that teachers in Germany, Japan, and China spend 15 to 20 hours a week

working with teachers in study groups to collaborate and observe. These

teachers indicated that they could not perform their jobs successfully if they were

working under the same conditions as American teachers, where little time is

allowed to plan and work on instruction and curriculum with other teachers

(Holland, 1997).

This study investigated the impact of a common planning period for

teachers and its effect on the standardized test scores of middle school students.

While schools are required by law to provide 450 minutes of planning time for

teachers every two weeks, the middle school concept utilizes additional planning

time during the school day to allow a core team of teachers to meet. Two middle

school campuses were studied. One middle school campus was organized into core teams of teachers that were assigned common planning periods for their teams. Along with their common planning periods, the teachers were also assigned an individual planning time. The other middle school in this study was not organized into core teams, but had teachers who were departmentalized and had only one individual planning time.

The middle school concept originated in the early 1960s. "Enrollment pressures and larger societal issues were important in shaping the formation of middle schools for grades 6-8 from the beginning of the 1900s to the 1960s" (Juvonen, Le, Kaganoff, Augustine, & Constant, 2004, p. 12). The concept gained momentum in 1975 with the published research by Gatewood and Dilg, which justified the need for a school design that would meet the curricular and emotional needs of the adolescent period in a student's life. These authors felt that if educators understood the behaviors of the students at this age, then they could deal with them in a more rational way in the classroom (Association for Supervision and Curriculum Development [ASCD], 1975).

In the early 1980s, this concept was once again supported and advanced through the sweeping educational changes prompted by the political and social climate of the American public and leaders, who questioned the strength of the American education system in its entirety. "Critics challenged middle schools to care about the 'whole child'" (Juvonen et al., 2004, p. 13). Standardized test scores dropped, and a report by the National Commission on Excellence in Education ([NCEE], 1983) alleged, "The educational foundations of our society

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are presently being eroded by a rising tide of mediocrity that threatens our very future as a Nation and a people" (p. 1). Thus, Congress reacted by consenting to the passage of and an addendum to the General Education Provisions Act and the Federal Advisory Committee Act establishing a commission of 12 to 19 members, having knowledge of the educational system, to be an advisory committee to investigate the standards of American education. The Commission's published report *A Nation at Risk* (1983) stated the following:

> Business and military leaders complain that they are required to spend millions of dollars on costly remedial education and training programs in such basic skills as reading, writing, spelling, and computation. The Department of the Navy, for example, reported to the Commission that one-quarter of its recent recruits cannot read at the ninth grade level, the minimum needed simply to understand written safety instructions. Without remedial work they cannot even begin, much less complete, the sophisticated training essential in much of the modern military. (NCEE, 1983, p. 2)

This report led to the changes in the educational system that accommodated gifted learners and economically disadvantaged students; strengthened graduation requirements and teacher certification and training; and improved and modified class structure, including smaller class sizes, in an attempt to demand "the best effort and performance from each student" (1983).

During this time of broad educational reform, educators, who were interested in the academic development of the adolescent, began to focus on what became known as the "middle school movement." In 1986, the Carnegie Council of New York established the Carnegie Council on Adolescent Development (CCAD) to research methods to successfully teach the young adolescent. The Task Force on Education of Young Adolescents was created the

following year with members of "distinguished educators, researchers, government officials, and media leaders to examine firsthand the conditions of America's 10 to 15-year-olds and identify promising approaches to improving their education and promoting their healthy development" (CCAD, 2000, p. 2). They published a report in June 1989, entitled *Turning Points: Preparing American Youth for the 21st Century*. Upon the framework of this report's recommendation, further research was conducted, and ten years later *Turning Points 2000: Educating Adolescents in the 21st century* was published. This report calls for middle grade schools to address the following areas: a vigorous curriculum; high standard instructional methods; expert teachers engaged in ongoing, professional development; a learning community focusing on a positive climate of intellectual development; a representative democratic governing of staff; a safe and healthy school environment; and community and parental involvement in the education of the students (CCAD, 2000).

This continuing educational research on the middle school movement resulted in more districts moving from a junior high setting of seventh through ninth grades toward a design for a campus that would serve sixth through eighth grades. Educational leaders also saw the need for teachers who worked with these students to receive special training in order to deal with the adolescent behavior experienced during this time of tremendous physical and emotional growth. Thus, these leaders along with state legislators in many states including Texas, Louisiana, Arkansas, and California established a level of certification for teachers working with these students in grades four through eight.

The National Middle School Association has supported many research projects to aid the development of middle schools. They published the report *Education in the Middle Grades: National Practices and Trends* by authors Epstein and Mac Iver (1990), which discussed organization, practices, and instruction for adolescents in the middle school setting. This report disclosed the need for interdisciplinary instructional teams on the campuses. It stated, "In theory, teachers on a team know how their students are doing in all subjects, discuss the needs for special help with other teachers, arrange extra time for learning, and so on" (Epstein & Mac Iver, 1990, p. 28). However, the success of teaming is based on the premise that administration allows for a common planning time to make the team successful. The study advocated that, "Teachers could use one common planning period for teaming and one individual planning period for preparations for teaching" (Epstein & Mac Iver, 1990, p.33).

Another report released by the ASCD in 1992 by authors George, Stevenson, Thomason, and Beane discussed the middle school movement. The study stated:

> Although it is indeed still new in many places, the middle school concept has been adopted and accepted in districts across the country for a variety of reasons: as a tool for desegregation, to cope with changing demographics and exploding enrollments, to meet state funding requirements. But the resurging middle school movement of the '90s offers the best rationale yet: to address the special learning needs of students at a crucial stage in their development as they prepare for a vision of a future that has never been faster changing. (ASCD, 1992, p. 2)

Many states and districts have given educators the authority to develop strategies that address the crucial needs of early adolescents. The state of Texas in June 1990 passed Senate Bill 1, which established committees on campuses

for planning goals and academic objectives to advance student success. Other middle school educators across the nation were also assigned this task, and nationwide many school districts initiated strategies to incorporate team planning.

This team-planning concept focuses on a planning time utilized by a team of core teachers to accomplish many tasks in managing the education of an identified group of 100 to 150 students. Teachers have a common planning time when they can meet together to plan and integrate curriculum for instruction in the classroom as well as develop incentives to motivate students and provide rewards for both academic and behavioral success. Additionally, teachers also use the time to discuss those students who are academically struggling or failing in their classes, schedule parent meetings during this time, and prepare assignment packets for missing work to be completed by the student in a tutorial time during or after school. Teachers also work together to meet the needs of special education students who are mainstreamed and have special needs. Counselors and diagnosticians schedule Admission review dismissal (ARD) and other meetings for these teachers during this common planning time.

The importance of teachers meeting with parents and other school staff has intensified in the state of Texas with the establishment of the Academic Excellence Indicator System (AEIS) in 1984 by House Bill 72. Since 1990, this document compiled by the Texas Education Agency has provided a report card for school districts across Texas addressing performance successes and failures within the sub-groups of students of low socio-economic level, English second language speakers, minority groups, at-risk students, and special education

students within the district (Texas Education Agency, [TEA], 2005, Accountability, Origin section).

These issues have also become important to other states with the No Child Left Behind Legislation passed by Congress that has ramifications impacting federal funding through the Adequate Yearly Progress report. This legislative bill, much like the bill from Texas, relates to the performance of sub-groups, motivating school leaders across the nation to research programs ensuring success for identified students. The team concept gives teachers the time during the school day to concentrate on those students and communicate and contact their parents or guardians. It is extremely important to districts to focus on this small percentage of students due to the high accountability for their achievements, which affects the rating of the campuses in their districts, which in turn sometimes affects the state and federal funding.

Another important issue facing districts is the financing of schools which has been a topic of concern for our nation throughout the years. Many state leaders have struggled over the cost of providing an adequate and equal education for their students. The funding crisis and other issues have caused the legislators from the state of Ohio to change the way their public schools are financed (Sherry, 2004). They must meet the standards set by federal and state government requiring higher achievement for students without the help of federal funds for the additional resources needed by educators to provide these services (Candisky, 2004). In the state of Colorado, districts and parents asked the legislature to fund repairs for run-down buildings and other educational needs,

but no funds were allocated to provide for those needs (Allison, 2004). The court of New York has imposed a deadline for the state to "fix the state's system for funding public education" (Times Running Out, 2004, p. A12).

In the state of Texas, a school finance overhaul was the top priority of the last legislative session. A state district judge declared in 2004 that the schools finance's current system "Robin Hood" robs local districts of meaningful control over property tax rates, and is so under-funded that it violates the Texas Constitution. The Texas Supreme Court ruled on this case, which prompted legislators to take action (Dyer, 2005). In June 2005, the state of Texas passed new educational funding legislation, but districts are unsure as to how it will affect their funding. At present time, there are still not adequate funds available to support all the educational needs of this state. This type of funding crisis has left districts and administrators with the task of cutting many programs that enhance education because of the minimal funds provided for school budgets. Due to its financial implications, research on the importance of implementing a common planning time is vital in gaining and retaining administrative support; however, due to the No Child Left Behind Act, educators must find ways to tighten their budgets without affecting the performance of their students. Cuts have been made in areas such as block scheduling, fine arts departments, athletics, and other extra-curricular activities, and the team-planning concept for the middle school is no exception because the additional planning period for core teachers generates the need for up to twenty percent more funding for additional teachers. This study will assess achievement outcomes resulting in the common planning

time on a middle school campus. Specifically, the study will examine whether or not a relationship exists between the team-planning period added to a personal planning period for a middle school teacher and standardized test scores comparing gender and ethnicity on the reading and math sections of the Texas Academic Knowledge and Skills (TAKS) test.

Statement of the Problem

Research conducted for this study will examine the impact that a common planning time for a team of teachers has on a students' academic performances by gender and ethnicity on standardized tests. Middle schools across the nation are assessing the "middle school concept" and the effect it has on the success of students. Researchers have found that when this concept is implemented at a high level, student achievement is also high (Felner, Jackson, Kasak, Mulhull, Brand, and Flowers, 1997). The concept stresses that teachers need individual planning time, a common planning time, and resources to meet and collaborate on interdisciplinary curriculum to achieve this goal of high student achievement (Pitton, 2001). To provide this support for interdisciplinary teaming, many principals provide a common planning time as well as an individual planning time for teachers on a team (Clark & Clark, 2003). The consequences lead to increasing the budget for teacher salary by 20 percent. For this reason and to determine if this has an impact on student achievement, it is important to conduct this study.

Rationale

Currently, some researchers feel that evidence is weak as to the impact of the middle school concept on schools, especially at a national level (Juvonen et al., 2004). These researchers suggest, "In particular, there is a dearth of studies that examine how middle school reforms may first raise student motivation, improve school climate, or decrease disciplinary problems and how such changes in turn might be related to achievement over time" (Juvonen et al., 2004, p. 115).

The two middle schools selected for this study will come from the "campus comparison group" on the Academic Excellence Indicator System (AEIS) report released for the 2004-2005 school year by the Texas Education Agency in the state of Texas. This report compares and rates campuses that are similar in structure pertaining to Texas Assessment of Knowledge and Skills (TAKS) scores, attendance rate, drop-out rate, student and staff information, budgeted operating expenditure information, and program information. One middle school from this campus comparison group will utilize the teaming concept, providing teachers with a common planning time. The other middle school, also from the campus group, will be structured by departments not involved in teaming with teachers having only an individual planning time. Information derived from this study will inform teachers and administrators of the importance of providing a common planning time for a team of teachers.

Research Questions

This study addresses the following research questions:

1. When comparing students' standardized test scores by gender, what impact does the common planning time have on TAKS math scores?

2. When comparing students' standardized test scores by gender, what impact does the common planning time have on TAKS reading scores?

3. When comparing students' standardized test scores by ethnicity, what impact does the common planning time have on TAKS math scores?

4. When comparing students' standardized test scores by ethnicity, what impact does the common planning time have on TAKS reading scores?

5. When comparing students' standardized test scores by gender and ethnicity, what impact does the common planning time have on TAKS math scores?

6. When comparing students' standardized test scores by gender and ethnicity, what impact does the common planning time have on TAKS reading scores?

Research Hypothesis

This study addresses the following research hypotheses:

Hypothesis 1: When measuring the scores of students by gender on the TAKS math test, a statistical difference will exist for those students who attend a middle school campus that utilizes a common planning time for teachers.

Hypothesis 2: When measuring the scores of students by gender on the TAKS reading test, a statistical difference will exist for those students who attend a middle school campus that utilizes a common planning time for teachers.

Hypothesis 3: When measuring the scores of students by ethnicity on the TAKS math test, a statistical difference will exist for those students who attend a middle school campus that utilizes a common planning time for teachers.

Hypothesis 4: When measuring the scores of students by ethnicity on the TAKS reading test, a statistical difference will exist for those students who attend a middle school campus that utilizes a common planning time for teachers.

Hypothesis 5: When measuring the scores of students by gender and ethnicity on the TAKS math test, a statistical difference will exist for those students who attend a middle school campus that utilizes a common planning time for teachers.

Hypothesis 6: When measuring the scores of students by gender and ethnicity on the TAKS reading test, a statistical difference will exist for those students who attend a middle school campus that utilizes a common planning time for teachers.

Limitations

 Even though the selected schools for this research will represent middle school campuses of similar characteristics as reported in the campus group on the AEIS report from the Texas Education Agency, variables exist that generate delimitations in this study.

1. The return of the consent/assent forms for student participation by the selected population

2. The instruction, curriculum and interdisciplinary strategies of the team in the classroom

3. The cohesiveness of the team members, amount of participation by each member, conflict resolution within the team, attitude toward the value of the teaming concept by members, and the attrition of team members

Definition of Terms

A Nation at Risk was created by the National Commission on Excellence in Education in 1981. It contained recommendations for improvements in education. These recommendations focused on assessing and comparing academic achievement and defining the problems inherent pursing excellence in education in America. Special attention was given to teenage youth and the formative years spent in elementary schools, higher education, vocational and technical programs.

Academic Excellence Indicator System (AEIS) report originated in 1984 as the Texas Legislature passed House Bill 72, which called for a system of accountability based on student performance in each school and district in Texas every year. This information is put into the annual AEIS reports, which are available each year in the fall. The performance indicators below are disaggregated by ethnicity, sex, special education, low income status, and limited English proficient status:

- State-administered assessment performance; by grade, by subject, and by all grades tested

- State developed alternative assessment performance

- Student Success Initiative

- attendance rate for the full year

- dropout rate (by year)

- completion and dropout rates (4-year longitudinal)

- percent of high school students completing an advanced course

- percent of graduates completing the recommended high school program

- Advanced placement (AP) and International Baccalaureate (IB) examination results

- Texas Assessment of Knowledge and Skills (TAKS) / Texas Academic Skills Program (TASP) equivalency rate

- Scholastic Aptitude Test (SAT) and the American College Testing Program (ACT) examination - participation and results

- Information on school and district staff, finances, programs, and demographics (TEA, 2004)

Admission Review Dismissal (ARD) committee is composed of a student's parent(s) and school personnel who are involved with the student. The ARD committee determines a student's eligibility to receive special education services and develops the individualized education program (IEP) for the student.

