ABSTRACT

Delilah A. Jackson. STUDENT ACHIEVEMENT AND FIDELITY OF IMPLEMENTATION OF THE MIDDLE SCHOOL CONCEPT IN MIDDLE SCHOOLS (Under the direction of Dr. James McDowelle). Department of Educational Leadership, May 2013.

This study, using qualitative, multiple case methodology, examined four middle schools within a Local Education Agency (LEA) in eastern North Carolina to determine whether the implementation of key middle school features; (a) interdisciplinary teaming, (b) flexible scheduling, (c) advisor/advisee relationships, and (d) an integrative, exploratory and challenging curriculum had an impact on middle school student achievement outcomes when implemented to the fullest extent.

Descriptive data was gathered and analyzed, first by individual cases and then collectively to determine the level of implementation. Findings revealed implementation scores ranging from 6.5 to 8.1 on a scale from four to twenty which suggested that the key features were implemented within the selected schools. However the low implementation scores also indicated that the features were not fully implemented. When implementation scores were compared to achievement data, rival explanations for student achievement emerged featuring (a) socioeconomic effects, (b) school size effects, and (c) the effect of community dynamics.

STUDENT ACHIEVEMENT AND FIDELITY OF IMPLEMENTATION OF THE

MIDDLE SCHOOL CONCEPT IN MIDDLE SCHOOLS

A Dissertation Presented to

the Faculty of

the Department of Educational Leadership

East Carolina University

In Partial Fulfillment

of the Requirements for the Degree

Doctor of Education

by

Delilah A. Jackson

May 2013

DEDICATION

This dissertation is dedicated to my parents. My parents instilled in me confidence, determination, Christian values and most importantly; perseverance. My father stayed with me long enough to see me finish college and start my career so he did not have an opportunity to share my dissertation experience with me; however my mother was with me through most of the way. She would often say to me, "Are you finished with that thing"? I would laugh and say, "Not yet Momma but I am." Mom, today, I can finally say, "Yes, I have!"

Even though you are no longer with me, I love you both and thank you for helping me to become the person I am today.

ACKNOWLEDGEMENTS

"And let us not grow weary of doing good, for in due season we will reap,

if we do not give up." Galatians 6:9

I would like to extend gratitude and appreciation to Dr. Charles Thompson who began this journey with me many years ago. Thank you for your methodical thinking process and your teaching of the true meaning of research. Even though you were not able to finish this race with me, I will be forever thankful for your knowledge, your patience, and your encouragement.

I would like to extend a very special thank you to Dr. James McDowelle. Thank you for stepping in as my dissertation chair and helping me finish this journey. Even though you were very busy, you found time in your schedule and desire in your heart to help me fulfill my dream. I will be forever grateful to you. I greatly appreciate your input, your sense of humor and most of all your encouragement. I will never forget your first words when we met, "Hey, let's get this thing finished." I knew I had made the right choice.

To my committee members, Dr. Art Rouse, Dr. Bill Grobe, and Dr. Patti Sanders-Smith, you each played a significant role in this process and my life. Dr. Rouse, thank you for joining my committee and understanding the demands of my daily job and its effects. Your knowledge as a former colleague and professor was invaluable. I will never forget your determination and what you did for me. Dr. Grobe, thank you for serving as my advisor and being a sounding board. I am grateful for your teaching. And to my mentor, Dr. Patti Sanders-Smith, thank you for just being you. I appreciate

your guidance, your expertise, your advice and most of your listening ear. Being a professional colleague as well, you knew exactly what to say to make things better.

Thanks to all of my colleagues for your daily encouragement to finish this process. It is great to work with a group of people who have your best interest at heart and who give you the words to keep moving forward.

To my family and friends, who knowingly and unknowingly played a significant role in this process, I want to say thank you. Words cannot express all you have each done for me. Thanks for believing in me, encouraging me, understanding and being my support. Even though I am not a child, I still needed a village. For each and every one of my family members, I would not have made it without you. A special thanks to my girls for letting me know that this was possible and making sure I had time for some fun.

Lastly to my beloved husband Leslie Evans Jackson, thank you for your endless patience, love and understanding. You supported me all the way, understood when I needed a break from it all, and stepped in when it was needed. To my boys, Camden and Bryce, thank you for understanding when I could not attend your sporting events and acknowledging that I was in school too. I love you all and thank you for helping me to make my dream come true.

STUDENT ACHIEVEMENT AND FIDELITY OF IMPLEMENTATION OF THE MIDDLE

SCHOOL CONCEPT IN MIDDLE SCHOOLS

by

Delilah A. Jackson

APPROVED BY:

DIRECTOR OF DISSERTATION: _____

James McDowelle

COMMITTEE MEMBER:_____

William A. Rouse, Jr.

COMMITTEE MEMBER:_____

William Grobe

COMMITTEE MEMBER:_____

Patti Sanders-Smith

INTERIM CHAIR OF THE DEPARTMENT OF EDUCATION:

_____

William A. Rouse, Jr.

DEAN OF THE GRADUATE SCHOOL:

_____

Paul Gemperline

TABLE OF CONTENTS

LIST OF TABLES

CHAPTER 1: INTRODUCTION

Need for the Study

This dissertation arose from an immediate practical problem within a school district within eastern North Carolina. The Local Educational Agency (LEA) serves middle school students in two different grade configurations--K-8 schools and middle schools with grades 6-8. There are six K-8 schools and seven middle schools in the LEA. According to an earlier study, students in grades 6-8 who attended K-8 schools performed better than students in grades 6-8 who attended traditional middle schools (Harris, 2007). To illustrate the differences, the researcher considered the 2004-2006 North Carolina End-of-Grade test scores in Reading for two schools; a K-8 school and a 6-8 middle school.

As Tables 1-3 indicated, School A (K-8) had higher developmental scale scores in Reading than did School B, (6-8). At each grade level, School A students achieved a higher average scale score than School B students. The middle grade students in the K-8 configuration outperformed the students in the 6-8 configuration each year (2004-2006) that was analyzed (Harris, 2007). This finding was consistent with much of the literature regarding the impact of the K-8 grade configuration compared with the middle school configuration (Coladarci & Theodore-Hancock, 2002; Hough, 2005; Howley, 2002; Offenberg, 2001; Pardini, 2002; Reeves, 2005; Renchler, 2000).

Consequently, district administrators were considering whether to eliminate the middle school configuration in favor of K-8 schools throughout the district. To this point, they have made no definitive decision. Over the last twelve years, the district converted an existing elementary school to a K-8 school and built a new middle school. The board

Table 1

6th Grade EOG Reading Scale Scores

Year	School A	School B	Difference
2003-04	261.8	259.5	2.3
2004-05	263.2	260.3	2.9
2005-06	263.3	260.0	3.3

Table 2

7ᵗʰ Grade EOG Reading Scale Scores

Year	School A	School B	Difference
2003-04	263.2	261.2	2.0
2004-05	263.5	260.8	2.7
2005-06	265.7	260.8	4.9

Table 3

8th Grade EOG Reading Scale Scores

Year	School A	School B	Difference
2003-04	265.2	263.7	1.5
2004-05	266.2	264.3	1.9
2005-06	267.5	262.7	4.8

of education and central administration evaluated various scenarios to ensure the most developmentally and academically appropriate arrangements of grades within our newest school buildings, but paradoxically, their deliberations resulted in a K-8 configuration in one case and a middle school configuration in the other.

Many parents, community leaders, and staff supported the change of the Pactolus Elementary School to a K-8 school, and many preferred making the Mills Road Middle School a K-8 school as well. A 1999 survey conducted by the school district revealed strong support to change the grade configuration of Pactolus Elementary School. The K-8 Option Survey had 181 responses of which 74% (134) were in favor of the change to K-8, while 26 % (47) preferred that Pactolus remain a K-5 school (C. Frinsko, personal communication, June 1, 1999). According to Carla Frinsko (personal communication, June 1, 1999), responses supporting the K-5 configuration reflected a worry about older students having a negative influence on younger students while riding the same bus. With the favorable response of the survey and the favorable vote of the school board, Pactolus Elementary School was converted to a K-8 school in 2000.

In February 2005, the Pitt County Board of Education faced another decision to build a school to alleviate overcrowding occurring in the fastest growing area of Pitt County. Many discussions were held over several months regarding the best configuration to accommodate the needs of middle school students. At the public hearings, many parents expressed their concerns about the redistricting that would have to occur to fully utilize the new school in regards to capacity (Strickland, 2005, pp. 1-3). The discussion also included the possibility of converting an existing K-2, 3-6 campus to a K-8 school. Associate Superintendent of Educational Programs and

Services Dr. Mary Williamson indicated that smaller student populations in a middle school would make it easier to create viable programs for grade 6-8 students (Strickland, 2005, p. 5). She added that 6-8 grade configurations would offer middle school students an effective transition to high school as well as exposure to a larger cache of students beyond their respective neighborhoods.

Dr. Williamson reported on the other hand that a K-8 configuration would also offer certain advantages, such as continuity with the nurturing environment offered in the elementary grades, fewer transitions, and more community spirit (Strickland, 2005, p. 5). On balance, the Board and administrators found the arguments in favor of a middle school more persuasive, and the 6-8 configuration was adopted for the new middle school (Strickland, 2005, p. 6).

Thus, at Board meetings, public hearings, and in discussions among district administrators, a variety of arguments were presented for and against both the middle school (6-8) and K-8 configurations. On different occasions, different arguments prevailed.

The evidence concerning student achievement cited above would seem to favor the K-8 over middle school configuration. Yet, it was not fully clear that it was actually the grade configuration that conferred an advantage on K-8 schools.

On the one hand, considerable research indicated that the K-8 performance advantage held true in many districts across the nation. Several researchers found that grade span configuration made a difference in student achievement in both rural and urban schools (Offenberg, 2001; Renchler, 2000). Many districts were finding that 6th, 7th, and 8th graders who attended schools with various grade configurations (K-6, K-7,

6

and K-8) were outperforming 6th, 7th, and 8th graders who attended a traditional middle school (Coladarci & Theodore-Hancock, 2002; Hough, 2005; Howley, 2002; Offenberg, 2001; Pardini, 2002; Reeves, 2005; Renchler, 2000).

Coladarci and Theodore-Hancock (2002) believed that the greater academic achievement that occurred in K-8 students stemmed from the continuity of experience that larger grade spans afford. Fleming (2005) argued that schools which maintained the same boundaries for K-8 students and offered sound instructional programs for each grade improved student achievement. Howley (2002) presented evidence which suggested that narrow grade configurations reinforced the habit of building larger schools and that larger schools undermined educational excellence in impoverished communities.

On the other hand, there was significant evidence that grade 6-8 students in "middle schools" which fully implemented the middle school concept performed better than or as well as their counterparts in K-8 schools (Anfara & Lipka, 2003; Felner, Jackson, Kasak, Mulhall, Brand, & Flowers, 1997; Flowers, Mertens, & Mulhall, 1999; Seghers, Kirby, & Meza,1997).

In Louisiana, Seghers et al. (1997) collected data from 154 public school principals using the MLPQ (Middle Level Practices Questionnaire). The study provided evidence that the Curriculum and Instruction subscale of the Middle Level Practices had a significant positive relationship with California Achievement Test (CAT) scores and Louisiana Educational Assessment Program (LEAP) language scores.

The National Forum to Accelerate Middle School Reform (1998) implemented the Schools to Watch program to identify middle schools that had achieved academic

7

excellence, developmental responsiveness, and social equity. These schools

encouraged all students to use their talents, realize the unique development of

adolescences, and provide a community of support for all students (National Forum To

Accelerate Middle School Reform, 1998). All of these aspects were also emphasized by

advocates of K-8 schools.

So it may have been that middle schools that fully implemented the middle

school concept provided their students with the same kind of supportive environment

that K-8 schools provided and achieved similar academic results.

Statement of the Problem

Thus, from a practical standpoint, the problem was to determine whether in the

LEA, students in 6-8 schools that fully implemented the middle school model performed

just as well as or better than similar students in K-8 schools. If grade 6-8 students in

true middle schools performed just as well as grade 6-8 students in K-8 schools, the

case for converting schools to a K-8 configuration throughout the district was

substantially weakened. But, if fully-implemented middle schools failed to match the

performance of K-8 schools, the argument for a shift to the K-8 configuration was

strengthened.

Research Question

The research question addressed by this study was as follows: Do *middle

schools* that fully implement the middle school concept produced outcomes that more

closely match the outcomes produced by *middle schools* that implement the middle

school concept less fully?

Significance of the Study

When this practical problem was viewed through the lens of theory and research, the contrast was between specialization without personalization on one hand (6-8 schools that function like high schools) and a combination of personalization and specialization on the other hand (K-8 schools and "true" middle schools).

Often times at the elementary school level, the emphasis had been placed on the side of personalization, emphasizing child centered techniques, inclusive practices, and supportive, nurturing environments. At the high school level, the emphasis had been placed on subject centered specialization designed to build skills and knowledge in preparation for college and/or the workplace (San Antonio, 2006). Yet in concept, the middle school was designed to resolve this conflict by integrating personalization and specialization (Juvonen, Le, Kaganoff, Augustine, & Constant, 2004).

Thus, this study reviewed research and theoretical significance beyond the district as well as practical significance for the LEA. By putting this case together with a range of other cases and other types of studies through formal or informal meta-analysis, major scholars in the field may be able to draw sounder inferences about the grade configuration-student outcomes relationship. The study also contributed to the scarce research that has been conducted on the implementation of the middle school concept and its effect on 6-8 student outcomes. Moreover, as the district continues to analyze the appropriate setting for middle school students, this research may contribute to future organizational decisions.

Overview of Methodology

To test the hypothesis that middle schools which fully implement the key features of the middle school concept produce student learning outcomes that match middle grade outcomes that implement the key features less fully, I needed to ascertain the level of middle school implementation in several middle schools which vary in extent of implementation, then determine whether those with higher levels of implementation did indeed perform at higher levels. To assess the level of implementation, I used a combination of interviews, document reviews and observations in 4 middle schools with differing levels of performance on the North Carolina End of Grade assessments in Reading and Mathematics and on the performance composite derived from these results.

In each school, I interviewed seven teachers and the principal. The interviews were conducted within the school, using questions that indicated the level of implementation of key middle school features. The researcher also observed the interactions within each school environment as well as reviewed documents that showed evidence of implementation of key middle school features. The researcher then compiled information from all three sources to produce a global estimate of the degree of middle school implementation in each school and assessed the degree to which middle school implementation was correlated with the performance composites.

Limitations of the Study

The study had several limitations. First, the data collected was from one LEA; thus, the findings from this study were not generalizable beyond the LEA. Second, this study contributed to generalized knowledge only by adding another carefully examined

case to the accumulating literature on grade configuration and implementation of middle level practices. Third, even if the level of middle school implementation did turn out to be correlated with student outcomes, the researcher was not be able to conclude that better implementation caused better outcomes because the researcher was not able to rule out a variety of alternative explanations. It may have been, for example, that differences in the demographic profiles of students attending the schools were the "real" causes of the performance differentials. The researcher examined this possibility descriptively--that was, by constructing tables to permit a preliminary examination of this possibility--but ruling out this and other rival explanations through rigorous, sophisticated data analysis was beyond the scope of this dissertation. Thus, the results tended either to support or refute the hypothesis that the degree of middle school concept implementation impacted student academic performance, but they did not provide conclusive evidence on the issue.

Definition of Terms

Advisory programs - programs which consist of small groups of students assigned to an adult for the purpose of developing trusting relationships and discussing young adolescent issues and concerns (Anfara, 2006).

Block/Flexible Schedule - The organization of the school day into large units of time that may be utilized in varied and productive ways by the school staff (Russell, 1994).

Common Planning Time - A regularly-scheduled time during the school day during which a given team of teachers that is responsible for the same group of

students is available for joint planning, parent conferencing and/or lesson preparation (George & Alexander, 2003).

Grade-level configuration - an organizational pattern of grade levels contained within a building having at least three grades and not more than five grades, and at least grades 6 and 7 (Mizell, 2005). The configuration used for this study was grades 6 through 8, which is also considered the most likely to meet the needs of young adolescents.

Middle school concept - a concept designed around the unique developmental needs of early adolescents (11-14 year olds); it is a bridge between elementary and high school and advocates meeting the specific needs of all children (Anfara & Lipka, 2003).

Teaming - an instructional practice in which two or more teachers combine their abilities, energies, interests, enthusiasm, and knowledge of pupils to teach the core academic disciplines to a group of students with a constant, unvarying membership (Jackson & Davis, 2000).

Outline of the Balance of This Dissertation

In the next chapter, the researcher review prior research on the impact of grade configuration on academic outcomes as well as the implementation of effective middle level practices. In Chapter 3, the researcher describes the methodology used to determine the answer to my research question. The findings are presented in Chapter 4 and the researcher presents the discussion and implication(s) for future research in Chapter 5.

CHAPTER 2: LITERATURE REVIEW

This chapter begins by situating the emergence of the middle school concept within the historical evolution of grade configuration in American schools. It summarizes and discusses reports on grade configuration for early adolescents which defined the middle school concept. In essence, the argument focused on the central premise that middle schools should combine personalization and specialization. These reports were persuasive and led to widespread adoption of the middle school grade configuration. Research then began to reveal that early adolescents in K-8 schools achieved greater learning gains than did similar students in middle schools.

Next, the researcher summarized the research which argued that when the middle school idea was fully implemented, students in middle schools achieved just as well or better than those in K-8 schools. It was in the midst of this unresolved conflict between research favoring K-8 schools and research supporting fully implemented middle schools that my study was situated.

Evolution of Middle Level Education

History of American Education

Early in the history of our nation, schools were typically one-room schoolhouses with students ranging from grades K-12. In the 19th century, a new structure was developed that consisted of eight years of primary school and four years of high school (Clark & Clark, 1993; Elovitz, 2007; Juvonen et al., 2004). Soon, educational scholars began to recognize disparities in the scope of K-12 education and this recognition started the initiative to reorganize the 8-4 plan (George, Stevenson, Thomason & Beane, 1992). College presidents such as those who served on the Committee of Ten

on Secondary Studies supported the reorganization based on problems with the 8-4 organizational model such as growth in the number of high schools, industrial and societal changes and the need for more students to continue their education beyond elementary school (Clark & Clark, 1993). The Committee of Ten on Secondary Studies suggested a change which would allow the secondary school program to begin two years earlier at 7th grade.

The Junior High School

As time progressed, many school districts across the nation began to discuss the concern of correct balance between the aspects of the elementary and secondary approaches to educating students (George et al., 1992). This concern led to the development of the Committee on Economy of Time in Education (1908-1911) which recommended the reorganization of the secondary schools into two divisions-junior high and high school (Clark & Clark, 1993). According to Clark and Clark (1993), this committee made the first reference to the concept known as junior high school.

Equipped with theories on adolescent development and individual differences and the disturbing national attrition and pupil retention statistics, reformers were determined to create schools that better addressed the needs of developing adolescents in the early part of the 20th century (Baker, 1913). According to Toepfer (1992), the first junior high schools were established in Ohio and California. Mizell (2005) reported that by 1910, junior high schools were gaining popularity and the number of these schools increased tremendously.

Lounsbury (1992) believed that the junior high school made major contributions to education. First, the junior high school initiated the development of the middle level

institution, with a focus on integration, socialization and exploration. Second, the

enriched curriculum, which consisted of industrial arts, home economics, foreign

languages and laboratory sciences, enhanced the core curriculum and emphasized the

concepts of exploration and integration. Third, the junior high concept incorporated

guidance-oriented homerooms and professional counselors, both addressing the

developmental needs of the adolescent. Finally, extracurricular activities were

increased, and students were given opportunities to develop leadership, social, and

other nonacademic skills through service-oriented activities (Lounsbury, 2000).

