Spring 5-15-2018

The Effects of Interdisciplinary Team Size on Student Perceptions of the School Environment After Transition to Middle School

Robert Allen Moore
Arkansas Tech University

THE EFFECTS OF INTERDISCIPLINARY TEAM SIZE ON STUDENT PERCEPTIONS OF THE SCHOOL ENVIRONMENT AFTER TRANSITION TO MIDDLE SCHOOL

A Dissertation Submitted
to the Graduate College
Arkansas Tech University

in partial fulfillment of the requirements
for the degree of

DOCTOR OF EDUCATION

in School Leadership

in the Center for Leadership and Learning
of the College of Education

May 2018

Robert Allen Moore

Bachelor of Science in Education, University of Arkansas, 1994
Master of Education, Harding University, 1999
Educational Specialist, Harding University, 2005

Dissertation Approval

This dissertation, "The Effects of Interdisciplinary Team Size on Student Perceptions of the School Environment after Transition to Middle School," by Robert Allen Moore, is approved by:

Dissertation Chair:

_____

John Freeman
Professor
Center for Leadership and Learning

Dissertation Committee:

_____

V. Carole Smith
Professor
Curriculum and Instruction

`

_____

Marcia Smith
Assistant Superintendent
Springdale Public Schools

Program Director:

_____

John Freeman
Professor
Center for Leadership and Learning

Interim Graduate College Dean:

_____

Jeff Robertson
Professor, Department of Physical Sciences
Dean, College of Natural & Health Sciences

Permission

Title: The Effects of Interdisciplinary Team Size on Student Perceptions of the School Environment after the Transition to Middle School

Program: School Leadership

Degree: Doctor of Education

In presenting this dissertation in partial fulfillment for a graduate degree from Arkansas Tech University, I agree the library of this university shall make it freely available for inspection. I further agree that permission for extensive copying for scholarly purposes may be granted to my dissertation chair, or, in that professor's absence, by the Head of the Department or the Dean of the Graduate College. To the extent that the usage of the dissertation is under control of Arkansas Tech University, it is understood that due recognition shall be given to me and to Arkansas Tech University in any scholarly use which may be made of any material in my dissertation.

_____

Signature

_____

Date

Acknowledgments

I would like to thank the staff at the Center for Leadership and Learning at Arkansas Tech University for their dedicated support of the students in the graduate program. Dr. John Freeman has been a constant source of encouragement, and I thank him for the time and energy he has spent serving as the chair of my committee. I would also like to thank Dr. V. Carole Smith for sharing her middle-level expertise and Dr. Marcia Smith for her friendship and contributions to this dissertation study.

I appreciate the many colleagues I have worked with who have encouraged me to advance academically and professionally. I am especially grateful for Cindy Rice and Mary Ann Spears who were a constant source of encouragement and support as we traveled to class.

I would also like to acknowledge and thank retired Deputy Superintendent Mr. Mark Sparks and the middle-level principals in the Rogers School District. Our work together inspired this dissertation study and improved the school environment for students transitioning into the middle schools in the district. This dissertation process was also encouraged and supported by Dr. Steven Rippe and Dr. Ronald Newell from EdVision whose participation has been invaluable.

Dedication

I dedicate this dissertation to my wife Jennifer and my children Michael, Abby, and Emily. I have appreciated their love and support throughout the dissertation process. I hope that my educational pursuits will encourage each of my children to pursue their goals in life. I would like to thank my parents, Jim and Margie Moore, who always sacrificed to ensure that their children had opportunities not afforded to them. I would especially like to thank my brother, Dan Moore, M.D., for being the first family member to attend college and showing me that a college education was a possibility. I have special feelings of gratitude for my brother Jimmy and sister Debi who have always been there to provide encouragement and support throughout my career in education.

Abstract

Researchers have reported a loss of achievement for students transitioning between elementary and middle-level schools. Transitioning students often find themselves in classroom and school environments that are not a fit to their psychological and developmental needs. Since the transition to middle school has a profound impact on student academic success, schools should create developmentally appropriate environments that support student needs. Middle-level practitioners utilize a variety of activities and structures to support students. Interdisciplinary teaming structures are an important tool that middle schools use to create smaller communities within the school that support the development of student and teacher relationships to improve student socio-emotional development and academic learning. The purpose of this quantitative study was to determine the effects of interdisciplinary team size on student perceptions of the school environment after the transition to middle school. This quantitative study examined variables associated with the positive psychological development of adolescents within three-teacher and five-teacher interdisciplinary teams to determine the effect of team size on student perceptions. The variables measured were hope, engagement, belonging, goal-orientation, academic press, and autonomy. The results of the study found that three-teacher interdisciplinary teams had a significant positive effect on emotional engagement, and teacher and student academic and personal belonging. Five-teacher interdisciplinary teams had a statistically significant negative effect on emotional engagement, student and teacher personal belonging, and autonomy.

Table of Contents

Page

List of Tables

List of Figures

Chapter I: Introduction

The middle school years serve as a time when young adolescents begin the process of discovering who they are and exploring the world around them (Meyer, 2011). The middle school experience begins a period of development that shapes a child's future success as they develop physically, academically, and socially (Akos, 2006). The transition from the elementary school environments to the middle school environments is an impactful event for middle-level students that may have a negative impact on student success (Cauley & Jovanovich, 2006). Eccles, Midgley et al. (1993) presented an environmental stage-fit theory, which suggests that students may not be ready, developmentally, to cope with the changes they face while transitioning to middle grades. During this transition, students exchange a more supportive elementary school environment for a less supportive middle-grade environment. This transition occurs at a time when the students are least prepared to handle the new environment.

Jackson and Davis (2000) explained that a critical organizational structure for middle schools designed to support students at the middle level is interdisciplinary teaming. Interdisciplinary teams typically consist of two to five teachers who work with a common group of students to provide an environment where students have a sense of safety, respect, value, and belonging. At the core of this teaming concept is the development of relationships and small learning communities that support students and learning (National Middle School Association C.O., 1995). Middle schools should be designed to support this transition, but there are concerns that they are not meeting these needs (Jackson & Davis, 2000).

Wallace (2007) suggested that smaller interdisciplinary team size is more likely to produce an environment where teachers and students know each other and create a sense of belonging. Van Ryzin (2010) affirmed connections between student perceptions of the school environment and academic success and links between student engagement and hope that lead to increased perceptions of autonomy, goal orientation, and teacher support in later years. These findings suggest that early perceptions of hope and engagement in the school environment could lead to self-determining factors for students that influence their future academic success.

Background of the Study

The father of middle school philosophy, William Alexander, did not believe that junior high schools were meeting the emotional, social, and academic needs of early adolescent students (Meyer, 2011). The concept of developmentally appropriate middle schools gained traction with the release of Carnegie Corp. of New York, NY. (1989) *Turning Points: Preparing American Youth for the 21st Century. The Report of the Task Force on Education of Young Adolescents.* The Carnegie Corp. of New York, NY. (1989) examined the state of middle schools and called for reform and recommendations to meet the needs of middle school students. Additionally, the National Middle School Association C.O. (1995) position paper *This We Believe: Developmentally Responsive Middle Level Schools* outlined the characteristics of an effective middle-level approach and along with Turning Points are cornerstones of current middle school practice (Williams-Boyd, 2003).

Researchers have identified the importance of early adolescence in the development of students in the middle grades (Eccles, Midgley et al., 1993). During this

critical time, middle-level students are exposed to environments that do not fit their needs in developmentally appropriate ways (Eccles, Wigfield et al., 1993). Eccles, Wigfield et al. (1993) reported that the misfit between environment and developmental needs resulted in a loss of motivation for students and that this loss of motivation too often went unnoticed. Additional stressors for these students occur as a result of the transition from a supportive and nurturing elementary environment to a middle-grade environment of increased accountability and control. The early transitions that students experience at this age decrease self-esteem compared to transitions that occur in later grades. This suggests that transitions may not play as important a role in student development compared to the environment (Thornburg & Jones, 1982).

Dickinson and Butler (2001) expressed concern with current middle school practices and outlined the basic function of middle schools. Middle schools were designed to address exploration, integration, differentiation, articulation, socialization, and guidance. He stated that middle schools must function to address the developmental needs of students that include the intellectual, emotional, social, and physical development of students' needs. Holas and Huston (2012) determined that schools should focus more on the quality of the classroom and the size of the school with school size playing a role in students feeling engaged within the school. Epstein and Mac Iver (1990) reported that students who change teachers often in a school day do not believe that they are known well by their teachers. Therefore, it is important to create structures to provide students with an environment that develops relationships, so students feel cared for at middle school (McPartland, 1987).

Arhar and Kromrey (1993) reported that the organization of teachers into teams to work with smaller groups of students both academically and socially enhanced the sense of belonging over the course of a year. Additionally, a study on interdisciplinary team size by Wallace (2007) found a strong correlation between team size and sense of belonging in sixth-grade students who participated in two-teacher interdisciplinary team configuration compared to students who participated in a four-teacher team configuration.

Problem Statement

Researchers have reported there is a loss of achievement for students transitioning between schools (Alspaugh, 1998a, 1998b; Rockoff & Lockwood, 2010; Ryan, A., Shim, & Makara, 2013; Schwerdt & West, 2012). Transitioning students often find themselves in classrooms and school environments that are not a fit to their psychological and development needs (Eccles, Wigfield et al., 1993). Schools should seek to build relationships and improve learning for students by creating school environments where all students feel as if they are well known and supported by their teachers (Sklarz, 1982). Interdisciplinary teaming structures are used to create smaller communities within the school that supports the development of student and teacher relationships, which are essential for students in transition to the middle school (Association for Middle Level Education, 2010; Jackson & Davis, 2000). According to Wallace (2007), students who participate in smaller interdisciplinary teams are more likely to bond with their peers, schools, and teachers; however, schools often utilize larger departmentalized teams so teachers can be more content focused. Since the transition to middle school has a profound impact on student academic success, schools should create developmentally

appropriate environments that support students' psychological needs (Eccles, Wigfield et al., 1993). A school environment that meets the developmental needs of their students can increase student perceptions of engagement and hope, which could lead to future student success (Newell & Van Ryzin, 2009).

Purpose of the Study

The purpose of this quantitative study was to determine the effects of interdisciplinary team size on student perceptions of the school environment after the transition from elementary to middle school. The researcher utilized the *EdVision*© Hope Survey as a measurement tool to determine the differences for students on three-teacher and five-teacher interdisciplinary teams and their perceptions of autonomy, belongingness, academic-press, goal orientation, engagement, and hope (EdVision, 2017).

A variety of researchers reported on the effect of the school environment on students transitioning from elementary school to middle school regarding belonging and achievement (Eccles, Wigfield et al., 1993; Epstein & Mac Iver, 1990; Wallace, 2007). In this research, the environment into which students transition is vital to the success of the transitioning middle-level student. This study provides insight into the effects of interdisciplinary team size on student perceptions of the school environment after the transition to middle school.

Research Questions

The students examined in this study made a transition from elementary school into larger middle schools during their sixth- or seventh-grade year. The middle schools participating in this study were located in Northwest Arkansas and Eastern Nebraska. The students in the Northwest Arkansas school transitioned into middle schools with a

sixth-grade through eighth-grade configuration; whereas, the Eastern Nebraska students transitioned into seventh- through eighth-grade middle school grade configuration. Additionally, the students in the Northwest Arkansas School transitioned into three-teacher interdisciplinary teams, and the Eastern Nebraska students transitioned into five-teacher interdisciplinary teams. The researcher measured variables associated with developmentally appropriate school environments to determine the effect of middle school interdisciplinary team structures (three-teacher versus five-teacher) on student perceptions. The students were surveyed at the beginning of the transitional year to middle school to determine perceptions of their previous elementary school environment. The students were then surveyed at the end of the first semester in the middle school environment to determine if there were differences in their perceptions of the school environment after participation in three-teacher or five-teacher interdisciplinary teams.

The research questions used for this study are as follows:

1. Is there a significant difference in student hope in three-teacher interdisciplinary teams as students transition from elementary to middle school?
2. Is there a significant difference in student hope in five-teacher interdisciplinary teams as students transition from elementary to middle school?
3. Is there a significant difference in student engagement in three-teacher interdisciplinary teams as students transition from elementary to middle school?

4. Is there a significant difference in student engagement in five-teacher interdisciplinary teams as students transition from elementary to middle school?
5. Is there a significant difference in student belonging in three-teacher interdisciplinary teams as students transition from elementary to middle school?
6. Is there a significant difference in student belonging in five-teacher interdisciplinary teams as students transition from elementary to middle school?
7. Is there a significant difference in student goal orientation in three-teacher interdisciplinary teams as students transition from elementary to middle school?
8. Is there a significant difference in student goal orientation in five-teacher interdisciplinary teams as students transition from elementary to middle school?
9. Is there a significant difference in student academic press in three-teacher interdisciplinary teams as students transition from elementary to middle school?
10. Is there a significant difference in student academic press in five-teacher interdisciplinary teams as students transition from elementary to middle school?

11. Is there a significant difference in student autonomy in three-teacher interdisciplinary teams as students transition from elementary to middle school?
12. Is there a significant difference in student autonomy in five-teacher interdisciplinary teams as students transition from elementary to middle school?

Theoretical Foundation

The information revealed in the literature identified the impact of student transition, school environment, and adolescent development on student success at the middle school level (Alspaugh, 1998a, 1998b; Eccles, Midgley et al., 1993; Wigfield, Eccles, Mac Iver, Reuman, & Midgley, 1991). The researcher discovered the importance of environmental stage-fit theory within the literature when considering the environment for student success as they transition to middle school.

The environmental stage-fit framework utilizes concepts of person-environment fit of Hunt (1975). Hunt (1975) believed that teachers should develop environments that match a student's level of maturity and that the structures would be different based on the age of the students to foster developmental growth. Eccles, Wigfield et al. (1993) reported that the transition from elementary to middle school created stress for students as they exchanged more supportive environments for larger less developmentally appropriate settings that could affect student success. They found that the mismatch in environments along with additional stressors led to a decrease in self-esteem for students in transition. The environment-stage fit theory is a lens to view student success as

students move through transition and into the various classroom and school environments (Eccles, Midgley et al., 1993).

Definition of Terms

In this study, the researcher used the following definitions to describe terms listed below:

Academic Press: Consistently high expectation on the part of the teachers that students will do their best work (EdVision, 2017).

Autonomy: The opportunity for student self-management and choice in the school environment (Newell & Van Ryzin, 2009).

Belonging: The measure of depth and quality of interpersonal relationships among student and teachers, and among students and peers for supporting academic and personal needs (Newell & Van Ryzin, 2009).

Early Adolescence: The period of time that encompasses ages 10 to 14.

Engagement: Student behavior and attitudes in school. Behaviorally engaged students work hard, concentrate, and pay attention. An emotionally engaged student enjoys being in school and learning new things (EdVision, 2017).

Goal-orientation: The reasons behind a student's effort to achieve. A mastery goal orientation represents a desire to achieve purely for the purpose of obtaining knowledge and increasing skills. In contrast, a performance goal orientation represents the desire to succeed in comparison to others, and thus the purpose of all activity in the classroom is not the enjoyment of learning or the satisfaction of personal interest, but a demonstration of superiority or avoidance (EdVision, 2017).

Hope: An individual's perception regarding his or her ability to conceptualize goals, develop strategies to reach those goals, and initiate actions to achieve their goals (Newell & Van Ryzin, 2009).

Interdisciplinary Teaming: An organizational structure used by middle schools to create smaller groups of students within a larger school environment for the purpose of building relationships and supporting student academic and social-emotional needs (Association for Middle Level Education, 2010).

Middle School or Middle-level: A school grade-level configuration that typically includes the student in various grade configurations. For this study, the middle schools contained grades sixth through eighth and grades seventh through eighth.

Team Size: The number of teachers assigned to a group of students to provide core instruction in a middle school. Interdisciplinary team size configurations typically range from 50-125 students based on the number of teachers on the team with a common ratio of one teacher to approximately 25 students. Four-teacher teams are the most common, but two-, three-, and five-teacher teams are utilized frequently in middle schools around the country (Rottier, 2001).