Adolescent Students are youth who attend grades 6 through 8. These students are entering a time of development toward physical, intellectual, and

social change. It is a crucial time in their lives when they are leaving elementary school and are approaching the secondary education setting.

Analysis of Variance (ANOVA) is a statistical measuring instrument used to compare the means of two or more groups in a data set. It involves two sets of variances, the dependent and independent variable. In each group can have levels in which the interaction effect can be compared, also.

Adequate Yearly Progress Report (AYPR) is mandated by the No Child Left Behind Act (NCLB) 2001 and is a disseminated annual report card that each state must produce providing information on student achievement in the state, as a whole and separately according to the subgroups. State report cards include:

- State assessment results by performance level (basic, proficient and advanced), including (1) two-year trend data for each subject and grade tested; and (2) a comparison between annual objectives and actual performance for each student group

- Percentage of each group of students not tested

- Graduation rates for secondary school students and any other student achievement indicators that the state chooses

- Performance of school districts on adequate yearly progress measures, including the number and names of schools identified as needing improvement

- Professional qualifications of teachers in the state, including the percentage of teachers in the classroom with only emergency or provisional credentials and the percentage of classes in the state that are

not taught by highly qualified teachers, including a comparison between high- and low-income schools (NCLB, 2001)

Campus Group is a comparison group of 40 other campuses in the state that closely match the target school on six characteristics as reported on the AEIS report released by the Texas Education Agency:

- Percentage of African American students enrolled

- Percentage of Hispanic students enrolled

- Percentage of White students enrolled

- Percentage of economically disadvantaged students enrolled

- Percentage of limited English proficient students enrolled

- Percentage of mobile students as determined by cumulative attendance

The schools are grouped by grade level and then determined on the predominant feature of the target school. The methodology utilized to establish this group "creates a unique comparison group for every campus" (Texas Education Agency, 2004, Accountability, Glossary section).

Common Planning Time is a 45 or 50 minute block of time each day when a core team (math, science, reading, writing, and social studies) of teachers meet together, usually everyday, to "plan curriculum, develop assessments, refine instructional strategies, and engage in collaborative inquiry to improve student work (CCAD, 2000, p. 131). Each team of teachers is responsible for approximately 150 students. Notes for the meeting are recorded and kept in a notebook for administrative observation.

Core Team is a group of teachers, who instruct the core subjects such as math science, social studies, reading, and writing and share in teaching a group of approximately 125 students on a middle grade level. This team spends time together planning and focusing on coordinating curriculum, improving teaching strategies, and meeting the needs of the students.

Interdisciplinary Teaming is a way of organizing the faculty so that a core team of teachers share: (1) the same group of students; (2) the responsibility for planning, teaching, and evaluating curriculum and instruction in more than one academic area; (3) the same schedule; and (4) the same area of the building (George & Alexander, 1993). These teams include teachers from different disciplines (Erb, 1999), usually from the five core subject areas, who plan curriculum and instruction that crosses over the various disciplines and is then presented as a lesson or unit to the students.

Learning Community is described by the California Learning Community College Network (2005) as "faculty collaboratively studying a theme or body of knowledge in two or more linked, clustered, or otherwise connected classes, unified by a common area of interest or career goal, and intentionally designed to restructure the students' time, credit and learning experiences to foster more explicit intellectual and emotional connections between students, between students and their faculty, and between disciplines." Cushner, McClelland, and Safford (2003) defined it as "An approach to classroom organization and instruction, based on democratic ideals, which is characterized by active teaching and learning, collaboration, belonging, shared decision making, and a strong

sense of democratic participation. This approach can be highly effective when used by educators to improve school performance for both the student and teacher." An effective tool for supporting a learning community on a campus is to have a team approach and allow that team to have a common planning time as well as an individual planning time.

No Child Left Behind Act 2001 ([NCLB] HR 1-P.L. 107-110-Title 1 part F) passed by Congress was an attempt to reform education by reauthorizing the Elementary and Secondary Education Act (ESEA), a federal law supporting elementary and secondary education in the United States. The foundation of this legislation is based on four pillars: accountability for results; an emphasis on doing what works based on scientific research; expanded parental options; and expanded local control and flexibility. Through this Act, state goals are to close the achievement gap and ensure success for all students, including those who are disadvantaged. Parents and communities are kept informed through annually released school district report cards. "Schools that do not make progress must provide supplemental services, such as free tutoring or after-school assistance; take corrective actions; and, if still not making adequate yearly progress after five years, make dramatic changes to the way the school is run" (NCLB, 2001).

Scale Score is a statistical score format utilized for in TAKS test results which allows the comparison of a student's score with the performance standards set by TEA in the state of Texas. In terms of achievement, this scale score indicates how far above or below the performance standards each student

falls. Since the scores vary, they cannot be compared across subject or grade

levels (TEA, 2004, Accountability Section).

Significance of Study

The significance of this study is to determine if a common planning time

affects standardized test scores, with a comparison by gender and ethnicity.

Public concern has grown over the issue of low achievement levels by middle

school students (Juvonen et al., 2004). Accountability issues and legislative

mandates such as No Child Left Behind, which are tied to federal funding, are

affecting schools across the nation. Administrators are concerned with the

performance of their students on standardized test scores and other areas of

measurement as required by this legislation. As instructional leaders, these

educators must research methods that can be implemented to improve student's

success in these areas. This study not only accessed achievement scores, but

also specifically addressed the issue of performances based on gender and

ethnicity to clarify what impact a common planning time had on these students.

While some middle school principals "may compromise instructional

leadership for the sake of operational management" (Juvonen et al., 2004), some

researchers report it is the commitment and leadership of middle school

principals that has been the contributing factor to the reorganization and

implementation of the middle school concept (Clark & Clark, 2003). However,

these principals need data to support this reorganization. Studies report,

"Evidence of the effectiveness of middle grades practices can be found among

schools that implemented teaming, a common planning time, and adolescent-

appropriate classroom instruction" (Flowers, Mertens, Mulhall, 2003, p. 57; Clusters and Team Teaching, 1995; Cromwell, 2002). More importantly, the data indicates achievement scores are higher in schools where teaming is implemented with a common planning time (Flowers, Mertens, Mulhall, 2003).

Since the cost of teaming and allowing a common planning time as well as an individual planning time for a teacher, can be an expensive expenditure on a middle school budget, principals must assess the value of the common planning time when developing their campus budgets. The Frederick County Public School system serves 2800 middle school students, and had to cut the common planning time for its teachers because of budget concerns. The assistant superintendent for instruction reported that the school system saved $600,000 by eliminating the program, which allowed for a reduction of twelve instructional staff positions (Cupp, 2003). A study conducted by Trimble and Rottier (1998) states, "By documenting the benefits for students, teachers, and schools, team assessments can justify the cost of common planning time for teachers and other staff members" (p. 1). Therefore, the significance of this study researches if a common planning time for teachers on a team provides academic success for students, linking principals with data to support the need for additional staffing, enabling them to defend this expenditure.

Organization of Study

This study is organized into five chapters. The first chapter includes the introduction, background, statement of the problem, research question, research hypothesis, limitations, definition of terms, significance of the study, and the

organization of the study. The second chapter includes the literature review from journal articles, dissertations, monographs, and books concerning the middle school concept. Topics included are components that comprise that concept, including a common planning time for teachers on a team. The third chapter outlines the methodology of this study. It introduces the design of the research, population, data collection and the data analysis, ending with a summary. The fourth chapter interprets analysis of the research question results. The fifth chapter states the conclusion of the study and recommendations for future research related to this topic.

CHAPTER 2

REVIEW OF THE LITERATURE

Introduction

The impact of a common planning time, an integral part of the middle school concept, has led to much discussion in the educational community. According to authors Epstein and Mac Iver (1990), research scientists for The John Hopkins University Center for Research on Elementary and Middle Schools, "Interdisciplinary teams of teachers are considered by many to be a key organizational feature of middle grades education," (p. 28) and an important part of this middle grade philosophy is allowing the teams of teachers to have a common planning time. These authors, along with other educators, have researched and written a large amount of theoretical literature and empirical studies covering this topic.

Literature and studies concerning the middle school concept use the key words common planning time, middle school, and education. Articles in various middle school educational periodicals, corporate task force studies published in book format, dissertations, and ERIC documents were located that addressed the success of the middle school concept. This chapter is organized in sections, which review the published information, beginning with Early Organization Restructuring, Implementation of Organizational Restructuring, Assessing the Value of a Common Planning Time, The Impact of the Common Planning Time on the Academic Achievement of Students, Administrative and Teacher Support for a Common Planning Time, and the Summary.

Early Organizational Restructuring

The concept of a common planning period became increasingly popular with the middle school movement, which began in the 1960s. A report by the Association for Supervision and Curriculum Development (ASCD, 1975) conveyed that the physical and emotional development of the early adolescent age group necessitated a school that would focus on these students' educational needs. At its 1988 conference, the National Middle School Association (NMSA) pressed for schools to be developed that would meet the needs of early adolescents. Teachers and principals in the NMSA became aware that the organization of a junior high school did not meet the needs of the various age groups of students. Students entering the ninth grade needed an education that focused more on a secondary education preparing them for higher level learning, while sixth, seventh, and eighth graders needed to begin to move away from the elementary concept. William Alexander (ASCD, 1992) and John Lounsbury (Cromwell, 2002) were authors that researched and published information concerning the concept of a middle level education for students age 10 to 13. George, Stevenson, Thomason, and Beane (ASCD, 1992) discussed how the concept of a middle school education led administrators to support the theory of interdisciplinary teams with common planning periods.

Following this article, the North Carolina Middle School Association Research Bulletin published an article by Strahan and Hartman in 1994, which revealed the survey results for contributions of programs in exemplary and effective middle schools that aided in their success. The authors said,

"Exemplary middle schools are able to demonstrate positive outcomes related to academic achievement and student personal development" (Strahan and Hartman, 1994, p. 2). They listed nine common elements that educational researchers George and Alexander (1993) found were needed for middle schools to achieve this rating:

1. classroom-based guidance efforts

2. interdisciplinary team organization

3. common planning time for a team of teachers

4. flexible scheduling

5. a curriculum emphasizing balanced exploration and solid academics

6. heterogeneous grouping whenever appropriate

7. instructional characteristics that consider learners' characteristics

8. a wide range of special interest experiences

9. collaboration between and among administrators

In the summary section of this research, which was based on a 1993 survey, the authors stated that middle schools maintaining this concept for three years and utilizing interdisciplinary teaming and team leaders along with several other components had "substantial positive outcomes in virtually every area of concern to educators and parents, including academic improvement" (p. 5).

In 1995, the government publication, *Raising the Educational Achievement of Secondary School Students*, reviewed the educational reforms of clusters and team teaching made at Thurgood Marshall Middle School in Lynn, Massachusetts. This school was considered low performing in the 1980s

(Clusters and Team Teaching, 1995). Then in 1987, the principal appointed a committee of school personnel to study literature and visit successful schools in an attempt to restructure the campus. After gathering this information, the staff implemented several components of the middle school concept: flexible scheduling, daily common planning times, and extensive staff development to improve not only teacher morale, but also student performance and behavior (Clusters and Team Teaching, 1995). By the end of the first year, teacher absences and student suspensions were cut in half. At the end of the second year, student attendance increased and standardized test scores improved. One teacher commented that the daily team-planning period was a critical contributor to the teachers' improved understanding of the students. When the 1991-1993 California Achievement Test scores were evaluated, the students had experienced a significant increase in scores from the past years (Clusters and Team Teaching).

The decade of the 1990s found many middle school campuses following the same restructuring efforts of Thurgood Marshall Middle School and implementing the middle school concept. Large schools were concerned with student numbers and low success rates, while rural schools were struggling with meeting curriculum needs of the students. When Prasak (Texas Center for Educational Research [TCER], 1995) wrote "Sizing up the Schools," she said, "Proponents of the notion that bigger is better are interested in efficiency" and that "Advocates of small is beautiful view are interested in effectiveness that can be achieved through intimacy and smaller proportions" (TCER, 1995, p.1). In her

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recommendations she said, "Classroom size was less the point than instructional flexibility" (TCER, 1995, p. 16). She also recommended small units of teachers on a team that share a common planning time.

Another report written by Wiles (1995), proposed that a successful formula for a middle school program involves teaching teams that share a common time to plan while students are attending their specialty classes. He stated that a small rural school with a limited faculty struggles with a common planning time. These schools often share high school and middle school faculty; thus they are unable to coordinate a common planning time. Wiles says that the targeted areas of academic achievement, learning skills, and personal development may be a challenge to a small rural school, but through careful planning these schools can meet those needs in their own unique way through community involvement, the utilization of technology, new ways of using buildings, and structuring learning as a social activity provide opportunities for the middle schools to achieve success (Wiles, 1995).

In May 2001, Mertens, Flowers, and Mulhall collaborated on an article which discussed the school size issue, but also included interdisciplinary teaming with a common planning time for teachers and its influence on student achievement. The article discussed how a national sample of middle level principals believed that smaller schools were the best scenario for successful teaching and learning. These administrators opted for implementing the middle school concept of interdisciplinary teaming. The authors state that in order for this teaming to be successful, teachers must have a planning time where they

can "plan, share, and discuss team, student, and curricular issues" (Mertens, et al, 2001, p. 53).

Implementation of Organizational Restructuring

As a new teacher in 1967, Thomas Erb was fortunate to share a common planning time with another teacher who had a similar teaching schedule. They would meet during this common planning time to discuss topics concerning student behavior, lesson planning, and strategies for motivating 13-year-olds. This shared planning time made a positive impact on him as a teacher. He interviewed other teachers who had similar experiences in the 1980s and 1990s. He found that the process of teacher dialogue and joint decision making on a school campus led to changes in organizational practices which he coined as "transformative organizational structures in middle schools" (Erb, 2001, pp. 50-51). Erb said, "In every middle school organization that has transformed itself, team meeting time is scheduled into the teachers' workdays on a regular basis" (Erb, 2001, p. 51).

Additionally, the establishment of a team meeting or common planning time for teachers was the catalyst for the following results on a middle school campus: a more interactive work life for teachers, thus promoting teacher satisfaction; a productive school and classroom climate; student support with less stress; and increased student achievement (Erb, 2001). Erb proposed that through the hard work and combined efforts of teachers who utilize the common planning time and administration's support, middle school campuses should in fact become learning communities. The term learning community was defined by

Cushner, McClelland, and Safford (2003) as "an approach to classroom organization and instruction, based on democratic ideals, which is characterized by active teaching and learning, collaboration, belonging, shared decision making, and a strong sense of democratic participation" (Cushner, McClelland, and Safford, 2003). This goal of becoming a learning community is important in that the practice is "highly effective when used by educators to improve school performance for both the student and teacher" (Cushner, McClelland, and Safford, 2003), and can be achieved when teachers are given a common planning time along with an individual planning time.

In fact, the educators responsible for middle level schools becoming learning communities are quite often the principals. Clark & Clark (2003) state, "Over the last three decades, it has been the commitment and leadership of middle level principals that has led to reorganization of middle level schools" (p. 48). These principals "believe in the concept of exploration" (p. 49) and often support teachers who want to make changes and improvements that are research based to provide success for the middle level student. Even though the middle school concept was not always practiced as a whole, the component of interdisciplinary teaming was widely implemented. Furthermore, middle level principals who implemented interdisciplinary teaming supported the need for the common planning time along with a personal planning time for teachers on these teams.