Emergent Dissatisfaction with Junior High Schools

Even though it was the purpose of junior high schools to prepare their students

for high school, with which they were closely aligned (Hough, 1995), disagreement

arose when it became apparent that junior high schools continued to show similarities to

senior high schools. Lutz (2004) asserted even though the scholars in support of the

development of the junior high school of the early 20th century emphasized the need to

acknowledge the distinctiveness of the early adolescent, the actual foundation of the

junior high school paid little attention to children's needs. This was evident in the

departmentalization of curriculum, the schedule, and the constant emphasis on grades

and test scores (Anderman, Maehr, & Midgley, 1999; George et al., 1992; Juvonen et

al., 2004; Polite, 1995).

In spite of the effort to create an environment that placed emphasis on

preparation of all adolescents (Clark & Clark, 1994), students were still rapidly dropping

out of school in the 9th grade.

As the junior high school of the 1940-50s began to waver in its ability to create a learning environment that was distinct from the high school, interest in the development of a middle school began to gain momentum (Alexander & McEwin, 1989; George et al., 1992). Many scholars began to explore strategies that would address the physical, social, emotional and academic needs of 10-15 year olds (Akos, Creamer, & Masina, 2004; Haskins, 1996; Manning, 2000). This exploration along with the need for academic reform (Lounsbury, 1992) led to the emergence of the middle school concept (Hough, 2005; Offenberg, 2001; Reeves, 2005).

The Middle School Idea

Scholars such as William Alexander (1965) and others wanted a new school that would use a different organizational pattern that mirrored the century old ideas of middle level education and capitalized on the positive attributes of the junior high school (Cuban, 1992; George et al., 1992).

Donald Eichorn, William Alexander and Emmett Williams (1965) among others, became early advocates of the middle school. Donald H. Eichorn was instrumental in establishing the nation's first nongraded middle school in the early 1960s. He instituted middle school practices and programs on learner characteristics, developmentally appropriate tasks, and advisory groups during a time when information was not readily available regarding adolescents (Brough, 1995). Both Williams and Alexander were forerunners in the area of research and development concerning programs for teachers in the 1960s devoted to supporting the middle school model (George & Alexander, 2003).

Foundational Reports

Many middle school advocates based their beliefs regarding the appropriate setting for young adolescents on three foundational documents: the Carnegie Council on Adolescent Development's (1989) report, *Turning Points: Preparing American Youth for the 21st Century*, the National Middle School Association's (1995) *This We Believe: Successful Schools for Young Adolescents*, and most recently *Turning Points 2000: Educating Adolescents in the 21st Century* (Carnegie Council on Adolescent Development, 1989) (Beane, 2006; Jackson & Davis, 2000).

Each document outlined a set of guidelines to foster improved developmentally responsive educational programs for middle school students (Beane, 2006; National Middle School Association, 1995; Sommerfield, 1995).

Turning Points: Preparing American Youth for the 21st Century (Carnegie Council on Adolescent Development, 1989) provided a clear set of guidelines for educating young adolescents. This groundbreaking report originated to answer questions regarding the gaps in education reform (Carnegie Council on Adolescent Development, 1989). The report was designed to examine the state of young adolescents and how they were being served within the middle school environment. The task force determined that there was a mismatch between the organization and curriculum of middle schools (Carnegie Council on Adolescent Development, 1989).

Turning Points: Preparing American Youth for the 21st Century (Carnegie Council on Adolescent Development, 1989) proposed middle schools that:

- Divided the middle school into smaller learning communities.

- Taught a core of common knowledge. The core knowledge should teach

  middle school students to think critically, develop healthy lifestyles, be active

  citizens, and learn successfully.

- Were organized to ensure success for all adolescents. All adolescents

  should be able to succeed regardless of their present level of achievement.

- Empowered teachers and administrators to transform the middle school

  setting.

- Were staffed by teachers who specialized in middle grades education and

  were prepared to teach young adolescents.

- Promoted healthy lifestyles for all young adolescents.

- Created an environment of trust and respect through open communication

  with families.

- Partnered with communities to share the responsibility of ensuring success

  for middle school students.

Middle school reform was also a direct focus for the National Middle School Association. This organization was established in 1973 to provide an avenue for those who had a compelling interest in young adolescents (National Middle School Association [NMSA], 1995). In an effort to re-vision middle school education, NMSA (1995) published *This We Believe*. This position paper represented an attempt of the organization to develop a comprehensive statement that would rally the beliefs of all who were a part of the newly formed reform efforts (NMSA, 1995).

The position statement, *This We Believe* (NMSA, 1995), identified twelve characteristics that describe what a developmentally responsive middle school should

look like. The first six characteristics outlined general conditions that had to be in existence to provide an appropriate arena for program decisions:

- Educators that were committed to young adolescents

- A shared vision

- High expectations for all

- An adult advocate for every student

- Family and community partners

- A positive school climate (p. 17-23).

NMSA (1995) affirmed the need for the aforementioned characteristics to be in place in order for middle schools to make appropriate decisions regarding reflective educational programs for young adolescents. The association then presented six program components that mirror middle school student needs:

- Curriculum that is challenging, integrative, and exploratory-a curriculum that helps middle school students understand themselves and creates new opportunities through exploration and integration.

- Varied teaching and learning approaches-teaching strategies that embellish the diverse abilities and skills of young adolescents through engagement and hands-on experiences.

- Assessment and evaluation that promote learning--types of assessment that helps middle school students set goals, identify ways to measure progress, and discover their strengths and values.

- Flexible organizational structures--structures that promote schools within schools and provide enrichment, cooperative learning, and independence.

19

Teachers have direct involvement in the design and operation of the instructional program.

- Programs and policies that foster health, wellness, and safety-programs that promote healthy minds and bodies through comprehensive health and fitness programs. Intramurals and other extracurricular activities that are developmentally appropriate and physical.

- Comprehensive guidance and support services--Ongoing services that give middle school students personal advocates within the school environment to assist in the development of respect, compassion, and decision making (NMSA, 1995).

This position statement was a call to action to encourage schools to implement programs designed to benefit young adolescents. The National Middle School Association (1995) declared its intent to launch middle school project ideas, continue those that were in progress, and reform those that were in need of work.

Jackson and Davis (2000) also recognized the need to revisit reform efforts for middle schools. *Turning Points 2000*, a revision of the original Carnegie publication, was written to address concerns regarding the academic performance of middle grade schools (Andrews & Jackson, 2007). According to Andrews and Jackson (2007), two different sources of pertinent test data, the National Assessment of Educational Progress (NAEP) and the Third International Mathematics and Science Study (TIMSS), revealed alarming results for eighth grade students that caused many to believe the recommendations of previous publications such as *Turning Points* (Carnegie Council on Adolescent Development (1989) and *This We Believe* (NMSA, 1995) were not working.

Turning Points 2000 (Jackson & Davis, 2000) was written based on the reflective analysis of the ten years after the first publication. Jackson and Davis (2000) focused on raising awareness regarding the issue of equity which was also a component of the new legislation, No Child Left Behind. To achieve the goal of educating the "whole middle school child" and guaranteeing success for every middle school student, the following recommendations were presented:

- Teach a curriculum grounded in rigorous, public academic standards for what students should know and be able to do, relevant to the concerns of adolescents, and based on how students learn best, and use a mix of assessment methods that allow students to demonstrate what they know and can do.

- Use instructional methods designed to prepare students to achieve high standards and become lifelong learners.

- Staff middle grades schools with teachers who are expert at teaching adolescents, and engage teachers in ongoing, targeted professional development opportunities.

- Organize relationships for learning to create a climate of intellectual development and a caring community of shared educational purpose.

- Govern democratically through direct or representative participation of all school staff members, the adults who know students best.

- Provide a safe and healthy school environment as part of improving academic performance and developing caring and ethical citizens.

- Involve parents and communities in supporting student learning and healthy development (Jackson & Davis, 2000, pp. 23-24).

Personalization and Specialization

As suggested earlier, the argument for middle schools was centered around the balance of personalization and specialization. Middle schools should combine the disciplinary specialization characteristics of high schools with the personalization characteristics of elementary schools.

Shulack (2000) contended, "The effective middle school is neither an elementary school nor a reduced version of the high school" (p. 15). George and Alexander (1993), founding fathers of the middle school concept, firmly believed the concept was designed to connect the interpersonal relationships that are a part of elementary schools and the academic specialization of high schools.

Clarke (2003) depicted the term *personalization* as it was used in the *Breaking Ranks* report: "Learning processes in which schools help students assess their own talents and aspirations, plan a pathway toward their own purposes, work cooperatively with others on challenging tasks, maintain a record of their explorations, and demonstrate their learning against clear standards in a wide variety of media, all with the close support of adult mentors and guides" (p. 15).

According to Lambert and Lowry (2004), personalization means that:

- Adults in the school know the students and their families so well that instruction and learning opportunities can be tailored to individual students based on that knowledge

- Further, students know and have a sense of belonging that sustains mutual trust between the teacher and the student

- Students trust teachers sufficiently to grant their teachers the moral authority to make greater demands on them as learners (p. 2).

Cotton (2001) also argued for the advantages of personalization through small learning communities and smaller learning environments. She believed greater personalization contributed to higher performance and better attendance, which produced higher graduation rates for high schools (Cotton, 2001).

The term specialization within the middle school environment relates to middle school teachers and the content in which they teach. The issue of developing teachers that are experts in young adolescence is one of the major tenets of middle school reform (Carnegie Council of Adolescent Development, 1989; Clark & Clark, 1994). According to Clark and Clark (1994), the "pushing down of content" has been detrimental to the continuous attempt to make middle schools more developmentally responsive.

Departmentalization is often associated with specialization in terms of young adolescents being taught by teachers who are fully trained in the subject matter for which they teach (Clark & Clark, 1994). This idea arose from the components of the junior high school to prepare students for high school majors. Stahler (1992) contended teachers were organized into departments and electives were centered around high school specialization which stifled the exploration needed for young adolescents. This dissatisfaction eventually lead to the development of interdisciplinary teaming: a concept that would bridge the separation of a self-contained elementary school and a

subject-centered high school curriculum. These two principles combined represent the essence of the middle school concept.

Middle Schools Emerge

According to George et al. (1992), by the 1960s new middle schools of grades 5-8 or 6-8 began to take hold on the educational landscape of the United States. "Middle Schools" (2010) reported that in 1965 there were more junior high schools (67%) than middle schools (5 %). By the year 2000, those percentages were reversed: only 5% were junior high schools and 69% were middle schools. Eichhorn (1966) offered four main reasons to account for the relatively rapid acceptance of the middle school as a valid educational organization:

1. Recognition and reaffirmation of the belief that youngsters aged 10-14 are in a unique stage of development in which they share similar physical, mental, social, and emotional characteristics.

2. New medical evidence that suggests that youngsters attain puberty at an earlier age than before.

3. Forces such as the new technology, racial integration, and the knowledge explosion that were affecting society.

4. The junior high school organization was perceived as and in many instances had become an institution patterned after the senior high school (p. viii).

Distinctive Middle School Practices

Although the middle school grade configuration was widely adopted, advocates of middle schools continued to debate and conduct research on which characteristics were really essential. Interdisciplinary teaming, flexible scheduling, advisor/advisee

programs, and an integrative, challenging, exploratory curriculum, emerged as fundamental characteristics for the effective education of adolescents (Epstein & Mac Iver, 1990; Hackmann, Petzo, Valentine, Clark, Nori, & Lucas, 2002; McEwin, Dickinson, & Jacobson, 2004; Petzko, 2004).

Interdisciplinary Teaming

Interdisciplinary teaming refers to a practice in which a group of teachers with specific content specialties who teach the same students through collaboration for each student's success (Arhar, 1997; Bickmore, Bickmore, & Hart, 2005; Erb, 1997; Manning, 1994). George et al. (1992) asserted that teams served as an extended family within middle schools. Teams were identified by names, mottos, logos, colors, and traditions that served as a catalyst to further define the social groups (George et al., 1992, p. 59).

According to Petzo (2004), interdisciplinary teaming was being implemented in 95% of highly successful schools in 2000; which revealed a dramatic increase from the 57% reported in 1992. Petzo (2004) also found that four teachers was the typical team size and the four core subjects of math, science, English/language arts, and social studies were the subjects most commonly taught. Petzo's findings were consistent with the research conducted in 1992 that also showed that sixth grade represented the greatest percentage of teams (Arhar, 1997; Hackmann et al., 2002).

Many middle school advocates believe that there are numerous advantages of interdisciplinary teaming (Arhar, 1997; Clark & Clark, 1990; Flowers et al., 1999; Jackson & Davis, 2000; Manning, 1993). Customarily, middle schools were structured by academic subjects, therefore hindering the ability to form meaningful teacher/student relationships. Carnegie Council on Adolescent Development (1989) proposed a better

approach to satisfy the adolescent need of belonging and provide an avenue for adults to build relationships. Interdisciplinary teaming afforded teachers and students the opportunity to build bonds that provided a nurturing atmosphere for academic and personal achievements. This developmental practice decreased the isolation of students as well as broadened opportunities for group membership (Carnegie Council on Adolescent Development, 1989; George et al., 1992).

Flowers et al. (1999) affirmed that interdisciplinary teaming was designed to create an environment that allowed students and teachers to build relationships therefore enabling the teachers to provided better academic support.

Using data collected from the Self-Study administered by the Center of Prevention Research and Development in Illinois, Flowers et al. (1999) concluded there are five research-based outcomes that exemplify the positive effects of interdisciplinary teaming: common planning time, improved work climate, increased parental contact, increased job satisfaction for teachers, and higher student achievement.

Based on the analysis of achievement data from the MEAP (Michigan Educational Assessment Program), 7th grade students in schools that implemented interdisciplinary teaming scored higher than students in schools that had not implemented the teaming concept (Flowers et al., 1999). Flowers et al. (1999) reported when the data was further analyzed, achievement scores were higher within schools that had implemented teaming for five years or more.

Over the past 20 years, many educators, middle school critics and parents have questioned the effects of teaming on student outcomes (Flowers et al., 1999). In a review of research studies on the effects of teaming on student achievement, Armstrong

(1977) reported no significant difference between interdisciplinary team organization and traditional departmentalization. He inferred middle schools using the interdisciplinary approach should base the decision to continue this practice on other variables than increased student outcomes (Armstrong, 1977).

Middle school advocates such as Gayle Davis have asserted practices such as teaming are necessary but not sufficient (Bradley & Manzo, 2000). Hansen (2009) affirmed that teams are essential within successful middle schools but a mutual focus must exist between academics and student well being.

Common planning time and flexible scheduling are essential to effective interdisciplinary teaming (Flowers et al., 1999; Hackmann et al., 2002; Hansen, 2009; Mertens & Flowers, 2004; Warren & Muth, 1995). According to Flowers et al. (1999), common planning time is defined as time allotted for a group of teachers from different subject areas who share the same students to collaborate, plan and discuss their students' progress and problems. Erb (2000) asserted common planning time is a nonnegotiable component of successful implementation of interdisciplinary teaming. Mertens, Flowers, and Mulhall (2001) further affirmed that common planning time must exist to allow teacher teams to collaborate, plan and develop curricula.

Warren and Muth's (1995) research on common planning time and its effect on interdisciplinary teaming served as the foundation for other studies on this topic (Erb, 2000; Flowers et al., 1999; Mertens & Flowers, 2004). Warren and Muth (1995) confirmed schools that professed the usage of teams but neglected the use of common planning time, had the same effect on change as departmentalizing.

Flexible Scheduling

Flexible scheduling is an essential practice that determines how well a middle school operates (Alexander & George, 1981; George & Alexander, 1993; Harris, 1998). Daniels (2007) defined flexible scheduling as creative use of the time in an attempt to match the instructional time and format to learning needs of students (p. 1). This middle school practice augments the learning environment by reducing transition time, increasing curriculum offerings and enhancing curriculum integration (Canady & Rettig, 1995; Spear, 1992).

Various scheduling models have been implemented within middle schools across the nation (Daniels, 2007; Hackmann et al., 2002; National Middle School Association, 1995). Daniels (2007) identified block scheduling, alternative day classes, rotating and dropped schedule as the most popular forms of flexible scheduling that have materialized over time with middle schools:

- Block scheduling is blocks of time that consist of two or more combined periods. Middle level schools commonly have two blocks; one in the morning and one after lunch.

- Alternative day scheduling is often referred to as A/B scheduling. Students are assigned to classes on an every-other-day basis. This scheduling type can be utilized with core academic and exploratory classes.

- Rotating scheduling uses the master schedule while offering sequential classes at different times each day. This method allows students to experience all subjects and can be implemented by a team or the entire school.

- Dropped scheduling is defined as scheduling more classes than class periods. One class is dropped each day and it allows for advisory, assemblies, and other activities that incorporate the developmental needs of middle school students (p. 1-2).

Flexible scheduling has noted advantages and disadvantages for both teachers and students (Daniels, 2007; NMSA, 1995). Harris (1998) noted the following advantages for flexible scheduling:

1. It provides opportunities for teachers to correlate and integrate subject matter.

2. It allows the length of classes to be adjusted for individual subjects or special activities based on teacher and student needs.

3. It permits teachers on the team to group and adjust grouping regularly without causing tracking.

4. It allows the team to decide when to provide large group instruction and small group instruction.

5. It allows for the team to adjust the schedule to see all students when the school has special activities such as assemblies or field trips (p. 12-13).

Similarly, DeRouen (1998) and Seed (1998) reported that flexible scheduling permitted teachers the ability to use their expertise regarding time and provided an element of control over the learning environment. Vars (1993) found that flexible scheduling promoted a less fragmented learning environment which in turn enhanced the use of project based learning and skill application.

Even though middle school researchers have advocated for flexible scheduling (Hackmann et al., 2002; National Middle School Association, 1995, 2003), many middle

schools have been hesitant to abandon the traditional fixed-period day. Researchers

such as Canady and Rettig (1995) recognized many concerns with schedules used in

middle schools. They posited that the traditional middle school schedule caused

students to be overwhelmed by the number of teachers seen each day as well as the

lack of curriculum integration. Lastly, Canady and Rettig (1995) acknowledged middle

schools must recognize the importance of extended learning time that allows

adolescents to master the objectives.

Even though flexibility is the intent of this type of scheduling, Harris (1998)

discovered teachers often resist the concept due to lack of understanding, anxiety, and

fear of the unknown. Implementing this practice successfully requires collaboration

among teachers as well as a clear understanding of appropriate amounts of time

required for each subject (Spear, 1992; Wiles & Bondi, 1989; Williamson, 1993).

Within the last three decades, there has been an upward trend towards

increased usage of this middle practice (Daniels, 2007). Even though most of the

research on flexible scheduling has been analyzed within high school settings, several

middle school researchers have examined the effects of flexible scheduling at the

middle school level (Daniels, 2007).

Brown (2001) studied the perception of teachers in two middle schools regarding

the effects of block scheduling. Nine of the ten participants in his study stated that the 4

x 4 block scheduling concept improved student learning and allowed the flexibility for

schedules to be altered to accommodate the developmental needs of adolescents.

Harris (1998) found that flexible scheduling was most utilized in 6th and 7th grade with

less usage at the 8th grade level. The principals interviewed in this study stated even

though teachers had the authority to adjust their schedules to meet student's needs, most schedules remained unchanged. Harris concluded that in order for a middle school to function at its full potential, all of the effective middle school practices must be implemented fully.

Advisory Programs

Another key practice of a developmentally appropriate middle school is the advisor–advisee program. According to Anfara (2006), advisory programs were created on the foundational belief that adolescents should have a relationship with at least one adult advocate that they can depend on to foster a vision of success and provide valuable life experiences (Carnegie Council on Adolescent Development, 1989). Cobb (1992) further describes an advisory program as an organizational structure comprised of small groups that are lead by one advocate who serves as a shepherd; guiding adolescents through school. In essence, Goldberg (1998) proposed that,

> ..an advisory system makes a school a more personal place, gives all advisors a chance to share something powerful; provides students and parents a specific person to whom they can turn with questions, concerns, or offers of help; and has a generally salutary effect on the overall culture of a school (p. 63).