School Transitions: Any change from one school configuration to another. Most common student transitions are from elementary to middle school and from middle school to high school.

Scope and Delimitations

The purpose of this quantitative study was to determine the effects of interdisciplinary team size on student perceptions of the school environment after the transition to middle schools. The researcher focused on school perception data and

excluded achievement, discipline, and attendance data that may have revealed student success within each team configuration. The researcher also limited the study to three-teacher and five-teacher interdisciplinary teams. These configurations were selected to create some variance in the number of students on the interdisciplinary teams for comparative purposes since research indicates the importance of creating smaller populations of students within schools to improve student-to-student and student-to-teacher bonding (Association for Middle Level Education, 2010). The researcher did not include two-teacher interdisciplinary teams due to difficulty in locating schools with two-teacher team configurations. Four-teacher interdisciplinary teams are the most common configuration found in middle schools but using three- and five-teacher interdisciplinary teams created a higher discrepancy in the number of students on the teams and a higher number of teachers that students are instructed by on the chosen team sizes.

The researcher based school selection on the school administrator's willingness to participate and the size of the interdisciplinary teams selected the middle schools. These schools transition students at different grade levels; therefore, the differences in age and maturity at the time of the transition may have affected student perceptions of the school environment. However, the research indicated that the timing of the transition is not as important as the quality of the environment that students enter after the transition (Holas & Huston, 2012). The participating middle schools conducted similar transitional activities for students and provided similar social-emotional and academic supports.

The three-teacher interdisciplinary teams at the Arkansas middle school reported structures for daily collaboration between teachers who teach the same content areas within each grade as well as multiple interdisciplinary team meetings within each team.

The focus of the collaboration was to discuss student learning and social-emotional needs. The Nebraska middle school with five-teacher interdisciplinary teams reported the utilization of multiple weekly interdisciplinary team meetings to discuss student learning and social-emotional needs.

The researcher utilized two schools in this study where the middle schools utilize interdisciplinary teaming. Additional schools with the same team structures would have increased the sample size and may have affected results of statistical findings. A larger sample would have created a more diverse population, which could have also led to a greater generalization of the findings and their implication to middle school practices.

The researcher has assumed that the two schools are similar enough in size, teacher quality, and performance to base differences in statistical analysis on the change of student perceptions within each interdisciplinary team size over the course of the first semester of the school year. It should be noted that there are some differences in student poverty, as measured by participation in the free and reduced lunch program, and in ethnicity that may have affected the results of this study. Table 1.1 provides a review of the statistical data from each school at the time of selection for the study.

Limitations

The data collection was limited to variables measured by the *EdVision*© Hope Survey and excluded discipline and attendance records of the students. These measurements could also be used to determine student success within the environment, and were not included due to the difficulty in measuring the impact of other factors on these measures and access to the data. The researcher chose a quantitative approach to data collection for students only, so there is no perceptual data from teachers on the

variables related to the school environment. These data would have perhaps provided additional insight into the school environment at each school.

Table 1.1

Summary of School Statistical Data

Demographics	Arkansas MS	Nebraska MS
Total Population	930	513
Ethnicity		
White	52%	66%
Hispanic	42%	15%
African-American	0.7%	11%
Other races	2%	4%
Low Income	66%	40%
Special Education	13%	22%
English as Second Language	35%	0%
State Proficiency		
Literacy	65%	53%
Math	54%	79%
Average Teacher Experience	12 yrs.	17 yrs.

(Arkansas Department of Education, 2017; Nebraska Department of Education, 2017)

The data collected with the survey were limited to perceptual data and not narrative feedback, which may have provided more insight on student perceptions in the school environment. The results received were self-reported, and the researcher assumed that students answered honestly and understood the nature of the questions asked in the survey.

Significance of the Study

The study of the effect on interdisciplinary team size on the school environment is significant because research has specifically determined that team size impacts student bonding (Wallace, 2007). Best practices at the middle-level call for organizational structures within the school that build relationships and improve learning for students (Association for Middle Level Education, 2010). Additionally, research shows that the school environments that students transition into have an impact on student success during a transitional year (Eccles, Wigfield et al., 1993). Therefore, this study may provide information for middle-level practitioners that will inform decision-making when developing interdisciplinary team structures and programming during transitional years for students.

Chapter Summary

The transition from the elementary school environment to the middle school environment is an impactful event for middle-level students and can have an effect on student success after the transition (Cauley & Jovanovich, 2006). Middle schools should effectively utilize organizational structures such as interdisciplinary teams, which are designed to support students at the middle-level (Jackson & Davis, 2000). This study analyzes student perceptions within three-teacher and five-teacher interdisciplinary teams to determine if the size of a student's team affects student perceptions of the school environment. The literature review in the next chapter will examine the background of middle school practices, school transitions, interdisciplinary teaming, and school effectiveness measures.

Chapter II: Literature Review

Researchers have identified the important role early adolescence plays in the development and success of students in the middle grades (Eccles, Midgley et al., 1993; Eccles, Wigfield et al., 1993). During this critical time, middle-level students are exposed to environments that may not fit their developmental needs (Eccles, Midgley et al., 1993). The changes in the school environments that did not meet the needs of students during the transition from elementary to middle school were shown to have a negative impact on student motivation and stress (Eccles, Wigfield et al., 1993). Various publications have identified the importance of developing schools that utilize developmentally appropriate practices to support adolescent students through the transition from elementary to high school (Association for Middle Level Education, 2010; Carnegie Corp. of New York, NY., 1989).

Background of Middle School Philosophy

Meyer (2011) discussed the beginning of the middle school movement that originated with a presentation in 1963 by William Alexander. The presentation called for a restructuring of American schools to create a school between elementary school and high school and ignited the movement to develop schools that meet the needs of adolescents. Alexander called for a school that allowed students to have a choice in their learning, explore interests, and provides support for students that at the time was not in place in junior high programs modeled after high schools that often do not meet the adolescent needs of middle-grade students. Alexander and Williams (1965) outlined the basic tenets of middle school:

A real middle school should be designed to serve the needs of older children,

> preadolescents, and early adolescents . . . A middle school organization should make a reality of the long-held idea of individualized instruction . . . A middle school program should give high priority to the intellectual components of the curriculum . . . A middle school program should place primary emphasis on skills of continued learning . . . A middle school should provide a rich program of exploratory experiences . . . A program of health and physical education should be designed especially for boys and girls of the middle school . . . The organization of a middle school would facilitate the most effective use of the special competencies and interests of the teaching staff . . . An emphasis on values should underline all aspects of a middle school program. (pp. 219-221)

George (2009) reported that during the early phase of middle-level implementation, educators utilized the middle-level structure to meet desegregation requirements and address enrollment concerns without using the guiding set of middle-level principles outlined by Alexander in the early 1960s. Since the beginning of middle schools, middle-level practitioners have made an effort to improve these new middle schools through a variety of structures and strategies. These new practices utilized various learning structures that were designed to meet the developmental needs of students in middle schools. The creation of the interdisciplinary team structure was the most significant development that emerged at the middle school level (George, 2009).

Development of purpose of middle schools. The Carnegie Corp. of New York, NY. (1989) described the discrepancy that existed between the curriculum and organization of middle schools and student needs. The group reported the need for immediate changes in middle schools to create students who are on a path to become

ethical citizens, healthy, reflective, and life-long learners. The report called for the creation of school learning communities to provide developmentally appropriate core instruction with trained teachers who could meet student needs. Additionally, it called for middle schools to promote student health and family and community outreach.

Jackson and Davis (2000) examined the state of middle schools over the previous 10 years to share best practices and debunk the myth of middle-level schools not being successful. The authors called for a continued effort to implement the original Turning Points recommendations with fidelity while focusing on the improvement of curriculum, instruction, and assessment practices. Association for Middle Level Education (2010) built upon earlier recommended practices and identified essential attributes and characteristics to create successful schools for adolescents. The authors called for middle schools to make developmentally responsive decisions, develop high expectations for all students, support student decision-making and create equitable educational opportunities for all students. Figure 2.1 from the Association of Middle Level Education (2013) outlines the essential attributes and characteristics for middle schools of a successful school for young adolescents. These characteristics can be utilized as a guide to support schools as they work to improve the school environment for middle-level students.

School Transitions

A variety of studies identified the impact that school transitions play in the lives of students (Alspaugh, 1998a; Schwerdt & West, 2012). Educators should make every effort to ease these transitions to meet the needs of their students (Perkins & Gelfer, 1995).

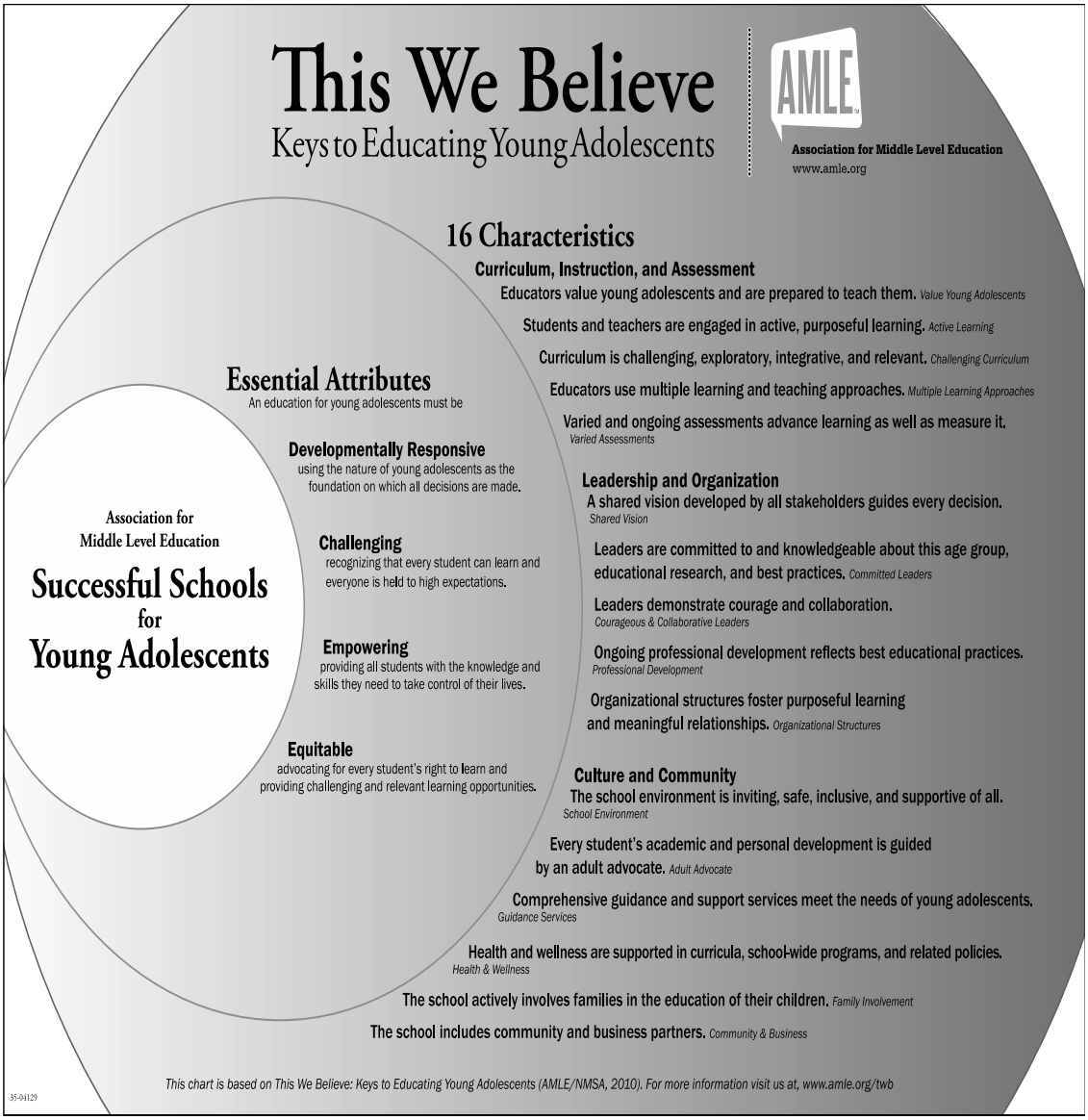

Figure 2.1. Keys to educating young adolescents. From "This We Believe: The 16 Characteristics of Successful Schools," by Association for Middle Level Education, 2013.

The foundational concepts of middle school take into account the physical, social-emotional, and academic needs of middle school students during critical transitional years between the elementary and high school setting (Pickhardt, 2011). In spite of the work of many dedicated middle-level educators, students still struggle as they transition into the

middle school (Eccles & Midgley, 1990). Eccles and Midgley (1990) reported that students experience a loss of achievement and motivation during transitional years.

Student success after the transition. Alspaugh (1998a) reported a negative impact on multiple grade-level transitions on student achievement and drop-outs for students transitioning through middle school when compared to students making a K-8 to high school transition. The decrease in performance for students entering high school after experiencing a middle school transition was higher than students who experienced the first transition at the high school level. Alspaugh (1998b) affirmed the impact of early transitions and identified the impact of a late ninth-grade to a tenth-grade transition to increased student drop out, indicating that school size and multiple transitions could be compounding the problem of school dropouts. He further suggests that schools re-examine the practice of creating additional building transitions for students.

Rockoff and Lockwood (2010) highlighted the negative effect on achievement for students in New York who transitioned in the sixth- or seventh-grade in middle-grade configurations when compared to K-8 grade configurations. Schwerdt and West (2012) also described the impact that grade configurations and transitions had in Florida public schools on student achievement in math and reading. Students who experienced a middle-level transition from elementary to middle school had a significant drop in student achievement, attendance, and increased dropout rates by the tenth-grade, as compared to those who transitioned directly from elementary to high school. Students who made only one transition during their school years at the ninth-grade level also showed a reduced drop in achievement, but the ninth-grade transition did not have as

large of an impact on future student success when compared to those who also transitioned at the middle level.

A. Ryan et al. (2013) studied students as they transitioned from fifth-grade to sixth-grade to determine academic adjustment and feeling of self-worth. Their findings revealed a steady decrease in student grade point average over the course of the transitions. They also discovered that student intrinsic value for schoolwork declined over the course of the transition.

Learning environment after the transition. Transitions do not play as large of a role in student development when compared to the school environment (Thornburg & Jones, 1982). Kim, Schwartz, Cappella, and Seidman (2014) examined the role of social context in student experiences in middle school and determined that grade configuration had no impact on student well-being. They concluded that middle or junior-high grade configurations and social context did not vary although both configurations should take different approaches to meeting student needs. They reported the environment students enter during transitions had an increased impact on social context when compared to grade configuration or the effect of the transition.

Holas and Huston (2012) determined that schools should focus more on the quality of the classroom and the size of the school than on the grade configurations. When studying students who made a transition to middle schools in the fifth-, sixth-, or seventh-grade, the researchers discovered the timing of the transition was not as important a factor in student functioning as classroom quality and climate. There was some indication from the research that school size played a role in lowering students' senses of engagement within the school in larger schools (Holas & Huston, 2012).

Wigfield et al. (1991) observed a decrease in self-esteem for students transitioning from sixth-grade in one school into seventh-grade in another school. They found that the new school environment caused the decline in the self-esteem of the students. They saw this drop in self-esteem increase as students moved through the seventh-grade. Additionally, students' beliefs in their personal English and math ability decreased following the transition, and the decrease in self-esteem was attributed to a change in the classroom environment.

Eccles, Midgley et al. (1993) identified theories and environmental factors from research that address transitions for students. The move to a secondary school from a nurturing elementary school environment represents a stressful event for students. Students leave an elementary environment of nurturing and close support to a larger and more impersonal environment in the middle schools. The new school environment entered often focused on discipline, social circles, peer pressure, and feelings of public performance judgment, which can have a long-term impact on students.