If not for his principal and the organization on his campus of interdisciplinary teaming, Kain (2001) reported that early in his career, he would

have left the middle school for a different level of schooling. He stated that teaming allowed teachers the "opportunity to confront the practices that dominate schools and in the team environment, teachers are invited to seek ways to make learning more invitational, interactive, and relevant" (p. 210). However, he cautioned that teaming has its disadvantages. He said that it must be approached as an "avenue for professional growth" (p. 211) and as a means to better teaching, and better learning, not as an end within itself.

As the National Middle School Association (NMSA) celebrated its 30th anniversary, Flowers, Mertens, and Mulhall (2003) reflected on the changes in middle level education and its impact on the teachers and students. They summarized the lessons learned from the past ten years of research. The first lesson listed was "Interdisciplinary team teachers must meet regularly for common planning time" (p. 55). The report recommended that teams meet at least four times a week for 30 minutes during each meeting. Their findings concurred that "student self-reported outcomes improved, including less depression, fewer behavior problems, higher self-esteem, and greater academic efficacy" (p. 55). They also reported that student achievement scores improved due to the team's time spent together coordinating instructional practices. Moreover, over a two year period, these schools demonstrated impressive gains in student achievement scores (Flowers, Mertens, & Mulhall, 1999).

Not only do educators struggle with the organization of a middle school, but parents have concerns, also. The NMSA (2003) published an article "Moving From Elementary to Middle School Can Be a Smooth Experience for Students,

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Parents" that was addressed to parents to alleviate the concerns of their child moving from the elementary setting to a middle level campus. During the elementary years, students often have only one teacher and one classroom, which provides for a very secure setting. Although the middle school setting provides for "greater learning opportunities-both academically and developmentally" (para. 1), these changes can be confusing to the student. In order to address these changes, the NMSA proposed that the middle schools adopt the teaming approach that allows teachers to "have their planning time together during which they discuss the best ways to meet the learning and developmental needs of the young adolescents on their team" (para. 3).

Educators Flowers, Mertens, and Mulhall (2000) believe that the success of interdisciplinary teaming relies heavily on the communication, planning, and collaboration of a team of teachers. Research indicates that the common planning time is an important component to ensure that these three elements are present on any team. In fact, when it comes to assessing teaming, these authors stated, "A common planning time is a critical component of a team's success. Teams with high levels of common planning time report both engaging in team activities more frequently as well as feelings of a more positive team climate" (p. 56).

Those same three elements of the middle school concept provide opportunity for middle school students to experience the world of work, which is beneficial to their academic and personal development (Smith, 2000). The middle school philosophy allows students to explore career options with individual and

group activities. Smith stated that when administrators schedule a common planning time for teams of teachers, providing the flexibility of a daily schedule to plan and implement integrated curriculum, it opens the door for instruction for the middle school student to discover the variety of available career choices (Smith, 2000). This opportunity allows students in the eighth grade to make effective decisions when the school counselors begin to instruct and provide guidance for completion of their high school schedules.

<div align="center">Assessing the Value of a Common Planning Time</div>

In the early 1990s, corporate and university studies examined the educational reforms implemented in the middle school to assess the value of the common planning time for a team of teachers. Laven (1992) researched the impact of interdisciplinary teams on teacher perceptions of job satisfaction and found that "A positive relationship existed between amount of common planning time and teacher collegiality" (p. 1). When the Total Quality Management philosophy was introduced as a model for school improvement, Bravo de Murillo (1994) conducted a study that reported the common planning time effective as a reform effort for middle school education. In fact, Draeger (1995) assessed time usage by teachers in a suburban school district and observed that middle school teachers spend more time in team planning than those in the elementary school.

Since the National Middle School Association played such a large role in the implementation of the team concept in a middle school, this organization proposed that data were needed to confirm the success of teaming in preparing adolescents for secondary education. Authors Epstein and Mac Iver (1990) took

the data from the John Hopkins Center for Research on Elementary and Middle Schools (CREMS) that surveyed principals in middle grade schools. The probability sample of 2400 schools was selected from 25,000 schools having 7th graders across the nation. Principals from 1753 schools answered the survey and reported that it was difficult to implement teams in a middle school. They also stated, "If schools do not give teams of teachers common planning time, teachers cannot do the kinds of collaborative work that make teams successful" (p. 29). Their survey confirmed that 30% of the schools utilizing interdisciplinary teams did not provide a common planning time for teachers. If teachers did not have a personal planning time, along with a common planning time, many of the teachers spent more time on their individual work than on the teamwork. Therefore, teachers need one planning time for personal individual work and one common planning time for the team to use as an interdisciplinary organizational time (Epstein & Mac Iver, 1990).

This study also found that middle school principals value the interdisciplinary teaming program. Furthermore, when these principals were asked to rate their own middle school programs, they indicated that the single strongest predictor for their higher ratings was the use of common planning periods for members of interdisciplinary teams (Epstein & Mac Iver, 1990). Moreover, according to the principals surveyed, "Interdisciplinary teams with leaders, sufficient common planning time, and use of the planning time for team coordination increase benefits for teachers and students, and improve the overall quality of middle grades programs" (p. 74).

As the decade of the 90s drew nearer to the end, the educational community became even more interested in assessing educational reforms concerning the middle school concept. Sager (1996) led a qualitative study investigating interdisciplinary teaming and integrated curriculum in the middle school. She found that a daily team planning time was one of several necessary conditions needed for successful completion of integrating curriculum on a middle school campus. Further research was conducted for the utilization of a common planning time for teachers on interdisciplinary teams and its effectiveness on teacher efficacy and environmental perceptions by authors Warren and Payne (1997). The study involved twelve middle schools located in the southeastern states. Four had interdisciplinary teaming with a common planning time, four had interdisciplinary teaming without a common planning time, and four had departmental organizations. The two instruments used were the Teacher Efficacy Scale (Gibson & Dembo, 1984) and the Teacher Opinion Questionnaire (Rosenholtz, Hoover-Dempsey, and Bassler, 1985).

The Teacher Efficacy Scale is a "self-report scale consisting of 30 items" (p. 304) and is designed to assess general efficacy and personal efficacy. This instrument utilizes the Likert scale from 1 for strongly agree to 6 for strongly disagree. The validity for this test was "established by means of factor analysis and multitrait-multimethod and analysis (p.305). The Teacher Opinion Questionnaire was a 78-item questionnaire assessing the perception of teachers for their working environment on 10 subscales. It also utilized a Likert scale from a (strongly agree) to e (strongly disagree). The basis for the content validity for

this instrument was a "theoretical discussion and literature research on teacher working environment research" (p. 305).

During the course of their study, Wayne and Payne (1997) found that the "Common planning time for interdisciplinary teams is widely endorsed by middle grades literature" (p. 301). They claimed that a "common planning time is deemed critical to the success of an interdisciplinary team because it provides with an opportunity to plan collaboratively" (p. 301). The results concluded that a common planning time makes the middle grade school a better place for students and teachers. These authors are of the opinion that a common planning time should be implemented in the elementary and secondary schools as well.

In the process of examining the impact of interdisciplinary team teaching, the Project on High Performance Learning Communities found that "effective teaming" depends on several components, one of which involves the frequency and length of team planning time (Erb & Stevenson, 1999). Aram, Breck, and Suanders (2002) conducted an in-service project in a rural middle school to model interdisciplinary thematic curricula. They found that providing team teachers with a common planning time was essential for the implementation of curriculum that would enhance classroom learning. Furthermore, the Michigan Middle Start Initiative found that as the amount of common planning time increased, so did the quality of team interactions and the frequency of desired instructional practices (CCAD, 2000), thus impacting the academic success of the students.

The Carnegie Council of New York has long been involved in research concerning the young adolescent's behavior. They established the Carnegie Council on Adolescent Development (CCAD) in 1986, which in turn established a Task Force on Education of Young Adolescents under the leadership of Hornbeck, a former superintendent in the state of New York. This task force met with educators across the nation and published *Turning Points: Preparing American Youth for the 21st Century* in 1989.

This same task force devised a new goal in 1996 to "integrate what is known from education research and practice within a coherent approach toward adolescent education that educators can use in their own efforts to transform middle grades schools" (CCAD, 2000, p. xiii). This report emphasizes the need for time, deeming it as "the most important but least available resource in American education" (CCAD, 2000, p. 131). In fact in their report, the CCAD included the research conducted by Dickinson and Orb (1997) and Holland (1997) supporting more planning time for teachers in the United States.

In 1999, the National Center for Public Education and Social Policy reported that teachers need three to four hours of common planning time per week to have any positive outcome on student success and performance. This time promotes integration of curriculum, better parental communication, and positive behavior having a constructive impact on the student's success in the classroom. The CCAD (2000) wrote, "teachers' shared time should not, however, come at the expense of their individual preparatory periods. Then common planning supplants individual time, and collaborative work suffers because

teachers predictably are concerned about their own workloads" (pp. 133-134).

This report clearly stated that teachers should have an individual planning time

as well as a common planning time with their team. This common planning time

is essential to educational growth and can become a "daily professional

development 'huddle' time" (p. 141) that benefits the teachers by allowing for a

critical assessment of the curriculum and issues surrounding the education of a

middle level student.

The Impact of the Common Planning Time on the

Academic Achievement of Students

Juvonen, Le, Kaganoff, Augustine, and Constant (2004), a research team

for the Rand Corporation, conducted a study which included utilization of

interdisciplinary team teaching utilizing a comprehensive review of literature and

an analysis of nationally representative data. The statistical information was

based on six data sets: Common Core of Data from 2000-2001 (Young, 2002),

National Assessment of Educational Progress (National Center for Education

Statistics [NCES], 2003), National Education Longitudinal Study of 1988 (Carroll,

2002), Schools and Staffing Survey (NCES, 2001), Third International Math and

Science Study (NCES, 2003), and World Health Organization (WHO, 1998). The

study stated that a key component of this concept is common planning time.

However, some middle schools do not schedule an additional planning time for

teachers, but rely on teachers meeting before or after school. The report

concluded that if schools can implement interdisciplinary team teaching at a high

level, which includes teachers having a common planning time, the data

reflecting successful academic achievement for students are encouraging (Juvonen, et al, 2004).

When addressing the question as to whether the middle school concept affects the success of students attending high-poverty schools, Callicoatte, Picucci, Brownson, Kahlert, and Sobel (2004) reported the results of the Charles A. Dana Center at the University of Texas at Austin for the U.S. Department of Education during the 2001 and 2002 school year. From across the nation, seven open-enrollment, pubic schools were selected for this study in an effort to gain understanding as to the importance of each element of the middle school concept with close attention to curriculum. All seven schools selected were identified as high-performing and high-poverty with students showing a "strong growth rate in reading and mathematics performance for at least the three-year period between 1997-1998 and 1999-2000" (para. 6). At least 50% of the student population participated in the free or reduced lunch program. The schools implemented most of the following school structures: localized student teams, common planning time for teachers, and block scheduling. The authors reported that the results of the data showed that elements of the middle school concept when implemented in a high-poverty school can lead to improved student performance (Callicoatte et al., 2004).

In 2000, the New York State Education Department implemented the Middle-Level Education Program, which is comprised of seven essential elements. The goals for this program are to promote intellectual development and academic achievement of all students, and the personal and social

development of each student (New York State Education Department [NYED], 2001, p. 1). Essential element three titled Organization and Structure discusses the promotion of academic excellence and the establishing within staff and students the feeling of belonging and a sense of personal identification with the school and its purpose (NYED, 2001). Listed as third of sixteen components under this essential element is "Have a common planning time for those teachers and teacher teams sharing responsibility for a common group of students" (p. 3).

From 1997 to 1999, the Georgia Middle School State Incentive Grant required the following: Each school was to have its own administrator, at least two interdisciplinary teams per grade, at least 85 minutes of common planning time per week, at least four and a half hours of daily core instruction, and two exploratory classes (Trimble, 2002). As a result of satisfying these eligibility requirements, five schools located in rural southern and middle Georgia that received additional state funding were involved in a study to see what practices were associated with higher student achievement "beyond what we already know about effective schools: strong leadership, safe and orderly schools, and positive school climate" (Study, para. 1).

Data were collected from multiple sources including observations of team meetings and classrooms, interviews, questionnaires, school documents, and school reports (Trimble, 2002). A consultant came into the common planning time and taught new teaching and learning strategies. Three years of data were collected from the schools concerning the performances in math and reading, and compared to the district and state means. Eighth graders increased their

scores, but several schools fell from the upper 20% to 40% in performance on the report of the Council for School Performance for 1998 to 1999. Trimble indicated the need for future research to examine what would help sustain performance among high-poverty school.

In spring 2001, the state of Maryland had 12 middle schools that were referred for panel review. These schools showed a low performance level for the students on the State MCAS assessments in 1998 followed by a decline in results for the 1999 to 2000 school year. Edmond Talbot Middle School located in Fall River received the Panel Review in March 2001 (Maryland Department of Education [MDE], 2001). The panel identified significant inadequacies in the school's plan for improving student achievement. In particular, panel members found: goals and strategies for school needs were not clear, actions needed were not detailed, measurement means were not consistent with desired outcomes, and no timelines were outlined. They were also concerned the instructional leadership and supervision were lacking in ability to guide the improvements needed for teaching and learning on the campus (MDE, 2001).

Six major strategies were implemented that the panel believed would improve the performance of the students. Of the two that focused on building level structure, one was the implementation of a school-wide inclusion model and the other was the restructuring of the common planning time. The leadership team, administration, and teachers all considered the common planning time as the significant positive strategy for ultimately improving student performance. In the first year it was been instituted school-wide, it provided the time teachers

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needed to solve problems and collaborate around new initiatives. Upon review, the Panel Review discovered that a collaborative atmosphere was now established at the campus and determined that the staff will improve performance on planning, implementing and monitoring student progress. (MDE, 2001).

Other studies have shown the benefits of a common planning time for middle school teachers, also. Trimble and Rottier (1998) conducted a study that assessed team performances. They found that high performing teams enabled administrators to justify the cost of the common planning time for teachers. Wheeler-Clouse (1999) focused on the influence of middle school teaming and teacher efficacy along with job satisfaction. She reported that "Providing a daily common planning time for a team of core teachers who share the same group of students allows teachers an opportunity for acquiring the direct experience" (p. 18). She felt that this was the way for teachers to share and build a learning community. When Peterson (2001) studied middle schools to examine middle level instruction, he found that schools that received a type of excellency award had teachers and students organized into teams. One of the components that contributed to team effectiveness was the common planning time for teachers.

Since middle schools had traditionally been organized into departments instead of interdisciplinary teams, Ernest (1991) conducted a study to compare the two styles of organization to see which was the most effective in promoting student achievement. In selecting three middle schools, Ernest assessed the demographic characteristics; developed procedures for the selection of teams;

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organized experimental and control groups; gathered instruments to measure student achievement and attitudes; and developed procedures for collecting, reporting, and analyzing data. All three schools structured their campus utilizing the middle school philosophy. In the course of this study, Ernest found that the interdisciplinary team organization is as effective as the traditional organization in promoting achievement and positive attitudes toward school. However, she stated that this study raised more questions rather than answering them. Her recommendations for future studies include replicating this study in other school districts under similar conditions, completing longitudinal studies where the students stay with the same team for seventh and eighth grade, and using schools where the average class size is consistent in all classes in the study (Ernest, 1991).