The effectiveness of an advisory program has been the focus for many middle school researchers (Clark & Clark, 1994; Galassi, Gulledge, & Cox, 1997; Mac Iver, 1990). Clark and Clark (1994) spelled out several purposes of advisory programs:

- Promoting opportunities for social development.

- Assisting students with academic problems.

31

- Facilitating positive involvement between and among teachers and administrators and students.

- Providing an adult advocate for each student in the school.

- Promoting positive school climate (pp. 135-136).

Mac Iver (1990) further emphasized that the purpose of advisory programs is to foster relationship building between students and adults by conducting social and academic activities that allow students to converse about their needs. Such activities include discussions about personal problems, peer interactions, health issues, parental problems, academic concerns, and moral/ethical issues. This type of interaction with adolescents builds self esteem, promotes a sense of belonging, and increase engagement in learning (Mac Iver, 1990). Mac Iver's research also revealed a strong correlation to dropout reduction when the aforementioned interactions were present.

Based on his research with urban middle school youth, Brown (1999) argued that a caring relationship built on advocacy was the most valuable function of an advisory program. Brown's research focused on the views of students regarding the effectiveness of advisory programs. According to Brown (1999), students indicated that they needed the opportunity to talk about problems that related to their social environment such as drugs and gangs. Brown found that students felt their advisors did not foster a sufficiently open relationship with their advisees. Finally, students expressed a desire to assist in program design to enhance the effectiveness of the advisory program.

According to Van Hoose (1991) relationships are the core of advisories. Deborah Stipek's 2006 article, *Relationships Matter,* focused on the main purpose of the

advisory concept; relationships. Stipek's (2006) research solidified the extensive body of research that revealed students perform more effectively when they are valued and respected. In this present age of accountability, Stipek (2006) argued in order to promote high student achievement; teachers must create an environment that is supportive and based on positive relationships with students. She pointed out that advisory groups are a common strategy used within middle schools to promote a close relationship with an adult. Students interviewed for her research revealed the strong role their advisors played in their life regarding staying in school and commitment.

Cole (1994) noted in a survey of 224 middle school teachers that many saw the need for an advisory program, but were hesitant to serve as an advisor. Several reasons for the hesitation were discussed in this study such as fear of inadequacy, lack of commitment, and lack of parental support for the concept. Based on the results of this study, suggestions were made to enhance the program such as small numbers in the advisory groups and extensive planning prior to implementation that involved school counselors (Cole, 1994).

Ayers (1994) found that lack of teacher preparation on how to conduct an advisory program was a compelling reason for teacher resistance. She affirmed teachers discounted the concept when they had not received formal training on implementation. Ayers (1994) further asserted extensive professional development and support materials were needed to avert this type of reaction.

In contrast, Esposito and Curcio's 2002 study revealed that a successful program can be implemented if it meets the expectations of both the teachers and the students. In their research, five programs were chosen based on their perceptions of achieving

33

excellence and their implementation of the advisory process. The perceptions of the

staff and students were mostly positive coupled with a belief that most teachers and

students wanted the advisory program to remain as a part of their middle school culture.

Even though this concept still remains one of the most complicated middle school

concepts to implement (Fenwick, 1992; Lounsbury & Clark, 1990), when it is

implemented effectively, it can be the most significant factor in supporting student

learning (Anfara, 2006).

Integrative, Exploratory and Challenging Curriculum

An integrative curriculum is one that helps students connect the real world with

the instruction they receive at school. It also allows the students to verbalize and reflect

on how this method of instruction affects their daily lives (NSMA, 1995; Pate,

Homestead, & McGinnis, 1997).

According to McClure (2007), many educators question whether curriculum

integration improves student achievement. McClure (2007) further asserted few studies

exist due to the absence of a clear definition of the concept. Conversely, Hartzler

(2000) learned that students in classes with an integrated curriculum, out-performed

students taught using the traditional curriculum method on national standardized tests

as well as state-wide testing programs. This meta-analysis of 30 studies demonstrated

that an integrated curriculum is a feasible option to the traditional curriculum method.

Bergman (1992) contended that an exploratory curriculum should be an

extension of the regular curriculum that allows adolescents to explore areas of interest

that meet their developmental needs. *This We Believe* (NMSA, 1995) outlined three

earmarks of an exploratory curriculum:

- Enables adolescents to discover their attributes

- Reveals opportunities for adolescents to contribute to society

- Acquaints adolescents with enriching activities (pp. 23-24).

In contrast, Brazee (2000) avowed even though an exploratory curriculum should engage adolescents in meaningful experiences, often times, lack of implementation raised a concern. Brazee (2000) also identified several issues with an exploratory curriculum and classes;

- How will the classes relate to the core areas?

- How and what classes should be offered?

- Should the classes be graded?

- Will there be collaboration between the core and exploratory teachers?

Nevertheless, Brazee (2000) argued that communication among the entire middle school environment, understanding of how exploratory classes can complement the core areas, and alignment with the core curriculum would help middle schools embrace exploratory classes as a vital part of the curriculum.

In accordance with the National Middle School Association (1995), a challenging curriculum is defined as a curriculum that actively engages the adolescents. It must be relevant and allow the students to be in control of their own learning. In their 2005 Position Statement on Curriculum, Instruction, and Assessment, NMSA stated, "A challenging curriculum targets state and national standards, actively engages young adolescents in substantive issues, "and increasingly enables students to assume control of their own learning." Challenging learning opportunities allow students to:

- Move beyond covering content and rote learning activities.

- Help students become skilled writers, thinkers, and researchers.

- Engage students in demanding problem solving activities.

- Explore how and why things happen.

- Examine assumptions, principles, and alternative points of view (p. 1).

Middle School Critics and the Birth of the K-8 Idea

While middle school advocates and researchers were still arguing over which characteristics were or were not essential, other research began to emerge showing that early adolescents learn more in K-8 schools than in middle schools.

As the middle school movement progressed since its inception in the late 1960s, by the late 1990s many districts began to see a decline in middle school student performance (Armstrong, 2006; Office of Program Policy Analysis & Government Accountability, 2005). The results from the 1999 Trends in Mathematics and Science Study revealed an abrupt decrease between the performance of 4th and 8th graders when compared internationally in Math and Science (National Center for Educational Statistics, 1999). Pardini (2002) stated, "schools that were once praised for their team teaching, flexible scheduling, and interdisciplinary instruction found themselves under attack for placing too much emphasis on creating a nurturing environment for students and too little on their academic progress" (p. 10).

Concerns also arose that many schools that served early adolescents changed their grade configuration to 6-8 and called themselves middle schools without incorporating the distinctive characteristics that were indentified in the aforementioned foundational documents (Harrington-Lueker, 2000). These concerns lead districts

across the nation to begin looking for new ideas to help repair middle school reform. One idea was the rebirth of an old concept; K-8 schools.

Considerable research showed early adolescents performed better in K-8 schools than in middle schools in many districts across the nation. By examining a sample of 163 Maine schools, Wihry, Coladarci, and Meadow (1992) investigated the influence of grade configuration on eighth grade student performance. By statistically controlling economic status, per capital income, and parental education level, they discovered higher achievement in schools that had various grade configurations (K-8, K-9, and 3-8 schools).

In a study of 700 rural schools, Franklin and Glascock (1998) discovered that sixth and seventh grade students in K-6, K-7, and K-12 schools performed slightly higher on state tests than students in traditional middle schools or junior high schools. California Achievement Test scores from randomly selected schools were examined to determine if achievement differed with varied grade configurations. The authors found a significant difference between the achievement of 6th and 7th grade students in elementary schools than middle schools. A post hoc Tukey test revealed that 6th grade students' scores in an elementary school were higher than 6th grade students in a traditional middle school (F=8.37, p <.0001) and similar results were observed in 7th grade (F=10.20, p<.0001) (Franklin & Glascock, 1998).

K-8 centers were the focus of a Florida study by Rodolfo Abella (2005). In 1998, the school board of Miami Dade County, Florida approved a program to explore the concept of K-8 centers. Abella (2005) conducted a study to examine the effects of the

K-8 centers on student achievement. The author concluded that performance of sixth grade students in K-8 schools was higher than sixth grade students in middle schools.

To control the variables of his study, Abella (2005) sampled students that attended comparable K-8 centers and middle schools. The students came from the same neighborhood, had the same percentage of free and reduced lunch (64%), and also had identical mean scores on the Reading (M=643) and Math (M=665) sections of the Stanford Achievement Test from the their grade 5 school year (Abella, 2005). Abella (2005) found that in grade 6, Reading achievement scores improved by an average of 23 points for K-8 students and an average of 17 points for 6-8 students. By grade 7, the scores continued to show a difference (47 points-K-8, 43 points-6-8) but by grade 8 the difference narrowed (60 points-K-8, 58 points-6-8. The Math comparisons indicated the same results; the K-8 student outperformed the 6-8 students. In summary, Abella (2005) found in the case of Reading and Math, K-8 and comparison students began with identical scores at grade 6 but K-8 students outperformed comparison students through grade 8.

Other researchers, such as Offenberg, provided findings of K-8 academic success. Controlling the economic status and ethnic background variables, Offenberg (2001) found "statistically significant evidence" that 8th graders in K-8 schools performed better than 8th graders in middle schools on the Stanford Achievement Test. Offenberg (2001) also contended when there are fewer students in a grade, teachers get to know the students better. The teachers of K-8 schools serve the students for nine years when the traditional middle school serves the students three or four years. This affects the teacher-teacher, teacher-student, and student-student relationship.

Relationship building is an important component of preadolescent development. Weiss (2008) further examined the data used in the Offenberg study and concluded there were few statistical differences in eighth grade student academic outcomes. He asserted self-esteem and safety were the only two factors that favored K-8 schools over 6-8 schools.

Full Implementation of the Middle School Concept and Student Achievement

Responding to the critique from K-8 advocates, advocates of middle schools also conducted research showing that in middle schools when the key characteristics of middle schools laid out in the foundational reports were fully implemented, early adolescents did just as well or better than they did in K-8 schools. Though they are limited in number, several studies have examined the relationship between the implementation of distinctive, developmental middle school practices and middle school achievement.

According to the National Middle School Association (2003) (NMSA) Research Committee, four major studies investigated the middle school concept and its relationship to middle school student achievement: studies by Lee and Smith (1993), Felner et al. (1997), Mertens, Flowers, and Mulhall (1998) and Backes, Ralston and Ingwalson (1999).

Lee and Smith (1993) used a sample from the National Education Longitudinal Study of 1988 (National Center of Educational Statistics, 1988) to assess how policies and practices such as school restructuring affected middle school students. This evaluation highlighted areas such as achievement, engagement, and equity issues. Lee and Smith (1993) theorized that middle school students that attended schools in

which there was less departmentalization and more varied grouping practices were positively affected. The results of this study indicated that restructuring positively affected academic achievement when coupled with team teaching and less ability grouping. Lee and Smith (1993) further revealed that engagement was not conclusive within their research as they discovered that more engagement in academic work also correlated with more at-risk behavior. At the completion of their research, Lee and Smith (1993) conceded that they were unable to determine the level of implementation for these practices (p. 180).

Similar to the research conducted by Lee and Smith (1993), Felner et al. (1997) studied 31 middle schools that were part of the Illinois Middle Grades Network (IMGN). Felner et al. (1997) focused their research on the implementation of the Turning Points recommendations in relationship to student achievement, socio/emotional development and behavior with an emphasis on levels of reform implementation. The study used three classifications for the schools that were involved; low, middle and high implementation. They reported findings that supported the premise that well implemented middle level practices made significant contributions to the achievement of middle level students. The data indicated that middle grade students in high implementation schools scored much higher than students in the low-implementation schools on state achievement tests (Felner et al., 1997).

Mertens et al. (1998) found middle schools that utilized interdisciplinary teaming and common planning time produced higher student achievement scores on Reading and Math standardized tests. Their study also revealed student survey results that indicated a sense of increased academic efficacy that was felt among the students

based on the practices that were being implemented within their middle school (Mertens et al., 1998).

Backes et al. (1999) research examined the effect of middle school practices on student achievement within six North Dakota schools. Unlike the other foundational studies aforementioned, their research focused primarily on one fundamental principle; what effect does the implementation of middle level practices have on student achievement (Backes et al., 1999). Their findings indicated that there was no differentiation between schools that implemented middle level practices and those who did not in the areas of Math and Language expression; however the researchers did find that composite grade equivalent scores did vary for reading vocabulary, language mechanics, study skills, science and social studies (Backes et al., 1999).

Recent research has been conducted on the implementation of the middle school concept in several states such as Tennessee and Kentucky (Cook & Faulkner, 2009; Watts, Seed, & Franceschini, 2010).

Cook et al. (2009) analyzed the implementation of middle school practices in STW (Schools To Watch) schools and non-STW schools within the state of Kentucky. Using 7th grade population as the target, despite the grade configuration, the researchers determined that participants from STW schools professed higher levels of implementation of middle school practices. This discovery along with subscale scores on the Kentucky Core Content Test for 7th grade students supported the research of Felner et al. (1997) that high implementation correlates with high academic achievement.

Building upon the work created by Cook and Faulkner (2009), Watts et al. (2010) examined the effects of the implementation of the middle school concept as well as the

practices that were deemed essential to the process. The 17 theme survey was divided into 3 sections: curriculum characteristics, instructional and advisory issues, and governance (Cook & Faulkner, 2009). The initial findings indicated that the respondents thought the components of the middle school concept, as derived from *The Exemplary Middle School* (George & Alexander, 2003), were all important and implemented at a high level. On balance, the study revealed that there was no significant difference between the importance and the implementation of the concepts (Watts et al., 2010).

The Great Debate

Although several of the abovementioned studies showed a positive relationship between the implementation of the middle school concept and student achievement, opposing forces still exist in the middle school arena (Puttre, 2007).

This dissertation is situated squarely at the juncture where these two opposing camps meet. It addresses the question of whether middle schools in a local LEA that fully implement the middle school idea produce learning gains for early adolescents that match or exceed those produced in middle schools that implement the middle school idea less fully.

In the next chapter, the researcher describes the methods used to determine if the implementation of the aforementioned key features; interdisciplinary teaming, flexible scheduling, advisor/advisee, and an integrative, exploratory curriculum, produces equal or better student achievement outcomes for middle school students.

CHAPTER 3: METHODOLOGY

The central research question was "Do middle schools that fully implement the middle school concept produce better student achievement outcomes than middle schools that implement the concept less fully?

To address this question, the study consisted of four middle schools in one LEA in eastern North Carolina; two that made "High Growth" in North Carolina's ABCs accountability system and two that made "Expected Growth." The North Carolina statewide accountability system began in 1996 to assess student's abilities in various subject areas, including reading and math. The EOG tests were designed to measure student performance on the goals and objectives in the North Carolina Standard Course of Study. North Carolina requires third to eighth grade students to participate in the testing in the areas of reading and math (NCDPI, 1999).

In Yin's (2009) terms, this is an explanatory multi-case study. Based on the central question, the researcher investigated "how" and "why" the higher-growth schools produce better outcomes, guided by the hypothesis that fuller implementation of the middle school concept produces better student outcomes.

Approach and Rationale for Methodology

In this section, the research approach will be characterized more fully, and explain why it is appropriate for the present study, and explain the type of generalization the researcher will attempt and how it will be done.

Yin (2009) argued that a case study approach is appropriate when the researcher is asking "how" and "why" questions, when the researcher does not have

control over behavior events, and when the researcher focuses on contemporary events.

The present study meets all three conditions. It will address:

- A "how" question-"How do the higher-growth schools produce better student achievement outcomes? Is it because they implement the middle school concept more fully?

- A contemporary set of events over which the researcher has no control. Due to the fact that the implementation of the middle school concept is controlled at each individual school, the researcher will be unable to control the behavioral events of the subjects involved. Therefore, the researcher will examine the contemporary events as an outside observer, without manipulating the variables of interest. The researcher will utilize interviews, observations, and document reviews to gain current information regarding the implementation of the middle school concept.

Yin (2009) also argued that in evaluation research, case studies can be used for at least 4 different applications. For the study, the key application was "to explain the presumed causal links in real-life interventions that are too complex for the survey or experimental strategies" (Yin, 2009, p. 19). In a recent study, Cook and Faulkner (2009) concluded that evaluation processes such as interviews and observations provided the best opportunity for researchers to examine the implementation of the middle school concept. They determined that questionnaire-based survey methods were inappropriate.

Yin (2009) argued that virtually all research is undertaken for one or more three purposes: exploratory, descriptive, or explanatory. The study was explanatory in the following sense: the central hypothesis was that middle schools which fully implement the middle school concept produced student achievement results that were equal to or better than the student achievement results of middle schools that implemented the middle school concept less fully. Put somewhat differently, middle schools which implemented all of the key features of the middle school as defined in the reports that originally advanced and developed the concept produced better student achievement outcomes than middle schools that failed to implement some or all of these features.

Thus the hypothesis was that it was the degree to which middle schools actually implemented the middle school concept that determined the level of student achievement they produced. In this sense, the hypothesis that the degree of implementation of the middle school concept was the main factor which explained the performance of schools with a *middle school* grade configuration (grades 6-8).

It was important to acknowledge that while the purpose of the study was explanatory, it did not claim that it would establish causality in any rigorous sense; that the study would "prove" that fuller implementation of the middle school concept produced better student achievement results. That was, if the hypothesis was supported by the findings, this would support the proposition that full implementation of the middle school concept resulted in better student achievement than did partial implementation or non-implementation of the middle school concept. But it would not *prove* that it was full implementation that produced the better student achievement outcomes.

According to Shadish, Cook, and Campbell (2002), to support a claim of causality, four conditions must be met: (1) sequence (A precedes B) (Hill, 1965; Shadish et al., 2002), (2) regularity of association (when A occurs, B always or generally occurs) (Hill, 1965; Shadish et al., 2002), (3) plausible mechanism (the way that A is said to explain B seems logical) (Hill, 1965; Shadish et al., 2002), and (4) all obvious rival explanations have been ruled out (when B occurs, only A and not X, Y, Z, or another plausible cause is associated with the occurrence of B) (Hill, 1965; Shadish et al., 2002).

If the hypothesis was supported by the evidence, the study would meet the first three conditions. Concerning sequence, it seemed obvious that if higher-achieving schools were found to implement the middle school concept more fully, it would be the latter that caused the former rather than the other way around. Second, if the middle school concept was implemented in each higher-achieving school, then the regularity of association condition would be met; fuller implementation of the middle school concept would be associated on a regular basis with better outcomes. Finally, the way that the middle school concept is said to explain better student outcomes is logical and plausible based on the results of my literature review.

Thus, under these conditions, the study would meet the first three conditions for a claim of causality. However, the results of the study would not be able to rule out all rival explanations. School size, demographics, and physical location were three rival explanations that were unable to be ruled out. Consequently, the results of the study did not determine whether the rival explanations accounted for part or all of the better student achievement outcomes within the four middle schools that were studied.

Yin (2009) distinguished between "statistical generalization" and "theoretical generalization." He went on to argue that "… case studies, like experiments were generalizable to theoretical propositions and not to populations or universes" (Yin, 2009, p. 15).

In statistical generalization, a researcher attempts to generalize from sample to a population, using techniques based on the statistical probability that it is unlikely that the observed events would have occurred due simply to chance in the selection of the sample.

In theoretical generalization, a researcher compares the events actually observed to what the theory would predict if the observed events are consistent with what the theory would lead one to predict, then the results are said to "support" the theory (not to "prove" it). If the observed events are inconsistent with what the theory would lead one to predict, then the results are said to "disconfirm" the theory or call it into question (not to "disprove" it).

In the present study, the researcher attempted theoretical generalization, not statistical generalization. If the researcher found that middle schools which implemented the middle school concept more fully produced better student achievement than middle schools that implemented the middle school concept only partially or not at all, those findings supported the research hypothesis-the "theory." If the findings indicated that this pattern did not hold, these findings tended to disconfirm the research hypothesis (Yin, 2009).