Eccles, Wigfield et al. (1993) conducted the Michigan Adolescence Study to determine if the most common changes in the environment for students transitioning to middle grades would impact the motivation and performance of these students. Eccles, Wigfield et al. (1993) stated the following:

> The environmental changes often associated with transitions to traditional middle-grade schools are likely to be especially harmful since they emphasize competition, social comparison, and ability self-assessment at a time of heightened self-focus; they decrease decision making and choice at a time when the desire for autonomy is growing….they disrupt social

> networks and decrease opportunities for close adult-child relationships to develop….and may be in special need of close adult relationships….and that teachers must interact with so many more students, make it likely that emerging motivational problems will go unnoticed. (pp. 559-560)

The Eccles, Wigfield et al. (1993) Michigan study consisted of 3,248 students conducted over a two-year period as students moved from sixth-grade elementary schools to seventh-grade junior high schools. The researchers selected math teachers and their students for the study since their earlier research indicated motivational declines were greater in math for transitioning students. They found that the seventh-grade math teachers believed their students had to be controlled more and were less trustworthy when compared to the beliefs of the students' previous sixth-grade teachers. Eccles, Wigfield et al. (1993) also determined that students who moved from sixth-grade environments with higher personal teacher efficacy ratings into seventh-grade environments of lower personal teacher efficacy ratings had lower expectations for success and performance in math when compared to students moving from lower efficacy teachers to higher efficacy teachers after the transition.

Eccles, Midgley et al. (1993) found the misfit between environment and student developmental needs that resulted in a loss of motivation for students, and often this loss of motivation goes unnoticed. Additional stressors for these students occurred as a result of the transition from a supportive and nurturing elementary environment to a middle school environment of increased accountability and control. The early transitions that students experience at this age decreased self-esteem compared to transitions that occur in later grades. Thus, the environment stage-fit theory is a lens to view student success as

students move through transition and into the various classroom and school environments (Eccles, Midgley et al., 1993).

Stress and coping after the transition. Simmons, Burgeson, Carlton-Ford, and Blyth (1987) reported that several transitions at once had a negative impact on a student's ability to adjust and cope with the changes faced during early adolescence. They found that change was occurring too quickly, given students' physical, mental and emotional abilities, thereby creating discomfort and difficulty coping. The researchers recommended a gradual exposure to the changes over time as students become comfortable in various areas of their lives.

Fenzel (1989) stated that students develop role strain leading to poor behavior and stress. Fenzel (1989) also suggested that life changes occur during adolescence as students add and release new life roles, and they are often unable to cope with these new roles. Middle-level students live in the home and school environments that are not congruent with the adding of these new roles in their lives.

Simmons et al. (1987) reported that the significant change in the organization of school compounded by physical and social changes might be too much for students to handle at one time. Their findings revealed that there was a negative impact on student self-esteem, grade point average, and extra-curricular participation as the number of life changes occur at the same time. They suggested that there comes a point where students' abilities to cope with all of the adolescent and environmental changes at one time causes great discomfort, and recommend that a gradual change occurs over time for these students.

Feldlaufer, Midgley, and Eccles (1988) found that seventh-grade math students face a changing school environment where they have less autonomy and a decline in decision-making after transitioning from sixth-grade. The researchers report that students experience a classroom environment that is more task focused with fewer chances for collaborative interactions and increased opportunities for social comparisons. They believe that the combination of increased comparisons with student feelings of low self-concept could lead to reduced student motivation and success. Students in the study described their post-transition teachers as less caring than their pre-transition teachers. The researchers outlined a mismatch between the environments created for post-transition students that have the potential to debilitate a transitioning student (Feldlaufer et al., 1988).

Rudolph, Lambert, Clark, and Kurlakowsky (2001) compared transitioned and non-transitioned sixth-grade students to determine if self-regulatory beliefs predicted stress and depression over the course of the transition to a new school. Students who reported that they could not influence their success exhibited more stress and depression over the course of the transition than non-transitioned students. Maladaptive transitioned students who reported a lack of control over learning success demonstrated less engagement in school.

Vanlede, Little, and Card (2006) studied the impact of students' negative coping skills before the transition to middle school to determine if depression and aggression were predictable after the transition. Their findings revealed that negative coping skills were a factor for these students. They also found that positive behavior before a transition did not always predict positive outcomes after the transition.

Grills-Taquechel, Norton, and Ollendick (2010) examined anxiety on students from the point of transition to the middle school from sixth- through eighth-grade. The researchers reported that transitional sixth-grade students experienced increased levels of anxiety throughout their first year in middle school that decreased over their time in middle school. Their research revealed that boys tend to experience a more significant decrease in anxiety when compared to girls by the time the students reached the eighth-grade. Additionally, they determined that students' feelings of acceptance predicted decreased anxiety by the time they completed middle school.

Shoshani and Slone (2013) studied 417 seventh-grade middle school students in Israel to determine the effect of student character strength and well-being on student success as they transitioned through middle school. The researchers utilized the Positive and Negative Affectively Scale and Satisfaction with Life Scale to measure student well-being. The students' teachers were asked to fill out the National Center for School Engagement's School Engagement Survey to determine students' behavioral, cognitive, and emotional engagement along with the Friends subscale of the School Adjustment Report to assess a student's interaction with peers in the school environment. Students were surveyed first during January of their seventh-grade school year and then again in the middle of their eighth-grade school year.

Shoshani and Slone (2013) reported that students' grade point averages and student well-being declined over the period of the study. However, students who had intellectual strengths, such as enthusiasm and curiosity for learning, were found to have academic success in the middle school environment. The researchers also reported that emotional and interpersonal strengths were predictive of student school satisfaction.

Shoshani and Slone (2013) stated that a student's temperance skills, such as self-regulation and control, were predictive of the student's sense of well-being and these skills helped students successfully adapt from more protective classroom environments to the more controlled middle school environments.

Shell, Gazelle, and Faldowski (2014) studied extremely shy and anxious students and found the reorganization of social relations during transitions allowed shy students to improve peer relationships. Peer exclusion declined during the transition to middle school as group dynamics changed. However, the longer students were together; the more the groups become exclusive.

Booth, Sheehan, and Earley (2007) examined the impact of middle school grade-level structures to determine the effect on self-esteem. They found that students who experienced a transition at sixth-grade were unable to raise their levels of self-esteem when compared to sixth-grade students who remained in the K-8 building configuration. The research findings revealed the impact transitions have on students and supports other studies.

Kingery, Erdley, and Marshall (2011) found that peer acceptance and friendship were predictive in nature when considering the post-transition adjustment. Those with positive peer acceptance and social interaction before the transition also experienced success academically. These findings show that students in K-8 configurations report less negative attitudes about their behavior compared to students who transitioned to the middle school in sixth grade.

Adams, Kuhn, and Rhodes (2006) found that middle school students in certain ethnic and gender groups experienced a decline in self-esteem as they moved through

middle school. Their study of over 4,000 students specifically found a significant decrease in self-esteem with the Caucasian populations through the course of middle school. The researchers found that African American and Hispanic students had little change in their self-esteem, although African Americans typically reported higher self-esteem, while Hispanic students reported lower levels of self-esteem. Gender also had an impact on self-esteem among the Hispanic girls studied, with these girls reporting lower self-esteem than their Hispanic male counterparts do.

Espinoza and Juvonen (2011) studied student perceptions of school behavioral norms before and after the transition to middle school. They determined that the more students observed and perceived compliance among their classmates, the more likely they were to participate and follow instructions of teachers. Latino students reported greater sensitivity to the behavioral norms of the school and their actions related to the behavioral perceptions of their classmates. The authors suggested that school-wide prevention programs that address negative behavior norms be implemented to address student behavior norms.

Simmons et al. (1987) reported that the major change in the organization of school compounded by physical and social changes might be too much for students to deal with at one time. Their findings revealed that there was a negative impact on student self-esteem, grade point average, and extra-curricular participation as the number of life changes occur at the same time. They suggested that students' abilities to cope with all of the adolescent and environmental changes at one time causes great discomfort, and recommended that a gradual change occur over time for these students.

Fenzel (1989) reported that male students developed more strains after the transition to middle school when compared to girls, but the strain had a greater impact on girls. However, the researchers shared that positive relationships with teachers and parents lessened the strain found in students. The researchers found that team-teaching had the possibility of decreasing role strain through the reduction of a student's peer group and through creating opportunities for closer relationships with teachers and students (Fenzel, 1989).

Social bonding after the transition. The acclimation to school and the role of peer relationships are important to the success of students (Shell et al., 2014). Beland (2014) discussed the need for schools and teachers to create a sense of belonging in the classroom and school environment for transitioning ninth-grade students. The concept of freshman advisory with teachers who can connect with their students and foster a sense of community was important to the success of the students.

Bailey, Giles, and Rogers (2015) studied the concerns of fifth-grade students before the transition to the middle school and found that inner-city students were more concerned with creating friendships and selecting the right groups to join after the transition compared to suburban students. The findings suggested that the lack of social interaction opportunities for urban students, such as extra-curricular activities outside of school, increased this need to create friendships for these students.

McNeely and Falci (2004) analyzed the impact of teacher support and social belonging to students in grades seven through 12 and their participation in risky behaviors such as smoking, drug use, and sexual intercourse. Their findings revealed that teacher support delayed student participation in risky behaviors, but did not support

student cessation of the activities once they had begun. McNeely and Falci (2004) also found that social bonding could play a positive or negative role in initiating risky behaviors with the variable being bonding with a positive or negative peer group. Middle schools can become focus areas for developing supportive relationships before students engage in unhealthy and risky behaviors (McNeely & Falci, 2004).

Ellerbrock, Kiefer, and Alley (2014) investigated the role interpersonal relationships play in laying the groundwork for creating a sense of belonging in middle schools. Their qualitative study uncovered the importance that student-to-student and student-to-teacher relationships play in helping a student feel a sense of belonging. Middle school students needed a nurturing connection with teachers who were responsive to student needs (Ellerbrock et al., 2014). Ellerbrock et al. (2014) reported that students identified the need to be accepted emotionally and academically by fellow students as important to feel a sense of belonging. However, not every student studied expressed the need for peer-to-peer or peer-to-teacher relationships.

Programming and parent support after the transition. Rueger, Chen, Jenkins, and Choe (2014) found a critical link between family and teacher support of students in the reduction of depression after a transition to middle school. Their study of 1,163 urban middle school students over the course of the students' time in the middle school found that the support of both parents and teachers played a predictive role in the decrease of depressive symptoms. The family impact on depression symptoms is greater early in the transition, but played a reduced role in later middle school grades. When taking into consideration environmental stage-fit theory, the researchers suggest that student developmental needs catch up to the environment and may explain the lower need

for family support in late middle school to reduce depressive behaviors (Rueger et al., 2014).

Families and special programs can support the middle-level student and ease transitions to middle school (Bailey et al., 2015; Rueger et al. 2014). Akos and Galassi (2004) found that a temporal sequence approach to transition is important in meeting the needs of students and parents. The temporal sequence approach discussed by the researchers called for specifically timed programming in the areas of academic, procedural, and social expectations related to transition. Programs including discussions about middle school occurring both before and after the transition helped students. Parents perceived tours and orientation as most important.

Greene and Ollendick (1993) worked with students exhibiting evidence of transition issues in the middle school and provided intervention programming consisting of additional parent, teacher, and group support. They found students placed in interventions experienced an increase in grade point average during treatment, but were unable to sustain that success after the support ended. Green and Ollendick (1993) recommended schools create structures designed to monitor transitioning students and promote trusting relationships between students and teachers.

Perkins and Gelfer (1995) recommended a step-by-step plan for transitioning students and identifying goals for the process. Families were encouraged to participate with their students in the planning of activities, such as pen pals, letter writing, and journaling. Acquiring commitment from all involved in the transition and conducting evaluations should be a part of transition plans and programs. Cauley and Jovanovich (2006) found that transition programs should address the needs of students to help ease

anxiety and increase success. Additionally, social adjustment activities should be developed to reduce concerns related to feeling safe and dealing with the peer pressure.

Interdisciplinary Teaming

Alexander and Williams (1965) described the structure of a new middle school concept. The structure included a homeroom unit that placed students with a teacher-counselor to develop programming as students move through grades. It included a wing-unit of four core curriculum homeroom units who would plan and develop appropriate curriculum for the team of 100 students. The utilization of this structural approach is a foundational concept for middle schools and is widely practiced and recommended for implementation (Association for Middle Level Education, 2010). The Association for Middle Level Education (2010) discussed the significant impact that school organizational structures have on the learning environment, stating that an interdisciplinary team is:

> Two or more teachers working with a common group of students in a block of time is the signature component of high performing schools, literally the heart of the school from which other desirable programs and experiences evolve . . . The team is the foundation for a strong learning community characterized by a sense of family . . . Students and teachers on the team become well acquainted, feel safe, respected, and supported, and are encouraged to take intellectual risks. (p. 31)

The Association for Middle Level Education (2010) proposed that there is a variety of benefits related to the interdisciplinary team as a foundational organizational structure for middle schools. This organizational structure provides for regular common

planning time with opportunities for teachers to collaborate around curriculum, instruction, student data, and best practices. The large blocks of instructional time allow flexible time for extended and integrated learning activities and provide remedial support. Interdisciplinary teaming structures allow larger schools to create smaller communities within the school that support the development of student-teacher relationships that are important for students in transition.

Mac Iver (1990) shared data on the use of a variety of key practices utilized with early adolescent students throughout the country and identified key elements of these practices in schools today. He stressed the importance of balancing the needs of early adolescents for autonomy and their need to be guided by caring adults. The use of advisory groups in middle schools, which consist of a small group of students in a regularly scheduled class that addresses academic and social needs, is especially beneficial to the students. Schools that serve large numbers of students from minority backgrounds or whose families are affected by poverty are more likely to use the advisory approach to meet student needs (Mac Iver, 1990). Mac Iver (1990) also identified the importance of interdisciplinary team and school transition programs in the success of middle-level students. Mac Iver (1990) revealed that effective implementation of these practices could provide benefit for students, and called for additional data collection on these practices to refine implementation and improve support for students.

Mac Iver and Epstein (1991) reported that middle schools, which implement responsive strategies, must work to implement those practices effectively. They also reported that interdisciplinary team organizations that also emphasize department structures are perceived to be more successful than schools that do not utilize the

departmental team structures. The researcher indicated that schools with interdisciplinary teams that do not use a team leader approach, that do not have common planning periods for team teachers, and that fail to train teachers properly would not receive the full benefit of the team structure.

Sklarz (1982) reported that it was important for middle schools to be student-centered and less like departmentalized junior high schools. These schools should ease transitioning students by creating environments where the teachers know all students well. Sklarz (1982) suggested that an understanding of the needs of students and the development of philosophies that maintain the successful qualities of the elementary school environment are important to middle schools.

Erb (2006) challenged the myth promoted by middle-level reformers that middle schools are failing to meet the needs of students. In examining research, Erb (2006) argued that while factors such as school size, the timing of transitions, and grade configurations influence the success of students in middle schools, those factors alone should not be used to evaluate the effectiveness of the middle schools.

Student achievement on interdisciplinary teams. Alspaugh and Harting (1997) found that students transitioning into sixth-grade departmentalized middle school had a decrease in achievement in reading, math, science, and social studies when compared both to sixth-grade students in K-8 schools and to sixth- through eighth-grade middle schools with interdisciplinary teams. They found that seventh- and eighth-grade achievement was not impacted significantly by teaming practices. The mixed results suggest that departmentalization was not necessarily more or less impactful as interdisciplinary teaming. These findings highlighted the possible negative impact of

departmentalized teaming structures during transitional years compared to departmentalized structures after the transition year.

Styron and Nyman (2008) studied middle school practices and the climate for teacher support in high- and low-performing schools. They found that low-performing middle schools were organized similarly to high-performing middle schools in regarding the implementation of recommended middle school practices, such as teaming, advisory, and common planning times. The authors noted that this contradicted research that suggested these teaming structures improve achievement. However, Styron and Nyman (2008) found that high-performing schools report higher levels of collegiality among the teachers that could account for the difference in performance of the students. They noted that the creation of supportive, collegial teacher environments by administrators allowed teacher innovation and the utilization of effective strategies to support student learning.