Administrative and Teacher Support for Common Planning Time

When evaluating the concept of structuring a team of teachers on a middle school campus, researchers Warren and Muth (1995) found that if schools implemented teaming without the common planning time, teaming had very little effect. However, when teams were allowed a common planning time, the students were more committed to class work, reacted more favorably to teachers, and had a more positive perception of school compared to students taught by teachers whose campus was departmentalized.

Upon completion of conducting a literature review, Marten (1998) identified eight strategies found effective in middle schools in the state of Kansas. He developed a questionnaire that was pilot tested and mailed out to 177 middle

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school principals in the state to determine which strategies were most commonly used among successful middle schools. From the 170 questionnaires returned, he selected four schools to conduct further on-site studies through observations, interviews, and focus groups to compile qualitative data.

Marten found that the common planning time was fifth in rank order of the eight strategies. Those ranked higher included exploratory classes, parental involvement, interdisciplinary team organization, and continuous training for teachers. His study included a table with 11 authors and their findings that support the implementation of a common team planning time. When conducting interviews, teachers indicated that having a common planning time was an important component of their daily schedule. One teacher said, "There was time available to help kids" (p. 69). Another was quoted as saying, "The teachers have a common planning time together. This allows the teacher to stay in close contact with parents" (p. 69). Others spoke of the collegiality and cooperation it promoted throughout the building. In conclusion, Marten recommended future research be conducted that would include standardized test scores.

Examining Delaware's middle-level school reform, Hall (1999) conducted a study to determine how a team utilizes its planning time. Hall used observation of team planning periods, the principal's year-end team evaluation, interviews with five teachers and the principal, and observations of team interactions prior to classes and between classes in the study. As the study progressed, support for the many aspects of the middle school concept, including a common planning time for a team of teachers, was apparent in its findings. Hall stated that "Team

planning created a situation where fewer students 'fell between the cracks'" (p. 106). Teachers recognized the value of the common planning time. They felt that the time together allowed them the opportunity to discuss students in a way that provided for a positive influence of nurturing students which in turn enhanced their responses to the curriculum. He noted that this planning time was crucial to the mentoring and success of a new teacher. The teachers felt that team planning time removed the feeling of isolation experienced by teachers and helped them cope with problems. The principal listed decreased discipline problems and positive student/teacher relations as reasons for his support in teaming. Overall, the teachers believed that, if the team planning times were eliminated, the students would be the real losers.

Using a qualitative methodology, Moore (2002) documented the experiences of ten seventh grade middle school teachers in the Pacific Northwest for a full school year. She collected data through observation and extensive field notes, interviews, and other artifacts. The study promoted team teaching as a tool that prevented teacher isolation and provided a support group for discussion of problems covering topics from students to curriculum. The consensus of the teachers was that this support group helped build relationships based on mutual respect and further provided professional growth as educators. These teachers also felt that even though larger classes were caused by the double planning time, it was well worth it because it allowed for time to discuss students, curriculum, and administrative issues.

In Moore's study, the teachers' main goals during the team planning time were to support all students, especially those considered at-risk, so that they would experience success in the classroom. In the analysis section Moore reported that teachers "credited much of their success to having a team-planning period in addition to their individual planning time. In conclusion she stated, "Teaming is an effective, caring way to effectively meet the needs of both students and teachers, and deserves further study to fully understand the nuances that make some teams more successful" (p. 81).

Summary

This chapter reviewed the literature and was organized into the following sections: Introduction, Early Organizational Restructuring, Implementation of Organizational Restructuring, Assessing the Value of a Common Planning Time, The Impact of the Common PlanningTime on the Academic Achievement of Students, Administrative and Teacher Support for Common Planning Time, and the Summary. These sections contain information regarding research on the middle grades and how they could be central to helping more students succeed and stay in school (Epstein & Mac Iver, 1990). It presented the focus of organizations and educators on researching the best reforms and practices such as interdisciplinary teaming for this level of schooling. With growing financial concerns, the common planning time, a component of the interdisciplinary teaming practice, is not often implemented. This study examines standardized test scores by ethnicity and gender of middle school students in an effort to

evaluate the importance of the common planning time for a group of teachers in

a middle school setting.

CHAPTER 3

METHODS AND PROCEDURES

This chapter discusses the methods and procedures used in this study. It begins with the restatement of the purpose and is followed by the context. The next three sections explain the study participants, the methodology and the analysis of the data. The chapter concludes with the summary.

Purpose

The purpose of this study is to assess the impact of a common planning time for a team of teachers on a middle school campus by examining standardized test scores to determine the academic success of the students. Due to the limited financial resources available for education, along with the accountability of student academic success assigned to school districts, research on this issue is relevant to the planning and budgeting needs of middle school administrators.

Context

The study analyzes information from two school districts located in Central North Texas, selected specifically from the same campus group on the Texas Education Agency's (TEA) Academic Excellence Indicator System (AEIS) report. The AEIS report is a document available for any person to view on TEA's website. When viewing this document for any given school, which is referred to as the 'target' campus, the report will contain information about a campus group. A campus group on the AEIS report is developed by looking at the particular target campus and compiling a group of 40 other campuses in the state that

closely match the target campus on a number of characteristics and changes

from year to year based on the shifting demographics of each campus. The two

schools used in this study are located in communities that are experiencing rapid

growth; therefore, at least one new campus is being added to the district each

year.

The campus that does not allow for a common planning time for a team of

teachers, which is identified as School 1, has 434 seventh graders and 482

eighth graders for a total of 916 students on this campus. The district employs 52

teachers of which 34 are female and 18 are male. The ethnicity of the teachers is

comprised of 50 white, 1 Hispanic, and 2 African American. Table 1 lists the

years of experience for the teachers on this campus.

Table 1

Years of Teacher Experience at School 1

Number of teachers	Years of experience
1	Beginning
17	1 - 5 Years
21	6 – 10 Years
9	11 – 20 Years
4	20 Years

This campus has a total of 52 teachers with 73.1% having 1 to 10 years of

experience. A total of 25% have 11 to 20 or more years of experience. Only one

teacher was a beginning teacher on this campus. This indicates 98% of the teachers for the 2004 – 2005 school year had at least one year of teaching experience behind them and 65% of the teachers had more than five years of experience. The contract for these teachers is 187 days allowing for seven days of professional development time.

The campus that provides for a common planning time, School 2, has three grade levels: sixth grade, seventh grade, and eighth grade. There are 255 sixth graders, 240 seventh graders and 256 eighth graders for a total of 850 students on this campus. The district employs 48 teachers of which 32 are female and 17 are male. The ethnicity of the teachers is comprised of 52 white and 1 Hispanic. Table 2 lists the years of experience for the teachers on this campus.

Table 2

Years of Teacher Experience at School 2

Number of teachers	Years of
experience	
1	Beginning
15	1 - 5 Years
10	6 – 10 Years
18	11 – 20 Years
5	20 Years

As with School 1, School 2 had only one beginning teacher. A total of 51% had 1 to 10 years of experience and 47% had 11 to 20 or more years of experience. School 2 had a higher percentage of teachers with 11 to 20 or more years of experience as compared to School 1. The contract for these teachers is 187 days allowing for seven days of professional development time.

The curriculum for each campus was based on the Texas Essential Knowledge and Skills (TEKS) developed by TEA for each content area and grade level. TEKS, a curriculum guide created and published by the Texas Education Agency for school districts, vertically and horizontally aligns the curriculum taught in all schools. The development of the Texas Assessment of Knowledge and Skills (TAKS) and another system of support entitled the Student Success Initiative (SSI) passed in 1999 by the Texas legislators ensures that all students gain sufficient understanding of the TEKS (Texas Education Agency, n.d.). The initiative includes the Texas Reading Initiative, the Texas Math Initiative, and the grade advancement requirements in reading at Grade 3, in reading and mathematics at Grade 5, and beginning in the 2007–2008 school year, in reading and mathematics at Grade 8. The grade advancement requirements mandate that a student must pass the TAKS math and/or reading to promote to the next grade. The SSI also "provides schools with a number of resources, including early diagnostic assessments, funds for accelerated instruction and intervention, mechanisms for progress monitoring, professional development, and strong academic support" (Texas Education Agency, n.d.). Seventh graders are not subjected to the grade advancement requirements, but

the students who do not pass the TAKS are placed in tutorials and classes that provide instruction and interventions to aid in their success to promote to the next grade level in the upcoming year. Since this initiative links the promotion of students to the next grade with their performances on the standardized tests, educators and parents are concerned with how well students score on these standardized tests.

The daily schedule for the students on the two campuses in this study consists of five content area classes each day along with two elective class periods. The five content areas taught are math, American history, science, and English/language arts, which is divided into two class periods consisting of reading and writing. For the total time students spend in the classroom, School 1 had a bell schedule designed for a 340 minute day and School 2 had a schedule for a total of 355 minutes. Examining the average class size for each school, School 1 had a total of 19.1 students in the English/language arts classes and 22.2 for the math classes. School 2 had a total of 20 students for English/language arts classes and 24 for math classes.

School 1 did not hold any departmental meetings or plan any additional lessons for practice during the tutorial times provided each day. School 2 did require teachers to meet during the common planning time and utilized this time to prepare additional material, such as TAKS practice tests to give students during the advisory time. The teachers at School 2 also communicated with parents by phone and email during this time when students were not being academically successful. As stated earlier and for the purpose of this study,

School 1 did not utilize the middle school concept of having a team organization including a common planning time for each team of teachers, and School 2 did have a common planning time. Both campuses provided an individual planning time for each teacher.

Study Participants

The participants for this study are seventh grade middle school students selected from two middle school campuses on the 2004-2005 AEIS report released by TEA. These students completed the criterion referenced TAKS reading and math tests in the spring of 2005. Also, all students' scores were listed on the AEIS report published for their respective campuses by TEA in fall of 2005. During that time, School 1 had 434 students in the seventh grade and School 2 had 240.

To ensure demographic consistency in this study, the two selected schools both appeared in the other's campus group on their respective AEIS reports. This campus group compiled by TEA involves identifying 40 other campuses with the target school, the campus for which that particular AEIS is reporting, matching the following six characteristics: African American students enrolled, Hispanic students enrolled, White students enrolled, economically disadvantaged students enrolled, limited English proficient students enrolled, and mobility of students as determined by cumulative attendance. These schools were also grouped by grade level and then determined on the predominant feature of the target school, which once again is the school for which the AEIS reported. The methodology utilized to establish this group "creates a unique

comparison group for every campus" (Texas Education Agency, 2004,

Accountability, Glossary section). Table 3 displays data from the two campuses

for ethnicity percentages and Limited English Proficiency. Table 4 displays

additional data for the campuses on the 2004-2005 AEIS report.

Table 3

Ethnicity and Limited English Proficiency Percentages from the AEIS Report

School	*White Students	*Hispanic Students	*African American Students	Asian Students	*Limited English Proficiency
School 1	56.2	23.0	9.4	10.6	4.7
School 2	59.7	30.5	6.7	3.1	4.5

- Information used for six characteristics to determine campus group on the AEIS report

Table 4

Characteristics of the Campus Group on the 2004-2005 AEIS Report

	School 1	School 2
Number of Students per Teacher	17.1	15.3
**Attendance	96.1%	95.9%
**Student Disciplinary Placements	4.7%	3.8%
At Risk	38.4%	39.4%
**Annual Dropout Rate	.0%	.0%
*Economically Disadvantaged	25.8%	29.2%
*Mobility Rate	17.6%	19.7%

* Information used for six characteristics to determine campus group on the AEIS report
**Information from the 2003-2004 school year

Research Questions

This study addresses the following research questions:

1. When comparing students' standardized test scores by gender, what impact does the common planning time have on TAKS math scores?

2. When comparing students' standardized test scores by gender, what impact does the common planning time have on TAKS reading scores?

3. When comparing students' standardized test scores by ethnicity, what impact does the common planning time have on TAKS math scores?

4. When comparing students' standardized test scores by ethnicity, what impact does the common planning time have on TAKS reading scores?

5. When comparing students' standardized test scores by gender and ethnicity, what impact does the common planning time have on TAKS math scores?

6. When comparing students' standardized test scores by gender and ethnicity, what impact does the common planning time have on TAKS reading scores?

Research Design

The statistical tool used in this study was an Analysis of Variance (ANOVA). This instrument which measures the means of two or more groups in a data set is a statistical procedure comparing the amount of between-groups variance in scores of individuals with the amount of within-groups variance. A sufficiently high yield for this comparison indicates that there is more of a difference between the groups in their scores on a particular variable than there is within each group (Gall, Borg, & Gall, 1996).

The 2 * 4 design for this study includes two ways or factors, gender and ethnicity. Each way or factor consists of levels. The first way, gender, has two levels consisting of male and female. The second way, ethnicity, has four levels: Asian, African American, Hispanic, and white. This design also includes two sets of variances, the dependent and independent variable. For this study, the TAKS reading and math scores from both campuses are the dependent variables and gender and ethnicity are the independent variables. This instrument also looks at the interaction effect by gender and ethnicity groups.

The TAKS reading and math scores in this research were collected and recorded for seventh grade students who attended two middle school campuses selected from the AEIS report generated by TEA. These two campuses were included in the same "campus group" to ensure that similar demographics were considered in this comparison of the impact of a common planning time for a team of teachers on student's standardized test scores.

The data were entered into the SPSS program of the ANOVA 2*4 design with the variables of school, gender, ethnicity, TAKS math, and TAKS reading. The variables school, gender, and ethnicity were identified as the three main effects. The interaction effects in this instrument included:

1. school and gender
2. school and ethnicity
3. gender and ethnicity
4. school, gender, and ethnicity

A General Linear model of a Univariate Analysis of Variance was conducted twice. The first analysis was completed with TAKS math as the dependent variable and school, ethnicity, and gender as the fixed variables. The second analysis was completed with TAKS reading as the dependent variable and school, ethnicity, and gender as the fixed variables. The options for Descriptive Statistics and Homogeneity Tests were selected for both analyses, and the Post Hoc, Tukey HSD test for ethnicity was conducted for the TAKS math test to analyze the significant differences in the multiple comparisons test since it consisted of more than two levels. This test provides the information needed to indicate which specific levels out of the four have a significant difference.

Data Collection

The data for the students were collected from two middle school campuses selected from the "campus group" information released by TEA on the AEIS report generated for spring 2005. After permission was requested and granted by the two public school superintendents in North Texas (APPENDIX A) to complete this study on the two selected middle school campuses, cover letters (APPENDIX B), along with parent consent forms and student assent forms (APPENDIX C) were given to all eighth grade students on both campuses requesting permission to use their spring 2005 seventh grade TAKS math and reading scores. On return of these forms, the individual TAKS reading and math test scores were recorded by assigned number along with the gender, and ethnicity for use with the measuring instrument.