Consistent with Yin's (2009) argument that theoretical rather than statistical generalization is appropriate with case study research, in a multi-case study, each case

should be thought of as if it were a natural experiment, not a single member of a sample selected from a broader population. Furthermore, the mode of generalization was analytic generalization in which the results were compared to predictions based on the guiding hypothesis or theory (Yin, 2009). Yin (2009) stressed that replication of similar findings across-multiple cases, each of which may be thought of as separate "experiment" (natural experiment) strengthens the support of your theory. Thus, if the researcher found that the two higher-growth schools implemented the middle school concept more fully and that the two lower-growth schools implemented the concept less fully, the results of this multi-case study would be more persuasive than would the findings of that a single case were consistent with the hypothesis.

Research Design

According to Yin (2009), "a research design is a "blueprint" for research, dealing with at least four problems: (a) what questions to study, (b) what data is relevant, (c) what data to collect, and (d) how to analyze the results" (p. 26). Yin (2009) further stated that, "a research design is more than a work plan" (p. 27); it deals with a rational problem not the planning and implementation of the plan.

In Yin's (2009) scheme a research design has five major components: (1) a study's questions; (2) its propositions, if any; (3) its units of analysis; (4) the logic linking the data to the propositions; and (5) the criteria for interpreting the findings. In the five subsections below, the researcher addressed each of these in the context of the present study.

48

Study Question

The study question is "Do *middle schools* that more fully implement the middle school concept produce better student achievement outcomes than *middle schools* that implement the middle school concept less fully?

Study Proposition

A study proposition, the second component of a case study method, should emphasize the key elements that will be researched. The general proposition for the study was that when all the key features of the middle school concept were fully implemented, middle grade students achieved at levels similar to or better than the levels achieved by middle grade students in which the middle school concept was implemented less fully.

In Yin's (2009) terms, this is the *nutshell* of the theory. However, to better communicate the general proposition, a clearer explanation of each key feature is needed. The researcher provided a brief explanation of each feature below:

Interdisciplinary teaming creates an environment for better student/teacher relationships which in turn provides the opportunity for increased academic support for each student.

Flexible scheduling is an innovative use of instructional time with a correlation to individual student learning needs.

Advisor/Advisee focuses on the establishment a relationship between an individual student and a caring adult. This relationship provides an avenue for a vision of success for the student.

An integrative, exploratory, and challenging curriculum affords a middle student a method of instruction that offers real world connections, developmentally appropriate activities, and increased learning engagement. Implementation of the aforementioned features should lead to better student outcomes that are measured by the percentage growth of the students on standardized tests.

These propositions are summed up in the premise that a middle school should combine the personalization characteristic of an elementary school with the specialization characteristic of a high school. Elementary schools are often characterized for having a nurturing environment that provides personal support for students during the learning process. High schools are often characterized as having teachers who have mastered specialized content that is provided through specific instructional practices. Middle schools are designed to combine the best of elementary and high schools.

Although these are the guiding hypotheses, rival explanations (propositions) are also possible (Yin, 2009). The students' social economic status (SES) school size, and nature of the community served by the school (urban or rural) are obvious possible rival explanations for the performance of the four schools that I will study. That is, the higher-performing schools may serve students whose family background (parent education and income) simply make them easier to educate, independent of the features of the school itself; likewise, smaller schools may create better learning conditions, even if the features of the middle school concept are not fully implemented; and students from more urbanized communities may be either (a) more sophisticated

and prone to success in a school, or (b) more strongly affected by contemporary social problems such as drugs or child neglect than students from rural communities.

The researcher attempted to select a set of schools that helped rule out these rival hypotheses, but it was not be possible to do so fully. For example, an ideal set of schools would include (a) a high-growth rural school and a low-growth rural school, (b) a high-growth urban school and a low-growth rural school; (c) a high-growth low SES school and a low-growth low SES school, (d) a high-growth high SES school and a low-growth high SES school; (e) a high growth small school and a low-growth small school; and a high growth large school and a low-growth small school. This pattern would help rule out community type (urban/rural), SES, and size as rival hypotheses. But it was unlikely that within the LEA a manageable number of middle schools whose characteristics were similar could be identified. In Table 4, characteristics of the four selected schools for the study were displayed; however they did not reach an ideal set of schools.

Unit of Analysis

The research study was a multiple case study; therefore each selected middle school (School 1, 2, 3, and 4) served as a unit of analysis. Each of the four middle schools were represented as an individual case that was similar in nature to a natural experiment which meant that the researcher was unable to control the behavior events within each school, but measured the level of implementation in order to test whether greater implementation yielded better student outcomes.

This multiple case study followed a "theoretical replication" design as indicated by Yin (2009). The researcher compared the findings from the first selected middle

Table 4

Selected Schools

School	Growth Level	SES Level	(Number of Students) Size	Urban/Rural
1	Expected	67%	334	Rural
2	Expected	43%	746	Urban
3	High	67%	661	Urban
4	High	28%	665	Rural

school and used the finding from the other three middle schools to see whether the level of implementation of the middle school concept was the same, lower or higher than that of the first selected school. The question was whether the findings of each school supported the hypothesis, or "theory." If the findings from all four cases fit what the theory predicted; that was that fuller implementation of the middle school concept lead to higher growth and poor implementation of the middle school concept lead to lower growth; then the first case and the three subsequent "theoretical replications" substantiated the hypothesis.

Table 5 illustrates the different levels of student achievement within each middle school selected. Varied levels of achievement were needed to test the theory whether higher levels of student achievement were associated with higher levels of implementation of the middle school concept (see Table 5-School Achievement Levels).

Linking Data to Propositions

The fourth component of case study research was linking data to propositions (Yin, 2009). This component was critical to case study research because it required you to develop a strategic plan for analyzing your data. Pattern matching, explanation building and cross-case synthesis were the three analytic techniques that were relevant to my study (Yin, 2009). Pattern matching, according to Yin (2009) is "comparing an empirical pattern with a predicted one" (p. 136). Explanation building is a way to "explain the "phenomenon" usually in a narrative format. Cross-case synthesis is a technique that is used to allow researchers to draw conclusions across multiple cases (Yin, 2009).

Table 5

School Achievement Levels

School	Proficiency Level (Based on ABC Accountability Model)
1	54.9%
2	56.5%
3	65.5%
4	75.8%

Table 6

Individual Teacher Level

Middle School Feature	Summary of Teacher's Responses with Illustrative Quotes	Implementation Score (1-5)
Interdisciplinary teaming		
Flexible Scheduling		
Advisor/Advisee		
Integrative, Exploratory, and Challenging Curriculum		
TOTAL		

Table 7

Individual School Level (One for Each School)

Middle School Feature	Teacher 1 Score	Teacher 2 Score	Etc.	Average Score
Interdisciplinary teaming				
Flexible scheduling				
Advisor/Advisee				
Integrative, exploratory, and challenging curriculum				
SCHOOL TOTAL				

But in order to create a chain of evidence leading from my findings up to the point where I could employ these techniques, I created a series of linked tables. First the researcher created a table for each individual principal and teacher interviewed. A shell for this most basic table is displayed in Table 6. Then, the researcher summarized the evidence across teachers for each school and displayed them in a second table, as shown in Table 7. Next, the researcher summarized the evidence across schools and displayed it in a third table as shown.

in Table 8. Finally, the researcher summarized the implementation scores across the selected schools and also displayed the rival explanatory variables as shown in Table 9.

Based on the theory mentioned earlier, the predicted pattern was that middle schools with high levels of implementation also have high growth of student outcomes. The scale used to validate the theory will be based on a Likert Scale model. A maximum of 5 points could be achieved for full implementation of a feature and a minimum of 1 point could be achieved for no implementation. Based on the usage of this scale range, each selected middle school could have a maximum score of 20 points and a minimum score of 4 points.

As stated earlier, taken, together, the data on the key features provided evidence regarding the "theoretical" proposition that when all key features of the middle school concept are fully implemented, middle grade students achieved at levels similar to or better than the levels achieved by middle grades students in middle schools that implemented the middle school concept less fully.

Table 8

MS Features Implementation Summary Across Schools

School	Feature 1 Score	Feature 2 Score	Feature 3 score	Feature 4 Score	Total Score
1					
2					
3					
4					

Table 9

Summary of Implementation Scores, Growth Levels, and Rival Explanatory Variables

School	Implementation Score	Growth Level	SES Level	Size	Urban/Rural
1					
2					
3					
4					

Yin (2003) made it clear that maintaining a chain of evidence is important for increasing the reliability of a case study. If a chain of evidence is maintained, a case study "will have addressed the methodological problem of determining construct validity, therefore, increasing the overall quality of the case" (Yin, 2003, p. 105). Pattern matching, explanation building and cross-case synthesis laid the foundation for a high-quality multiple-case study (Yin, 2009). The researcher triangulated the data collected and identified themes and patterns to explain my findings. Key words were used to generate themes from the principals' and teachers' responses. The presence of themes throughout each case revealed that full implementation would be evident in schools that produced high student achievement outcomes. A narrative format was used to explain possible causes for the presence of common attributes in each case and the cases were compared by matching the different methods and data.

Criteria for Interpreting the Findings

To ensure that research was conducted with quality and integrity, the researcher attended to all of the evidence collected through observations, document reviews, and interviews and addressed the rival explanations. The data collected from each source tended to confirm, disconfirm, or modify the general proposition that when all the key features of the middle school concept were fully implemented, middle grades students achieved at levels similar to or better than the levels achieved by middle grade students in middle schools which implement the middle school concept less fully.

In order to accurately interpret the findings of the study, the researcher determined whether cases of fuller middle school implementation were associated with better student achievement were evident in selected middle schools and if so to what

60

degree. If the findings were consistent with the central hypothesis, this would support

an analytic generalization; that was, that the findings tended to substantiate the theory.

However, to the extent that the pattern of findings fitted rival explanations (SES, size,

location (urban or rural) in addition to or instead of the guiding hypothesis, interpretation

was more complex and uncertain.

Validity and Reliability of the Design

Silverman (2008) stated, "Validity is the extent to which an account accurately

represents the social phenomena to which it refers" (p. 289). Yin (2009) specified four

tests to judge the quality of case study research; construct validity, internal validity,

external validity, and reliability. Based on the four tests, several instruments were

designed to gather data for this study.

Construct Validity

According to Yin (2009), construct validity is "identifying correct operational

measures for the concepts being studied" (p. 40). To enhance construct validity of the

study, multiple sources of evidence were used to support study findings-an approach

referred to as "triangulation" (Yin, 2009).

Several instruments were designed to gather data for this study. The interview

protocol consisted of a group of questions related to each of the key features of the

middle school concept that were used during the semi-structured interviews with the

selected teachers and administrators. The majority of the interview questions were

based on information gathered from the three foundational reports outlined in the

literature review. The researcher identified key terms that validated the implementation

of each key feature. The observation checklist consists of observable evidences of real

life application of the key features identified. The document review checklist contained a list of documents naturally created within the environment of each selected middle school. The documents provided further evidence and support of real life application of the middle school concept.

Interviews were conducted at each school. An interview note sheet was developed and utilized for each interview and two interview protocols were developed for this study. Seven teachers, two per grade level and one encore, and the principal for each school were selected for the interviews. The teachers were randomly selected to increase the validity of the study and to protect the participants. The names remained anonymous and were not used within the study. Interviews were conducted on the school campus during the day or after school at the convenience of the person being interviewed (see Appendix A).

A document review was conducted at each school. In a research situation, documents can provide the researcher with the ability to observe and analyze events that have already taken place. Document review also allowed the researcher the ability to substantiate evidence obtained through the other methods of data collection. The information from the document review was noted using a document review checklist (see Appendix B).

Observations were conducted across the total school environment. Anecdotal notes were taken on the observation checklist to document interactions of students and staff in various situations such as parent conferences, staff meetings, classroom walkthroughs and school improvement team meetings (see Appendix C).

To further increase the construct validity, as explained previously, the researcher presented the chain of evidence through a series of tables that summarized the data collected.

The informant/source table was utilized to document information gathered from each participant regarding the implementation of the key features of the middle school concept. Based on the usage of quotes and examples from the participants, the researcher was able to determine the level of implementation for each key feature (see Appendix D-Individual Teacher/Principal Level)

Next, a school level table was utilized to document data from each middle school as a whole. The researcher was able to use the individual tables to summarize implementation of the key features of the middle school concept in each school (see Appendix E-Individual School Level)

Next, the researcher created a key feature table based upon all of the data gathered from the four selected middle schools. This culmination of data allowed the researcher to determine the degree of implementation of each concept and the extent to which the features had an impact on student academic outcomes (see Appendix F-MS Features Implementation Summary Across Schools).

Finally, the researcher created a summary table, which displayed for each school, the implementation scores, academic growth levels, and rival explanatory variables. This table was used to complete the cross-case synthesis (see Appendix G-Summary of Implementation Scores, Growth Levels and Rival Explanatory Variables).

Internal Validity

Yin (2009) maintained that pattern matching, explanation building, and addressing rival explanation can be used to strengthen internal validity.

The researcher triangulated the data collected in the case study and identified patterns and themes using a comparative method to explain the findings and summarized the data. For the interviews, key terms were identified from the participants' responses to generate themes.

The observations within each middle school validated the key terms that were identified from the interviews and the document reviews conducted within each school further substantiated the patterns.

Each of these tactics assisted in the explanation of how the implementation of key features of the middle school concept yielded higher student achievement outcomes when implemented fully.

Finally, the researcher identified the SES composition (% federally subsidized lunch), size and community type of each selected middle school. This was easily accomplished through the use of data from school report cards and data maintained in the district central office.

External Validity

The data collected in this study was analyzed to test the theoretical proposition that when all the key features of the middle school concept were fully implemented, middle grade students achieved at levels similar to or better than the levels achieved by middle grade students in middle schools that implemented the middle school concept less fully.

The theoretical proposition was tested on the first selected middle school and then "replicated" with data from the other three selected middle schools. These four natural experiments provided strong evidence to support the theory that, when fully implemented, the key features of the middle school concept yielded the same or better student academic outcomes as were produced by middle schools that implemented the middle school concept less fully.

As indicated earlier, the study would not produce rigorous evidence to support a claim of causality, but it would contribute the equivalent of four natural experiments which could be added to the evidence from other studies accumulating over time.

Reliability

To validate the construct of the instruments, a pilot study was conducted at a 6-8 middle school within a local LEA. The results of this pilot study were used to reframe the questions for interview protocols and narrow the focus for the observations and document reviews.

The procedures used in the study made it possible for other investigators to replicate the study or to track the development of the conclusions from the most basic individual-level responses through the ultimate findings. To begin the research, as previously stated, the researcher collected data using interviews, document reviews, and observations. Permission to conduct this qualitative study was obtained from the LEA's Educational Programs and Services department through the research study process outlined in district policy 9.101-Educational Study and Research. Approval to collect data from the subjects was obtained from the University and Medical Center Institutional Review Board.

The data collected through interviews, observations and document reviews was entered into descriptive tables. These tables were constructed to illustrate informant, key features, and school level data. A judgment of the extent of implementation for each key feature was entered using a Likert scale from 1 to 5, with 1indicating a low degree of implementation and 5, a high degree of implementation. These descriptive tables allowed the researcher to document and determine patterns and recurring themes and other unanticipated occurrences.

The informant/ source table included a collective view of all of the data gathered through the various qualitative research methods (see Appendix D). The school level table gave an analysis of the data collected for each individual school to provide a cumulative view for each middle school (see Appendix E). The key features table contained data on each key middle level practices for each school (see Appendix F) and the summary table provided a cumulative view of all the data used for the cross-case synthesis (see Appendix G).

Limitations

Based on the pilot study and the review of literature, several limitations were noted. First, due to the fact that this research was an explanatory study, no definitive conclusions were determined. Second, based on the fact that the research was conducted in one LEA only, the findings cannot be generalized to other districts within North Carolina.

The findings contributed to generalizable knowledge about the relationship between implementation of the middle school concept and student achievement as one set of cases added to the accumulating case literature on the topic. Finally, the

66

researcher was not be able to rule out alternative (rival) explanations for any apparent relationship, (such as SES (socio-economic status), on the basis of the current study.

Summary

This chapter explained the process that was used to collect and analyze the data regarding the implementation of key features of the middle school concept. By using this multiple case study, the researcher deepened the understanding of the key middle school features employed by teachers and administrators within a local LEA's middle schools. Each interview provided a wealth of information from a personal point of view regarding implementation and the observations corroborated the data collected. The document reviews provided further evidence to substantiate the data gathered through the interviews and observations.

An analysis of data collected through interviews, observations, and document reviews revealed similarities and differences among the selected middle schools and divulged issues and concerns that hindered the implementation process. By addressing threats to the validity this research, the researcher reduced the impact of social desirability as well as increased conceptual understanding of implementing key middle school features. This study provided compelling evidence to support or deny that implementation of these key middle school features had an impact on middle school student achievement. In Chapter four, the findings and analysis of those findings were discussed in further detail.

CHAPTER 4: FINDINGS

This chapter focused on the analysis of data collected through various methods using Robert Yin's case study model. The central question was: Do *middle schools* that fully implement the middle school concept produce student higher achievement outcomes than outcomes produced by *middle schools* that implement the middle school concept less fully?

With the use of interviews, observations and document reviews, data were gathered to create descriptive tables to address the central question. Individual teacher data were collected through interviews of twenty-eight middle schools teachers and four principals on the degree of implementation of (a) interdisciplinary teaming, (b) flexible scheduling, (c) advisor/advisee, and (d) integrative, exploratory and challenging curriculum. The interview questions were based on information gathered from the three foundational reports outlined in the literature review for each key feature (see Table 10).

School level descriptive tables were developed from the cumulative teacher interview data to determine patterns and recurring themes on the implementation of the four middle school features. For further validation, the principal data collected for each school was analyzed to determine a correlation between the teachers and principals regarding the degree of implementation. To attend to all evidences, triangulation of interviews, document reviews, and observation were conducted.

Participants

Four middle schools from a local LEA in eastern North Carolina served as the units of analysis and were analyzed as a part of this explanatory multi-case study.

Table 10

Foundation for Interview Questions

Key Feature	Effective Practices
Interdisciplinary Teaming	Relationship Building
	Mutual Focus between student social and academic well being
	Common Planning Time
	Improved Work Climate
Flexible Scheduling	Reducing transition time
	Increase curriculum offerings
	Enhancing curriculum integration
	Different types of scheduling
Advisor/Advisee	Social and academic activities
	Relationship with at least one adult
Curriculum	Integrative-real world connections
	Exploratory-extension of regular curriculum
	Challenging-students who are in control of their own learning

Seven teachers were interviewed at each school. Selection of these middle schools allowed completion of the study on the degree of implementation of the key middle school features in four schools with different student achievement levels, demographics, and social economic statuses.

Scoring of Tables

As stated earlier, a school level descriptive table was created to demonstrate the results for all four schools. The column on the left for each school level table lists the middle school features and the school average. The rest of columns to the right represent the implementation score for each teacher (7) and the average score for each middle school feature. The highest implementation score for each middle school feature that could be obtained was 5.

Using the information provided in Table 10-Foundation of Interview Questions, an analysis of the answers given by each teacher was conducted and an implementation score for each feature was given. For example, four practices were identified for interdisciplinary teaming, which yielded a possibility of an implementation score of 4 but more information provided on common planning time such as how it was used could have increased the implementation score to 5.

School 1

School 1 is located in a rural area within the school district. It serves students in 6th through 8th grade. There are approximately 330 students who are primarily Caucasian (44%) and African American (43%). The school is part of a very supportive small community that values the importance of education. The teaching staff has various levels of teaching experience ranging from 1 to 30 years. The school day is

structured on an eight period day with back-to-back exploratory classes to provide large blocks of instructional planning for teachers. The overall interview findings related to degree of implementation of the four key features for School 1 are presented in Table 11.

Interdisciplinary Teaming

When asked questions regarding interdisciplinary teaming, there was a consensus among teachers at School 1 that they provided relationships for learning. The following quote summarized it best:

Our students do present challenges, some positive and some negative but they need TLC. I am an "edutainer" and I found it works best to make sure it (my teaching) is more interesting and I do what it takes. (Teacher 2)

The teachers agreed that it was important to talk to your students and get to know them as individuals.