Belonging and bonding on interdisciplinary teams. Arhar and Kromrey (1993) found that students in low socio-economic status schools benefited from an interdisciplinary approach when compared to those students in high socio-economic status schools when measuring a sense of belonging. The organization of teachers into teams, to work with smaller groups of students academically and socially, enhanced students' senses of belonging over the course of a year. An interdisciplinary teaming approach improved students' senses of belonging and established structures for teachers to work together to support student needs.

Epstein and Mac Iver (1990) reported that students who change teachers often in a school day do not believe that they are known well by their teachers. They reported that school philosophy plays an important role in determining the structure and team size in

middle schools. As students move through the middle school grades, they tend to be instructed by a greater number of teachers each school year. This increase in the number of teachers occurs as a result of schools wanting to help students prepare for the eventual transition to high school. It is important to create structures to provide students with subject experts along with an environment that develops relationships, so students feel cared for at middle school (McPartland, 1987).

Juvonen (2007) discussed social connectedness through the lens of middle school reform and suggested that schools find ways to take advantage of adolescents' natural desire to be together and work together to motivate students. The researcher indicated that instructional practices such as collaborative classroom activities could promote a sense of emotional safety and develop positive relationships between students. Additionally, schools should work to create continuity for students through transitions to improve engagement.

Interdisciplinary team size. George (2003) outlined how schools have adopted middle school structures and practices since the inception of middle schools. The researchers indicated that interdisciplinary teaming was a standard middle school practice with a variety of team size structures. Erb and Doda (1989) described the approach of interdisciplinary teams as one that allows teachers to develop a meaningful relationship with students to influence student outcomes. They identified a variety of team organizational structures formed due to considerations ranging from teacher certification to teacher preference. The number of teachers with appropriate certifications to teach the various subjects usually affects the configuration of interdisciplinary teams. The Association for Middle Level Education (2010) suggested that smaller teams of two or

three teachers are more effective in improving achievement, parental connections, and school climate. Effective interdisciplinary teams can also promote collegiality among teachers that leads to student success (Styron & Nyman, 2008).

Epstein and Mac Iver (1990) described the key practices of interdisciplinary teams and how the team structure was designed to create improved attitudes, caring, and supervision of students as they face a variety of developmental, social, and transitional challenges. As students experience these changes, improved articulation needs to occur to ease these transitions.

Eccles, Midgley et al. (1993) described a lack of research on the differences in the classroom and school environments. In one of the few studies on interdisciplinary team size, Wallace (2007) found a strong correlation between team size and sense of belonging in sixth-grade students who participated in two-man interdisciplinary team configuration compared to students who participated in a four-man team configuration. As a result, the researcher recommended that schools consider two-man teams when appropriate, but also suggested that teacher satisfaction and those teachers who struggle to connect with students could affect team configurations when developing teams. "There is strength in numbers. However, when those numbers equate to large middle school teams, the odds of students connecting with their peer, their school, and their teachers decrease" (Wallace, 2007, p.12).

Russell, Jarmin, and Reiser (1997) reported that teachers new to interdisciplinary teams had a positive attitude toward the teaming concept, common planning time, and regrouping of students for learning. However, there was a decrease in attitude as the implementation of teaming concepts occurred. Overall, the researchers reported that

administrators could plan and adjust to the reduced enthusiasm during team implementation.

Echols (2015) studied the impact of interdisciplinary teaming on students with low social status and students who reported victimization by their peers in shared courses. Students with low social status experienced increased victimization as the number of shared academic courses within the same subset of students increased. Echols (2015) acknowledged the positive benefits of interdisciplinary team approach, but encouraged the school to develop larger team sizes to increase student exposure to a variety of additional students to reduce the number of shared academic courses that students experience with the same classmates. Echols (2015) stated that "students' social and academic lives are interrelated and closely tied to their overall adjustment in school; it is, therefore, important to consider both the academic and social ramification of any instructional practice" (p. 14).

Interdisciplinary team effectiveness. Valentine, Clark, Hackmann, & Petzko (2004) shared that “it was teachers working together in teams that appeared to provide the most powerful influence on curriculum, instruction, and school improvement” (p. 92). Effective interdisciplinary teams provide teachers and school leaders a climate and structure where collaboration, shared decision-making, and the development of strong relationships can improve schools (Valentine et al., 2004).

Clark and Clark (2006) outlined several critical characteristics of effective interdisciplinary teams that influence curricular and instructional decisions and improve the school environment. Interdisciplinary teams should be student-centered with a focus on developmentally appropriate curriculum and instructional practices. Effective teams

believe that all students can learn, but also see themselves as learners. The team teachers should have a mindset that creates commitment among members to collaboratively improve their knowledge (Clark & Clark, 2006). Effective teams will also collaborate on lesson planning and effective instructional practices while developing plans of action that align with school visions and goals (Clark & Clark, 2006).

School Effectiveness Measurements

Clark and Clark (2003) suggested that changes in the culture of a school can be a difficult challenge for middle school administrators. Long-held beliefs about school organization and instructional practices can produce an environment that is resistant to change. They believe that school leaders and teachers must work to change the school culture so that improvement initiatives have a chance to make a difference. They contend that responsive school leaders are looking for ways to develop their building cultures to meet student developmental and academic needs (Clark & Clark, 2003).

Newell and Van Ryzin (2007) proposed that the standardized exams used by most states to measure student and school success were unable to determine the effectiveness of schools and teachers. State exams could identify student skills but failed to reflect the culture and the development of youth that could also measure school effectiveness. The researchers stated:

> What we need if we are to judge school effectiveness is a means by which schools can be assessed as cultures that create sets of relationships, norms of behaviors, and values and obligations that lead to the development of healthy and productive adults . . . is possible to use a series of scientifically sound self-perception surveys in conjunction with a set of

> school design concepts created to produce growth in the dispositions needed for success in life. (pp. 465-466)

With the concepts of culture and youth development in mind, Newell and Van Ryzin (2007) believed that schools should focus on school cultures that valued the student as a person and promoted student and teacher ownership of the learning process. Utilizing environmental stage-fit theory as the foundation of their work, they theorized "a better match between the needs of adolescents and the educational environment should result in higher levels of student motivation, engagement, and achievement" (Newell & Van Ryzin, 2007, p. 466). The Hope Study survey is a tool that measures students' perceptions of how much the school environment supports core developmental needs. The survey measures autonomy, belongingness, goal-orientation, academic-press, engagement, and hope (EdVision, 2017).

Autonomy. R. M. Ryan and Grolnick (1986) analyzed student perceptions of the classroom environment through the lens of student autonomy and teacher control of the learning process. In the study, the researcher determined that students who perceive greater self-control of the learning process within the school environment exhibited an increased sense of self-worth, competence at learning, and internal motivation to reach goals. Additionally, students who participated in environments that are more autonomous felt less controlled by other factors. In contrast to a classroom environment of autonomy is an environment of increased control and direction from classroom teachers (Grolnick & Ryan, 1987).

Grolnick and Ryan (1987) compared students participating in two directed-learning environments to students in a spontaneous-learning and non-controlling learning

environment to determine motivation and performance. Students who participated in the two directed-learning environments outperformed students on rote learning but had less success and interest in conceptual learning. In contrast, students who were part of the two directive learning environments felt increased pressure to perform and experience greater levels of learning loss after eight days compared to the students in the less controlling environments. The results of these studies suggest that the more autonomous the classroom and school environment, the more integrated and lasting the learning outcomes will be for the students (Grolnick & Ryan, 1987).

Furtak and Kunter (2012) evaluated student learning and motivation in low- and high-level procedural and cognitive supported classroom environments within seventh-grade science classrooms. The researchers found that students who conducted the assignment in the high autonomous environments expressed feelings of non-autonomy due to feeling a sense of being overwhelmed and overtaxed due to the lack of support. Additionally, students who participated in the low autonomy classes experienced increased learning on posttests compared to students in the highly autonomous classroom. The researchers discovered that autonomous environments were motivating for students but found minimal linkage between autonomy in the classroom and student learning. Hofferber, Eckes, and Wilde (2014) also studied seventh-grade students in the science classroom to determine the effects of student autonomy in a science classroom. Their results supported previous research (Grolnick & Ryan, 1987; Ryan, R. M., & Grolnick, 1986) that found links between student autonomy and an increase in student conceptual learning.

Belonging. Ellerbrock et al. (2014) reported that middle school students seek nurturing connection with teachers who were responsive to their needs. Student-to-student and student-to-teacher relationships created in the school environment increase belonging and emotional and academic acceptance. Positive student-to-student and student-to-teacher relationships have been shown to promote the well-being of students and increase motivation, engagement, achievement, and behavior (Wentzel, 1998; Wentzel & Caldwell, 1997).

Keifer, Alley, and Ellerbrock (2015) performed a mixed method study in large urban demographically diverse middle schools found that teacher and peer support can support young adolescent needs while fostering school belonging, academic motivation, and engagement. The study identified teacher involvement was identified in both the quantitative and qualitative aspects of the study as being central to meeting students' needs for belonging and supporting adjustment to the school environment. The supportive structures that are put into place by teachers that are academic and social in nature should be connected to quality student-teacher relationships, and will enhance adaptive academic and interpersonal contexts in the classroom (Anderman, L. H., 2003; Kiefer et al., 2015).

Goal orientation and academic press. E. M. Anderman and Midgley (1996) applied goal orientation theory to study changes in students' personal goal orientations and their perceptions of classroom goal orientations across transitions from fifth- to seventh-grade. The researchers identify two types of goal orientation in the academic settings. Task goal orientation occurs within students when they engage in classroom work to satisfy an intrinsic need for learning or to improve their abilities. Performance

goal orientation is opposite to task orientation in that students engage in academic work to demonstrate their skill relative to other students (Anderman, E. M. & Midgley, 1996).

Researchers have found that students with a task orientation are much more likely conform to successful behavior and learning patterns when compared to students with a performance orientation (Ames & Archer, 1988). E. M. Anderman and Midgley (1996) reported that across the transition from fifth-grade to sixth-grade that task goal orientation diminished in English classrooms while performance goal orientation increased. Researchers also found that the performance orientation of students decreased over the sixth- to seventh-grade transition in English while they observed no change in math goal orientation over the transitions. They also found that students perceived a decrease in task orientation in the classroom in the sixth-grade that continued into the seventh-grade. Additionally, there was a general decrease in student grades over the entire transition from fifth- to seventh-grade.

Feldlaufer et al. (1988) previously found that seventh-grade math students experienced an environment of less autonomy and decline in decision-making after transition with less student choice, decreased opportunities for collaboration, and increased social comparisons. E. M. Anderman and Midgley (1996) findings appear to reflect Feldlaufer et al. (1988) findings regarding the impact of the classroom-learning environment on the psychological needs of the students.

Hoy and Hannum (1997) characterized academic press as the characteristics in a school environment where the high expectation for goal attainment are established. These academic press environments focus on the belief that students can live up to their abilities if provided structured environments where learning is stressed. Shouse (1996)

studied two schools to determine how academic press influenced achievement. One school studied focused on a climate of social cohesion in the school community and the other school focused on a climate of academic press. While these two concepts are not mutually exclusive in a school environment, the researchers did report significant links between student academic success and academic press.

Engagement. Newell and Van Ryzin (2007) stated that student engagement in learning could be reflected by the behaviors and attitudes they bring to the classroom. A student who is engaged in learning "works hard, concentrates and pays attention. A student who is not behaviorally engaged is bored, distracted, and doing just enough to get buy" (Newell & Van Ryzin, 2007, p. 468).

Finn and Rock (1997) examined the impact of school engagement on 1,803 minority students from low-income homes based on their resilience, non-resilience, and non-completers. The researchers defined resilience for students as those who completed school and exhibited a level of academic success. Non-resilient students were defined as able to complete high school with poor performance, while non-completers were student dropouts. Researchers utilized surveys, demographics, and grade data to determine the role of engagement in student success (Finn & Rock, 1997). Finn and Rock (1997) found that students in the resilient group reported behaviors typically associated with engagement, such as being prepared for class, being at school on time, completing assignments, and behaving in the classroom. The study revealed significant differences between at-risk students who succeed academically in school compared to those who do not. Implications of the study suggest the potential for academic engagement to be a protective factor for students at risk.

Engels et al. (2016) investigated the association between behavioral engagement, peer status, and teacher and student relationships while attending secondary schools. The researchers found that students experiencing positive student and teacher relationships over time had higher levels of behavioral engagement compared to students who reported negative relationships with their teachers. This and other studies have concluded that behavioral engagement decreases over time for students in secondary school environments (Engels et al., 2016; Fredricks, Blumenfeld, & Paris, 2004).

Hope. Snyder, Rand, and Sigmon (2002) proposed a theory that "hopeful thought reflects the belief that one can find pathways to desired goals and become motivated to use those pathways. We also proposed that hope, so defined, serves to drive the emotions and well-being of people" (p. 257). Pathway and agency thinking are required components of hopeful thinking. Pathways thinking is the concept that hopeful individuals generate singular or multiple thoughts or pathways that allow them to believe they can achieve a goal. Agency thinking in a person requires the development of thoughts that motivate one to achieve goals when faced with challenges or obstacles to reaching those goals (Snyder et al., 2002).

Snyder et al. (2002) hypothesized that pathway and agency thinking could be developed from each other as one successfully pursues their goals. They also proposed that positive and negative emotions are a result of the success or lack of success of an individual to achieve their goals. The researchers stated that it is important for a child to develop goal directed hopeful thoughts to be successful in life. The application of hope theory in educational settings along with the purposeful development of pathway and agency thinking in students has the potential to benefit all students (Snyder et al., 2002).

Walker et al. (2009) studied rural middle school students to determine the effect of student perceptions of hope and achievement goals on behavior and academic achievement. The study utilized the *Patterns of Adaptive Learning Survey* (PALS) from the University of Michigan to determine achievement goals and disruptive behavior. Newman's *Mathematical Learning in the Classroom Questionnaire* (MLCQ) was utilized to determine student attitudes toward help-seeking, and the dispositional hope scale was used to determine student perceptions of hope (agency and pathways thinking). Student grade point averages were used to determine academic success (Walker et al., 2009).

Walker et al. (2009) found that both hope and achievement goals could be utilized to predict academic outcomes and that the components of hope were related to the academic domain. They stated, "the components of hope give insight into a broad range of student behaviors in the middle school" (Walker et al., 2009, p. 25) since the study focused on both adaptive and maladaptive behaviors and achievement. When focusing on the impact of hope, Walker et al. (2009) found that agency and pathway thinking had a positive relationship with student mastery, performance approach, and performance avoidance goals.

Additionally, the researchers found that only pathways thinking was significantly correlated to student grade point average while agency thinking was found to have a positive relationship with student participation in disruptive behaviors. They believed the positive relationship between maladaptive behavior and agency could be the result of students with high agency acting on feelings of personal confidence which could become "self-defeating" (Walker et al., 2009, p. 26). High agency student confidence levels may cause students to feel that rules do not apply and that they can be successful academically

without the required work (Walker et al., 2009). Walker et al. (2009) findings supported the importance of the school environment fitting the needs of the students and revealed that the environment could lead to students who are better adapted and motivated within the environment.

Marques, Lopez, Fontaine, Coimbra, and Mitchell (2015) investigated the students who exhibited high levels of hope to determine the characteristics that affect their hopefulness and compared them to students with lower levels of hope. Students with high levels of hope also displayed higher mean scores of school engagement and academic achievement. The study revealed that even small levels of hope in students could be leveraged to bolster student agency and hopeful pathways development that are key components of increasing personal hope. Marques et al. (2015) suggest that schools could help students set goals and engage in conversations and plans related to the students' progresses towards achievement of these goals. These strategies may reinforce student pathway and agency thinking to increase hopefulness.

Van Ryzin (2010) affirmed the connection between student perceptions of the school environment and academic success and links between student engagement and hope. In this study, the researcher found a strong correlation between student achievement and student perceptions of engagement and hope. Student perceptions, of the environment were linked to learning, which was then linked to hope and academic success. The findings suggest that school environment could become the focal center, and that modifications to the school environment can improve student perceptions and in turn increase student engagement and hope, which can lead to improved achievement (Van Ryzin, 2010).