The TAKS scores for each student were recorded in the "scale score" format. This scale score format allows for a comparison of each individual child's score with the performance standards as set by the state of Texas and TEA. It is also an indicator as to how far above or below the standards of achievement each student has performed on the test. However, for clarification of reading these scores, TEA notes that the TAKS scale scores cannot be compared across subject areas or other grade levels (Texas Education Agency, 2004, Accountability section). The scale scores were entered into the statistical measuring instrument utilized in this study.

Data Analysis

After data was collected, an analysis was conducted with an ANOVA 2 * 4 design to determine if a statistical significant difference existed for the TAKS math and reading scores, gender, and ethnicity of students from the two different middle school campuses selected for this study. This evaluation provided information to assess if students from the campus utilizing a common planning time for a team of teachers scored higher than students who attended a campus that did not utilize this middle school concept.

The ANOVA 2 * 4 design utilized for this study had two factors, gender and ethnicity. The first factor, gender, had two levels: male and female. The second factor, ethnicity, had four levels: Asian, African American, Hispanic, and white. The Descriptive Statistics and Post Hoc Tests not only analyzed the statistical differences between the two schools, but additionally analyzed the statistical differences between gender and ethnicity to see if subgroups and

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gender were affected by the use of a common planning time. A tests of between-subjects effects and a multiple comparisons test was completed to evaluate the differences between the three variables of school, ethnicity, and gender in this study. A *p calc* of <.05 was utilized to determine if a significant statistical difference existed. Also, the mean scores yielded by the descriptive statistics were examined and then converted to indicate the information depicted in Table 10, establishing the number of correctly answered questions on the test by the students.

For this study, utilizing this measuring instrument instead of an individual *t* test is beneficial in that it concurrently calculates and measures the variations in each of the factors. These variations include the amount of between-groups variance as compared to the amount of within-groups variance for all the variables. The inferential statistics such as the ANOVA also aids researchers in determining how probable it is that the differences found between the randomly drawn samples would be found in the populations from which they were drawn (Gall, Borg, and Gall, 1996).

Summary

This chapter provides an overview of the purpose and context of this study. It relates the process of selecting the research participants, the methods of data collection, the instrument used to measure the results, and the analysis of those results when comparing scale scores of the TAKS reading and math test administered in the spring of 2005 to seventh grade students from two middle school campuses. Of the two middle school campuses, one campus provided a

team of teachers with both a common planning time and personal planning time while the other campus provided for a personal planning time for its team of teachers.

The results of this study are important to districts that are managing limited funding and at the same time budget adequately for the needs of their students. As districts receive their ratings from the state on the AEIS report and Federal government on NCLB, administrators will consider ways to meet the needs of the different subgroups and students to help to achieve success on their standardized test scores to ensure an acceptable or above rating for their campuses. The establishment of a common planning time within the middle school concept is one component that administrators will scrutinize to determine if it is worth the time and money in relation to student achievement as represented by standardized test scores.

CHAPTER 4

PRESENTATION AND ANALYSIS

OF THE DATA

In this chapter the presentation and analysis of the data for this study is discussed. The first section of this chapter discusses the process of the selection of the data. The second section contains information concerning the research questions and the presentation of the statistics conducted for this study. The third section includes the analysis of the data. The fourth section is the summary.

Data Selection

This study was completed to assess the impact of the common planning time for a team of teachers on the academic success of middle school students. Two middle school campuses were selected from the North Central Texas area for this research. One campus has a common planning time for the teachers as well as a personal planning time. The other campus does not have a common planning time, but only a personal planning time. This study compares the data from the standardized test scores of the Texas Assessment of Knowledge and Skills (TAKS) math and reading test by ethnicity and gender for seventh grade students. The TAKS test utilized in this study was administered during the spring of 2005.

The TAKS math and reading tests are criterion-referenced tests that assess student mastery of Texas Essential Knowledge and skills (TEKS). Due to the Student Success Initiative, passing the TAKS test has become a requirement for grade advancement in grades 3, 5, and 8. Seventh graders are not subjected

to the grade advancement requirements, but the students who do not pass the TAKS are placed in tutorials and classes the following school year providing instruction and interventions to aid in their success of passing the tests in the eighth grade.

The two campuses for this study were selected on criteria of the existence of a common planning time, and the inclusion in the same campus group on the Academic Excellence Indicator System (AEIS) report from TEA for the administration of the TAKS test in spring 2005. The campus group consists of a target school, the campus for which the report is being compiled, and then grouped with 40 other campuses matching on six characteristics: the enrollment of African American students, Hispanic students, white students, economically disadvantaged students, limited English proficient students; and the mobility of students as determined by cumulative attendance. These schools are also grouped by grade level and then determined on the predominant feature of the target school. This methodology "creates a unique comparison group for every campus" (Texas Education Agency, 2004, Accountability, Glossary section).

The first selected campus, School 1, assigns the teachers a personal planning time with no common planning time. The other campus, School 2, which was also included in the same AEIS campus group as School 1, assigns teachers a personal planning time as well as a common planning time, which teachers utilize as a daily meeting time for their team. During this time, a team of core teachers will schedule parental meetings often contacting parents by phone or email, and discuss the academic and behavioral needs of the students. Years

of experience for teachers on each of the schools' campuses are depicted in Table 5.

Table 5

Years of Teacher Experience for School 1 and 2

Years of Experience	Number of Teachers	
	School 1	School 2
Beginning	1	1
1-5 Years	17	15
6-10 Years	21	10
11-20 Years	9	18
20 Years	4	5
Total Teachers	52	49

On each campus five content areas are taught: a math class, an American history class; a science class; and two English/language arts classes divided into a reading class and a writing class. The teachers on both campuses sign a 187 day contract. Seven of those contract days are set aside for planning, inservice, and training, and 180 of those days are utilized as classroom instruction time with the students. School 1 has seven class periods of 45 minutes along with a 25 minute tutorial period. School 2 has seven class periods with two at 50 minutes and five at 45 minutes. This campus also has a 25 minute tutorial time. The campus group information from the AEIS report for both campuses is presented in Tables 6 and 7. School 1 is the campus that does not have a common

planning time for teachers, and School 2 is the campus that does have a

common planning time for teachers. The selection of the two schools from the

same campus group was utilized to ensure similar demographics for the

campuses involved in the study.

Table 6

Ethnicity and Limited English Proficiency Percentages from the AEIS Report

School	*White Students	*Hispanic Students	*African American Students	Asian Students	*Limited English Proficiency
School 1	56.2	23.0	9.4	10.6	4.7
School 2	59.7	30.5	6.7	3.1	4.5

* Information used for six characteristics to determine campus group on the AEIS

report

Table 7

Characteristics of the Campus Group on the 2004-2005 AEIS Report

	School 1		School 2	
	Percentages	Number	Percentages	Number
Number of Students per Teacher		17.1		15.3
**Attendance	96.1		95.9	
**Student Disciplinary Placements	3.8	38	3.8	43
At Risk	38.4	352	39.4	296
**Annual Dropout Rate	.0		.0	
*Economically Disadvantaged	25.8		29.2	
*Mobility Rate	17.6		19.7	

* Information used for six characteristics to determine campus group on the AEIS

report

**Information from the 2003-2004 school year

Examining the six characteristics utilized by the AEIS report in Table 6 and

Table 7, School 1 and School 2 closely matched in numbers. The percentage of

white students enrolled in School 1 at 56.2% and School 2 at 59.7% varied by

only 3.5%. The Hispanic percentages showed a differentiation of 7.5% with

School 1 at 23.0% and School 2 at 30.5%, and the African American by 2.7% with School 1 at 9.4% and School 2 at 6.7%. The Asian population showed a disparity of 7.5% with School 1 at 10.6% and School 2 at 3.1%, but this was not one of the six characteristics used by the AEIS report for determining the campus group. Limited English Proficiency showed a small difference of only 0.2% between School 1 and School 2.

Table 7 depicted the data reflecting the percentage variation of the economically disadvantaged population at the two campuses. School 1 had a percentage of 25.8%, but School 2 showed a higher percentage at 29.2%. This coded classification is based on the free and reduced lunch qualification. The mobility rate at School 1 was 17.6%, and once again School 2 was higher at 19.7%. Other areas listed on the AEIS report such as number of students per teacher was higher at School 1 with 17.1 as compared to School 2 at 15.3. At School 1 the attendance rate was 96.1% and School 2 had a 95.9% showing a variance of only 0.2%. Student disciplinary placements percentages were the same at both schools at 3.8%. The at-risk population differed by only 1% with School 1 having a 38.4%, and School 2 at 39.4%, and the annual dropout rate was 0% at both campuses.

Consent and assent forms (APPENDIX C) were given to all eighth grade students on both middle school campuses requesting permission to use their seventh grade TAKS math and reading scores for spring 2005. Upon the return of parent consent and student assent forms, data were entered in the measuring

instrument to complete this study. Table 8 records the collected data by ethnicity and gender for students that returned their forms from School 1 and School 2.

Table 8

Student Data by Ethnicity and Gender of Returned Permission Forms for School 1 and 2

	Male				Female			
	Asian	African American	Hispanic	White	Asian	African American	Hispanic	White
School 1	1	1	1	9	4	2	0	10
School 2	0	3	2	3	1	3	5	11
TOTALS	1	4	3	12	5	5	5	21

A total of 16 female students returned permission forms for School 1 with School 2 having a return of 20. School 1 had 12 male students return their forms, and School 2 had only 8. School 1 had fewer returns for the Hispanic population with a total of 1 male student while School 2 had a total return of 7 forms, 2 male and 5 female. School 1 received 1 male and 4 female forms for a total of 5 from students of Asian ethnicity, whereas School 2 had fewer returns with a total of only 1 female student. Returns for the white population were high for male and female students at School 1 with 9 and 10 respectively. School 2 had a high

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return for the white female students with 11 forms received, but from the white male students, only 3 turned in their forms.

Table 9 depicts the percentages of permission forms returned for the sample of students in which information was collected and recorded in comparison to the percentages of the total population of students on the two campuses.

Table 9

Percentages of Returned Permission Forms to Student Population on Each Campus

	Asian		African American		Hispanic		White	
	Sample	Pop.	Sample	Pop.	Sample	Pop.	Sample	Pop.
School 1	17.8	10.6	10.7	9.4	3.5	25.8	67.8	56.2
School 2	3.5	19.7	21.4	6.7	25.0	30.5	50.0	59.7

Comparing percentages of the ethnicities in the sample utilized in this study to the population of the ethnicities from the two campuses indicates that School 1 had 17.8% Asian students return their permission forms as compared to the total campus population of 10.6%. The return for the permission forms by the students for the ethnicity of African American, 10.7% and white, 67.8% were higher by 1.3% and 11.6% respectively as compared to the total campus population. The percentages of Hispanic students who returned their forms in the

sample were 3.5% as opposed to the campus population of 25.8%, leaving a difference of -22.3 points.

School 2 had 3.5% Asian students return their forms as compared to the campus population of 19.7%. The percentage of African American students who returned their forms was 21.4%, which was comparatively higher than the campus population of 6.7%. The percentage of Hispanic students who returned their permission forms was 25.0%, which was -5.5% compared to the campus population and the number of white students at 50% differed by -9.7%. Information for the data was collected from a total of 56 students, with each campus having a total of 28 students used in this study.

<div align="center">Research Questions and Presentation of Statistics</div>

This section restates the research questions and discusses the presentation of statistics for the ANOVA 2*4 design. This statistical tool calculates and measures the variations in each of the factors presented in this study concurrently. The research questions developed for this study include:

1. When comparing students' standardized test scores by gender, what impact does the common planning time have on TAKS math scores?

2. When comparing students' standardized test scores by gender, what impact does the common planning time have on TAKS reading scores?

3. When comparing students' standardized test scores by ethnicity, what impact does the common planning time have on TAKS math scores?

4. When comparing students' standardized test scores by ethnicity, what impact does the common planning time have on TAKS reading scores?

5. When comparing students' standardized test scores by gender and ethnicity, what impact does the common planning time have on TAKS math scores?

6. When comparing students' standardized test scores by gender and ethnicity, what impact does the common planning time have on TAKS reading scores?

Information for the standardized TAKS test was collected from 28 students for School 1 and 28 students from School 2 with a total student count of 56 students. The TAKS math and reading scores by gender and ethnicity for these students were entered into an ANOVA 2*4 design for this research. This design consists of 2 ways or factors. The first way or factor is gender and has two levels, male and female. The second way or factor, ethnicity, has four levels: Asian, African American, Hispanic, and white.

The data entered in the SPSS software program listed the following variables: school, gender, ethnicity, TAKS math, and TAKS reading scores. The TAKS math and TAKS reading scores were the dependent variables. The General Linear model of a Univariate Analysis of Variance was conducted twice.

The first analysis utilized the dependent variable as the TAKS math test. The fixed factors were school, ethnicity, and gender. The options for Descriptive Statistics and Homogeneity Tests were selected, along with the Post Hoc, Tukey HSD test for ethnicity. Upon completion of this first analysis, a second one was conducted using the TAKS reading test as the dependent variable and the same fixed factors of school, ethnicity, and gender. Once again the same options and Post Hoc test were run for ethnicity.

The computed data for the Descriptive Statistics in the ANOVA 2*4 design, selecting TAKS math as the dependent variable is depicted in Table 10. In this study, School 1 is the campus where teachers are not assigned a common planning time along with the personal planning time. School 2 is the campus in which teachers are given a common planning time along with the personal planning time. The scores are represented by scale score. Table 10 depicts the raw score and the computed scale score for the seventh grade math and reading test administered in spring 2005.