A mutual focus on a student's social and academic well being was not evident at School 1. Many of the teachers interviewed believed that a focus on the students' social needs was important, however, oftentimes, they did not connect the social needs to the academic needs of the students.

Regarding common planning time, all but one teacher had a common planning time. Teacher 4 works with a specialized group of students across two grade levels and expressed the difficulty of finding time to collaborate due to a different schedule. However, it is evident that common planning time is utilized across the rest of the school. One teacher at School 1 said:

Table 11

Individual School Level Data-School 1

Middle School Feature	Teacher 1 Score	Teacher 2 Score	Teacher 3 Score	Teacher 4 Score	Teacher 5 Score	Teacher 6 Score	Teacher 7 Score	Average Score
Interdisciplinary teaming	2	3	2	2	3	2	2	2.2
Flexible scheduling	2	2	3	2	2	2	2	2.1
Advisor/Advisee	1	1	1	1	1	1	1	1
Integrative, exploratory, and challenging curriculum	2	2	2	2	2	2	2	2
SCHOOL AVERAGE	7	8	8	7	8	7	7	7.3

We are organized into teams; we have PLCs (Professional Learning Communities) on Thursdays and team meeting on Tuesdays. During the PLC, we focus on data (scores) and during team time. We talk about the needs of the students and communicate with parents. We also discuss team events that are upcoming (Teacher 1).

Another teacher further elaborated:

It depends on the day, I have PLCs where we plan by subject and other days we meet as a team and discuss student needs. (Teacher 5)

Lastly, another teacher within School 1 specified a deeper connection to instruction:

There are PLCs for each grade level and we talk about Marzano and other strategies for teaching. We help coordinate events and talk about assessment and integrating with core teachers. (Teacher 7)

Evidence of an improved work climate was mixed. Several of the teachers felt that the school was inviting overall but others indicated due to the circumstances of being a small school, they were forced to work together.

Flexible Scheduling

When asked questions regarding flexible scheduling, the teachers interviewed at School 1 did not indicate the use of flexible scheduling for reducing transition time, increasing curriculum offerings or curriculum integration. Even though the foundation for flexible scheduling did not reveal a focus on curriculum, one teacher indicated:

The schedule is the way it is because of every core subject being tested (Teacher 2).

Teacher 5's quote, *"we have 3 blocks and the schedule is the way it is because of tested subjects"* further supported that belief.

Regarding types of scheduling, block scheduling and A/B scheduling were the most highly used in School 1. The master schedule reflected a large block of planning for each grade level. Also, Teachers 1, 3, and 7 acknowledged the use of an A/B schedule for Science and Social Studies as a way to increase teaching time for each subject. All teachers interviewed at School 1 stated the design of the master schedule allowed them more teaching time.

Advisor/Advisee Relationships

When questions were asked regarding advisor/advisee relationships, all the teachers interviewed at School 1 indicated that they did not have an advisor/advisee program. Even though School 1 did not have a formal advisor/advisee program, Teachers 3, 5, and 7 discussed social activities such as clubs, sports and academic activities such as afterschool tutoring as ways for students to interact with adults. One teacher stated:

> *I have very high expectations for my students and I have to be more loving to my students. We do not have advisor/advisee but I reward and I also talk to them about consequences.* (Teacher 4)

Teachers 1 and 2 also had a strong focus on expectations as well. Another teacher at School 1 revealed:

> *We do not have advisor/advisee but at the beginning of the year, we meet with the students and they find an adult to connect with and we also have a peer buddy system as well.* (Teacher 6)

Also, discussions have taken place regarding advisor/advisee relationships based on the information provided by another teacher:

We do not have the program but it has been brought up the last couple of years. (Teacher 5)

Observations of teacher/student interactions demonstrated positive relationships between the teachers and their students.

Integrative, Exploratory, Challenging Curriculum

When questions were asked regarding an integrative, exploratory, challenging curriculum, teachers at School 1 saw the value of teaching the curriculum (common core and essential standards) and making connections to the real world. The consensus was best summarized by the following quote:

I feel the middle school curriculum should emphasize making connections to text and the real world and text to self. (Teacher 1)

However, none of the teachers interviewed at School 1 discussed the integration of curriculum as a way to help students see the connections to their daily lives. In observations conducted at School 1, the teachers used real world examples to bring their subject alive and increase the learning opportunities for the students.

The most common way teachers at School 1 expressed their perception of an exploratory curriculum was through encore classes, guest speakers and career days. Evidence of co-curricular activities such as intramurals was not identified from the teacher responses, however, one teacher indicated:

We have a lot of community support and the students conduct food drives to help the community. (Teacher 3)

Another teacher further elaborated on an exploratory curriculum:

We connect Science beyond the classroom by using the school news and

allowing students to participate in Habitats for Humanity. (Teacher 6)

Control of their learning was the focus of a challenging curriculum. The following

quote was the best example of a challenging curriculum,

My instruction is individualized and I think that the middle school should focus on

problem solving, common core and real life. (Teacher 4)

Teachers 2 and 6 shared models such as "encouraging students to be

responsible for their learning" and "I break them into groups and assign a team leader

who is responsible for the teaching." Also, one teacher took it a step further when he

stated:

I feel the middle school curriculum should focus on teaching the child and get

back to problem solving and helping them become a better person. (Teacher 6)

On the whole, the teachers who participated in the interviews for School 1 knew it

was important to develop relationships, collaborate and connect student learning to the

real world. The documents provided appeared to confirm the information received from

the interviews and the classroom observations. However, they noted the focus on

tested subjects in relationship to the master schedule and lack of opportunity to take

their students' learning beyond the classroom.

School 2

School 2 is an urban middle school that serves approximately 760 Six to Eighth

grade students. The school has a very diverse student population that is mostly

Caucasian (53%) and African American (40%). Community support is evident in all

aspects of the school environment from sports to academics. School pride is infused

throughout the entire school which is mostly comprised of veteran teachers. Even

though the school's demographics have changed over the past several years, it has

managed to maintain a high teacher retention rate and continuous academic success

for over 10 years. According to data gathered from the North Carolina School Report

Card, School 2 has made expected or high growth from 2002 to 2012 and has

maintained high a teacher retention rate (95% in 2002 and 87% in 2012).

The school day is structured based on the needs of each grade level; 6th grade

teachers have back to back exploratory classes, three core blocks and three teams of

teachers, 7th grade teachers have 60 minutes classes, a remediation block, and three

teams of teachers, and 8th grade teachers have 60 minute classes, a

remediation/enrichment time and three different team structures. Each of the varying

schedules provided time for instructional planning. The overall interview findings related

to degree of implementation of the four key features for School 2 are presented in Table

12.

Interdisciplinary Teaming

Similar to the teachers at School 1, School 2 teachers felt they provided a

relationship for learning as well. One teacher stated,

Every child is different. They have needs. I see different behaviors but I work

with them one-on-one and redirect. I do not bounce students; I build

relationships. (Teacher 3)

The quote from Teacher 3 best represented the teachers' opinions interviewed at

School 2.   Other teachers further elaborated on the various roles they performed such

Table 12

Individual School Level Data-School 2

Middle School Feature	Teacher 1 Score	Teacher 2 Score	Teacher 3 Score	Teacher 4 Score	Teacher 5 Score	Teacher 6 Score	Teacher 7 Score	Average Score
Interdisciplinary teaming	2	3	3	3	2	2	4	2.7
Flexible scheduling	3	1	2	2	2	2	2	2
Advisor/Advisee	1	1	1	1	1	1	1	1
Integrative, exploratory, and challenging curriculum	2	2	3	2	1	2	3	2.1
SCHOOL AVERAGE	8	7	9	8	6	6	10	7.8

as doctors, nurses, litigators, etc., that enhanced the relationship for learning with their students.

Unlike the teachers in School 1, which revealed a focus on providing relationships for learning, teachers in School 2 indicated a concerted effort to address the social needs of the students by emphasizing working with others, belonging to a group, and peer interaction.

Regarding a mutual focus between academic and social needs of the students, one teacher indicated:

My students have tremendous social needs. It (social need) is important to address; they need to learn to work with everyone in my class and allow everyone to learn. If they cannot, they need to find a compromise. I provide opportunities for them to interact through my teaching. The best approach to learning for adolescents is to lecture some, let them take the activity and apply it to real life. (Teacher 7)

Another teacher in School 2 went even further than her colleagues:

To address social needs, I provide a lot of cooperative activities and give them the ability to be creative and interact with their peers. The teaching approaches that I feel work best with adolescents are voting, experimenting, and letting the students know up front what we are doing. I involve my students and that helps me to get to know them. I get their input on how to teach. (Teacher 4)

These responses represented a mutual focus between academic and social well being that was not evident at School 1.

Regarding common planning time, teachers interviewed in School 2 used the words *common planning time* less frequently than School 1. However, School 2 teachers stated they were in teams but conversed more about how they were organized in PLCs (Professional Learning Communities):

> *We are organized into teams but we also meet by subject areas. I think that*
> *PLCs are beneficial. For example, I work with the science teacher regarding the*
> *scientific method and how it evolved during the scientific revolution. As a grade*
> *level, our planning happens all day long; we discuss students and their needs.*
> (Teacher 1)

Similar to the teachers interviewed at School 1, School 2 teachers had a common time for planning on each grade level as indicated by the master schedule. On the other hand, the teachers interviewed at School 2 demonstrated the ability to carry their discussions beyond communicating with parents, the needs of the students, and team events. Their focus was more inclusive of interdisciplinary planning as indicated by the following quote:

> *We are organized into teams and departments with PLCs. We plan and we also*
> *plan cross curricular. We talk about student issues and collaborate as a group.*
> *We discuss group activities and make parent contacts as needed.* (Teacher 4)
> *We have a combination; PLCs departments and grade level teams. Yes, we do*
> *have common planning time and we have cross curricular planning, subject*
> *planning and grade level planning. We talk about the needs of the students and*
> *we hold parent conferences and discuss team activities. Integration of*

80

curriculum is something that I do like I work with the ELA teacher because we are

all being assessed. (Teacher 7)

An improved work climate was the consensus of the School 2 teachers. In contrast to the School 1 teachers, each teacher of School 2 expressed, in their own way, how the school was a caring family with high expectations.

Flexible Scheduling

Similar to the teachers at School 1, the majority of the teachers at School 2 did not indicate the use of flexible scheduling for reduced transition time, increased curriculum offerings or curriculum integration. Conversely, one teacher indicated evidence of creative scheduling:

We realized that 90 minutes was too long and 45 minutes was not enough. Each

teacher teaches Reading and we also have Thursday and Friday as Remediation

days. (Teacher 1)

This quote was supported by the master schedule and class observations. In contrast to the School 1 teachers, several School 2 teachers focused on how the schedule allowed for increased student engagement:

This schedule allows enough time for each subject and helps with student

engagement. (Teacher 1)

Teacher 7's agreement, "It also helps with engagement" further supported this claim.

Regarding types of scheduling, School 2 specified block scheduling as the most common type of schedule. Foreseeably, the master schedule reflected the use of large blocks of time for uninterrupted teaching. In contrast, School 2 did not utilize an A/B schedule for Science and Social Studies as indicated within School 1. The document

review of staff assignments for School 2 revealed a large number of single certification assignments that were not evident in School 1. Lastly, as revealed at School 1, all the teachers at School 2 designated more time as the purpose and design of the master schedule.

Advisor/Advisee

On the topic of advisor/advisee relationships, like the teachers at School 1, the teachers interviewed at School 2 affirmed they did not have an advisor/advisee program. Much like the teachers at School 1, the teachers at School 2 discussed expectations and certain behaviors for which students were responsible. The following quote this aspiration best:

My motto is "what you achieve is up to you" (Teacher 3).

Relationships were evident between teachers and students as seen during observations throughout the school.

Integrative, Exploratory, Challenging Curriculum

Like teachers at School 1, teachers at School 2 realized the importance of teaching the curriculum. The majority of the teachers at School 2 connected their teaching to real life experiences of adolescents. One teacher stated:

I feel the middle school curriculum should hold them accountable and relate to them (students). (Teacher 3)

Unlike the other teachers interviewed at School 2 and the teachers at School 1, Teacher 2 and Teacher 6 focused more on the instructional design of their teaching rather than focusing on real world connections. Conversely, curriculum integration was

not identified as a way to connect instruction to real life examples. This approach

coincided with the responses from teachers at School 1.

Similar to the teachers at School 1, School 2 teacher responses regarding the

exploratory curriculum focused on the classes taken during the exploratory period such

as Art, Music, and PE (physical education). The majority of the teachers at School 2

indicated the lack of time or opportunity to take learning beyond the classroom which

differed from the responses of teachers at School 1. One teacher summarized it best:

We do not have a lot time to take learning beyond the classroom; I am working

on that. (Teacher 2)

Unlike the teachers at School 1, the majority of the teachers at School 2

emphasized the importance of adolescents having control of their learning. When

asked what do you feel the middle school curriculum should emphasize, the following

responses were given:

I feel the middle school curriculum should emphasize working to solve problems.

(Teacher 2)

I think the middle school curriculum should emphasize the development of good

thinking skills and provide a foundation that focuses on independence and self-

reliance. (Teacher 5)

Overall, the teachers interviewed at School 2 demonstrated a focus on

relationships with students, the importance of planning, and teaching the curriculum.

Yet, the teachers at School 2 revealed a stronger focus on use of PLCs and

collaboration. The documents and observations revealed a focus on interdisciplinary

conversations about the needs of students. Comparable to the teachers of School 1,

School 2 teachers did not have social activities such as intramurals and lacked the opportunity to take learning beyond the classroom.

School 3

School 3 is an urban middle school that serves approximately 630 Sixth to Eighth grade students. The student population is predominantly African American (61%) and Caucasian (30%). This middle school, along with the other schools in the community, is a strong source of pride for the town in which it resides. Historically, community support has been present and welcomed throughout the total school environment. Changes in teaching and learning over the past several years have proven to be productive by the achievement of high growth through the North Carolina Accountability System. Systematic change is evident throughout the diverse staff which is a mixture of veteran and beginning teachers. According to data collected from the North Carolina School Report Card, School 3 has made high growth for the last 3 years, reduced the teacher turnover rate from 27% in 2008-2009 to 13% in 2011-2012, and decreased the number of violent student acts from 13 per 100 students in 2008-2009 to 0 per 100 students in 2011-2012.

The school day is structured based on an eight period day with two planning periods for each teacher. 6th and 7th grade have two teams each and 8th grades serves as one collective team. Student leadership has been a focus for the past couple years with the implementation of *Covey's Seven Habits for Highly Effective Teens.* The overall interview findings related to degree of implementation of the four key features for School 3 are presented in Table 13.

Table 13

Individual School Level Data-School 3

Middle School Feature	Teacher 1 Score	Teacher 2 Score	Teacher 3 Score	Teacher 4 Score	Teacher 5 Score	Teacher 6 Score	Teacher 7 Score	Average Score
Interdisciplinary teaming	3	2	2	2	3	2	3	2.4
Flexible scheduling	2	2	3	3	2	1	3	2.2
Advisor/Advisee	1	1	1	1	1	1	1	1
Integrative, exploratory, and challenging curriculum	3	2	3	3	3	2	3	2.5
SCHOOL AVERAGE	9	7	8	9	9	6	10	8.1

Interdisciplinary Teaming

Similar to School 1 and School 2, the teachers at School 3 placed an emphasis on relationships for learning. The following quote by one teacher represented the essential belief of all the teachers at School 3:

The biggest thing needed is building relationships by having conversations.

(Teacher 3)

By consensus, the teachers interviewed at School 1, School 2, and School 3 identified the importance of addressing social needs within the school environment.

Regarding a mutual focus on a student's social and academic well being, School 3 implemented a leadership academy as well as the components of Covey's 7 Habits. Based on the teacher responses from this school, these two programs provided avenues in which students were able to grow both socially and academically. Therefore, a mutual focus was maintained at School 3 that was not evident at School 1 or School 2.

When asked the question about common planning time, the general consensus was that teachers always had the time. Unlike School 1 and School 2, six out of the seven teachers mentioned common planning time and PLCs. One teacher's comment in School 3 captured the sentiments of the majority of the teachers:

We are organized into teams. We have common planning time and we use it for

PLCs and other types of meetings. We talk about available resources and we

make sure that we are all doing the same thing but also have different methods

of delivery. We discuss data, benchmarks and the needs of the students.

(Teacher 5)

Each teacher in School 3 mentioned how the time was used. In sum, they utilized the time as an effective way to communicate and collaborate.

Similar to the views of the teachers at School 2 but different than School 1, an improved work climate was evident in School 3. Words such as "family," "friendly," "close and professional," and "working together," were used to describe the working environment. The words used by Teacher 7, "teachers are positive and not backstabbing" summed it up best.

Flexible Scheduling

When questions were asked regarding flexible scheduling, comparable responses to the teachers at Schoo1 and School 2 were given. The majority of the teachers interviewed at School 3 did not express the usage of flexible scheduling to reduce transition time or to enhance curriculum integration. However, one teacher said:

We rotate the students through the different subjects and it also keeps the

students from moving so much. (Teacher 4)

Even though curriculum integration was not evident, Teacher 1 discussed the usage of *Patriot Period* to remediate and enrich students as well as incorporate the Covey material.

Regarding types of scheduling, teachers at School 3 identified block scheduling as the format used for their school. Their responses coincided with the responses for School 1 and School 2. One teacher stated:

We have a pretty tight schedule; we have 45 minute blocks for Science and

Social Studies and 90 minutes for Math and ELA. We do not have any bells so

teachers have the ability to be flexible and switch among themselves. (Teacher

7)

This response indicated teachers had the opportunity to be creative when

needed.

Similar to School 1, an A/B schedule was also utilized when it was appropriate.

One teacher revealed:

As a joint decision between us and administration, we changed our schedule to

help provide more time for Science and Social Studies. We have A/B day so that

Science and Social Studies teachers can have a large block of time to cover

curriculum. (Teacher 3)

Unequivocally, as specified by teachers interviewed at School 1 and School 2,

the teachers interviewed at School 3 stated the usage of block scheduling allowed more

time for each subject.

Advisor/Advisee

Like School 1 and School 2, the teachers interviewed at School 3 conveyed the

lack of an advisor/advisee program. Similar to the responses from School 1 and School

2 interviews, School 3 teachers discussed the various ways that they built relationships

with students; during class time, sports, and clubs. One teacher declared:

We do not have advisor/advisee however we have teachers who get to know

students by serving as coaches or club advisors. This year we have LOVE for

female students and GQ for male students. We try to hold high standards for our

students and it is business first and then fun. (Teacher 1)

Teachers interviewed for School 3 spoke about a new concept at their school called *Patriot Period*. Based on the master schedule, *Patriot Period* is a flexible time between 5th and 6th period where the teachers have the option to remediate, enrich, or meet with small student groups pertaining to a particular issue or concern. One teacher shared how Patriot Period was like an advisor/advisee program:

We do not have advisor/advisee program but Patriot Period is like that. It allows

us to address the needs of the students like technology and public speaking.

Students are also encouraged to get involved. We have many clubs such as

SAVE and the Green Team. The Green Team is a group of students that have an

interest in landscaping and the students are mentored by the head custodian and

the other custodians assist. (Teacher 7)

Integrative, Exploratory, Challenging Curriculum

Similar to the all the responses from School 1 and the majority of School 2, the teachers at School 3 acknowledged the importance of teaching the curriculum and making connections that were relative to adolescent experiences. On the topic of an integrative curriculum, one teacher said:

I use various teaching strategies such as PowerPoint and relating teaching to

real life situations such as reading a menu in a restaurant. I try to be creative so

the students can enjoy. (Teacher 1)

Another teacher's quote best captured the opinion of teachers interviewed at School 3:

Instruction that is relevant to real world is the best approach and knowing why

they have to learn. (Teacher 7)

As indicated by the teachers at School 1 and School 2, School 3 teacher responses did not reveal the use of curriculum integration as a way to connect the curriculum to real life experiences for adolescents.