Akos and Kurz (2016) suggested that the transition from elementary to middle school is a good time to support the development of the components of hopeful thinking. The development of these skills might help the students overcome risk factors experienced during the transition. They suggest that schools can create targeted interventions within the school setting to address the development of goal-setting, pathway creation, and development of agency. Akos and Kurz (2016) recommended that schools provide small groups for pre or post-transition students to help them adapt to the middle school. Schools can help these students in the setting of goals to adapt to the new environment and then later to social and academic goals. The initiating of goal setting with the teaching of pathway and agency thinking supports the development of skills related to hope that would support student success.

Chapter Conclusion

Middle school practitioners have sought ways to create schools and structures that meet the developmental needs of students (Carnegie Corp. of New York, NY., 1989). However, researchers have determined that many middle schools still do not function in a way that meets the needs of every student as they transition to middle schools (Alspaugh, 1998a). This inability to meet student needs could be the result of post-transition environments that do not match the developmental needs of the students (Eccles, Midgley et al., 1993). Many of these students have lost motivation, become stressed, struggled to cope, come to feel isolated, and failed to achieve at the levels experienced previously at the elementary school (Simmons et al., 1987).

Structures such as interdisciplinary teams have become the cornerstone of middle schools, although some research indicates that interdisciplinary teams alone are not

sufficient to meet the needs of the students (George, 2003; Styron & Nyman, 2008). The interdisciplinary team is designed to create smaller environments where students can develop relationships and bonds with a smaller peer group and fewer teachers (Association for Middle Level Education, 2010). However, sixth-grade students often transition from a self-contained elementary environment with one or two teachers daily to middle school teams that most commonly contain four to five teachers and up to 150 students (Erb & Doda, 1989; George, 2003). Wallace (2007) found that two-teacher team configurations increased student bonding and sense of belonging when compared to larger teams. These smaller teams can provide students the ability to connect with their teachers and each other while giving teachers the ability to know better their students to improve student bonding and success.

Researchers have identified the importance of looking at success measures in the school environment through a different lens (Newell & Van Ryzin, 2007, 2009). Newell and Van Ryzin (2007) encouraged schools to look beyond traditionally used achievement exams to determine their success and instead look to the cultures created in the school environment. They encouraged schools to evaluate their school to determine if the environment is meeting the developmental needs of their students. Their research aligns with previous studies to suggest that schools develop educational environments that fit students' psychological and developmental needs (Eccles, Wigfield et al., 1993; Newell & Van Ryzin, 2007).

Chapter III: Research Methodology

The purpose of this quantitative study was to determine the effects of interdisciplinary team size on student perceptions of the school environment after the transition to the middle school. Student perceptions of these variables can have a positive or negative effect on their future academic success. The researcher utilized the *EdVision*© Hope Survey as a measurement tool to determine the differences for students on three-teacher and five-teacher interdisciplinary teams and their perceptions of autonomy, belongingness, academic press, goal orientation, engagement, and hope.

Researchers have reported the impact of the school environment on students transitioning from elementary school to middle school regarding belonging and achievement (Eccles, Wigfield et al., 1993; Epstein & Mac Iver, 1990; Wallace, J., 2007). In this research, the environment into which students transition is important to the success of the transitioning middle-level student. This research provides insight into the effect that interdisciplinary team size has on students after the transition year to middle school.

Methodology

A school or classroom environment that does not adequately address the needs of an adolescent can cause social-emotional strain and poor academic performance for some students (Eccles, Wigfield et al., 1993). The importance of the transition of student between elementary school and middle school is highlighted by research and educational organizations that advocate for developmentally appropriate environments for students after they transition to the middle school (Association for Middle Level Education, 2010). The research promotes a variety of best practices that focus on school transitions, organizational structure, academic success, and social-emotional needs of students.

Through the process of reviewing appropriate literature, the researcher found few research studies that analyze the impact of interdisciplinary team size on student success after transitions to the middle school. The researcher discovered additional information that identified the importance of a variety of school environmental variables that influence student success and can be utilized as a lens to measure school effectiveness (Newell & Van Ryzin, 2009). Therefore, the purpose of the research is to study the differences between perceptions of autonomy, engagement, academic press, belonging, goal orientation, and hope for students in three-teacher and five-teacher interdisciplinary teams during their transitional year to middle school.

Research Questions

The research questions used for this study are as follows:

1. Is there a significant difference in student hope in three-teacher interdisciplinary teams as students transition from elementary to middle school?
2. Is there a significant difference in student hope in five-teacher interdisciplinary teams as students transition from elementary to middle school?
3. Is there a significant difference in student engagement in three-teacher interdisciplinary teams as students transition from elementary to middle school?
4. Is there a significant difference in student engagement in five-teacher interdisciplinary teams as students transition from elementary to middle school?

5. Is there a significant difference in student belonging in three-teacher interdisciplinary teams as students transition from elementary to middle school?
6. Is there a significant difference in student belonging in five-teacher interdisciplinary teams as students transition from elementary to middle school?
7. Is there a significant difference in student goal orientation in three-teacher interdisciplinary teams as students transition from elementary to middle school?
8. Is there a significant difference in student goal orientation in five-teacher interdisciplinary teams as students transition from elementary to middle school?
9. Is there a significant difference in student academic press in three-teacher interdisciplinary teams as students transition from elementary to middle school?
10. Is there a significant difference in student academic press in five-teacher interdisciplinary teams as students transition from elementary to middle school?
11. Is there a significant difference in student autonomy in three-teacher interdisciplinary teams as students transition from elementary to middle school?

12. Is there a significant difference in student autonomy in five-teacher interdisciplinary teams as students transition from elementary to middle school?

Research Design

The researcher utilized a quantitative research design to conduct a study of two middle schools to determine the differences between the independent variable of interdisciplinary team size and the dependent variables of autonomy, engagement, academic press, belonging, goal orientation, and hope. Student perceptions were analyzed to compare the differences between the students in three-teacher and five-teacher interdisciplinary team configurations to determine if there are statistically significant differences. The quantitative research approach allowed the researcher to objectively test differences in student perceptions on a pre and post survey and make an unbiased determination on the effect of interdisciplinary team size on student perceptions of the school environment. Variables in quantitative research are measured using statistical procedures that allow for an unbiased examination of the data and provides the researcher the ability to interpret the data using research questions and previous studies (Creswell, 2008).

Sample

The study utilized two middle schools for the study. One middle school used three-teacher interdisciplinary team configurations and one used five-teacher interdisciplinary team configurations during the transitional year to middle school. The researcher informally visited a school district in Arkansas and a school district in Nebraska to determine interest in participation in the study. The districts participating

contain multiple middle schools and are located in small cities. The Arkansas middle school currently utilizes three-teacher interdisciplinary teams in the sixth-grade during the transitional year and had four teams with approximately 75-80 students on each team. These students were provided core instruction in English, math, science, social studies, and reading from three teachers assigned to each team who taught classes in multiple disciplines.

The Nebraska middle school utilized five-teacher interdisciplinary teams in the seventh-grade during the transitional year and had two interdisciplinary teams with approximately 122 students on each team. The Nebraska students receive core instruction in English, math, science, social studies, and reading from five teachers with each teacher teaching only one subject area. The Arkansas middle school served 328 sixth-grade students, and the Nebraska middle school served 244 seventh-grade students. The researcher was previously an administrator employed by the Arkansas school district and currently employed by the Nebraska school district as an administrator. The researcher identified the schools studied through a discussion with the administrative teams in each school district and conversations with the principals of each middle school. The schools were specifically chosen based on the size of their interdisciplinary teams and their willingness to participate in the study.

All students in the transitional grades selected at each middle school were studied due to the size of the student population at each grade level and to ensure the sample is large enough to produce reliable data. This approach yielded a sample size of 328 students from the three-teacher interdisciplinary teams and 244 students from the five-teacher interdisciplinary teams.

Instrumentation

The researcher received permission to utilize the Hope Survey created by EdVision Schools. Additionally, the researcher was granted free use of the online software and survey tools, and agreed to share the findings of the study with EdVision. The *EdVision*© Hope Survey was utilized to evaluate the school environments' abilities to produce nonacademic outcomes that can affect academic achievement of students. The Hope Survey uses various surveys to measure school environment constructs that support student developmental needs related to components of autonomy, belonging, and competence (Newell & Van Ryzin, 2009). The survey measures student perceptions of autonomy, belongingness, goal orientation, academic press, engagement, and hope.

The Hope Survey measures autonomy with the "Learning Climate Questionnaire." The survey determines the levels of student autonomy in the school environment. The four-question survey uses a 7-point Likert scale: 1 = Disagree Strongly, 2 = Disagree Somewhat, 3 = Disagree a Little, 4 = Neutral, 5 = Agree a Little, 6 = Agree Somewhat, 7 = Agree Strongly. Responses for the items are averaged to produce a score ranging from 1 to 5. Survey scores for student academic press less than 4.0 = need significant improvement, 4.0 – 4.99 = needs improvement, 5.0 – 5.5 = good, 5.51 – 6.0 = very good, 6.1 – 7.0 = excellent. Students respond to statements such as "I feel that my teachers provide me choices and options" and "My teachers listen to how I would like to do things." This construct refers to the need for students to have a personal choice and the ability to make decisions in the educational setting that are important to student development. High autonomy environments are manifested through motivation, engagement, persistence, which can lead to higher levels of achievement and student

success. This scale consistently demonstrates reliability (Cronbach's α) above .70 and has been subjected to many tests of validity (EDVision, 2017).

The Hope Survey measures belongingness with the "Classroom Life Scale." This 17-item survey produces four belonging sub scores. These sub scores of belonging are teacher and student academic, teacher and student personal, student and peer academic, and student and peers personal. The items are measured using a 5-point Likert scale where 1 = Completely False, 2 = False Much of the Time, 3 = Sometimes True and Sometimes False, 4 = True Much of the Time, 5 = Completely True. Responses for the items are averaged to produce a score ranging from 1 to 5. Survey scores for student and teacher academic belonging less than 3.5 = Need Significant Improvement, 3.5 – 3.99 = Needs Improvement, 4.0 – 4.49 = Good, 4.5 – 4.74 = Very Good, 4.75 – 5 = Excellent. Survey scores for student and teacher personal belonging less than 3.0 = Need Significant Improvement, 3.0 – 3.49 = Needs Improvement, 3.5 – 3.74 = Good, 3.75 – 4.0 = Very Good, 4.01 – 5.0 = Excellent. Survey scores for student and peer academic belonging less than 2.5 = Need Significant Improvement, 2.5 – 2.99 = Needs Improvement, 3.0 – 3.49 = Good, 3.5 – 4.0 = Very Good, 4.01 – 5.0 = Excellent. Survey scores for student and peer personal belonging less than 3.0 = Need Significant Improvement, 3.0 – 3.49 = Needs Improvement, 3.5 – 3.74 = Good, 3.75 – 4.0 = Very Good, 4.01 – 5.0 = Excellent. The survey asks students to respond to statements such as "My teachers like to help me learn" and "My teachers really care about me" to determine teacher and academic support. Students are also asked to respond to statements such as "Other students in this school want me to do my best work" and "In this school, other students like me the way I am" to determine peer academic and personal support.

This construct relates to a student's need and motivation for connectedness and supportive relationships. These relationships can mitigate the impact of stressful events and may lead to a sense of well-being. Belongingness is important to students and can be characterized by the many supportive peer relationships that are vital to helping students stay motivated. The components of the "Classroom Life Scale" demonstrate reliability (Cronbach's α) at or above .90. The scale has been shown to be valid through extensive tests of validity, and is utilized in educational and social psychology literature (EDVision, 2017).

The Hope Survey measures performance and mastery goal orientation with the "Patterns of Adaptive Learning Survey." The 11-question survey uses a 3-point scale to produce a score for each student with the first point having a value of one, the second point having a value of 3, and the third point having a value of 5 to produce two scores representing the levels of mastery and performance goal orientation. When considering goal orientation, one would want to have a higher level of mastery orientation and a lesser level of performance orientation. The items are measured using a 5-point Likert scale: 1 = Not at all true in this school, 3 = Somewhat true in this school, 5 = Very true in this school. Responses for the items are averaged to produce a score ranging from 1 to 5. Survey scores for student mastery goal orientation less than 3.0 = Need Significant Improvement, 3.0 – 3.49 = Needs Improvement, 3.50 – 3.74 = Good, 3.75 – 4.0 = Very good, 4.01 – 5.0 = Excellent. Survey scores for student performance goal orientation greater than 3.5 = Need Significant Improvement, 3.1 – 3.5 = Needs Improvement, 2.51 – 3.0 = Good, 2.01 – 2.5 = Very Good, 1.0 – 2.0 = Excellent. The survey provided statements such as "Teachers in this school want students to really understand their work,

not just memorize it" and "In this school, teachers treat kids who get good grades or evaluations better than other kids."

Goal orientation examines a students' desire to succeed in school from purely personal motivation (mastery goal orientation) to achieve compared to their need to achieve in comparison (performance goal orientation) to their classmates. Those students who are motivated to learn for personal learning sake tend to have better attitudes and are more engaged when compared to those who perform for comparative reasons, which can lead to a lack of motivation by students when they do not perform well in the context of their fellow students. The survey demonstrates reliability (Cronbach's α) at or above .80 and has been determined to be valid (EdVision, 2017).

EdVision© Hope Survey measures academic press with the "Academic Press for Understanding" scale. The five-question survey uses a 3-point scale to produce a score for each student with the first point having a value of one, the second point having a value of 3, and the third point having a value of 5. The items are measured using a 3-point Likert scale: 1 = Not at all true in this school, 2 = Somewhat true in this school, 3 = Very true in this school. Responses for the items are averaged to produce a score ranging from 1 to 5. Survey scores for student academic press less than 3.0 = Need Significant Improvement, 3.0 – 3.49 = Needs Improvement, 3.5 – 3.74 = Good, 3.74 – 4.0 = Very Good, 4.1 – 5.0 = Excellent. Students are asked to respond to statements such as "My teachers are continually challenging me to do my best work" and "In this school, you have to do work that really makes you think." Academic press is related to high expectations from the teacher for students to do their best without pressing for comparative performance. A high press environment in schools promotes effective

strategies and high achievement for students. The "Academic Press for Understanding" scale has demonstrated reliability (Cronbach's α) at or above .70 (EdVision, 2017).

The Hope Survey measures behavioral and emotional engagement with the "Engagement vs. Disaffection with Learning" scale. The 20-question survey uses positively and negatively worded and scored items on a 4-point Likert scale: 1 = Not at all true, 2 = Not very true, 3 = Sort of true, 4 = Very true. Responses for the items are summed to produce a score ranging from -20 to 20. Student scores less than 0 = Very Low, 0 – 1.49 = Low, 1.5 – 2.99 = Moderate, 3.0 – 4.49 = High, greater than 4.5 = Very High. The survey asks students to respond to statements such as "I try hard to do well in school" and "I enjoy learning new things in school." Students who are engaged in school have attitudes and behaviors that lead to hard work, concentration, and attentiveness as opposed to a disengaged student who is worried or discouraged and perceives school as not fun. Engaged students have a higher quality of learning, which leads to greater understanding of the material and retention of that learning. The results of the survey have produced reliability (Cronbach's α) at or above .90 and have been extensively tested for validity (EdVision, 2017).

The Hope Survey utilizes the "Dispositional Hope Scale" that has reliability (Cronbach's α) at or above .90 to measure student perceptions of hope. The survey measures student perceptions of hopefulness. The 12-question survey with four distractor statements uses an 8-point Likert scale: 1 = Definitely False, 2 = Mostly False, 3 = Somewhat False, 4 = Slightly False, 5 = Slightly True, 6 = Somewhat True, 7 = Mostly True, 8 = Definitely True. Responses for the non-distractor items are added together to create a hope index score for each student ranging from 0 to 64 with indexes less than 42

= Very Low, 42 – 45.99 = Low, 46 – 49.99 = Moderate, 50 – 53.99 = High, and greater than 54 = Very High. Students who can visualize and develop plans to attain future goals exhibit Hope. The survey asked students to respond to statements such as "I energetically pursue my goals" and "Even when others get discouraged, I know I can find a way to solve a problem." Students with higher levels of hope set high goals for themselves than students with lower hope. High hope can be predictive of future academic and personal success.