Table 10

TAKS Raw Score Conversion Table by Item for Spring 2005 - Grade 7

Raw Score	Math Scale Score	Reading Scale Score
0	1371	1238
1	1506	1379
2	1603	1481
3	1662	1543
4	1705	1589
5	1739	1626
6	1768	1656
7	1793	1684
8	1816	1708
9	1836	1730
10	1855	1750
11	1872	1769
12	1889	1787
13	1904	1804
14	1919	1820
15	1933	1836
16	1947	1851
17	1961	1865
18	1974	1879
19	1987	1893
20	1999	1907
21	2023	1921
22	2024	1934
23	2036	1938
24	2048	1961
25	2061	1974
26	2073	1988
27	2085	2009
28	2100 *	2015
29	2110	2029
30	2123	2053
31	2136	2057
32	2149	2072
33	2163	2100
34	2177	2102
35	2192	2118*
36	2208	2135
37	2224	2153
38	2242	2172

(table continues)

Table 10 *(continued).*

Raw Score	Math Scale Score	Reading Scale Score	
39	2260	2192	
40	2280	2214	
41	2303	2238	* Met Standard
42	2328	2265	Level
43	2356	2295	** Commended
44	2400 **	2332	Performance Level
45	2433	2400**	
46	2492	2439	
47	2589	2541	
48	2725	2682	

Table 11 presents the Descriptive Statistics for the Dependent Variable:

TAKS math. The code number in the descriptive statistics representing the male

gender is 1 and the female gender is 2. The legends for the ethnicity codes in

this analysis are Asian - 2, African American - 3, Hispanic - 4, and white - 5. The

main effects are school, gender, and ethnicity

Table 11

Descriptive Statistics for Dependent Variable: TAKS Math

School	Gender	Ethnicity	Mean	Std. Deviation	N
1	1	2	2400.00		1
		3	2023.00		1
		4	2589.00		1
		5	2375.11	131.942	9
		Total	2365.67	167.481	12
	2	2	2214.00	146.203	4
		3	2206.50	171.827	2
		5	2206.80	143.810	10
		Total	2208.56	137.042	16
	Total	2	2251.20	152.945	5
		3	2145.33	161.203	3
		4	2589.00		1
		5	2286.53	159.790	19
		Total	2275.89	167.719	28
2	1	3	2052.33	144.195	3
		4	2246.00	155.563	2
		5	2254.00	68.790	3
		Total	2176.38	145.984	8
	2	2	2048.00		1
		3	2039.00	136.525	3
		4	2033.60	16.227	5
		5	2232.64	195.533	11
		Total	2144.60	179.224	20
	Total	2	2048.00		1
		3	2045.67	125.801	6
		4	2094.29	122.271	7
		5	2237.21	173.841	14
		Total	2153.68	168.353	28

(table continues)

Table 11 *(continued).*

| School | | | Mean | Std. | N |
	Gender	Ethnicity		Deviation	
Total	1	2	2400.00		1
		3	2045.00	118.645	4
		4	2360.33	226.531	3
		5	2344.83	128.536	12
		Total	2289.95	182.052	20
	2	2	2180.80	148.271	5
		3	2106.00	158.485	5
		4	2033.60	16.227	5
		5	2220.33	169.109	21
		Total	2173.03	162.865	36
	Total	2	2217.33	159.986	6
		3	2078.89	137.372	9
		4	2156.13	208.344	8
		5	2265.61	165.081	33
		Total	2214.79	177.552	56

Table 12 presents the results of the between-subjects effects, which depicts the interaction effects of (a) school and gender, (b) school and ethnicity, (c) ethnicity and gender, and (d) school, gender, and ethnicity.

Table 12

Between-Subjects/Interaction Effects for Dependent Variable: TAKS Math

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
School	110561.205	1	110561.205	5.065	.030
Gender	52969.096	1	52969.096	2.427	.127
Ethnicity	220663.821	3	73554.607	3.370	.027*
School/Gender	888.145	1	888.145	.041	.841
School/Ethnicity	57942.597	3	19314.199	.885	.457
Ethnicity/Gender	88311.987	3	29437.329	1.349	.272
School/Gender/Ethnicity	42178.584	1	42178.584	1.932	.172

p < .05.

The results for the Descriptive Statistics for the TAKS math test, conducted with the Levene's test of equality of error variance, was .329. The tests of between-subjects effects/interaction effects in Table 12 indicated that there was a significant statistical difference with the two main effects of school and ethnicity. The test yielded the results of (a) school at .030, (b) gender at .127, and (c) ethnicity at .027.

The .030 significance figure represents a statistical significant difference between the main effect of School 1 and School 2. The mean score for School 1, the campus without a common planning time, was 2275.89. School 2, the campus with a common planning time, reported a mean score of 2153.68.The

overall mean score for both campuses combined was 2214.79. With only two groups involved in this main effect, no further tests were conducted.

Examining the main effect of gender, which yielded a .127 statistical measure, Table 11 reported the Asian male gender at School 1 to have a mean score of 2400. School 2 had no forms returned for this group. For African American males, School 1 had a mean score of 2023.00 which was lower than School 2 at a 2052.33. The male Hispanic group reported a mean score of 2589 at School 1 compared to a 2246 score at School 2. The mean score for white males at School 1 was 2375.11, which was higher than School 2 at 2254. The total mean score for the male gender at School 1 was 2365.67 as compared to School 2 with 2176.38.

For the female population, Table 11 shows a mean score of 2214 for the Asian ethnicity at School 1 and a score of 2048 for School 2. School 1 had a mean score of 2206.5 for the African American female group while School 2 showed a score of 2039. No female Hispanics at School 1 returned permission forms, but School 2 had a mean score of 2033.6. At School 1, the white female mean scores were 2206.80 and School 2 reported 2232.64. The total female mean scores for both campuses were reported at 2208.56 for School 1 and 2144.60 for School 2.

In examining Table 12 for the main effect of ethnicity, the statistical significance of .027 prompted the need to complete a Post Hoc, Tukey HSD test. Table 13 depicts the results for the multiple comparison with the Tukey HSD-test for the dependent variable for the TAKS math test data.

Table 13

Multiple Comparison for the Tukey HSD – Dependent Variable: TAKS Math

Ethnicity		Mean Difference	Std. Error	Sig.
Ethnicity				
3	2	-138.44	77.865	.298
	4	-77.24	71.788	.706
	5	-186.72*	55.557	.009*

*The mean difference is significant at the .05 level.

This information indicated the performances on the TAKS math test had significant statistical differences for the two ethnicity levels of Group 3, African American, and Group 5, white, at a .009 significance level. The mean score in Table 11 for the African American ethnicity was 2078.89. The mean score for the white ethnicity was 2265.61.

The interaction effects for school, gender, and ethnicity are depicted in Table 12. The results for the variables were (a) school and gender at .841, (b) school and ethnicity at .457, (c) gender and ethnicity at .272, and (d) school, gender, and ethnicity at .172.

Examining the interaction effect of school and gender, the male participants at School 1 had a mean score of 2365.67. School 2 male participants had a mean score of 2176.38. For the interaction effect for the female gender and school, School 1 had a mean score of 2208.56 and School 2 had a mean score of 2144.60. The total mean score for the male gender for both schools was 2289.95 and for the female gender it was 2173.03.

The interaction effect for school and ethnicity are depicted in Table 14.

Table 14

Results of TAKS Math Interaction Effects: School and Ethnicity

Ethnicity	School	Mean Score	Range of correctly answered questions Total – 48 questions
Asian	1	2251.20	38-39
	2	2048.00	24
Total		2217.33	36-37
African American	1	2145.33	31-32
	2	2045.67	23-24
Total		2078.89	26-27
Hispanic	1	2589.00	47
	2	2094.29	27-28
Total		2156.13	32-33
White	1	2286.53	40-41
	2	2237.21	37-38
Total		2214.79	36-37

The Asian ethnicity in School 1 had a mean score of 2251.20 as opposed to

School 2 with a score of 2048. The total mean score for the Asian ethnicity was

2217.33. The African American ethnicity had a mean score of 2145.33 for School

1 and School 2 had a score of 2045.67 with a total mean score of 2078.89 for

both schools. The Hispanic ethnicity at School 1 had a mean score of 2589 and

School 2 had a score of 2094.29. The total mean score for the Hispanic ethnicity

was 2156.13. The white ethnicity at School 1 had a mean score of 2286.53 and

School 2 had a score of 2237.21. The total mean score for the white ethnicity was 2214.79.

For the variables of gender and ethnicity, the interaction effect produced scores as shown in Table 15.

Table 15

Results of TAKS Math Interaction Effects: Ethnicity and Gender

Ethnicity	Gender	Mean Score	Range of correctly answered questions (Total – 48 questions)
Asian	1	2400.00	44
	2	2180.80	34-35
Total		2217.33	36-37
African American	1	2045.00	23-24
	2	2106.00	28-29
Total		2078.89	26-27
Hispanic	1	2360.33	43-44
	2	2033.60	22-23
Total		2156.13	32-33
White	1	2344.83	42-43
	2	2220.33	36-37
Total		2265.61	39-40

When calculating all mean scores for the interaction effect of ethnicity and gender for each school, School 1 reported higher mean scores than School 2 in

this study. School 1 had a mean score of 2251.2 for all Asian students while School 2 had a score of 2048. The African American group on the campus of School 1 had a mean score of 2145.33 and School 2 reported a 2045.67. The mean score for the Hispanic ethnicity for School 1 was 2589, but for School 2 it was only 2094.29. Students from School 1 for the white ethnicity had a mean score of 2286.53 as opposed to School 2 students with a score of 2237.21. The total mean for School 1 by ethnicity and gender was 2275.89 and for School 2 it was 2153.68.

Examining the last interaction effect of school, gender, and ethnicity, the mean score for School 1 was 2275.89. The mean score for School 2 was 2153.68. The total mean score for this interaction effect was 2214.79.

The Descriptive Statistics in the ANOVA 2*4 design with TAKS reading as the dependent variable is represented in Table 16. For the purpose of this study, School 1 is the campus that does not provide a common planning time for the teachers and School 2 is the campus that does give teachers a common planning time along with the personal planning time. For gender, the code is 1 for males and 2 for females; and for ethnicity, 2 is Asian, 3 is African American, 4 is Hispanic, and 5 is white. The Descriptive Statistics for the TAKS reading test data included the Levene's test of equality of error variance. The significance for this test was .641. Table 17 depicts the data for the between-subjects effects test. Since no result for the between-subjects effects test was significant at less than a .05 *p calc.*, no further test were conducted.

Table 16

Descriptive Statistics for Dependent Variable: TAKS Reading

School	Gender	Ethnicity	Mean	Std. Deviation	N
1	1	2	2541.00		1
		3	2118.00		1
		4	2439.00		1
		5	2335.33	165.665	9
		Total	2343.00	170.329	12
	2	2	2249.50	100.868	4
		3	2228.50	242.538	2
		5	2268.00	143.033	10
		Total	2258.44	135.769	16
	Total	2	2307.8	156.924	5
		3	2191.67	182.982	3
		4	2439.00		1
		5	2299.89	153.688	19
		Total	2294.68	154.520	28
2	1	3	2152.67	72.947	3
		4	2367.00	101823	2
		5	2289.00	114.118	3
		Total	2257.38	123.626	8
	2	2	2118.00		1
		3	2193.67	83.381	3
		4	2096.80	195.197	5
		5	2279.55	127.996	11
		Total	2212.90	155.006	20
	Total	2	2118.00		1
		3	2173.17	73.578	6
		4	2174.00	210.979	7
		5	2281.57	120.921	14
		Total	2225.61	145.907	28

(table continues)

Table 16 *(continued).*

School			Mean	Std. Deviation	N
Gender	Ethnicity				
Total	1	2	2541.00		1
		3	2144.00	62.032	4
		4	2391.00	83.138	3
		5	2323.75	150.887	12
		Total	2308.75	155.818	20
	2	2	2223.20	105.305	5
		3	2207.60	136.185	5
		4	2096.80	195.197	5
		5	2274.05	132.033	21
		Total	2233.14	146.526	36
	Total	2	2276.17	160.325	6
		3	2179.33	108.811	9
		4	2207.13	216.636	8
		5	2292.12	138.964	33
		Total	2260.14	152.926	56

Table 17

Between-subjects Effects for Dependent Variable: TAKS Reading

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
School	12874.895	1	12874.895	.621	.435
Gender	82004.778	1	82004.778	3.958	.053
Ethnicity	88285.130	3	29428.377	1.420	.250
School/Gender	48.198	1	48.198	.002	.962
School/Ethnicity	11803.980	3	3934.660	.190	.903
Ethnicity/Gender	144560.455	3	48186.818	2.326	.088
School/Gender/ Ethnicity	5790.592	1	5790.592	.279	.600

The Levene's test of equality of error variances and the tests of between-subjects effects reported finding of (a) .435 for the main effect of school, (b) .053 for the main effect of gender, and (c) .250 for the main effect of ethnicity. This analysis found no statistical significant difference, which was based on the p-calc level of <.05.

The main effect of school yielded a mean score of 2294.68 for School 1 and a mean score of 2225.51 for School 2. The total mean score for both schools combined was 2260.14. Once again, School 1 is the campus without a common planning time and School 2 is the campus with a common planning time.

Gender, the second main effect, resulted in a .053 significance statistical measure. Table 16 reported a 2541 mean score for the male Asian gender at School 1, but School 2 had no students return a form for that group. For the male African American gender, School 1 yielded a 2118 and School 2 had a 2152.67. For the male Hispanic ethnicity, School 1 reported a 2439 and School 2 a 2367. The male white ethnicity at School 1 had a 2335.33 and School 2 had a 2289. The total mean score for the male gender at School 1 was 2343 as compared to School 2 with 2257.38.

For the female population, Table 16 reported a mean score of 2249.50 for the Asian ethnicity at School 1 and a score of 2118 for School 2. School 1 had a mean score of 2228.50 for the African American female group while School 2 showed a score of 2193.67. No female Hispanics at School 1 returned permission forms, but School 2 had a mean score of 2096.80. At School 1, the white female mean scores were 2268 and School 2 reported 2279.55. The total

female mean scores for both campuses were reported at 2258.44 for School 1 and 2212.90 for School 2.

The total main effect of ethnicity was examined and no significant statistical differences reported. The main effect of the Asian ethnicity had a mean score of 2276.17 The African American ethnicity had a mean score of 2179.33. The Hispanic ethnicity had a mean score of 2207.13. The white ethnicity had a mean score of 2292.12. The total score for ethnicity was 2260.14.

The Descriptive Statistics of the interaction effects for the TAKS reading test results are depicted in Table 14. The variables (a) school and gender yielded a significance of .962, (b) school and ethnicity of .903, (c) gender and ethnicity of .088, and (d) school, gender, and ethnicity of .600 indicating no significant differences. Therefore, no additional tests were needed for this data.

Examining the interaction effects of school and gender, the male participants at School 1 had a total mean score of 2343.00 and School 2 male participants had a total mean score of 2257.38 reflecting. The total combined mean score for the male gender for both schools was 2308.75. The female interaction effect for School 1 had a mean score of 2258.44 and School 2 had a mean score of 2212.90. The total combined mean score for the female gender for both schools was 2233.

The interaction effects of school and ethnicity are depicted in Table 18.

Table 18

Results of TAKS Reading Interaction Effects: School and Ethnicity

Ethnicity	School	Mean Score	Range of correctly answered questions Total – 48 questions
Asian	1	2307.80	43-44
	2	2118.00	35-36
Total		2276.17	42-43
African American	1	2191.67	38-39
	2	2173.17	38-39
Total		2179.33	38-39
Hispanic	1	2439.00	46
	2	2174.00	38-39
Total		2207.13	39-40
White	1	2299.89	43-44
	2	2281.57	42-43
Total		2292.12	42-43

The mean score for the Asian ethnicity at School 1 was 2307.80 and 2118 for

School 2. The total mean score for the Asian ethnicity was 2276.17. There was

very little disparity between the mean score of the two schools in the African

American ethnicity. School 1 was 2191.67 and School 2 was 2173.17. The total

mean score for all African American students yielded a 2179.33. Hispanics at

School 1 had a mean score of 2439 and School 2 had a score of 2174. The total

mean score for the Hispanic ethnicity was 2207.13. As with the African American

ethnicity, the last group, the white ethnicity, yielded similar mean scores. School

1 had a mean score of 2299.89 and School 2 had a score of 2281.5, with a total

mean score of 2292.12 for both schools.

For the variables of gender and ethnicity, the interaction effect produced

scores as shown in Table 19.