Regarding an exploratory curriculum, the teacher responses for School 3 were similar to responses from School 1 and School 2. One teacher reported:

Our students are exposed to careers, the arts, and other social events such as guest speakers. (Teacher 6)

However, unlike the responses from the prior schools, teachers at School 3 discussed intramurals as a co-curricular activity.

Every teacher interviewed at School 3 included information regarding intramurals in their responses. Intramurals were included in responses related to interdisciplinary teaming, advisor/advisee, and curriculum. Several teachers stated:

We address their social needs through games, intramurals, and dances. (Teacher 6)

We have intramurals which is a way for teachers and students to get to know each other. (Teacher 2)

The following quotes represented the best responses as to how intramurals can be used as a co-curricular activity:

We try to incorporate lessons that relate to the real world. Also, our students are exposed to various careers through guest speakers, vocational classes and we have intramurals as well. Students have the opportunity to be involved in other ways such as clubs and the leadership academy. (Teacher 2)

Their social needs are addressed through our leadership academy and in my

class, students have roles. We also have intramural representatives. The

students plan the intramurals and they can all compete in events such as the

Turkey Trot. (Teacher 7)

Similar to the responses received from School 2, School 3 expressed a constant

effort to present a challenging curriculum by having students take control of their

learning. One teacher in School 3 said:

My instruction is adapted by making sure everyone knows the content and I have

seen success in tiered assignments. I will come up with plans that will convince

them to read and other strategies. Next, I ask them what they are doing to make

their goals so that is individual. (Teacher 5)

Another teacher further added:

When I ask why and how, I have found that it (the lesson) interest the students

more. I incorporate the interest of my students inside my classroom. (Teacher 4)

The highest level of revised Bloom's Taxonomy was the focus of this teacher's

response:

They also self-evaluate by creating charts and error analysis. If students are not

learning, I individualize and talk about why the learning is important for their

success. (Teacher 7)

As indicated by the prior schools, teachers at School 3 felt they had few

opportunities to take learning beyond the classroom.

On the whole, the teachers interviewed at School 3 were similar to School 1 and

School 2 regarding a focus on relationships with students, the importance of planning,

and teaching the curriculum. However, the teachers at School 3 demonstrated a solid foundation in area of curriculum as a holistic representation of the school's focus on students. The documents and observations revealed a mutual focus of the students' social and academic well being. Comparable to the teachers of School 1and School 2, teachers felt they lacked the opportunity to take learning beyond the classroom. However, unlike the prior schools, School 3 had intramurals and a flexible period that allowed teachers to meet their students' social and academic needs.

School 4

School 4 is a rural middle school that serves approximately 700 Six to Eighth grade students. The student population is predominantly Caucasian (60%) with a small combination of African American (27%) and Hispanic students (6%). This middle school resides with one of the fastest growing areas of the LEA. Community support in all aspects of the school is evident and school pride is instilled in all stakeholders of the school environment. The teaching staff is comprised of mostly veteran teachers and the teacher turnover rate is below the district and state average. High student performance is expected through high expectations for the students.

The school day is structured based on an eight period day with two planning periods for each teacher. Each grade level has two teams. Homeroom is extended once a month for club day. During this forty-five minute time period, the regular classroom teachers and encore teachers are paired together to provide coverage of the various clubs. The overall interview findings related to degree of implementation of the four key features for School 4 are presented in Table 14.

Table 14

Individual School Level Data-School 4

Middle School Feature	Teacher 1 Score	Teacher 2 Score	Teacher 3 Score	Teacher 4 Score	Teacher 5 Score	Teacher 6 Score	Teacher 7 Score	Average Score
Interdisciplinary teaming	2	3	2	2	3	2	2	2.3
Flexible scheduling	1	2	2	2	1	1	2	1.6
Advisor/Advisee	1	1	1	1	1	1	1	1
Integrative, exploratory, and challenging curriculum	2	1	1	1	3	2	1	1.5
SCHOOL AVERAGE	6	7	6	6	8	6	6	6.4

Interdisciplinary Teaming

When asked questions regarding interdisciplinary teaming, similar to the responses of the previous three schools, the teachers of School 4 believed they provided relationships for learning. The following quote by one teacher summarized it best:

They have peer issues of wanting to belong and I build relationships with them and often times social issues are a problem as well. In regards to social needs, I talk to them like they are my own children. (Teacher 3)

Another teacher further emphasized how it affects their engagement:

I talk to them individually to find out what is going on, most just want to belong and focus on things like "she doesn't like me" which causes them to be disengaged. (Teacher 7)

A mutual focus on a student's academic and social well being was not evident. Unlike School 2 and School 3, the responses for School 4 were similar to the School 1 teacher responses. One teacher stated:

They want to be like their peers, so I try to mix them up with people of different personalities so that they can learn to work different people in teams. (Teacher 3)

All of the teachers in School 4 demonstrated a strong focus on the students' needs yet, they did not demonstrate a mutual focus on the students' academic and social well being.

Concerning common planning time, every teacher interviewed at School 4 stated they had common planning time. Unlike the teachers at School 2 and School 3, the

majority of the teachers interviewed utilized their planning time to discuss students and communicate with parents. One teacher at School 4 stated:

We are in departments and teams. We have PLCs and we also have team teaching. We have common planning time and we prepare lessons and grade papers. I try not to take a lot home. (Teacher 4)

This quote represented the emerging transition from the traditional use of common planning time to collaborative PLCs like the teachers at School 2 and School 3. Teachers 3 and 5 expressed the usage of their common planning time to meet in their PLCs and talk about student needs for remediation:

We have PLCs to determine where we are going and plan different activities and we also work collaboratively to gather different things from others that worked well with the students. (Teacher 5)

Evidence of an improved work climate was evident in School 4. The teachers stress the presence of a family atmosphere that was supportive, coupled with high student expectations. Overall the teachers at School 4 articulated the same sentiment that the teachers from School 2 and 3 revealed.

Flexible Scheduling

When questions were asked regarding flexible scheduling, none of the teachers interviewed at School 4 expressed the usage of flexible scheduling to reduce transition time or to enhance curriculum integration which was comparable to the responses given from the previous 3 schools.

Regarding types of scheduling, block scheduling was the most highly used which was comparable to the 3 prior schools. One teacher stated:

We have 90 minute blocks with 3 teachers. The same teacher teaches both subjects (Social Studies and Science) so it allows more time to teach and 60 minutes is not enough time. (Teacher 3)

However, Teachers 2 and 4 discussed the usage of an A/B schedule:

Social Studies and Science teachers function on an A/B schedule. For example, Monday, Wednesday and Friday, are the scheduled days for one subject and Tuesday, Thursday and Friday are the scheduled days for the other subject. (Teacher 2)

They rotate on an A/B day for Social Studies and Science. (Teacher 3) The responses were similar to the teacher responses from School 1.

Lastly, the teachers at School 4 concurred with the 3 previous schools that more teaching time is allowed in block schedule.

Advisor/Advisee

As indicated in the previous 3 schools, an advisor/advisee program was not evident in School 4 but subsequently, the teachers interviewed discussed other ways to interact with students such as clubs and sports. However, in contrast to Schools 1, 2 and 3, the teachers interviewed at School 4 did not reveal a focus on high standards and expectations for students despite the lack of a set program.

Integrative, Exploratory, Challenging Curriculum

When answering questions regarding an integrative curriculum, counter to Schools 1, 2, and 3, School 4 teachers did not emphasize real world application in their responses. One teacher articulated and others concurred:

I feel the middle school curriculum should emphasize real world application of concepts and what they are going to learn in the future. (Teacher 5)

I relate lesson to real life. (Teacher 1)

I make my content global and use Science in the news and relate things to them. (Teacher 2)

I take the learning beyond the classroom by giving them real life examples such as shopping in the circulars that come in the mail. (Teacher 3)

Teacher 1 discussed the integration of other subjects as a way to expose students to various careers. This response was unlike the responses from other teachers within School 4 and the other 3 schools as well.

As indicated in the responses from the 3 previous schools, an exploratory curriculum was represented by exposure to various classes, guest speakers, and the arts. The quote by a teacher at School 4 revealed a different way to extend the curriculum beyond the classroom:

To take the learning beyond the classroom, I teach them about giving to give; we decorate the classroom for other students to show them that we care. (Teacher 5)

As stated previously, control of their learning is the focus of a challenging curriculum. Unlike the teacher responses from Schools 2 and 3, but similar to the responses from School 1, a challenging curriculum was not emphasized. Several of the teachers at School 4 discussed how they questioned their students but did not reveal giving ownership of the learning to the students. However, the other teachers gave

responses that demonstrated a slight shift of responsibility to the students. This teacher's quote captured the essence of a challenging curriculum:

> *I feel that the middle school curriculum should have a holistic approach. The students should be able to do higher order thinking and be able to grasp what is being taught.* (Teacher 7)

Overall, the teachers who participated in the interviews at School 4 had a relationship for learning within their classroom. Each teacher expressed the usage of common planning time; however the utilization of this time was not as inclusive and collaborative as the other schools demonstrated. The observations and document review supported the evidence of an emerging school regarding instructional practices and systemic change.

Cross Case Synthesis

Table 15 represents a summary across all four schools for each feature. The right column represents each school and the next four columns represent the average score for each middle school feature. For example, School 1 had an implementation score 2.2 for interdisciplinary teaming. This score derived from the average of the 7 teachers interviewed at School 1. The last column named Total Score indicates the total score for each school. As seen in row 1, the total score for School 1 is 7.3, which represents the total for columns 2 through 4.

Despite the differences among the four schools, there were several similarities that were identified. First, all four schools indicated a relationship of learning was present throughout the total school environment. As indicated within Table 15, interdisciplinary teaming received the highest score for each school.

Table 15

Middle School Features Implementation Summary Across Schools

Middle School Feature	Feature 1 Score	Feature 2 Score	Feature 3 Score	Feature 4 Score	Total Score
School 1	2.2	2.1	1	2	7.3
School 2	2.7	2	1	2.1	7.8
School 3	2.4	2.2	1	2.5	8.1
School 4	2.3	1.6	1	1.5	6.4

Note. Feature 1-Interdisciplinary Teaming; Feature 2-Flexible Scheduling; Feature 3-Advisor/Advisee; Feature 4-Integrative, Exploratory and Challenging Curriculum.

Regarding an advisor/advisee program, all the teachers felt, in the absence of a formal program, they created ways to meet the needs of their students as a group or individually. Regarding scheduling, at all four schools, the teachers interviewed stated that the design of their master schedule was to allow more time for instruction. The application of real world connections was viewed as an effective way to teach adolescents at all four schools. Even though the teachers conveyed various examples of how they connected the learning by sharing real examples, they felt it was the most beneficial strategy for integrating curriculum. At all four schools, the most consistent barrier presented was the inability to extend the learning beyond the classroom. Several teachers expressed concerns about the impact of time, lack of field trips, and pressure of increased accountability.

To validate the data collected from the teachers at each school, every principal was interviewed as well. However, the principal data were analyzed last to avoid unfair influence. The data for each principal are presented in Table 16.

In comparison, the school data collected in Table 15-Middle School Features Implementation Summary Across Schools closely aligns with the principal data collected in Table 16-Principal Middle School Features Implementation Summary.

Regarding interdisciplinary teaming, each principal described a positive environment and relationships for learning throughout the building. PLCs were a focus for each principal as they related to common planning time. However, Principal 2 and Principal 3 emphasized a connection between common core curriculum and collaboration.

Table 16

Principal Middle School Features Implementation Summary

Middle School Feature	Feature 1 Score	Feature 2 Score	Feature 3 Score	Feature 4 Score	Total Score
Principal School 1	3	2	1	1	7
Principal School 2	2	3	1	2	8
Principal School 3	3	3	1	2	9
Principal School 4	3	1	1	1	6

Note. Feature 1-Interdisciplinary Teaming; Feature 2-Flexible Scheduling; Feature 3-Advisor/Advisee; Feature 4-Integrative, Exploratory and Challenging Curriculum.

Block scheduling was the type of schedule most often identified for each school which aligned with the teacher data collected for all four schools. Unlike the other principals, Principal 2 contended, "These large blocks of time allow for less transition time," and "The schedule was developed based on student needs and what teachers are licensed to teach." Also, similar to the teacher data collected at School 3, Principal 3 explained the "Patriot Period" concept.

Based on the principal data collected, none of the schools selected had an advisor/advisee program. This finding mirrored the teacher interviews.

Lastly, regarding curriculum, the principals discussed in more detail how teachers took the learning beyond the classroom which was an opposite view than that presented by the teachers interviewed. Similarly, each principal described how data were used to enhance the instruction within the classroom.

The cross-case synthesis was completed by an analysis of all four schools using implementation scores, growth levels, SES (socio-economic status) percentages, school size, and demographics. Table 17 depicts the cumulative information collected from the research conducted and district resources.

As indicated by Table 17, the implementation scores for the four schools ranged from 6.5 to 8.1. The highest possible score that could be achieved for each school was 20. In a comparison of the implementation scores and the growth levels, it appears that School 3 has the highest implementation score and the second highest growth level. However, School 4 has the lowest implementation score and the highest growth level. Unlike Schools 3 and 4, Schools 1 and 2 have similar implementation scores and growth levels.

Table 17

Summary of Implementation Scores, Growth Levels, and Rival Explanatory Variables

School	Implementation Score	Growth Level	SES Level	Size	Urban/Rural
1	7.3	54.9%	67%	334	Rural
2	7.6	56.5%	43%	760	Urban
3	8.1	65.5%	67%	630	Urban
4	6.5	75.8%	28%	683	Rural

Note. Implementation Score- The final score as determined by data compiled using descriptive data from each selected middle school.

Growth Level-A school's ABCs growth status is determined by its growth calculation and its change ratio (a measure of the percent of students meeting their individual growth targets) (see Appendix H).

SES (Socioeconomic Status)-Socioeconomic status (SES) is the measure of the influence that the social environment has on individuals, families, communities, and schools (Brogan, 2009).

Urban/Rural-Census classification based on the number of people that live in a particular demographic location (Meserole, 1938).

Regarding implementation scores, SES levels and growth scores, Schools 1 and 3 have the same SES level and less than a 1 point difference between the implementation scores. However, School 3 has a much greater growth level. School 2 has an implementation score similar to School 1. However, the SES level is more than 20 percentage points lower and the growth levels are similar. School 4 seems to have the largest discrepancy when the implementation score is compared to the SES level. As stated earlier, School 4 has the lowest implementation score, lowest SES level and the highest growth level.

When assessing school sizes and implementation scores, it appears School 1 is an outlier when compared to the other 3 schools. Nonetheless, School 1's implementation score is similar to School 2 with only a .3 discrepancy. School 3 and School 4 are similar in size however, the largest difference in implementation scores exist between these two schools; 1.5 points and School 4 with the highest Growth Score.

Lastly, on the subject of demographic location, the table reveals that the two urban schools, School 2 and 3, have the highest implementation scores when compared to the two rural schools, School 1 and 4, but once again School 4 has the highest Growth Level.

Summary

The data gathered from the teachers and principals at all four schools represent the beliefs of each school environment regarding the key features of the middle school concept and its implementation. The cumulative responses reveal valuable information that depicts the foundation needed for adolescent development within each school.

Six themes emerged from the teacher interviews held for each school. The themes were (a) relationship building, (b) common planning time, (c) PLCs (professional learning communities), (d) lack of an advisor/advisee program, (e) block scheduling, and (f) real world application. In the following chapter, I will answer the study question, summarize the findings from the data gathered, address all rival explanations, discuss implications for middle school leaders and recommend suggestions for future studies.

CHAPTER 5: DISCUSSIONS AND RECOMMENDATIONS

The purpose of this research study was to determine whether the implementation of key middle school features; (a) interdisciplinary teaming, (b) flexible scheduling, (c) advisor/advisee relationships, and an (d) integrative, exploratory and challenging curriculum, had an impact on middle school student achievement when implemented fully.

The middle school concept was developed to provide a blend of personalization (child centered techniques, inclusive practices and nurturing environments) and specialization (subject centered, building skill and knowledge in preparation for college/workforce) for adolescents and to increase middle school student achievement (Juvonen et al., 2004).

Four major studies; (a) Lee and Smith (1993), (b) Felner et al. (1997), (c) Mertens et al. (1998) and (d) Backes et al. (1999), investigated the relationship between the middle school concept and middle school student achievement. Even though these studies revealed positive results similar to the studies conducted in the last four years by Cook and Faulkner (2009) and Watts et al. (2010), disagreement still exist regarding whether middle schools that fully implement the middle school idea produce better student gains (Anfara & Lipka, 2003; Yecke, 2005). A local LEA in eastern North Carolina engaged in various conversations regarding the best way to serve the needs of 6th through 8th grade students.

As mentioned previously, the researcher conducted an explanatory, multiple case study utilizing interviews, observations, and document reviews of four middle schools in a local LEA. The data was used to determine whether student achievement

was impacted by the implementation of key middle school features. From the data collection results, themes emerged that described the varied implementation scores among the four selected middle schools.

Research Question

The research question addressed by this study was as follows: Do *middle schools* that fully implement the middle school concept produce outcomes that more closely match the outcomes produced by *middle schools* that implement the middle school concept less fully?

Summary of Findings

To answer the research question, an examination of the implementation of the four key features was conducted in the four middle schools. Next, a comparison of the results from each selected middle school was conducted using the collected data and other variables such as SES, school size and demographics.

To explore this question, data was compiled and analyzed using descriptive data from each selected middle school to determine an implementation score for each key feature and an overall score for each school. The implementation scores ranged from 6.5 to 8.1 on a scale from four to twenty. This range suggests that the key features are present within the selected schools however the low implementation scores imply that the features are not implemented fully.

Even though the implementation scores appeared to be within the low range, when the individual school data were further analyzed, the data revealed differences and similarities among each of the key features within each individual school.

Based on the data collected for Table 15, interdisciplinary teaming received the highest implementation score for three out of the four selected middle schools. For School 3, it was the 2nd highest. The interview data revealed that relationship building and common planning time were part of the daily interactions within each selected middle school.

Each middle school makes a conscious effort to meet students' social and emotional needs through individual conversations, group discussions or structured opportunities (groups/counselor). Common planning time is used to plan lessons, discuss students, and plan team events. However, one theme emerged that suggest a shift in the use of common planning time.

Professional Learning Communities (PLCs) emerged as an important component in the use of common planning time in three out of four of the selected middle schools. PLCs, as they are commonly called, are used to collaborate with grade level and/or subject area teachers to develop common formative assessments, discuss data, identify student needs and determine the best instructional strategies to meet the student needs. Data collected from School 4 revealed common planning time is mostly used for meetings, parent conferences, and general planning however the interviews, document review and observations indicated a change is occurring regarding effective PLCs.

Flexible scheduling and an integrative, exploratory and challenging curriculum received similar implementation scores within all four schools as shown in Table 15. The implementation scores for flexible scheduling ranged from 1.6 to 2.2 and the implementation scores for an integrative, exploratory and challenging curriculum ranged from 1.5 to 2.5. Based on information obtained from the interviews, document reviews,

and observations, increased usage of block scheduling and real world application were the two themes that emerged from the descriptive data.

Each middle school uses block scheduling as the most common way to schedule students within teams and grade levels. More time for teaching was the overarching result of block scheduling within each school. The descriptive data indicates that all teachers need more time to teach the concepts and several stated that standardized testing is driving the need for this type of schedule.

Real world application of concepts is key to building the foundational knowledge of all students. In the past two years, teachers within this LEA began using a new standard course of study that is based on *Common Core* and *Essential Standards.* This new standard course of study assists teachers in preparing students for success in the 21st century and real world application plays an important role within the standards (Sloan, 2010). In each of the selected middle schools, real world application was present based on the interviews, document reviews, and observations. The primary difference between the four schools was in the degree of implementation of real world application. As indicated above, there was a 1 point difference between the lowest (1.5) and highest score (2.5). The school with the highest score for this feature, School 3, had significant evidence of real world application. The teachers incorporate the interest of the students, create tiered assignments and allow students to take charge of their learning by creating self-evaluating charts. Many of the teachers within the school within the lowest implementation indicated that they use questions to integrate real world application but they did not specify giving ownership of the learning to the students.