Procedures and Data Collection

The researcher received permission to conduct the study and collect data after submitting a research proposal to his dissertation committee and an application to the Arkansas Tech University Institutional Review Board. The researcher followed the guidelines and procedures for research studies outlined by the participating districts. The students and parents on the selected interdisciplinary teams were provided letters describing the nature of the study and a request to allow their child to participate. Parents and students were provided an opt-out form to return to the school administration one week before survey administration to offer the opportunity to opt out of the study. Students could opt out at any time throughout the survey process. The students were given the survey during the first week of September 2017 to determine their perceptions of their previous school's environment and again during the first week of December 2017 to assess their perceptions after one semester in their current school environment. All students selected for the study who did not return an opt-out form were administered the Hope Survey electronically in the school setting using the EdVision online platform. The survey took approximately 20 minutes for students to complete and was administered by

teachers in a classroom or lab setting. The online platform required the uploading of student information into the survey portal before the administration of the survey. The researcher was provided student demographic information and identification numbers by the chosen districts data management team. All unique individual student response data and information collected by the researcher for entry into the Hope Survey remained anonymous and was not available to the school districts after the completion of the survey.

The researcher worked with building administrators to identify the optimal time and location to administer the survey. The survey participants accessed a link provided by their teachers that directed them to the online survey. The participants utilized their student identification as a key code to access the survey. The researcher received the data set from EdVision via a comma-separated values spreadsheet. The data collected was converted to Microsoft Excel and organized before being uploaded into IBM SPSS23 for statistical analysis. The study only utilized the data collected for students who participated in both September and December survey administrations.

Data Analysis

The participant survey data for students present for both surveys were separated according to interdisciplinary team size and analyzed using IBM SPSS23 data analysis software. The Hope Survey variables were analyzed by interdisciplinary team size to determine the differences between students' perceptions of their previous school environment and current school environment after experiencing a three-teacher or five-teacher interdisciplinary team for one semester. A paired samples *t*-test was performed to

determine differences in student perceptions on all dependent variables within each interdisciplinary team size configuration.

Summary

The purpose of this quantitative study was to investigate the differences in student perceptions of autonomy, belongingness, goal orientation, academic press, engagement, and hope within three-teacher and five-teacher interdisciplinary teams. This chapter outlined the methodology and data analysis techniques used related to the research questions. This chapter also discussed the research design, sampling, instrumentation, procedures, and data collection. One middle school in Nebraska and one in Arkansas participated in this study. The two samples were taken from transitioning sixth- and seventh-grade students who are being served on three-teacher and five-teacher interdisciplinary teams. The study used the Hope Survey to compare differences in student perceptions of autonomy, engagement, belonging, goal-orientation, academic-press, and hope at their previous school and current school after the transition to middle school. This study expands current research on the effects of interdisciplinary team organization on student's perceptions of the school environment during a transitional year.

Conclusion of Methodology

This study outlined the background, current research, and methodology that was utilized by the researcher to study the stated problem. Through the study of the problem and review of the literature, the researcher affirmed that additional research on the effects of interdisciplinary team configuration on students after transitioning to the middle school could be beneficial.

The review of literature noted the impact that transitions have on early adolescent students (Cauley & Jovanovich, 2006). Many elementary students who enter the new middle school environment are often unprepared developmentally for the environment and structure of the middle schools (Eccles, Wigfield et al., 1993). The creation and design of middle schools should be focused on meeting the various developmental needs of these students (Alexander & Williams, 1965). Jackson and Davis (2000) described the importance of the interdisciplinary team structure in meeting the needs of the middle school students. Wallace (2007) reported that the size of the interdisciplinary teams allows students to develop better relationships with their peers and teachers.

The researcher believes that these structures also impact student perceptions of the school environment. This research was designed to determine if there are differences in student perceptions of the school environment for students on three-teacher and five-teacher interdisciplinary teams. Data analysis will determine how each interdisciplinary team size configuration affected student perceptions of their environment. The variables of autonomy, goal-orientation, academic press, belonging, engagement, and hope that were measured are elements that research suggests impact student success in the school environment (Newell & Van Ryzin, 2009).

Chapter IV: Results

Transition to middle school can have a significant effect on student academic success, and middle-level administrators work to minimize the impact of these transitions between elementary school and middle schools on their students. Unfortunately, the school environments transitioning students enter do not always support the developmental and psychological needs of students (Eccles, Wigfield et al., 1993). Interdisciplinary teaming is one tool that middle schools use to create structured environments that are more supportive of students' emotional and academic needs. At the core of this teaming concept is the development of relationships and small learning communities that support students and their learning (National Middle School Association C.O., 1995). The Association for Middle Level Education (2010) suggested that smaller teams of two or three teachers are more effective in improving achievement, parental connections, and school climate. However, interdisciplinary teams of four and five teachers are more common in middle schools. Since a school environment that supports the developmental needs of students can improve student engagement which could lead to increased achievement and hope (Newell & Van Ryzin, 2009), the researcher sought to study how team size affects student perceptions of the school environment.

The purpose of this quantitative study was to determine the effects of interdisciplinary team size on student perceptions of the school environment one semester after the transition to the middle school. The researcher utilized the *EdVision*© Hope Survey as a measurement tool to determine the effect that three-teacher and five-teacher

interdisciplinary team size on student perceptions of autonomy, belongingness, academic-press, goal orientation, engagement, and hope.

In this chapter, the researcher will present the results from the data analysis of student perceptions of the school environment using the *EdVision*© Hope Survey completed by students who took the survey in both September and December of 2017. The data sample included students who transitioned into three-teacher and five-teacher interdisciplinary teams at the beginning of the 2017 school year. To examine the data, the researcher utilized IBM SPSS23 analysis software to run descriptive and inferential statistics on the pre and post survey data to seek answers to the following questions related to the school environment within three-teacher and five-teacher interdisciplinary teams.

Research Questions

1. Is there a significant difference in student hope in three-teacher interdisciplinary teams as students transition from elementary to middle school?
2. Is there a significant difference in student hope in five-teacher interdisciplinary teams as students transition from elementary to middle school?
3. Is there a significant difference in student engagement in three-teacher interdisciplinary teams as students transition from elementary to middle school?

4. Is there a significant difference in student engagement in five-teacher interdisciplinary teams as students transition from elementary to middle school?
5. Is there a significant difference in student belonging in three-teacher interdisciplinary teams as students transition from elementary to middle school?
6. Is there a significant difference in student belonging in five-teacher interdisciplinary teams as students transition from elementary to middle school?
7. Is there a significant difference in student goal orientation in three-teacher interdisciplinary teams as students transition from elementary to middle school?
8. Is there a significant difference in student goal orientation in five-teacher interdisciplinary teams as students transition from elementary to middle school?
9. Is there a significant difference in student academic press in three-teacher interdisciplinary teams as students transition from elementary to middle school?
10. Is there a significant difference in student academic press in five-teacher interdisciplinary teams as students transition from elementary to middle school?

11. Is there a significant difference in student autonomy in three-teacher interdisciplinary teams as students transition from elementary to middle school?
12. Is there a significant difference in student autonomy in five-teacher interdisciplinary teams as students transition from elementary to middle school?

Description of Sample

The researcher selected middle schools located in Northwest Arkansas and East Central Nebraska for the study. The two school districts serve approximately 16,000 and 10,000 students, respectively, in grades Pre-K through twelfth. The Arkansas middle school contained grades sixth through eighth and utilized three-teacher interdisciplinary teams during the sixth-grade transitional year. The Nebraska middle school contained grades seventh and eighth and used five-teacher interdisciplinary teams during the seventh-grade transitional year. The Arkansas middle school served 328 sixth-grade students, and the Nebraska middle school served 244 seventh-grade students.

The researcher obtained permission to conduct the study from the superintendents of both districts prior to data collection. Two surveys were administered to study Arkansas sixth grade students and Nebraska seventh-grade students during the 2017-2018 school year. The survey administrations occurred during the first week of September and the first week of December.

The September survey was utilized to measure student perceptions of their previous elementary school environment. The December survey was utilized to measure student perceptions of their current school environment after spending one semester in

their current team configurations. There were 328 sixth-grade students in the Arkansas middle school and 244 seventh-grade students in the Nebraska middle school at the time of the survey in September. Data utilized was collected only from students who took the survey in both the September and December administrations. There were 572 students invited to participate with data collected from 331 students with a 57.8% participation rate. In the Arkansas middle school, data collection yielded a 66.6% response rate and a sample size of 202 sixth-grade students placed on three-teacher interdisciplinary teams. The data collection for the Nebraska middle school yielded a 50% response rate and a sample size of 129 seventh-grade students placed on five-teacher interdisciplinary teams in Nebraska.

Table 4.1 provides a demographic view of the participants that completed both administrations of the surveys. The data collected from the 202 sixth-grade students from Arkansas consisted of 104 female students representing 51.5% of the sample, and 98 male students representing 48.5% of the sample. One hundred and four Caucasian students made up 51.4% of the sample, and 88 Hispanic students represented 43.5% of the sample. Six Asian/Pacific Islanders and four Native American students made up the remaining 4.9% of the sample. There were no African American students represented in the data. The student sample was composed of 125 students eligible for free and reduced lunch which represented 61.9% of the students. Students identified for special education services represented 19 students who were 9.4% of the sample.

The data collected from the 129 seventh-grade students from Nebraska consisted of 63 female students representing 48.8% of the sample and 66 male students representing

51.2% of the sample. Eighty-nine Caucasian students made up 68.9% of the sample, and 21 Hispanic students represented 16.3% of the sample. There were 15 African American

Table 4.1

Demographic Comparison of Sample

		Three-teacher Teams		Five-teacher Teams	
Demographic	Level	*N*	*%*	*N*	*%*
Gender	Male	98	48.5	66	51.2
	Female	104	51.5	63	48.8
Ethnicity	Caucasian	104	51.4	89	68.9
	Hispanic	88	43.5	21	16.3
	African American	0	0	15	11.6
	Native American	4	1.9	0	0
	Asian/Pacific Islander	6	3.0	4	3.1
Free/Reduced Lunch		125	61.9	42	32.6
Special Education		19	9.4	19	14.7

students that comprised 11.6% of the sample and four Asian/Pacific Islanders that made up the remaining 3.1% of the sample. There were no Native American students represented in the data. The student sample was composed of 42 students eligible for free and reduced lunch which represented 32.6% of the students. Students identified for special education serviced represented 19 students who were 14.7% of the sample.

Results of the Study

The researcher studied changes in student perceptions of school climate after participating in three-teacher and five-teacher interdisciplinary teams. A September and December administration of the *EdVision*© Hope Survey collected data on student

perceptions of the school environment. The survey measured hope, engagement, belonging, task orientation, academic press, and autonomy from each interdisciplinary team configuration.

Tables 4.2 and 4.3 present a summary of the descriptive statistics for each team size configuration related to the survey variables on both the September and December survey. Student perceptions of hope, academic press, and autonomy are each reported individually. Student Engagement was reported as two subscores (behavioral and emotional engagement). The variable of student belonging is reported as four subscores (student/teacher academic, student/teacher personal, student/student academic, student/student personal). Goal orientation was reported as two subscores (mastery and performance orientation).

Descriptive statistics were run on each variable of the *EdVision*© Hope Survey within each interdisciplinary teaming configuration to determine changes in student perceptions before and after exposure to the teaming configuration in their school. The researcher ran a paired samples two-tailed *t*-test on data from September and December within each team configuration to determine changes in student perceptions of the environment. A *p* value of .05 was utilized to indicate significant differences between pre and post survey variables. The researcher ran a test for normality, and each of the constructs appeared to be normally distributed. Table 4.4 represents the results for paired samples t-test run on Hope Survey data variables.

Table 4.2

Three-Teacher Interdisciplinary Team-Hope Survey

Survey Variables	*N*	*M*	*SD*	Std. Error Mean
Hope				
September	202	48.06	9.99	.70
December	202	47.65	9.87	.69
Behavioral Engagement				
September	202	5.69	4.70	.33
December	202	5.38	4.91	.35
Emotional Engagement				
September	202	3.96	5.72	.40
December	202	5.95	6.05	.43
Belonging-T/S Academic				
September	202	4.31	.87	.06
December	202	4.49	.69	.05
Belonging-T/S Personal				
September	202	3.87	1.02	.07
December	202	4.07	.92	.06
Belonging-S/P Academic				
September	202	3.36	.98	.07
December	202	3.42	.81	.06
Belonging-S/P Personal				
September	202	3.53	1.04	.07
December	202	3.65	.88	.06
Goal Orientation-Mastery				
September	202	4.02	.86	.06
December	202	4.13	.70	.05
Goal Orient-Performance				
September	202	2.39	1.05	.07
December	202	2.23	.95	.06
Academic Press				
September	202	3.84	.87	.06
December	202	3.89	.72	.05
Autonomy				
September	202	5.12	1.47	.10
December	202	5.34	1.23	.09

Note. T/S=Teacher and Student; S/P=Student and Peer

Table 4.3

Five-Teacher Interdisciplinary Team-Hope Survey

Survey Variables	*N*	*M*	*SD*	Std. Error Mean
Hope				
September	129	50.52	8.32	.73
December	129	50.50	8.67	.76
Behavioral Engagement				
September	129	6.27	4.57	.40
December	129	6.09	4.71	.41
Emotional Engagement				
September	129	6.20	5.87	.52
December	129	3.53	5.58	.49
Belonging-S/T Academic				
September	129	4.64	.54	.05
December	129	4.61	.57	.05
Belonging-S/T Personal				
September	129	4.03	.89	.08
December	129	3.83	.84	.07
Belonging-S/P Academic				
September	129	3.47	.99	.09
December	129	3.45	.97	.09
Belonging-S/P Personal				
September	129	3.65	1.08	.09
December	129	3.57	.92	.08
Goal Orientation-Mastery				
September	129	4.18	.57	.05
December	129	4.21	.70	.06
Goal Orient-Performance				
September	129	2.00	.92	.08
December	129	2.10	.87	.08
Academic Press				
September	129	3.85	.65	.06
December	129	3.82	.75	.07
Autonomy				
September	129	5.64	1.06	.09
December	129	5.41	1.13	.10

Note. T/S=Student to Teacher; S/P=Student to Peer

Table 4.4

Paired Sample t-Test Results-Hope Survey

Variables	*N*	*M*	*SD*	*t*	*df*	*Sig.*
Hope						
Three-teacher	202	-.41	13.14	-.445	201	.657
Five-teacher	129	-.02	7.33	-.036	128	.971
Behavioral Engagement						
Three-teacher	202	-.31	6.62	-.669	201	.504
Five-teacher	129	-.19	4.19	-.504	128	.615
Emotional Engagement						
Three-teacher	202	1.99	8.39	3.37	201	.001***
Five-teacher	129	-2.67	5.58	-5.42	128	.000***
Belonging T/S Academic						
Three-teacher	202	.18	1.12	2.31	201	.022*
Five-teacher	129	-.03	.58	-.49	128	.623
Belonging T/S Personal						
Three-teacher	202	.21	1.41	2.07	201	.039*
Five-teacher	129	-.20	.87	-2.60	128	.010*
Belonging S/P Academic						
Three-teacher	202	.06	1.31	.70	201	.485
Five-teacher	129	-.02	.99	-.245	128	.807
Belonging S/P Personal						
Three-teacher	202	.12	1.41	1.21	201	.226
Five-teacher	129	-.08	1.03	-.904	128	.367
Goal Orient-Mastery						
Three-teacher	202	.11	1.12	1.39	201	.165
Five-teacher	129	.03	.73	.45	128	.655
Goal Orient.-Perform.						
Three-teacher	202	-.16	1.45	-1.60	201	.109
Five-teacher	129	.10	.93	1.17	128	.245
Academic Press						
Three-teacher	202	.05	1.12	.603	201	.547
Five-teacher	129	-.03	.82	-.386	128	.700
Autonomy						
Three-teacher	202	.22	1.92	1.64	201	.102
Five-teacher	129	-.22	1.27	-1.99	128	.049*

Note. T/S=Teacher and Student; S/P=Student and Peer; *N* = Number; *M* = mean; *SD* = standard deviation; *t* = paired *t* test statistic; *df* = degrees of freedom; *Sig. = Significance*; *p<.05; ***p<.001

Research Question 1

Is there a significant difference in student hope in three-teacher interdisciplinary teams as students transition from elementary to middle school?