Table 19

Results of TAKS Reading Interaction Effects: Ethnicity and Gender

Ethnicity	Gender	Mean Score	Range of correctly answered questions (Total – 48 questions)
Asian	1	2541.00	47
	2	2223.20	40-41
Total		2276.17	42-43
African American	1	2144.00	36-37
	2	2207.60	39-40
Total		2179.33	38-39
Hispanic	1	2391.00	44-45
	2	2096.80	32-33
Total		2207.13	39-40
White	1	2323.75	43-44
	2	2274.05	42-43
Total		2292.12	42-43

The male Asian ethnicity had a mean score of 2541 and the female group had a

mean score of 2223.20. The total mean score of this ethnicity was 2276.17. The

males from the African American ethnicity had a mean score of 2144.00 and the

females had a score of 2207.60. The total mean score was 2179.33. The males from the Hispanic ethnicity had a mean score of 2391.00 and the females had a score of 2096.80. The total mean score for this ethnicity was 2207.13. The males from the white ethnicity had a mean score of 2323.75 and the females had a score of 2274.05. The total mean score for the white ethnicity was 2292.12.

The tests of between-subjects effects indicated that there was no significant statistical difference with the main effect of the three variables of school, gender, or ethnicity since all were greater than .05. The mean score for the School 1 was 2294.68 and for School 2 2225.61. The total mean score for these three variables was 2260.14.

<div align="center">Analysis of Data</div>

The results of the ANOVA 2*4 design were analyzed to determine if the common planning time for a team of teachers impacted standardized test scores for middle school students. The TAKS math and reading scores from two middle school campuses were compared by school, gender, and ethnicity to ascertain if a statistical significant difference existed for the scores. The mean score was established by entering the scale score of each participant from the two campuses into the measuring instrument. The main effects and interaction effects were evaluated from the descriptive statistics to assess if a significant score less than the p-calc of .05 was observed. In reference to the research questions, the following analysis of the data was observed:

1. When comparing students' standardized test scores by gender, what impact does the common planning time have on TAKS math scores?

   Data Results: The between-subjects effects for Dependent Variable: TAKS math yielded a significance score of .841 for the interaction effect within the grouping of the variables of school and gender. This score did not indicate a significant statistical difference for this interaction effect.

2. When comparing students' standardized test scores by gender, what impact does the common planning time have on TAKS reading scores?

   Data Results: The between-subjects effects for Dependent Variable: TAKS reading yielded a significance score of .962 for the interaction effect within the grouping of the variables of school and gender. This score did not indicate a significant statistical difference for this interaction effect.

3. When comparing students' standardized test scores by ethnicity, what impact does the common planning time have on TAKS math scores?

   Data Results: The between-subjects effects for Dependent Variable: TAKS math yielded a significance score of .457 for the interaction effect within the grouping of the variables of school and

ethnicity. This score did not indicate a significant statistical

difference for this interaction effect.

4. When comparing students' standardized test scores by ethnicity,

   what impact does the common planning time have on TAKS

   reading scores?

   Data Results: The between-subjects effects for Dependent

   Variable: TAKS reading yielded a significance score of .903 for the

   interaction effect within the grouping of the variables of school and

   ethnicity. This score did not indicate a significant statistical

   difference for this interaction effect.

5. When comparing students' standardized test scores by gender and

   ethnicity, what impact does the common planning time have on

   TAKS math scores?

   Data Results: The between-subjects effects for Dependent

   Variable: TAKS math yielded a significance score of .172 for the

   interaction effect within the grouping of the variables of school,

   gender, and ethnicity. This score did not indicate a significant

   statistical difference for this interaction effect.

6. When comparing students' standardized test scores by gender and

   ethnicity, what impact does the common planning time have on

   TAKS reading scores?

   Data Results: The between-subjects effects for Dependent

   Variable: TAKS reading yielded a significance score of .600 for the

interaction effect within the grouping of the variables of school,

gender, and ethnicity. This score did not indicate a significant

statistical difference for this interaction effect.

Summary

This chapter presents the information found from the statistical analysis of

the data for the research questions proposed in this study. Additional information

will be presented to explain these findings in Chapter 5.

CHAPTER 5

FINDINGS, CONCLUSIONS, AND

RECOMMENDATIONS

This chapter presents a summary for the findings, conclusions, and recommendations of this study. The first section contains information describing an overview of the descriptive statistics used in this research. The second section includes the summary of findings and the third the discussion of findings. The next section is conclusions, followed by recommendations for future research and studies. The last section is the summary.

Overview of Study

This study involved an examination of the impact of a common planning time in the middle school setting by assessing standardized test scores of middle school students. A comparison of scores for the Texas Assessment of Knowledge and Skills (TAKS) math and reading test administered to seventh grade students in the spring of 2005 for two middle school campuses was completed. On one middle school campus, the teachers were assigned a common planning time as well as a personal planning time. On the other middle school campus, teachers were only assigned the personal planning time.

The TAKS test is a criterion-referenced test in which the scores are calculated in raw score for each student. These raw scores (See Table 9) were recorded along with the ethnicity and gender of each student by campus and then entered into an analysis of variance measuring instrument. Six questions were developed and addressed in this study:

Research Question 1: When comparing students' standardized test scores by gender, what impact does the common planning time have on TAKS math scores?

Research Question 2: When comparing students' standardized test scores by gender, what impact does the common planning time have on TAKS reading scores?

Research Question 3: When comparing students' standardized test scores by ethnicity, what impact does the common planning time have on TAKS math scores?

Research Question 4: When comparing students' standardized test scores by ethnicity, what impact does the common planning time have on TAKS reading scores?

Research Question 5: When comparing students' standardized test scores by gender and ethnicity, what impact does the common planning time have on TAKS math scores?

Research Question 6: When comparing students' standardized test scores by gender and ethnicity, what impact does the common planning time have on TAKS reading scores?

To ensure similar demographics, the campuses for this study were selected from the campus group of a North Texas school district included on the Academic Excellence Indicator System (AEIS) report published by TEA during the fall of 2005 (see Tables 6 and 7). The participant sample for this study consisted of 28

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students from each campus with a total of 56 students for both campuses. An ANOVA 2*4 design was the measuring instrument.

Summary of Findings

This section addresses the research hypotheses and results of this study, which was to determine the impact of a common planning time for a team of teachers in a middle school setting on the standardized test scores for middle school students, as well as the conclusions from the analysis of the statistical information in this study.

The analysis of variance was utilized to compare several factors and the main and interaction effects of those factors on the dependent variable. In this research, the dependent variables were the test scores from the TAKS math test and the TAKS reading test. This test was created by the Texas Education Agency and administered to all students for the levels of grades three through eleven in the state of Texas. The scores in this study were recorded from seventh grade students for the administration of the spring 2005 test. The factors or the main and interaction effects in this analysis were the subgroups of school, gender, and ethnicity. The number of participants for this study totaled 56 students, 28 from each campus. However, the low rate of return for the consent and assent forms by the various ethnicities was disappointing when assessing the comparison effects by ethnicity for these schools. Several of the ethnic groups had a return of only one or two forms.

As stated earlier in this chapter, the ANOVA statistically measures the ratio of the amount of variance of the scores for individuals of between-groups

as opposed to the amount of variance of within-groups. This measuring instrument indicates if there is a statistically significant difference on the scores in any one particular variable compared to the variances of scores for the other variables in the study. The conclusions for the hypotheses in this study indicated:

Hypothesis 1: When measuring the scores of students by gender on the TAKS math test, a statistical difference will exist for those students who attend a middle school campus that utilizes a common planning time for teachers.

The between-subjects effects for Dependent Variable TAKS math showed a significance score of .841 for the interaction effect within the grouping of the variables of school and gender. This score showed there were no statistical significant differences in the TAKS math scores by gender for students who attend a middle school campus that utilizes a common planning time for teachers.

The ratio of differences in the between-groups of school and gender to the differences of variances within-groups of the school and gender was not sufficiently high. This indicates that comparing the ratio of differences by gender in the scores of the students from School 1 to the scores of the students from School 2 did not differ from the variances in score that occurred between the students on and within each campus.

Hypothesis 2: When measuring the scores of students by gender on the TAKS reading test, a statistical difference will exist for those students who attend a middle school campus that utilizes a common planning time for teachers.

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The between-subjects effects for Dependent Variable: TAKS reading showed a significance score of .962 for the interaction effect within the grouping of the variables of school and gender. This score showed there were no statistical significant differences in the TAKS reading scores by gender for students who attend a middle school campus that utilizes a common planning time for teachers.

The ratio of differences in the between-groups of school and gender to the differences of variances within-groups of the school and gender was not sufficiently high. This indicates that comparing the ratio of differences by gender in the scores of the students from School 1 to the scores of the students from School 2 did not differ from the variances in score that occurred between the students on and within each campus.

Hypothesis 3: When measuring the scores of students by ethnicity on the TAKS math test, a statistical difference will exist for those students who attend a middle school campus that utilizes a common planning time for teachers.

The between-subjects effects for Dependent Variable TAKS math showed a significance score of .457 for the interaction effect with the grouping of the variables of school and ethnicity. This score showed there were no statistical significant differences in the TAKS math scores by ethnicity for students who attend a middle school campus that utilizes a common planning time for teachers.

The ratio of differences in the between-groups of school and ethnicity to the differences of variances within-groups of the school and ethnicity was not

sufficiently high. This indicates that comparing the ratio of differences by ethnicity in the scores of the students from School 1 to the scores of the students from School 2 did not differ from the variances in score that occurred between the students on and within each campus.

Hypothesis 4: When measuring the scores of students by ethnicity on the TAKS reading test, a statistical difference will exist for those students who attend a middle school campus that utilizes a common planning time for teachers.

The between-subjects effects for Dependent Variable TAKS reading showed a significance score of .903 for the interaction effect with the grouping of the variables of school and ethnicity. This score showed there were no statistical significant differences in the TAKS reading scores by ethnicity for students who attend a middle school campus that utilizes a common planning time for teachers.

The ratio of differences in the between-groups of school and ethnicity to the differences of variances within-groups of the school and ethnicity was not sufficiently high. This indicates that comparing the ratio of differences by ethnicity in the scores of the students from School 1 to the scores of the students from School 2 did not differ from the variances in score that occurred between the students on and within each campus.

Hypothesis 5: When measuring the scores of students by gender and ethnicity on the TAKS math test, a statistical difference will exist for those students who attend a middle school campus that utilizes a common planning time for teachers.

The between-subjects effects for Dependent Variable TAKS math showed a significance score of .172 for the interaction effect with the grouping of the variables of gender and ethnicity. This score showed there were no statistical significant differences in the TAKS math scores by gender and ethnicity for students who attend a middle school campus that utilizes a common planning time for teachers.

The ratio of differences in the between-groups of gender and ethnicity to the differences of variances within-groups of the gender and ethnicity was not sufficiently high. This indicates that comparing the ratio of differences by gender and ethnicity in the scores of the students from School 1 to the scores of the students from School 2 did not differ from the variances in score that occurred between the students on and within each campus.

Hypothesis 6: When measuring the scores of students by gender and ethnicity on the TAKS reading test, a statistical difference will exist for those students who attend a middle school campus that utilizes a common planning time for teachers.

The between-subjects effects for Dependent Variable TAKS reading showed a significance score of .600 for the interaction effect with the grouping of the variables of gender and ethnicity. This score showed there were no statistical significant differences in the TAKS reading scores by gender and ethnicity for students who attend a middle school campus that utilizes a common planning time for teachers.

The ratio of differences in the between-groups of gender and ethnicity to the differences of variances within-groups of the gender and ethnicity was not sufficiently high. This indicates that comparing the ratio of differences by gender and ethnicity in the scores of the students from School 1 to the scores of the students from School 2 did not differ from the variances in score that occurred between the students on and within each campus.

<center>Discussion of Findings</center>

The statistical findings from the analysis of the data resulted in showing no statistical significant differences in the hypotheses composed for this study. Furthermore, the common planning time had no statistical significant effect on the standardized test scores of middle school students. While it is true that the mean score of the main effect school for the dependent variable of the TAKS math test did show a statistical significant difference for the two schools concerning the students' test scores, the school that achieved the higher mean scores for the test was the campus without the common planning time. This result is opposite of what the research questions for this study hypothesized. The descriptive statistics for the TAKS reading test did not implicate any statistical differences in the mean scores.

Several factors could have contributed to these conclusions. First, the low return of consent and assent forms could have lead to limited involvement of participants. Secondly, not only the low return, but the unequal return of these forms by gender and ethnicity could have affected the statistical outcomes of

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these findings. Recommendations for further studies which address these factors are included in a later section of this chapter.

Although the results of this study indicate the common planning time had no statistical impact on the standardized TAKS scores of middle school students, literature published by Flowers, Mertens, and Mulhall (2003), supports the implementation for this component of the middle school concept. As members of the National Middle School Association, these authors summarize the impact of changes in middle level education from the past ten years of conducted research. In their report from these reflections, they included recommendations for an interdisciplinary team of teachers to meet thirty minutes a day at least four times a week. These recommendations, when implemented over a two-year period, resulted in impressive gains of students' academic performances on achievement test scores. Also, they concluded that "student self-reported outcomes improved, including less depression, fewer behavior problems, higher self-esteem, and greater academic efficacy" (p. 55).

A study conducted by George and Alexander (1993) supported the common planning time as one of the nine components necessary for middle school campuses to be rated as exemplary in academic achievement and student personal development. Epstein and Mac Iver (1990) surveyed principals finding the common planning time gave teachers the opportunity to work collaboratively for successful teaming. Hall (1999) stated, "Team planning created a situation where fewer students 'fell between the cracks'" (p. 106). The teachers on the campus utilized in this research felt the common planning time

reduced the feeling of isolation, aided in problem solving, while principals saw a decrease in discipline problems and positive student/teacher relations.

In view of this literature, other considerations can be observed from the data of this research. For example, an analysis of the descriptive statistics for the TAKS math test yields a statistical significant difference for the interaction effect of ethnicity. This information was not hypothesized in a research question. However, when examining the observed differences from the multiple comparison tests, statistical information for the African American subgroup and the White subgroup yielded a ratio for a statistical difference between the scores for the two subgroups that was sufficiently higher than the ratio differences of scores from within each subgroup. According to the mean scores, the African American students correctly answered 32 to 33 questions on the TAKS math test and the White students answered 42 questions correctly on the test. The total mean score for all ethnicities indicated the students correctly answered 40 questions on the test.

A further examination reveals that the total combined mean score for the African American female students in this subgroup had an average mean score of 2207.60, reflecting a raw score of 27 to 28 correctly answered questions. The average mean score for this subgroup was not sufficient for a passing score on this test, which required students to answer a total of 35 questions correctly. These results reveal that this subgroup, especially the female subgroup, of the African American ethnicity may need additional tutoring and support to ensure academic achievement and success on standardized testing. This information

should not only be noted by administrators in meeting the requirements for the

AEIS report card for schools in the state of Texas, but will also aid administrators

nation-wide in meeting the requirements as specified in No Child Left Behind,

which affects the federal funding received by districts.

When reviewing the campus results of performance by percentages from

the AEIS report from TEA for the spring administration of 2005, Table 20 gives

the overall averages for each test, including the writing test which was not

statistically measured for this study. The percentages in this table include the

scores of every student who attended school on that campus on a specific target

date in the month of October, 2004.