Implementation of an advisor/advisee program received the lowest score (1) when compared to the other 3 features. As indicated earlier, relationship building was an emergent theme for all four middle schools. The teachers clearly indicated an understanding of the emotional, developmental, and social needs of adolescents. Based on the data collected, none of the schools have a formal advisor/advisee program, however, relationships are built through one-on-one discussions, interest surveys, class meetings and arrangements such as club advisor or coach.

Conclusions

A review of the cumulative data collected for all four selected middle schools indicated that School 2 and School 3 have the highest implementation scores (7.6 and 8.1 respectively) however, when correlated with the student achievement scores (56% and 65.5%), these results do not support my guiding hypothesis. Correspondingly, School 4 has the lowest implementation score (6.5) and the highest student achievement score (75.8%) which also does not support my guiding hypothesis. However, School 1 has the second lowest implementation score (7.3) and the lowest student achievement score (54.9%) which closely comports with my guiding hypothesis.

Rival Explanations

The guiding hypothesis for this dissertation stated that if all the key features of the middle school concept were fully implemented, middle grades students achieved at levels similar or better than middle schools that implemented the concept less fully. The guiding hypothesis was not substantiated.

The socioeconomic level of the selected middle schools is the most obvious rival explanation. School 4 has the lowest implementation score for the key features of the

middle school concept, the highest student performance (75.8%) and the lowest SES

percentage (28%). One possibility for this finding could be that the students who attend

School 4 have family backgrounds with accessibility to various resources (education

and income) that broaden their educational experiences. On the other hand, in the case

of School 3, it could be that the students are exposed to the various educational

experiences while within the school setting that enhance their ability to learn regardless

of their family background.

Another possible rival explanation for the findings is school size. School 1 is the

smallest middle school within this study. In comparison to School 4 which had a lower

implementation score, it could be that the personal attention that the students receive

within the school setting at School 1 caused the implementation score for School 1 to be

higher than the implementation score for School 4 while still achieving relatively high

growth.

A final possible rival explanation relates to the nature of the community served by

the schools. School 2 and 3 are located in urbanized communities. Both communities

have the ability to be affected by social ills such as drugs, gangs and crimes however;

both schools have the highest implementation scores in the study. It could be possible

that societal ills cannot be completely overcome by implementation of the middle school

concept.

As stated earlier, because this study was an explanatory study, the ability to rule

out rival explanations was beyond the capacity of this study.

111

Discussion

The problem of practice that was researched within this study was to determine whether, in this LEA, students in middle schools that fully implemented the middle school concept performed just as well as or better than students in K-8 schools. Based on the information provided in the literature review, middle school students in middle schools performed just as well if not better than middle school students in K-8 schools in which the key features of the concept were implemented (Backes et al., 1999; Felner et al., 1997; Lee & Smith, 1993; Mertens et al., 1998). Therefore the study evolved into an intense examination of whether the degree of implementation of the key features had an impact on middle school student outcomes.

The selected key features are a perfect combination of the personalization and specialization components that are needed to educate adolescents. Often times, many educators believe that middle school students do not need to talk to someone about their problems nor do they need to work with others during a time when they are expected to be independent. A middle school should provide a safe place for adolescents to experiment, reflect, explore and think critically. Interdisciplinary teaming, flexible scheduling, advisor/advisee programs, and an integrative, challenging, and exploratory curriculum are tools that can help build the safe haven that adolescents need to thrive and become productive citizens.

Recommendations

The emergence of the rival explanationof socioeconomic issues impact onmiddle school achievement highlights the necessity of an educational environment that attends to social, emotional, developmental, and academic needs. Continuous professional

development related to the developmental needs of middle school students is necessary. Often times, educators receive strategies during their pre-service years regarding developmentally appropriate activities for adolescents. New ways of the teaching the 21st century middle student should be explored. Middle school students today are very knowledgeable of the latest technology gadget however many of them have not been taught how to think critically and we have to ensure that our middle school educators are knowledgeable as well. Also, professional development on cultural diversity and poverty should be incorporated to enhance the knowledge base of middle school educators. Middle school students need an educational environment that attends to their social, emotional, developmental, and academic needs.

Administrators and teachers should continue to use Professional Learning Communities as an avenue to analyze data, collaborate with others and discuss the needs of middle school students. By moving away from the common practices of grading papers, calling parents, and discussing items that cannot be controlled; middle school educators can better utilize their time to have a positive impact on daily instruction.

In the absence of a designated advisor/advisee program, this study revealed that relationship building plays an important role within the middle school environment. Even though the demands of accountability are forever present within every school environment, it is important that middle school students have an opportunity to interact with adults and other students to meet their social needs. Finding a creative way to carve out time daily for middle school students to interact in various ways such as

intramurals, clubs, and other activities based on student interest, would enhance the middle school learning environment.

Finally, this study emphasized the views of teachers and principals within the four middle school buildings. Viewing the needs of middle school students through the lens of educators that understand the middle school idea is important. Special people are needed to work with middle school students. A commitment to educate adolescents must be transparent, sincere, and by any means necessary to reach and educate.

REFERENCES

Abella, R. (2005). The effects of small K–8 centers compared to large 6–8 schools on student performance. *Middle School Journal, 37*(1), 29–35.

Akos, P., Creamer, V., & Masina, P. (2004). Promoting connectedness and belonging in middle school orientation. *Middle School Journal, 36*(1), 43-50.

Alexander, W. M. (1965). The junior high school: A changing view. In G. Hass, & K. Wiles (Eds.) *Reading in curriculum*. Boston, MA: Allyn & Bacon.

Alexander, W. M., & George, P. S. (1981). The exemplary middle school. New York, NY: Holt, Rinehart, Winston.

Alexander, W., & McEwin, K. (1989). Schools in the middle: Progress 1968-1988. Schools in the Middle: A Report on Trends and Practices. National Association of Secondary School Principals, Reston, VA.

Alexander, W. M., & Williams, E. L. (1965). Schools for the middle years. *Educational Leadership, 23*(3), 217-223.

Andrews, P. G., & Jackson, A. W. (2007). Turning Points 2000: Looking back and looking forward. *Middle School Journal, 39*(2), 62-68.

Anderman, E. M., Maehr, M. L., & Midgley, C. (1999). Declining motivation after the transition to middle school: Schools can make a difference. *Journal of Research and Development in Education, 32*(2), 627-658.

Anfara, V. (2006). Research summary: Advisory program. Retrieved from http://www.nmsa.org/Research/ResearchSummaries/AdvisoryPrograms/ tabid/812/Default.aspx

Anfara, V. A., Jr., & Lipka, R. P. (2003, September). Relating the middle school concept to student achievement. *Middle School Journal*, *35*(1), 24-32.

Arhar, J. (1997). The effects of interdisciplinary teaming on teachers and students. In J. Irvin (Ed.), *What current research says to the middle level practitioner* (pp. 49-55). Columbus, OH: National Middle School Association.

Armstrong, D. G. (1977). Team teaching and academic achievement. *Review of Educational Research, 47*(1), 65-86.

Armstrong, T. (2006). *The best schools.* Alexandria, VA: Association for Supervision and Curriculum Development.

Ayers, L. (1994). Middle school advisory programs: Findings from the field. *Middle School Journal, 25*(3), 8-14.

Backes, J., Ralston, A., & Ingwalson, G. (1999). Middle level reform: The impact on student achievement. *Research in Middle Level Education Quarterly*, *22*(3), 43-57.

Baker, J. H. (1913). Report of the Committee on the National Council of Education on Economy of Time in Education. Bulletin 1913 no 38. Washington, DC: Department of Interior Bureau of Education.

Beane, J. A. (2006). Pickle in the middle. California English. Sacramento, CA.

Bergman, A. (1992). Lessons for principals from site-based management. *Educational Leadership, 50*(1), 42-43.

Bickmore, D., Bickmore, S. T., & Hart, L. E. (2005). Middle level interdisciplinary teaming as an induction practice. *NASSP Bulletin, 89*(644), 30-53.

Bradley, A., & Manzo, K. K. (2000). The weak link. *Education Week Supplement, 20*(5),

3-8. Retrieved from

http://web.ebscohost.com.jproxy.lib.ecu.edu/ehost/delivery?vid=13&hid=

7&sid=4e47c567-aa7aa.

Brazee, E. (2000). Exploratory curriculum in the middle school. Champaign, IL: Eric

Clearinghouse on Elementary and Early Childhood Education. (ERIC Document

Reproduction Service No. ED447970).

Brogan, R. (2009). Socioeconomic status. The Gale Group. Retrieved from

http://www.education.com/reference/article/socioeconomic-status/

Brough, J. (1995). Middle level education: An historical perspective. In M. Wavering

(Ed.) *Educating young adolescents: Life in the middle* (pp. 27-51). New York:

Garland.

Brown, D. F. (1999). The value of advisory sessions: Perceptions of young adolescents

at an urban middle school. *Research in Middle Level Education Quarterly, 22*(4),

41-57.

Brown, D. F. (2001). Middle level teachers' perception of the impact of block scheduling

on instruction and learning. *Research in Middle Level Education Annual, 24,*

121-141.

Canady, R. L., & Rettig, M. D. (1995). The power of innovative scheduling. *Educational

Leadership, 53*(3), 4-10.

Carnegie Council on Adolescent Development. (1989). *Turning points: Preparing American youth for the 21st century: A report of the task force on education of young adolescents.* Washington, DC: Carnegie Council on Adolescent Development.

Clarke, J. (2003). Changing systems to personalize learning: Introduction to the personalization workshops. The Education Alliance at Brown University.

Clark, S. N., & Clark, D. C. (1990). *Restructuring middle schools: Strategies for using turning points.* Reston, VA: NASSP.

Clark, S. N., & Clark, D. C. (1993). Middle level school reform: The rhetoric and the reality. *The Elementary School Journal, 93*(5), 447-460.

Clark, S. N., & Clark, D. C. (1994). *Restructuring the middle level school: Implications for school leaders.* Albany, NY: State University of New York Press.

Cobb, C. W. (1992). *Responsive schools, renewed communities.* San Francisco: ICS Press.

Coladarci, T., & Theodore –Hancock, J. (2002). The (limited) evidence regarding effects of grade-span configurations on academic achievement: What rural educators should know. *ERIC Digests*, August 2002.

Cole, C. (1994). Teachers' attitudes before beginning a teacher advisory program. *Middle School Journal, 25*(5), 3-7.

Cook, C. M., & Faulkner, S. A. (2009). The use of common planning time: A study of two Kentucky Schools to Watch. Paper presented at the annual meeting of the American Educational Research Association, San Diego, CA.

Cotton, K. (2001). New small learning communities: Findings from recent literature. *School Improvement Research Series.* Portland, OR: Northwest Regional Educational Laboratory.

Cuban, L. (1992). What happens to reform that last? The case of the junior high school. *American Educational Research Journal, 29*(2), 227-251.

Daniels, L. (2007). Research summary: Flexible scheduling. Retrieved from http://www.nmsa.org/Research/ResearchSummaries/FlexibleScheduling/ tabid/1140/Default.aspx

DeRouen, D. A. (1998). Maybe it's not the children: Eliminating some middle school problems through block scheduling. *Clearing House, 71*(3), 146-148.

Eichorn, D. H. (1966). *The middle school.* New York, NY: Center for Applied Research in Education, Inc.

Elovitz, L. (2007). Middleschoolosaurus Rex: Is the middle school becoming extinct? *Principal Leadership, 7*, 26-30.

Epstein, J. L., & Mac Iver, D. J. (1990). *Education in the middle grades: National practices and trends.* Columbus, OH: National Middle School Association.

Erb, T. O. (1997). Thirty years of attempting to fathom teaming: Battling potholes and hairpin curves along the way. In T. Dickinson & T. Erb (Eds.), *We gain more than we give: Teaming in middle schools* (pp. 19-59). Westerville, OH: National Middle School Association.

Erb, T. O. (2000). Do middle school reforms really make a difference. *The Clearing House, 73*(4), 194-200.

Esposito, J., & Curcio, C. (2002). What works and what doesn't work in five teacher

advisory programs. *Middle School Journal, 34*(1), 27-35.

Felner, R., Jackson, A., Kasak, D., Mulhall, P., Brand, S., & Flowers, N. (1997).

The impact of school reform for the middle years: A longitudinal study of a

network engaged in turning Points-based comprehensive school

transformation. *Phi Delta Kappan, 79*, 528-32, 541-50.

Fenwick, J. (1992). *Managing middle grade reform-An "American 2000" Agenda.* San

Diego, CA: Fenwick and Associates.

Fleming, J. A. (2005). A cautious opening move into K-8. *School Administrator*,

62(3), 12.

Flowers, N., Mertens, S. B., & Mulhall, P. F. (1999). The impact of teaming: Five

research-based outcomes. *Middle School Journal, 32*(2), 52-59.

Franklin, B. J., & Glascock, C. H. (1998). The relationship between grade

configuration and student performance in rural schools. *Journal of Research in

Rural Education, 14*(3), 149-153.

Galassi, J., Gulledge, S., & Cox, N. (1997). Middle school advisories: Retrospect and

prospect. *Review of Educational Research, 67*(3), 301-338.

George, P., & Alexander, W. (1993). *The exemplary middle school.* Orlando, FL: Holt,

Rinehart, and Winston, Inc.

George, P. S., & Alexander, W. M. (2003). *The exemplary middle school* (3rd ed.). Fort

Worth, TX: Thompson/Wadsworth.

George, P., Stevenson, C., Thomason, J., & Beane, J. (1992). *The middle school and

beyond.* Alexandria: VA, ASCD.

Goldberg, M. F. (1998). *How to design an advisory system for a secondary school.* Association for Supervision and Curriculum Development. Alexandria, VA.

Hackmann, D. G., Petzo, V., Valentine, J., Clark, D., Nori, J., & Lucas, S. (2002). Beyond interdisciplinary teaming: Findings and implications of the NASSP national middle level study. *NASSP Bulletin, 86*(632), 33-47.

Hansen, S. D. (2009). The American evolution of teaming. *Principal Leadership, 9*(7), 32-36.

Hartzler, D. H. (2000). *A meta-analysis of studies conducted on integrated curriculum programs and their effects on student achievement.* Unpublished EdD Dissertation, Indiana University, Bloomington.

Harrington-Lueker, D. (2000). The middle years. *American School Board Journal, 187.*

Harris, C. H. (1998). *Current scheduling, teaming, and curriculum practices in Virginia's middle schools. Dissertation.* Virginia Polytechnic Institute and State University.

Harris, D. A. (2007). *Effect of grade configuration on student achievement.* Paper presented for LEED 8991. East Carolina University.

Haskins, A. W. (1996). Planning that works: Developing schools for the middle-level learner. *School Administrator, 53*(6), 10-12.

Hill, A. B. (1965). The environment and disease: Association or causation? *Proceedings of the Royal Society of Medicine, 58*(5), 295-300.

Hough, D. L. (1995). The elemiddle school: A model for middle grades reform. *Principal, 74*(3), 7-9.

Hough, D. L. (2005). The rise of the "elemiddle" school. *The School Administrator, 62*(3), 10-14.

Howley, C. B. (2002). Grade –span configurations. *The School Administrator, 59*(3), 24-29.

Jackson, A. W., & Davis, G. A. (2000). *Turning points 2000: Educating adolescents in the 21st century*. New York: Teachers College Press.

Juvonen, J., Le, V. N., Kaganoff, T., Augustine, C., & Constant, L. (2004). *Focus on the wonder years: Challenges facing the American middle school.* Santa Monica, CA: RAND Corporation. Retrieved from http://www.rand.org/publications/MG/MG139?MG139.pdf

Lambert , M. B., & Lowry, L. K. (2004). *Knowing and being known: Personalization as a foundation for student learning.* Seattle, WA: Small School Project.

Lee, V. E., & Smith, J. B. (1993). Effects of school restructuring on the achievement of middle-grades. *Sociology of Education, 66*(3), 164-187.

Lounsbury, J. H. (1992). Perspectives on the middle school movement. In J. L. Irvin (Ed.) *Transforming middle level education: Perspectives and possibilities* (pp. 3-15). Boston: Ally and Bacon.

Lounsbury, J. H. (2000). The middle school movement: "A change to keep." *Clearing House, 73*(4), 193.

Lounsbury, J., & Clark, D. (1990). *Inside grade eight: From apathy to excitement.* Reston, VA. National Association of Secondary School Principals.

Lutz, R. A. (2004). *Response of selected middle schools to the accountability demands of no child left behind within mathematics curriculum and instruction.* Unpublished EdD dissertation, University of Pittsburgh.

Mac Iver, D. J. (1990). Meeting the needs of young adolescents: Advisory

 groups, interdisciplinary teaching teams, and school transition programs.

Phi Delta Kappan, 71(6), 458-464.

Manning, M. (1993). Cultural and gender differences in young adolescents.

Middle School Journal, 25(1), 13-17.

Manning, M. L. (1994). Addressing young adolescents' cognitive development.

The High School Journal, 78(2), 98-104.

Manning, M. L. (2000). A brief history of middle school. *Clearing House, 73*(4), 192.

McClure, C. T. (2007). Linking the disciplines-and achievement. *District Administration,*

70-71.

McEwin, C. K., Dickinson, T. S., & Jacobson, M. G. (2004). *Programs and*

practices in K-8 schools: Do they meet the educational needs of young

adolescents? Westerville, OH: National Middle School Association.

Mertens, S., & Flowers, N. (2004). Middle school practices improve student

achievement in high poverty schools. *Middle School Journal, 35*(1), 33-43.

Mertens, S. B., Flowers, N., & Mulhall, P. F. (1998). *The middle start initiative,*

phase I: A longitudinal analysis of Michigan middle-level schools.

University of Illinois, Center for Prevention Research and Development.

Mertens, S. B., Flowers, N., & Mulhall, P. F. (2001). School size matters in

interesting ways: Research on middle school renewal. *Middle School*

Journal, 32(5), 51-55.

Meserole, W. H. (1938). What do you mean: Rural or urban? *Journal of Marketing, 2(3), 233-235.*

Middle schools-The emergence of middle schools, growth, and maturation of the middle school movement. (2010). Retrieved from http://education.stateuniversity.com/pages/2229/Middle-Schools.html

Mizell, H. (2005). Grade configurations for educating young adolescents: Are still crazy after all these years. *Middle School Journal, 37*(1), 14-23.

National Center for Education Statistics. (1988). *National educational longitudinal study of 1988.* Washington, DC: U. S. Department of Education.

National Center for Educational Statistics. (1999). *Third international mathematics and science study.* Retrieved from the National Center for Education Statistics Website: http//nces.ed.gov/timss/

National Forum to Accelerate Middle School Reform. (1998). Schools to watch criteria. Retrieved from the National Forum to Accelerate Middle Grades Reform Website: http://www.mgforum.org/Improvingschools/STW/STWcritieria.asp

National Middle School Association. (1995). *This we believe: Developmentally responsive middle level schools.* Columbus, OH: National Middle School Association.

National Middle School Association. (2003). *This we believe in action.* Westerville, OH: National Middle School Association.

North Carolina Department of Public Instruction. (1999). Assessment Brief, *5*(2).

Offenberg, R. M. (2001). The efficacy of Philadelphia's K-to-8 schools compared to middle grades schools. *Middle School Journal, 32*(4), 23-29.

Office of Program Policy Analysis & Government Accountability. (2005). K-8 schools

 may help districts improve student performance. Report No.05-02.

Pardini, P. (2002). Revival of the K-8 school. *The School Administrator, 59*(3), 6-12.

Pate, P. E., Homestead, E. R., McGinnis, K. L. (1997). *Making integrated curriculum*

 work: Teachers, students, and the quest for coherent curriculum. New York:

 Teachers College Press.