Students entered the three-teacher team configuration with a mean student hope index of (M = 48.06, SD = 9.99) and experienced a decrease in hopefulness (M = 47.64, SD = 9.87) after a semester in the environment. A paired samples two-tailed t-test run on survey results for students participating in three-teacher interdisciplinary teams indicated no significant statistical difference in student hopefulness, (M = - .41, SD = 13.14), $t(201)$ = - .445, p = .657.

Research Question 2

Is there a significant difference in student hope in five-teacher interdisciplinary teams as students transition from elementary to middle school?

Students entered the five-teacher interdisciplinary teaming configuration with a mean student hope index of (M = 50.52, SD = 8.32) and experienced a decrease in hopefulness (M = 50.50, SD = 8.66). A paired samples two-tailed t-test run on survey results for students participating in five-teacher interdisciplinary teams indicated no significant statistical difference in student hopefulness, (M = - .02, SD = 7.33), $t(128)$ = - 0.036, p = .971.

Research Question 3

Is there a significant difference in student engagement in three-teacher interdisciplinary teams as students transition from elementary to middle school?

Students entered the three-teacher team configuration with a mean behavioral engagement score of (M = 5.69, SD = 4.70) and experienced a decrease in their

behavioral engagement (*M* = 5.38, *SD* = 4.91) after a semester in the environment. A paired samples two-tailed *t*-test run on survey results for students participating in three-teacher interdisciplinary teams indicated no significant statistical difference in student behavioral engagement, (*M* = - .31, *SD* = 6.62), *t*(201) = - 0.669, *p* = .504.

Students on the three-teacher team reported a mean emotional engagement score of (*M* = 3.96, *SD* = 5.718) and experienced an increase in emotional engagement (*M* = 5.95, *SD* = 6.05) after a semester in the environment. A paired samples two-tailed *t*-test run on survey results for students participating in in three-teacher interdisciplinary teams indicated a statistically significant increase in student emotional engagement, (*M* = 1.99, *SD* = 8.39), *t*(201) = 3.37, *p* = .001.

Research Question 4

Is there a significant difference in student engagement in five-teacher interdisciplinary teams as students transition from elementary to middle school?

Students entered the five-teacher team configuration with a mean behavioral engagement score of (*M* = 6.27, *SD* = 4.57) and experienced a decrease in behavioral engagement (*M* = 6.09, *SD* = 4.71) after a semester in the environment. A paired samples two-tailed *t*-test run on survey results for students participating in five-teacher interdisciplinary teams indicated no significant statistical difference in student behavioral engagement, (*M* = - .18, *SD* = 4.19), *t*(128) = - 0.504, *p* = .615.

Students on the five-teacher team reported a mean emotional engagement score of (*M* = 6.20, *SD* = 5.87) and experienced a decrease in emotional engagement (*M* = 3.53, *SD* = 5.57) after a semester in the environment. A paired samples two-tailed *t*-test run on survey results for students participating in in five-teacher interdisciplinary teams

indicated a statistically significant decrease in student emotional engagement, (*M* = -2.67, *SD* = 5.59), *t*(128) = -5.42, *p* = .000.

Research Question 5

Is there a significant difference in student belonging in three-teacher interdisciplinary teams as students transition from elementary to middle school?

Students entered the three-teacher team configuration with a mean teacher and student academic belonging of (M = 4.30, SD = .87) and experienced an increase in teacher and student belonging (M = 4.48, SD = .69) after a semester in the environment. A paired samples two-tailed t-test run on survey results for students participating in three-teacher interdisciplinary teams indicated a statistically significant increase in teacher and student academic belonging, (M = .18, SD = 1.12), t(201) = 2.31, *p* = .022.

Students entered the three-teacher team configuration with a mean teacher and student personal belonging of (M = 3.87, SD = 1.02) and experienced an increase in teacher and student personal belonging (M = 4.07, SD = .92) after a semester in the environment. A paired samples two-tailed t-test run on survey results for students participating in three-teacher interdisciplinary teams indicated a statistically significant increase in teacher and student personal belonging (M = .21, SD = 1.41), t(201) = 2.07, *p* = .039.

Students entered the three-teacher team configuration with a mean student and peer academic belonging of (M = 3.36, SD = .98) and experienced an increase in student and peer academic belonging (M = 3.42, SD = .81) after a semester in the environment. A paired samples two-tailed t-test run on survey results for students participating in

three-teacher interdisciplinary teams indicated no significant statistical difference in student and peer academic belonging, (M = .06, SD = 1.31), t(201) = 0.70, p = .485.

Students entered the three-teacher team configuration with a mean student and peer personal belonging of (M =3.52, SD =1.04) and experienced an increase in student and peer personal belonging (M = 3.64, SD = .88) after a semester in the environment. A paired samples two-tailed t-test run on survey results for students participating in three-teacher interdisciplinary teams indicated no significant statistical difference in student and peer academic belonging, (M = .12, SD = 1.41), t(201) = 1.21, p = .226.

Research Question 6

Is there a significant difference in student belonging in five-teacher interdisciplinary teams as students transition from elementary to middle school?

Students entered the five-teacher team configuration with a mean teacher and student academic belonging of (M = 4.63, SD = 0.54) and experienced a decrease in teacher and student academic belonging (M = 4.61, SD = .57) after a semester in the environment. A paired samples two-tailed *t*-test run on survey results for students participating in five-teacher interdisciplinary teams indicated no significant statistical difference in teacher and student academic belonging, (M = - .02, SD = 0.58), t(128) = -0.493 , p = .623.

Students entered the five-teacher team configuration with a mean teacher and student personal belonging of (M = 4.02, SD = 0.89) and experienced a decrease in teacher and student personal belonging (M = 3.82, SD = 0.84) after a semester in the environment. A paired samples two-tailed *t*-test run on survey results for students participating in five-teacher interdisciplinary teams indicated statistically significant

decrease in teacher and student personal belonging, (M = -.20, SD = .87), t(128) = -2.61, p = .01.

Students entered the five-teacher team configuration with a mean student and peer academic belonging of (M = 3.47, SD = 0.99) and experienced a decrease in student and peer academic belonging (M = 3.45, SD = 0.97) after a semester in the environment. A paired samples two-tailed t-test run on survey results for students participating in in five-teacher interdisciplinary teams indicated no significant statistical difference in student and peer academic belonging, (M = -.02, SD = 0.99), t(128) = -0.245 , p = .807.

Students entered the five-teacher team configuration with a mean student and peer personal belonging of (M = 3.65, SD = 1.07) and experienced a decrease in student and peer personal belonging (M = 3.57, SD = 0.92) after a semester in the environment. A paired samples two-tailed t-test run on survey results for students participating in five-teacher interdisciplinary teams indicated no significant statistical difference in student and peer personal belonging, (M = -.08, SD = 1.03), t(128) = -0.90 , p = .367 .

Research Question 7

Is there a significant difference in student goal orientation in three-teacher interdisciplinary teams as students transition from elementary to middle school?

Students entered the three-teacher team configuration with a mean student mastery goal orientation of (M = 4.02, SD = 0.86) and experienced a increase in mastery goal orientation (M = 4.13, SD = 0.70) after a semester in the environment. A paired samples two-tailed t-test run on survey results for students participating in in three-teacher interdisciplinary teams indicated no significant statistical difference in student mastery goal orientation, (M = .11, SD = 1.12), t(201) = 1.39, p = .165.

Students entered the three-teacher team configuration with a mean student performance goal orientation of (M = 2.39, SD = 1.05) and experienced a slight decrease in performance goal orientation (M = 2.23, SD = 0.95) after a semester in the environment. A decrease in performance goal orientation is desirable and explained in Chapter 5. A paired samples two-tailed t-test run on survey results for students participating in three-teacher interdisciplinary teams indicated no statistically significant difference in student performance goal orientation, (M = -.16, SD = 1.45), t(201) = -1.61, p = .109.

Research Question 8

Is there a significant difference in student goal orientation in five-teacher interdisciplinary teams as students transition from elementary to middle school?

Students entered the five-teacher team configuration with a mean student mastery goal orientation of (M =4.18, SD = 0.57) and experienced an increase of mastery goal orientation (M =4.21, SD = 0.70) after a semester in the environment. A paired samples two-tailed t-test run on survey results for students participating in in five-teacher interdisciplinary teams indicated no significant statistical difference in student mastery goal orientation, (M = .03, SD = 0.73), t(128) = 0.45, p = .655.

Students entered the five-teacher team configuration with a mean student performance goal orientation of (M = 2.00, SD = 0.92) and experienced an increase in performance goal orientation (M = 2.10, SD = 0.87) after a semester in the environment. A decrease in performance goal orientation is desirable and explained in Chapter 5. A paired samples two-tailed t-test run on survey results for students participating in five-

teacher interdisciplinary teams indicated no significant statistical increase in student to teacher personal belonging, (M = .10, SD = 0.93), t(128) = 1.17, p = .245.

Research Question 9

Is there a significant difference in student academic press in three-teacher interdisciplinary teams as students transition from elementary to middle school?

Students entered the three-teacher team configuration with a mean student academic press of (*M* = 3.83, *SD* = 0.87) and experienced an increase in academic press (*M* = 3.89, *SD* = 0.72) after a semester in the environment. A paired samples two-tailed *t*-test run on survey results for students participating in three-teacher interdisciplinary teams indicated no statistically significant difference in student academic press, (*M* = .05, *SD* = 1.12), *t*(201) = 0.603, *p* = .547.

Research Question 10

Is there a significant difference in student academic press in five-teacher interdisciplinary teams as students transition from elementary to middle school?

Students entered the five-teacher team configuration with a mean student academic press of (*M* = 3.85, *SD* = 0.65) and experienced a decrease in academic press (*M* = 3.82, *SD* = 0.75) after a semester in the environment. A paired samples two-tailed *t*-test ran on survey results for students participating in five-teacher interdisciplinary teams indicated no significant statistical difference in student academic press, (*M* = -.03, *SD* = .82), *t*(128) = -0.386, *p* = .70.

Research Question 11

Is there a significant difference in student autonomy in three-teacher interdisciplinary teams as students transition from elementary to middle school?

Students entered the three-teacher team configuration with a mean student autonomy of (M = 5.12, SD = 1.46) and experienced an increase in autonomy (M = 5.34, SD = 1.23) after a semester in the environment. A paired samples two-tailed t-test run on survey results for students participating in three-teacher interdisciplinary teams indicated no significant statistical difference in student autonomy, (M = .22, SD = 1.92), $t(201)$ = 1.64, p = .102.

Research Question 12

Is there a significant difference in student autonomy in five-teacher interdisciplinary teams as students transition from elementary to middle school?

Students entered the five-teacher team configuration with a mean student autonomy of (M = 5.64, SD = 1.07) and experienced a decrease in autonomy (M = 5.42, SD = 1.14) after a semester in the environment. A paired samples two-tailed t-test run on survey results for students participating in five-teacher interdisciplinary teams indicated a statistical significant decrease in student autonomy, (M = -.22, SD = 1.27), $t(128)$ = -1.99, p = .049.

Chapter Conclusion

Results from the *EdVision*© Hope Survey administered to sixth-grade students in three-teacher interdisciplinary team configuration indicated that there were no significant differences in measurements of hope, behavioral engagement, student and peer academic belonging, student and peer personal belonging, mastery goal orientation, performance goal orientation, academic press, or autonomy. There was a statistically significant improvement in student emotional engagement, teacher and student academic belonging, and teacher and student personal belonging,

Survey results from seventh-grade students in five-teacher interdisciplinary teams indicated that there were no significant differences in measurements of hope, behavioral engagement, student, and teacher academic belonging, student and peer academic belonging, student and peer personal belonging, mastery goal orientation, performance goal orientation, or academic press. There were statistically significant decreases in emotional engagement, teacher and student personal belonging, and autonomy.

The results indicated a significant statistical increase in the variable of emotional engagement for students on three-teacher teams and a statistically significant decrease for students on five-teacher teams. Students who are emotionally engaged enjoy being in school and learning new things (EdVision, 2017). Students who are emotionally disengaged often worry and feel discouraged and believe that school is not a fun place to be (EdVision, 2017).

The results also indicated a significant statistical increase in the variable of teacher and student academic belonging and teacher and student personal belonging for students participating in three-teacher interdisciplinary teams. There was no significant increase for students on five-teacher teams related to teacher and student academic belonging. However, there was a statistically significant decrease in student and teacher personal belonging. The school environment variable associated with belonging relates to a student's need and motivation for connectedness and supportive relationships with teachers and peers within the environment. Teacher and student connectedness can lead to students feeling supported both academically and personally by their teachers and peers (Newell & Van Ryzin, 2009).

Student survey results from five-teacher teams also indicated a statistically significant decrease in perceptions of autonomy within the environment. The variable of autonomy refers to the opportunity for student self-management and academic choice. High-autonomy situations stimulate student motivation, engagement, and persistence, which in turn results in higher levels of achievement (Newell & Van Ryzin, 2009).

The next chapter presents an analysis and interpretation of the findings through the lens of appropriate research literature and middle school practices. The researcher provides recommendations for middle-level practitioners attempting to create supportive school environments for students transitioning from elementary school to middle school along with recommendations for further study.

Chapter V: Conclusions

The purpose of this quantitative study was to determine the effects of interdisciplinary team size on student perceptions of the school environment after the transition to middle schools. Research indicates that students often exchange supportive environments at the elementary school, anchored to the support of a few teachers, for larger middle school environments with many teachers. These larger environments often fail to adequately address the developmental and psychological needs of students (Eccles, Wigfield et al., 1993).

Most middle schools utilize a variety of transitional activities for students and parents to provide opportunities to explore the new environment and ease the transition to the new school environment (Bailey et al., 2015; Rueger et al., 2014). Middle school organizational structures, such as interdisciplinary teams, can make the school environment feel intimate and foster productive relationships between students and teachers to meet student needs (National Middle School Association C.O., 1995). The focus of the interdisciplinary teaming concept is the development of small communities that support students and their learning. The Association for Middle Level Education (2010) suggested that smaller teams of two or three teachers are more effective in improving achievement, parental connections, and school climate. However, interdisciplinary teams of four and five teachers are more common in middle schools.

Since a school environment that supports the developmental needs of students can improve student engagement, achievement, and hope (Newell & Van Ryzin, 2009) and in light of the Association for Middle Level Education (2010) recommendation for smaller team sizes, the researcher sought to study how team size affects student perceptions of

the school environment. The researcher utilized the *EdVision*© Hope Survey as a measurement tool to determine the effect that three-teacher and five-teacher interdisciplinary team size has on student perceptions of the school environmental variables that support adolescent needs. The variables measured were student perceptions of autonomy, belonging, academic-press, goal orientation, engagement, and hope.

Limitations

The researcher focused on school perception data from students and excluded achievement, discipline, attendance data and perceptional teacher data that would have informed this study. The researcher also limited the study to only three-teacher and five-teacher interdisciplinary teams, although four-teacher interdisciplinary teams are the most common configuration within middle schools. Both schools were selected based on their willingness to participate and size of the interdisciplinary teams. A more extensive sample may have allowed for a broader generalization of the results.

Students in the schools studied transitioned students at different grade levels which may have impacted student perceptions due to the natural social and emotional development related to their age. However, Holas and Huston (2012) reported that the timing of a student grade-level transition between schools is not as important as the quality of the environment a student enters after the transition.