Table 20

Performance Percentages on the AEIS Report - Spring 2005 TAKS

Administration

Campus	Reading	Writing	Math	All Tests
School 1	83	86	67	61
School 2	89	94	65	62

This analysis of the test in Table 20 reveals that School 1, the campus without

the common planning time scored 6% lower for the reading and writing test, and

2% higher on the math test. For the three test administered, including the writing

test not examined by the statistical tool for this study, School 1 scored 1% lower

overall. Table 21 depicts the percentages reported for the campuses by ethnicity

for the campuses on the TAKS reading test.

Table 21

TAKS Reading Test Performance Percentages Reported for Spring 2005

Campus		Asian	African American	Hispanic	White
School	1	87	54	76	89
School	2	N/A	83	85	92

The TAKS reading test performance percentages for School 1, the campus without the common planning time, was 29% lower for the African American subgroup, 9% lower for the Hispanic subgroup and 3% lower for the White subgroup. School 2, the campus with the common planning time did not have enough students to qualify a percentage for the Asian subgroup. These percentages indicate that School 2 performed higher on the reading test.

Table 22 depicts the performance percentages of students by gender and special population on the TAKS reading test administered in spring 2005 as reported on the AEIS report for each campus.

Table 22

TAKS Reading Test Performance Percentages Reported for Spring 2005

Campus	Male	Female	Special Education	Economically Disadvantaged	Limited English Proficiency
School 1	81	86	33	74	23
School 2	91	88	58	85	N/A

The performance percentages for the campuses in Table 22 indicate that School 1, the campus without the common planning time, had an overall lower performance by percentages for the male, female, special education, economically disadvantaged, and limited English proficient students. These differences from School 1 ranged from 2% for the female population to 25% in the special education population.

Table 23 depicts the percentages reported for the campuses by ethnicity for the campuses on the TAKS math test.

Table 23

TAKS Math Test Performance Percentages Reported for Spring 2005

Campus	Asian	African American	Hispanic	White
School 1	80	33	50	75
School 2	N/A	35	59	71

School 1, the campus without a common planning time had a performance percentage 3% lower for the African American subgroup and 9% lower for the Hispanic subgroup. However, School 1 was 4% higher for the white subgroup. The Asian population for School 2 was not high enough to qualify for reporting as a subgroup.

The performance percentages from the AEIS report of students by gender and special population on the TAKS math test administered in spring 2005 for each campus are reported in Table 24.

Table 24

TAKS Math Test Performance Percentages Reported for Spring 2005

Campus	Male	Female	Special Education	Economically Disadvantaged	Limited English Proficiency
School 1	68	66	38	55	33
School 2	67	63	25	45	N/A

The TAKS math test percentages depict a more uniform performance between each campus. However, School 1, the campus without the common planning time, was higher than School 2 with the differences between each subgroup ranging from 2% for the male population to a 13% difference for the special education population. Overall School 1, the campus without a common planning time, had a higher performance level than School 2.

While statistically, there were no differences reported for the impact of a common planning time on the standardized test scores for middle school students, the percentages released from the AEIS report from TEA for the two North Texas middle schools indicate that the campus with the common planning time did have higher reading scores. The math performances on both campuses were more uniform across the board. When speaking with administrators and evaluating the utilization of the common planning time, the teachers at School 2 applied this time to preparing materials for the students to provide additional practice in the content areas of math and reading during their tutorials. School 1

was departmentalized and did not meet and prepare materials during the year to provide the additional practice for the students during their tutorial time. Thus, the additional tutoring at School 2 prepared students not only by proving extra practice for content, but also allowed the students to observe and become comfortable with the presentation of the questions and format of the test.

With the legislative mandates of No Child Left Behind addressing the need for all students of all ethnicities to be academically successful, along with the rating of schools being measured by how well all the students perform on standardized tests, administrators must find ways to help teachers "teach smarter." Research has been conducted and published to address this issue. Many of the studies support the need for the common planning time. The Michigan Middle School Start Initiative found that the amount of a common planning time impacted the academic success of students by allowing teachers to implement the desired instructional practices into the curriculum and lesson plans (CCAD, 2000. The National Center for Public Education and Social Policy endorses the common planning time for teachers because it promotes integration of curriculum, better parental communication, and positive behavior having a constructive impact on the student's success in the classroom (CCAD, 2000). The data is available and administrators need to consider using this component of the middle school concept on their campus to ensure student success.

<div align="center">Conclusion</div>

In conclusion, the statistical analysis indicates the common planning time does not have a statistical impact on the performance of a middle school student

on a standardized test. However, examining the performance percentages of the TAKS reading test, some differences were observed, especially with the African American subgroup. When looking at the percentages of the total population from the AEIS report for the TAKS reading test, School 2 performed higher in all of the following areas:

1. Ethnicity - African American, Hispanic, and white (The population of the Asian ethnicity was not measurable on the campus of School 2)

2. Gender – male and female

3. Special Populations – economically disadvantaged, special education, and limited English proficiency

The percentages for the TAKS math test showed that School 1, the campus without the common planning time had higher scores for all but two areas in the African American and Hispanic ethnicity. The highest point spread was in the areas of special education at thirteen points and economically disadvantaged at eleven points. However, most were less than five points, and no differences were recorded showing as high a point spread as the results of the African American population on the two campuses with the TAKS reading test.

Although the descriptive statistics utilized in this study measure the variances of differences from within the groups on each campus and also compare it to the variances of differences of between the two school campuses, the percentages that are released by the AEIS report for these scores are what determines the ratings of schools in Texas. Therefore, the information and percentages released by this report are thoroughly examined by administrators

from campus to central office personnel as well as parents and members of the community. Even real estate agents capitalize on the information when trying to sell homes or property in an area where the schools are high performing. Also, the No Child Left Behind legislation requires states to monitor student achievement, emphasizing the performance of subgroups. This legislation ties federal funding to the performances of these students on standardized tests. In light of the differences of outcomes presented in this study for the statistical and percentage information concerning student achievement on standardized test, I suggest that further research be conducted to determine the full impact of the common planning time in a middle school setting.

<div align="center">Recommendations</div>

This section of chapter five suggests future recommendations for research of the middle school concept by studying the component of providing a common planning time as well as a personal planning time for a team of teachers on a middle school campus and how it impacts the standardized test scores of those students.

1. Conduct future research comparing standardized test scores of students from two middle school campuses without relying on a sample based on return of consent/assent forms, but request permission to randomly select a sample from all the standardized test scores of the students on both campuses. The subgroups selected should be of equal number, therefore insuring equal variance for statistical assumptions.

2. Conduct future research to statistically evaluate the impact of the common planning time for the subgroup of economically disadvantaged students.

3. Conduct future research by completing a qualitative case study with all stakeholders, including students, teachers, and parents to evaluate the importance and impact of the common planning time.

4. Conduct a longitudinal study over a period of two to three years to determine if the common planning time affects the academic achievement of middle school students.

5. Conduct a study assessing the utilization of technology by a team of teachers on a middle school campus. This study would analyze the effectiveness of communication through emails by teachers and parents, and the recording and storage of data to evaluate the impact on the academic performances of middle school students.

Summary

This chapter presented information for the Descriptive Statistics and findings of the TAKS math and reading test. The last three sections included the conclusions of the findings, the recommendations for future research, and the summary. This study observed that there were no statistical significant differences in the impact of the common planning time on standardized test scores for students in a middle school setting. However, when examining the percentage scores as released by the AEIS report for the TAKS reading and math test from the two selected middle school campuses in North Texas, the school with the common planning time showed African American students

performed at higher levels of achievement on the standardized reading test. In fact the campus with the common planning time performed 11 to 29 points higher in all but two of the areas included in this report for the TAKS reading test. The standardized math test scores were less inclusive for showing an impact of the common planning time. The campus without the common planning time had higher scores in the areas except the African American and Hispanic ethnicity.

While much emphasis has been made on developing the curriculum to reach the English language learners, another important aspect of this study indicated an obvious need for focusing on the African American ethnicity, especially the female gender, to help them perform at a higher level of achievement on the TAKS math and reading test. This ethnicity for both campuses performed low on the statistical measures in this study and these results were reinforced by the percentage levels presented on the AEIS report. On the TAKS reading test at School 1, the students' performance level was 20% lower than the other ethnicities. The performance of this ethnicity by both School 1 and School 2 on the TAKS math test had a range of 17 to 42% lower scores when compared to the other ethnicities. This indicates the need for administrators to offer training to teachers to adjust and provide curriculum instruction for these students so that they may become academically successful and achieve high standardized test scores comparable with their peers.

Time for the necessary training and adjustment of curriculum to meet the needs of this subgroup can be accomplished through the utilization of the common planning time. Authors Epstein and Mac Iver (1990) said, "If schools do

not give teams of teachers common planning time, teachers cannot do the kinds of collaborative work that make teams successful" (p. 29). Researchers Flowers, Mertens, and Mulhall (2003) wrote that when campuses implemented the middle school concept, including the common planning time, they experienced an improvement in student-self outcomes, less depression, fewer behavior problems, higher self-esteem, and greater academic efficacy. They also reported that student achievement scores improved due to the team's time spent together coordinating instructional practices. Moreover, over a two year period, these schools demonstrated impressive gains in student achievement scores (Flowers, Mertens, & Mulhall, 1999). Therefore, research supports the need for middle school administrators to closely analyze and evaluate the data of standardized test scores and monitor the other areas as presented in the literature and studies to determine the impact of the common planning time on a middle school campus before discarding this component of the middle school concept.

APPENDIX A

PERMISSION REQUEST FOR SUPERINTENDENTS

To: Superintendent
    ISD

Middle schools across the nation are assessing the "middle school concept" and the effect it has on the success of the student. I am conducting a study for my doctoral dissertation at the University of _____ _____upon this topic. This study will examine the impact that a common planning time as well as an individual planning time for a team of teachers has on a student's academic performance on standardized tests. The research will compare spring 2005 seventh grade reading and math TAKS scores on this campus to student scores on a second middle school campus that does not utilize a common planning time. To ensure similar demographics for the two selected campuses, both are listed in the same "campus group" of the 2004-2005 AEIS report generated by TEA.

I would like to request approval to collect and record data of the reading and math TAKS scores from the ******* Middle School campus in your district for this study. If approved, I will be distributing consent forms to all eighth grade students and parents to seek approval of using their individual scores. To ensure confidentiality, the names of the schools, districts, and individual students who consent will not be released in the dissertation, but a number will be put in place as a code for that student, known only to me. I will utilize statistical methodology to analyze and compare using the TAKS Reading and Math scores, ethnicity, and gender of each student. When this study is completed, administrators can review the results to evaluate and determine if the financial expenditure of a common planning time for teachers is effective in helping middle school students be academically successful.

I would appreciate any considerations made for allowing me to use your district's middle school campus test data for this study. If you have any other questions, please contact me at _____ (cell phone).

Thank you for your time,

_____ _____
Doctoral Student
University of _____

_____   _____

Signature Approval   Date

APPENDIX B

COVER LETTER FOR CONSENT AND ASSENT FORMS

To: Parents/Students
     Middle School
     ISD

I am a student at the University of_____, and I am conducting a research study for my doctoral dissertation. In this research study I will examine the impact a common or shared planning time for a team of teachers has on a student's academic performance on the TAKS test. The study will compare the spring 2005 seventh grade reading and math TAKS scores of the _____ Middle School campus to the student scores on a second middle school campus that utilizes a common planning time.

If possible, I would like to ask for permission to use your students TAKS math and reading scores to conduct this study. **I have attached a permission consent form for the parent and an assent form for the student to sign** if you agree to let me use the 2005 TAKS math and reading score of your student to conduct this study. **To ensure confidentiality, the names of the schools, districts, and individual students who consent will not be released in the dissertation, but a number will be put in place as a code for that student, known only to me**. I will compare the TAKS Reading and Math scores, ethnicity, and gender of each student. When this study is completed, administrators can review the results and evaluate if a common/shared planning time for teachers is effective in helping middle school students be academically successful on the TAKS test.

I would appreciate any considerations made for allowing me to use your child's test data for this study. If you have any other questions, please contact me at _____ (home phone).

Thank you for your time,

_____
Doctoral Student
University of _____

APPENDIX C

PARENT CONSENT AND STUDENT ASSENT FORM

University of _____

Research Consent Form

Subject Name [ ]   **Date** [ ]

Title of Study
Common Planning Time
Principal Investigator _____

Before agreeing to allow your child to participate in this research study, it is important that you read and understand the following explanation of the purpose and benefits of the study and how it will be conducted.

Purpose of the Study
This study is being conducted to determine if a common or shared planning time for a team of teachers on a middle school campuses impacts TAKS test scores of seventh grade students.

Description of the Study
This study will collect the standardized test data for TAKS Math and Reading scores for students who were in the seventh grade students in the spring of 2005 from two different middle school campuses. The names of the individual students will not be included, but will be coded with a number.

Procedures to be used
The students will have completed the test while in the seventh grade in the spring of 2005 while attending school on their respective campuses.

Description of the foreseeable risks
There are no foreseeable risks.

Benefits to the subjects or others
This study will help educational administrators determine if a common planning time for a team of teachers impacts the TAKS scores of students.

Procedures for Maintaining Confidentiality of Research Records
I will eliminate the names of the students on any portion of the study, assigning a number to represent each student.

Review for the Protection of Participants
This research study has been reviewed and approved by the ___ Institutional Review Board (IRB). The ___ IRB can be contacted at _____or _____with any questions regarding the rights of research subjects.

Research Subject's Rights

I have read or have had read to me all of the above. I have received a letter from_____, which explains the study to me. I have been told the risks and/or discomforts as well as the possible benefits of the study for my child.

I understand that my child does not have to take part in this study and refusal to let my child participate or my decision to withdraw my child will involve no penalty or loss of rights or benefits.

The study personnel may choose to stop my child's participation at any time.

In case I have any questions about the study, I have been told I can contact _____at telephone number _____or Dr._____, a professor from the University of_____, College of Education, Educational Administration at telephone number _____.

I understand my child's rights as a research subject and I voluntarily consent to allow my child to participate in this study. I understand what the study is about, how the study is conducted, and why it is being performed. I have been told I will receive a signed copy of this consent form.

_____

Date

Section 1.02 Signature of Parent

For the Investigator or Designee:
I certify that I have reviewed the contents of this form with the subject signing above. I have explained the known benefits and risks of the research. It is my opinion that the subject understood the explanation.

_____

_____

Signature of Principal Investigator   Date

University of _____
Institutional Review Board
Research Assent Form

Subject Name [   ]   **Date** [   ]
Title of Study
Common Planning Time
Principal Investigator _____
This study will examine if a common or shared planning time for a team or
group of middle school teachers impacts the TAKS math and reading scores of
a middle school student. The study will compare the seventh grade spring 2005
TAKS math and reading scores of students from two middle school campuses.
One campus has a common or shared planning time for teachers and one does
not have a common or shared planning time for teachers. The individual
student's name will not be included in the study, but each test score will be
identified by a number.

Assent of Child

The Child named [   ] has agreed to participate in the study
mentioned above.

_____   _____
Signature of Subject
Note: The signature of a Parent or Guardian must be   Date
substituted if waiver of assent is required.
Waiver of Assent

The Child named [   ] has been waived from signing an
Assent for the following reason(s):
_____ Age
_____ Maturity
_____ Psychological State of the Child

_____   _____
Signature of Parent or Guardian   Date

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