Petzko, V. (2004). Finding and implications of a national study of leadership in

 middle level schools: Teachers in middle level schools. *National*

 Association of Secondary School Principals Bulletin, 88(638).

Polite, M. M. (1995). Two cases of change: Understanding middle school reformation

 and transformation. *Middle School Journal, January,* 3-6.

Puttre, C. P. (2007). *Does the degree of implementation of the components of*

 the middle school design relate to high-stakes assessment scores in

 grade 8 reading and math? Unpublished EdD dissertation, Virginia

 Polytechnic Institute and State University.

Reeves, K. (2005). Figuring and reconfiguring grade spans. *The School Administrator,*

 62(3), 16-21.

Renchler, R. (2000). School organization: Grade span. Trends and issues.

 Retrieved from http://cepm.uoregon.edu/publications/roundup/S00.html

Russell, J. (1994). *An evaluation of middle level schooling: Implementation of*

 programming concepts in relation to student achievement. (ERIC Document

 Reproduction No.ED394620).

San Antonio, D. M. (2006). Broadening the world of early adolescents. *Educational Leadership, 63*(7), 8-13.

Seed, A. (1998). Free at last: Making the most of the flexible block schedule. *Middle School Journal, 29*(5), 20-21.

Seghers, M. M., Kirby, P. C., & Meza, J. (1997). More evidence for the implementation of middle level practices. *NASSP Bulletin, 81*(591), 99-107.

Shadish, W. R., Cook, T. D., & Campbell, D. T. (2002). *Experimental and quasi-experimental designs for generalized causal inference.* Boston: Houghton-Mifflin.

Shulack, K. (2000). *Perceptions of implementation of key middle school concepts and factors that support or hinder key programs.* Dissertations. Paper. 1334. http://scholarship.shu.edu/dissertations/1334

Silverman, D. (2008). *Interpreting qualitative data: Methods for analyzing talk, text, and interaction.* Thousand Oaks, CA: Sage Publications.

Sloan, W. (2010). Coming to terms with common core standards. *INFObrief*, *16*(4), 1–7. Alexandria, VA: ASCD. Retrieved from*www.ascd.org/publications/newsletters/policypriorities/vol16/issue4/full/Coming-to-Terms-with-Common-Core-Standards.aspx*

Sommerfield, M. (1995). More changes in middle schools needed, report urges. *Education Week, 15*(10), 7.

Spear, R. C. (1992). Middle level team scheduling: Appropriate grouping for adolescents. *Schools in the Middle, 2*(1), 30-34.

Stahler, T. M. (1992). A comparative analysis of specifically prepared and generally

      prepared middle school preservice teachers (Doctoral dissertation, Ohio State

      University). *Dissertation Abstracts International, 53*, 3877A.

Stipek, D. (2006). Relationship matter. *Educational Leadership, 64*(1), 46-49.

Strickland, B. (2005, February 21). Pitt County Board of Education. Meeting Minutes.

      Retrieved from the Pitt County Board of Education Agenda.

Toepfer, C. F. (1992). Middle level school curriculum: Defining the elusive. In J.

      L. Irvin (Ed.), *Transforming middle level education: Perspective and possibilities.*

      Needham Heights, MA: Allyn and Bacon.

Van Hoose, J. (1991). The ultimate goal: A/A across the day. *Midpoints, 2*(1), 1-7.

Vars, G. F. (1993). *Interdisciplinary teaching: Why and how.* Columbus, OH:

      National Middle School Association.

Warren, L., & Muth, K. (1995). The impact of common planning time on middle

      grade students and teachers*. Research in Middle Level Education*

      Quarterly, 18(3), 41-58.

Watts, C., Seed, A. H., & Franceschini, L. A. (2010). The middle school concept

      in practice: How Tennessee schools do it. *Current Issue in Middle Level*

      Education, 15(1), 61-68.

Weiss, C. C. (2008). Re-examining middle school effects: What the research

      says. *Principal, January/February 2008.*

Wihry, D. F., Coladarci, T., & Meadow, C. (1992). Grade span and eighth –grade

      academic achievement: Evidence from a predominantly rural state.

      Journal of Research in Rural Education, 8(2), 58-70.

Wiles, J., & Bondi, J. (1989). *Curriculum development: A guide to practice.*

     Merrill Publishing Company.

Williamson, R. (1993). *Scheduling the middle level school.* Reston, VA: National

     Association of Secondary School Principals.

Yecke, C. P. (2005). *Mayhem in the middle: How middle schools have failed*

     America-and how to make them work. Thomas B. Fordham, Washington, DC.

Yin, R. K. (2003). *Case study research: Design and methods* (3rd ed.). Thousand

     Oaks, CA: Sage.

Yin, R. K. (2009). *Case study research: Design and methods* (4th ed.). Thousand

     Oaks, CA: Sage.

APPENDIX A: PRINCIPAL AND TEACHER INTERVIEW PROTOCOLS

Principal Interview Protocol

School: **Principal:**   **Date:**

Key Features:
Interdisciplinary Teaming
Common Planning Time
Flexible Scheduling

Questions	Things to Listen For
How would you characterize the climate of your school? Probe: You mentioned………..Could you say a little more about what you mean by that?	**Inviting** **Conducive to learning** **Caring** **Open door policy** **Relationship building**
Do your students' emotional or psychological needs pose any special challenges for you and your teacher? If so, what kinds of needs? How do you address those needs?	**Need for independence** **Lack of self-esteem** **Self discovery** **Inconsistent behaviors** **Mood swings** **Advisory program** **Role playing** **Drama**
How about student's social needs? Probes: Is it important for the school to address those, or is it something that has to be taken care of at home? Is there any way to address those needs at school?	**Need to belong to a group** **Cooperative learning activities** **Peer approval** **Role Playing** **Opportunities for peer interaction** **Collaborative experiences** **Service projects Intramurals** **Open communication**
In delivering instruction, are there needs for certain types of teaching and learning approaches for kids in these early adolescent years? Probe: Can you explain that a little more?	**Empowered to learn** **Experiential learning** **Integrated learning** **Individualized instruction**

Do you all offer any sorts of special supports for kids in the school, or can you leave them pretty much on their own at this age? Probe: Can you say a little more about that?	**Adult guidance** **Learning partnerships with adults** **Advocacy** **Demonstration of empathy** **Mentoring** **Home based groups** **Role Modeling**
Do you make any particular arrangements to ensure that teachers get to know their students individually, or does that just happen naturally? Probes: Any special ways of grouping kids or building particular relationship?	**Interdisciplinary teaming** **Advocate** **Advisor/Advisee** **Role model** **Mentorship** **Special interest** **Heterogeneous grouping** **Ability grouping**
Are teachers organized into departments, teams, or some other kind of structure? Does your master schedule provide common planning time for all teachers? How is it utilized?	**Student-centered focus** **Study groups support needs of students** **Commitment to academic achievement** **Regular communication with parents** **Collaborative working environment** **Collaborative planning principal-team member** **Coordination of team activities** **Integration of curriculum, instruction, assessment**
Do kids move from class to class on a pretty tight 50-minute or one hour basis, or is the schedule more complicated than that? Why do you arrange the schedule the way you do? Probe: I am just trying to get a feeling for how you think about scheduling	**Optimize time, space, staff add variety to curriculum offerings** **Large blocks of time-less transition** **More student engagement**
What kinds of behavior do teachers in your school expect from your students? How does that look in practice? Probe: I'm just trying to make that a little bit more concrete.	**To be intellectually engaged** **To be responsible for behavior** **To develop initiative and responsibility** **Evidence-Understanding of needs by: learning styles, curriculum pacing, individualization, start where students are**
Do you or does the district provide	**Professional development on:**

teachers with any special kinds of professional development to help them understand and work with them better?	**Adolescent development (social, emotional, physical)** **Content areas** **Varied teaching strategies** **Technology**

Key Features:

Core of Common Knowledge
Exploratory, Integrative, and Challenging Curriculum

Questions:

How do you determine what is taught in your school each day?	**Embraces every aspect of educational program-school, district, state, and national standards** **Accomplishes the school mission** **Challenging, Integrative, Exploratory**
What kinds of teaching approaches would you like to see teachers using? Are they actually using those approaches?	**Integration** **Interdisciplinary** **Cooperative Learning** **Reciprocal teaching** **Setting objectives** **Simulations** **Socratic Seminar** **Providing feedback** **Student Teams** **Concept Attainment** **Cues, questions,** **Tournaments** **Frayer Model** **Advanced organizers**
How do you know students have mastered the skills taught in your school?	**Homework** **Teacher made tests** **Observation Checklists** **Classwork** **Standardized Tests Personalized** **Educational Plan** **Projects** **Benchmark testing** **Student Self Evaluation**

If students are not learning, what changes are made within your school?	**Relevance to students-provide learning experiences that integrate and draws from all disciplines** **Gear to various levels of understanding** **Enable students to be responsible for own learning** **Collaboration among all stakeholders** **Teach skills that address the "why" and the "how"** **Individualization** **Measured by: standardized assessments, portfolios, grades**
Are you all able to do anything to help students take their learning beyond the classroom?	**Service projects** **Apprenticeships** **Shadow studies**
Do students have any opportunities to be exposed to various careers? How about the arts? How about community or social service? Physical activities?	**Options that allow students to discover talents, interest, values, and preferences** **Involvement in the arts, physical activities, social service, vocational skills**

Key Features:

Advisor/Advisee

Questions: **Things to listen for:**

How many of your teachers are middle school certified? How many teachers have elementary certification? Secondary certification?	**Number of elementary school certified teachers** **Number of middle school certified teachers** **Number of high school certified teachers** **Certified by: Approved program, Lateral Entry, Praxis**

What type of professional development has been provided for teachers within your school? District?	**Adolescent development (Social, Emotional, Physical)** **Content area** **Varied teaching strategies** **Technology** **SIOP**
What programs do you have within your school that provides students an opportunity to interact with adults?	**Advisor/Advisee** **Mentoring** **Role Modeling** **Home based groups**

Teacher Interview Protocol

School: **Teacher:**   **Date:**

Key Features:
Relationships for learning
Interdisciplinary Teaming
Common Planning Time
Flexible Scheduling

Questions and Probes   **Things to listen for:**

What is the climate of your school? Probe: You mentioned____, could your say a little more about what you meant by that?	**Inviting** **Conducive to learning** **Caring** **Open door policy** **Relationship building**
Do your students' emotional or psychological needs pose any special challenges for you as a teacher? If so what kinds of needs? How do you address those needs? Probe: How do you do that? Can you say a little more?	**Need for independence** **lack of self-esteem** **Self discovery** **inconsistent behaviors** **Mood swings** **Advisory program** **Role playing** **Drama**

How do you address students' social needs? Is that important or is that to be taken care of at home? Is there any way for the school to address this?	**Need to belong to a group** **Cooperative learning activities** **Peer approval** **Role Playing** **Opportunities for peer interaction** **Collaborative experiences** **Intrumals**
In delivering instruction, are there needs for certain types of teaching and learning approaches for adolescents? Probe: Tell me more.	**Empowered to learn** **Experiential learning** **Integrated learning** **Individualized instruction**
Do you have an arrangement to get to know your students individually or does it just happen? Any special ways of grouping students or building particular relationships? Are you organized into departments, teams, or some other kind of structure? Does your master schedule provide common planning time for all teachers? How is it utilized?	**Advocate** **Mentor** **Advisor/Advisee** **Role model** **Interdisciplinary teams** **Departmentalized by subject** **Student-centered focus** **study groups support needs of students** **Commitment to academic achievement** **Regular communication with parents** **Collaborative working environment** **Regular communication with parents** **Collaborative planning principal-team member** **Coordination of team activities** **Integration of curriculum, instruction, assessment**
Do students move from class to class on a pretty tight 50 minute or one hour basis, or is the schedule more complicated than that? Why is your schedule the way that it is? Probe: I am just trying to get a feel for how you think about scheduling.	**Optimize time, space, staff add variety to curriculum offerings** **Large blocks of time-less transition** **More student engagement**

	To be intellectually engaged To be responsible for behavior To develop initiative and responsibility Evidence-Understanding of needs by: learning styles, curriculum pacing, individualization, start where students are

Key Features:

Core of Common Knowledge
Exploratory, Integrative, and Challenging Curriculum
Assessment of Learning
Varied Teaching Approaches
Assurance of Success for All

Questions: **Things to listen for:**

Questions:	Things to listen for:
How do you determine what is taught in your class each day?	**Embraces every aspect of educational program-school, district, state, and national standards** **Accomplishes the school mission** **Challenging, Integrative, Exploratory**
What kinds of teaching approaches do you use? What evidence do you have to prove that you are actually using those approaches?	**Integration** **Lesson Plans** **Interdisciplinary** **Units** **28 strategies**
How do you know that your students have mastered the skills taught in your classroom?	**Homework Teacher made tests** **Observation Checklists** **Classwork** **Standardized Tests** **Personalized Educational Plan** **Projects** **Benchmark testing** **Student Self Evaluation**

If students are not learning, what changes are made within your classroom?	**Relevant to students-provides learning experiences that integrate and draws from all disciplines Geared to various levels of understanding Enables students to be responsible for own learning Collaboration among all stakeholders Measured by: standardized assessments, portfolios, grades**
How is the instruction adapted to assure success for all students? How is it measured?	**Skills are taught and learned in context addressing the "why and the "how" individualized**
What does the middle school curriculum emphasize within your school?	**Connection to skills and concepts to real world situations Challenging, Integrative, Exploratory Individualized Instruction Reflection on learning**
How are students grouped within your school?	**Heterogeneously Ability grouping Special interest**
What research based teaching strategies used in your school?	**Cooperative Learning Reciprocal teaching Setting objectives Simulations Socratic Seminar Providing feedback Student Teams Concept Attainment Cues, questions, tournaments Frayer Model Advanced organizers**
Are you able to do anything to help students take their learning beyond the classroom?	**Service projects Apprenticeships Shadow studies**
Do students have any opportunities to be exposed to various careers? How about the arts? How about the community or social service? Physical activities?	**Options that allow students to discover talents, interest, values, and preferences Involvement in the arts, physical activities, social service, vocational skills**

Key Features:

Advisor/Advisee

Questions:	Things to listen for:
Are you completely certified to teach middle school students? If so how were you certified? Do you have elementary certification? Secondary certification?	**Elementary school certified** **Middle school certified** **High school certified** **Certified by: Approved program,** **Lateral Entry, Praxis**
What type of professional development has been provided within your school? District?	**Adolescent development (Social, Emotional, Physical)** **Content area** **Varied teaching strategies** **Technology** **SIOP**
What programs do you have within your school that provides students an opportunity to interact with adults?	**Advisor/Advisee** **Mentoring** **Role Modeling** **Home based groups**
What programs do you have within your school that provides students an opportunity to interact with adults?	**Advisor/Advisee Mentoring Role Modeling Clubs**

APPENDIX B: DOCUMENT REVIEW

School_____ **Date**_____

Key Features Documents **Notes** Interdisciplinary Teaming Common Planning Time Flexible Scheduling Relationships for Learning	Master Schedule Team Structure Team Meeting Minutes Advisor/Advisee Schedule Parent Communication Logs Team Activities-Service Projects, Intramurals, etc Counseling Schedule Memos to Parents Communication Folders Business Partnerships Volunteer Log				

Document Review:

School_____ **Date**_____

Key Features	Documents	Notes			
Core of Common Knowledge Exploratory, Integrative, and Challenging Curriculum	Copy of School Improvement Plan SIT minutes Copies of Pacing guides, lesson plans, and thematic units Revised Blooms Question stems Copy of Master schedule Assessments: Standardized testing results, local benchmark testing results, portfolios, personal education plans Professional Development Plan Common Core and Essential Standards				

Document Review

School_____ **Date**_____

Key Features	Documents	Notes			
Knowledge of Adolescent Development Advisor/ Advisee Mentoring	Student Handbook Staff Handbook Copy of Master Schedule Mentor/Student Information PBIS plan Schoolwide Discipline Plan Club Schedules Rosters of Club members				

APPENDIX C: OBSERVATION CHECKLIST

School_____   Date_____

Key Feature Notes	Evidence of Implementation	
Interdisciplinary Teaming	Student Grouping Use of teacher time when not teaching Observance of meetings and teacher prep time Integration of curriculum, instruction and assessment	
Flexible Scheduling	Usage of large blocks of time Variations within the regular schedule Creative use of schedule between teams and grade levels	
Advisor/Advisee	Use of homeroom versus guidance Meetings between adults and students Learning partnerships between students and adults	
Integrative, Challenging, Exploratory Curriculum	Classroom visits: varied instructional approaches student engagement student work being produced experiential learning service learning	

APPENDIX D: TABLE 4-INDIVIDUAL TEACHER LEVEL

Middle School Feature	Summary of Teacher's Responses w Illustrative Quotes	Implementation Score (1-5)
Interdisciplinary teaming		
Flexible Scheduling		
Advisor/Advisee		
Integrative, Exploratory, and Challenging Curriculum		
TOTAL		

APPENDIX E: TABLE 5-INDIVIDUAL SCHOOL LEVEL

Middle School Feature	Teacher 1 Score	Teacher 2 Score	Etc.	Average Score
Interdisciplinary teaming				
Flexible scheduling				
Advisor/Advisee				
Integrative, exploratory, and challenging curriculum				
SCHOOL TOTAL				

APPENDIX F: MS FEATURES IMPLEMENTATION SUMMARY

ACROSS SCHOOLS

School	Feature 1 Score	Feature 2 Score	Feature 3 score	Feature 4 Score	Total Score
A.G. Cox Middle					
Ayden Middle					
Farmville Middle					
Hope Middle					

APPENDIX G: SUMMARY OF IMPLEMENTATION SCORES, GROWTH LEVELS,

AND RIVAL EXPLANATORY VARIABLES

School	Implementation Score	Growth Level	SES Level	Size	Urban/Rural
1					
2					
3					
4					

APPENDIX H: EXPLANATION OF THE ABC ACCOUNTABILITY PROGRAM

APPENDIX I: INSTITUTIONAL REVIEW BOARD APPROVAL

EAST CAROLINA UNIVERSITY
University & Medical Center Institutional Review Board Office
4N-70 Brody Medical Sciences Building· Mail Stop 682
600 Moye Boulevard · Greenville, NC 27834

Office **252-744-2914 begin_of_the_skype_highlighting   252-744-2914 FREE end_of_the_skype_highlighting** · Fax **252-744-2284** · **www.ecu.edu/irb**

Notification of Exempt Certification

From: Social/Behavioral IRB

To: Delilah Jackson

CC:
        Jim McDowelle

Date: 9/17/2012

        UMCIRB 12-001299

Re: STUDENT ACHIEVEMENT AND FIDELITY OF IMPLEMENTATION OF THE MIDDLE SCHOOL CONCEPT IN MIDDLE SCHOOLS- Fri Jun 29 20:18:08 EDT 2012

I am pleased to inform you that your research submission has been certified as exempt on 9/16/2012. This study is eligible for Exempt Certification under category #2.

It is your responsibility to ensure that this research is conducted in the manner reported in your application and/or protocol, as well as being consistent with the ethical principles of the Belmont Report and your profession.

This research study does not require any additional interaction with the UMCIRB unless there are proposed changes to this study. Any change, prior to implementing that change, must be submitted to the UMCIRB for review and approval. The UMCIRB will determine if the change impacts the eligibility of the research for exempt status. If more substantive review is required, you will be notified within five business days.

The UMCIRB office will hold your exemption application for a period of five years from the date of this letter. If you wish to continue this protocol beyond this period, you will need to submit an Exemption Certification request at least 30 days before the end of the five year period.

The Chairperson (or designee) does not have a potential for conflict of interest on this study.

IRB00000705 East Carolina U IRB #1 (Biomedical) IORG0000418
IRB00003781 East Carolina U IRB #2 (Behavioral/SS) IORG0000418 IRB00004973

Call
Send SMS
Add to Skype
You'll need Skype CreditFree via Skype