The middle schools chosen conducted similar transitional activities for students and provided similar social-emotional and academic supports both before and after the transition. However, the principals reported differences in teacher collaboration and teaming activities, as noted in Chapter I, related to the frequency of and nature of teacher

collaborative activities. There were also some differences in student free and reduced lunch rates and ethnicity that may have affected the results of this study.

The data collected with the perceptual survey was limited to Likert scale items and did not include narrative feedback questions from students, which would have provided the researcher more insight of student perceptions of the variables and school practices within the school environment. Initial student survey data collected in September asked students for their perceptions of the school environment in their previous elementary school. The delay between their departure from their previous elementary school environment in late May 2017 and the survey administration in early September 2017 may have influenced perceptions of the past environment which could have affected the results of the study. The survey results collected were also self-reported, and the researcher assumed that each student answered honestly and understood the nature of the questions asked.

Summary of Results

The researcher attempted to expand on the limited research related to the impact of interdisciplinary team size configurations on the school environment. The study was designed to address 12 questions related to the impact of interdisciplinary team size on student perceptions of the school environment after transitioning to the middle school. To answer the questions, the researcher utilized survey results from two administrations of the *EdVision*© Hope Survey to determine student perceptions of their previous elementary school environment and their current middle school environment after experiencing a three-teacher or five-teacher interdisciplinary team configuration for a semester. The Hope Survey utilizes a variety of frequently used surveys with high

reliability and validity to measure student perceptions of variables related to student development needs. Survey responses for 331 students from two middle schools were analyzed. Paired sample two tailed *t*-tests were conducted on all data to determine statistically significant changes in student perceptions.

The researcher also utilized a scale provided by EdVision to determine the levels of student perceptions of the environment on the variables measured by the survey for discussion purposes. These scales provide context for the mean levels of the various variables measured with the survey. The scales are typically given to school administrators to offer them a tool to identify variables within the school environment which need to be improved. The administrators can then use this information to work with staff to develop strategies that improve the environment and support student social-emotional and academic development.

The EdVision scales are defined in Chapter 3 in the instrumentation section. The scales classify collective mean results for students on a scale ranging from needs significant improvement to excellent or very low to very high depending on the survey used for the variables. The variables of hope, academic press, and autonomy are reported as a single score. The variable of engagement is reported as two subscores (behavioral and emotional engagement). The variable of belonging is reported as four subscores (student/teacher academic, student/teacher personal, student/peer academic, student/peer personal). Goal orientation is reported as two subscores (mastery and performance orientation).

Research Question 1: *Is there a significant difference in student hope in three-teacher interdisciplinary teams as students transition from elementary to middle school?*

Using the EdVision scale, students in the environment collectively reported "moderate" levels of hopefulness upon entry into the three-teacher team middle school, which persisted after one semester in the environment although there was a slight decrease in the mean. The result of a paired sample two-tailed *t*-test indicated that there was not a statistically significant difference in student perceptions of hope between the first and second survey administration. This finding suggests that participation in three-teacher interdisciplinary teams had no significant effect on student perceptions of hope after one semester in the environment.

Research Question 2: *Is there a significant difference in student hope in five-teacher interdisciplinary teams as students transition from elementary to middle school?*

Using the EdVision scale, students entering the five-teacher teaming environment reported "high" levels of hopefulness, which persisted after one semester in the environment. The result of a paired sample two-tailed *t*-test revealed that participation in the five-teacher team environment did not have statistically significant effects on student perceptions of hope after one semester in the environment. This finding indicates that participation in five-teacher team configuration had no significant effect on student perceptions of hope after one semester in the environment.

Research Question 3: *Is there a significant difference in student engagement in three-teacher interdisciplinary teams as students transition from elementary to middle school?*

Using the EdVision scale, students in the environment collectively reported "very high" levels of behavioral engagement upon entry into the three-teacher team middle school, which persisted although there was a slight decrease in the mean after one

semester. The result of a paired sample two-tailed *t*-test indicated that there was not a statistically significant difference in student perceptions of behavioral engagement between the first and second survey administration. This finding suggests that participation in three-teacher interdisciplinary teams had no significant effect on student perceptions of behavioral engagement after one semester in the environment.

Using the EdVision scale, students in the environment collectively reported "high" levels of emotional engagement upon entry into the three-teacher team middle school, which increased to "very high" levels of emotional engagement after one semester due to a substantial increase in the mean. The result of a paired sample two-tailed *t*-test indicated that there was a statistically significant increase in student perceptions of emotional engagement between the first and second survey administration. This finding suggests that participation in three-teacher interdisciplinary teams had a statistically significant positive effect on student perceptions of emotional engagement after one semester in the environment.

Research Question 4: *Is there a significant difference in student engagement in five-teacher interdisciplinary teams as students transition from elementary to middle school?*

Using the EdVision scale, students in the environment collectively reported “very high” levels of behavioral engagement upon entry into the five-teacher team middle school, which persisted although there was a slight decrease in the mean after one semester. The result of a paired sample two-tailed *t*-test indicated that there was not a statistically significant difference in student perceptions of behavioral engagement between the first and second survey administration. This finding suggests that

participation in five-teacher interdisciplinary teams had no significant effect on student perceptions of behavioral engagement after one semester in the environment.

Using the EdVision scale, Students in the environment collectively reported "very high" levels of emotional engagement upon entry into the five-teacher team middle school, which decreased to just "high" levels of emotional engagement after one semester due to a large decrease in the mean. The result of a paired sample two-tailed *t*-test indicated that there was a statistically significant decrease in student perceptions of emotional engagement between the first and second survey administration. This finding suggests that participation in five-teacher interdisciplinary teams had a statistically significant negative effect on student perceptions of emotional engagement after one semester in the environment.

Research Question 5: *Is there a significant difference in student belonging in three-teacher interdisciplinary teams as students transition from elementary to middle school?*

Using the EdVision scale, students' mean level of teacher and student academic belonging was classified as "good" upon entry into the three-teacher team middle school. This sense of belonging increased after a semester in the environment but remained classified as "good." The result of a paired sample two-tailed *t*-test indicated that there was a statistically significant increase in student perceptions of teacher and student academic belonging between the first and second survey administration. This finding suggests that participation in three-teacher interdisciplinary teams had a statistically significant positive effect on student perceptions of teacher and student academic belonging after one semester in the environment.

Using the EdVision scale, students mean level of teacher and student personal belonging was classified as “very good” upon entry into the three-teacher team middle school and increased to “excellent” after a semester in the environment. The result of a paired sample two-tailed *t*-test indicated that there was a statistically significant increase in student perceptions of teacher and student personal belonging following the first and second survey administration. This finding suggests that participation in three-teacher interdisciplinary teams had a statistically significant positive effect on student perceptions of teacher and student personal belonging after one semester in the environment.

Using the EdVision scale, students mean level of student and peer academic belonging was classified as “good” upon entry into the three-teacher team middle school. This sense of belonging increased after a semester in the environment but remained classified as “good.” The result of a paired samples two-tailed *t*-test indicated that there was not a statistically significant increase in student perceptions of student and peer academic belonging between the first and second survey administration. This finding suggests that participation in three-teacher interdisciplinary teams had no statistically significant effect on student perceptions of student and peer academic belonging after one semester in the environment.

Using the EdVision scale, students mean level of student and peer personal belonging was classified as “good” upon entry into the three-teacher team middle school. This sense of belonging increased after a semester in the environment but remained classified as “good.” The result of a paired sample two-tailed *t*-test indicated that there was not a statistically significant increase in student perceptions of student and peer personal belonging between the first and second survey administration. This finding

suggests that participation in three-teacher interdisciplinary teams had no statistically significant effect on student perceptions of student and peer personal belonging after one semester in the environment.

Research Question 6: *Is there a significant difference in student belonging in five-teacher interdisciplinary teams as students transition from elementary to middle school?*

Using the EdVision scale, students mean level of teacher and student academic belonging was classified as "very good" upon entry into the five-teacher team middle school. This sense of belonging decreased after a semester in the environment but remained classified as "very good." The result of a paired sample two-tailed *t* test indicated no statistically significant difference in student perceptions of teacher and student academic belonging between the first and second survey administration. This finding suggests that participation in five-teacher interdisciplinary teams had no statistically significant effect on student perceptions of teacher and student academic belonging after one semester in the environment.

Using the EdVision scale, students' mean level of teacher and student personal belonging was classified as "excellent" upon entry into the five-teacher team middle school and decreased to "very good" after a semester in the environment. The result of a paired sample two-tailed *t* test indicated that there was a statistically significant decrease in student perceptions of teacher and student personal belonging between the first and second survey administration. This finding suggests that participation in five-teacher interdisciplinary teams had a statistically significant negative effect on student perceptions of teacher and student personal belonging after one semester in the environment.

Using the EdVision scale, students mean level of student and peer academic belonging was classified as “good” upon entry into the five-teacher team middle school. This sense of belonging slightly decreased after a semester in the environment but remained classified as “good.” The result of a paired sample two-tailed *t* test indicated that there was not a statistically significant decrease in student perceptions of student and peer academic belonging between the first and second survey administration. This finding suggests that participation in five-teacher interdisciplinary teams had no statistically significant effect on student perceptions of student and peer academic belonging after one semester in the environment.

Using the EdVision scale, students mean level of student and peer personal belonging was classified as “good” upon entry into the three-teacher team middle school. This sense of belonging decreased after a semester in the environment but remained classified as “good.” The result of a paired sample two-tailed *t*-test indicated that there was not a statistically significant decrease in student perceptions of student and peer personal belonging between the first and second survey administration. This finding suggests that participation in five-teacher interdisciplinary teams had no statistically significant effect on student perceptions of student and peer personal belonging after one semester in the environment.

Research Question 7: *Is there a significant difference in student goal orientation in three-teacher interdisciplinary teams as students transition from elementary to middle school?*

Using the EdVision scale, students mean level of mastery goal orientation was classified as “excellent” upon entry into the three-teacher team middle school. This sense

of master goal orientation increased after a semester in the environment but remained classified as "excellent." The result of a paired sample two-tailed *t*-test indicated that there was not a statistically significant increase in student perceptions of mastery goal orientation between the first and second survey administration. This finding suggests that participation in three-teacher interdisciplinary teams had no statistically significant effect on student perceptions of mastery goal orientation after one semester in the environment. Using the EdVision scale, students mean level of performance goal orientation was classified as "very good" upon entry into the three-teacher team middle school. This sense of performance goal orientation decreased after a semester in the environment but remained classified as "very good." Performance goal orientation has a negative impact on students, so a decrease in the mean in this orientation is an improvement. The result of a paired sample two-tailed t-test indicated that there was not a statistically significant decrease in student perceptions of performance goal orientation between the first and second survey administration. This finding suggests that participation in three-teacher interdisciplinary teams had no statistically significant effect on student perceptions of performance goal orientation after one semester in the environment.

Research Question 8: *Is there a significant difference in student goal orientation in five-teacher interdisciplinary teams as students transition from elementary to middle school?*

Using the EdVision scale, students mean level of mastery goal orientation was classified as "excellent" upon entry into the five-teacher team middle school. This sense of mastery goal orientation increased after a semester in the environment but remained classified as "excellent." The result of a paired sample two-tailed *t*-test indicated that

there was not a statistically significant increase in student perceptions of mastery goal orientation between the first and second survey administration. This finding suggests that participation in five-teacher interdisciplinary teams had no statistically significant effect on student perceptions of mastery goal orientation after one semester in the environment. Using the EdVision scale, students' mean level of performance goal orientation was classified as "excellent" upon entry into the five-teacher team middle school and decreased after a semester in the environment to "very good." Performance goal orientation has a negative impact on students, so an increase in the mean in this orientation is not an improvement. The result of a paired sample two-tailed t-test indicated that there was not a statistically significant difference in student perceptions of performance goal orientation between the first and second survey administration. This finding suggests that participation in five-teacher interdisciplinary teams had no statistically significant effect on student perceptions of performance goal orientation after one semester in the environment.

Research Question 9: *Is there a significant difference in student academic press in three-teacher interdisciplinary teams as students transition from elementary to middle school?*

Using the EdVision scale, students mean level of academic press was classified as "very good" upon entry into the three-teacher team middle school. This sense of academic press increased after a semester in the environment but remained classified as "very good." The result of a paired sample two-tailed t-test indicated that there was not a statistically significant increase in student perceptions of academic press between the first and second survey administration. This finding suggests that participation in three-

teacher interdisciplinary teams had no statistically significant effect on student perceptions of academic press after one semester in the environment.

Research Question 10: *Is there a significant difference in student academic press in five-teacher interdisciplinary teams as students transition from elementary to middle school?*

Using the EdVision scale, students mean level of academic press was classified as "very good" upon entry into the five-teacher team middle school. This sense of academic press slightly decreased after a semester in the environment but remained classified as "very good." The result of a paired sample two-tailed t-test indicated that there was not a statistically significant decrease in student perceptions of academic press between the first and second survey administration. This finding suggests that participation in five-teacher interdisciplinary teams had no statistically significant effect on student perceptions of academic press after one semester in the environment.

Research Question 11: *Is there a significant difference in student autonomy in three-teacher interdisciplinary teams as students transition from elementary to middle school?*

Using the EdVision scale, students mean level of autonomy was classified as "good" upon entry into the three-teacher team middle school. This sense of autonomy increased after a semester in the environment but remained classified as "good." The result of a paired sample two-tailed t-test indicated that there was not a statistically significant increase in student perceptions of autonomy between the first and second survey administration. This finding suggests that participation in three-teacher interdisciplinary

teams had no statistically significant effect on student perceptions of autonomy after one semester in the environment.

Research Question 12: *Is there a significant difference in student autonomy in five-teacher interdisciplinary teams as students transition from elementary to middle school?*

Using the EdVision scale, students' mean level of autonomy was classified as "very good" upon entry into the five-teacher team middle school and decreased to "good" after a semester in the environment. The result of a paired sample two-tailed *t*-test indicated that there was a statistically significant decrease in student perceptions of autonomy between the first and second survey administration. This finding suggests that participation in five-teacher interdisciplinary teams had a statistically significant negative effect on student perceptions of autonomy after one semester in the environment.

Interpretations and Recommendations for Middle-Level Practitioners

Hope. There were no statistically significant changes in student perception of hopefulness as a result of experiencing either interdisciplinary team size configuration over the course of a semester. The variable of hope, when examined through the lens of the scale provided by EdVision, indicated that the sixth-grade group entered and maintained "moderate" levels of hope. The students in the five-teacher interdisciplinary teams entered with "high" levels of hope and maintained their hopefulness over the course of the semester. There is a grade level difference between the two samples entering their new middle school environment which may have influenced the results. The seventh-grade students entering the five-teacher environment reported a higher level of hope compared to the younger sixth-grade students throughout the study, but some

research has found that there is no relationship between the number of years in schools and increased levels of hopefulness (Newell & Van Ryzin, 2009). One may infer from the results that both schools were providing environments and supports that allow students to maintain their hopefulness. Researchers have reported that even small levels of hope in students can be leveraged to bolster student agency and hopeful pathways development, which are key components of increasing personal hope (Marques et al., 2015). Since school success is often determined by the academic success of students, it may be wise for middle-school practitioners to consider incorporating strategies related to the development of the agency and pathway thinking for hope that could have the benefit of improving student achievement. Walker et al. (2009) reported that improved academic success was associated with positive pathway thinking. Marques et al. (2015) identified strategies for school professionals to help students recognize and develop hope in students. Schools could help students set and discuss goals followed by a plan of action to achieve goals. Additional conversations between students and educators should then occur to reflect on student efforts and success in reaching their goals. These strategies may reinforce student habits of mind and allow students to understand that they can develop the pathway and agency thinking needed to increase their hopefulness. Typical components of interdisciplinary teaming, such as student advisory, would be an ideal setting to support students in developing their agency and pathways that improve hopefulness.

Engagement. Engagement was measured by the "Engagement vs. Disaffection with Learning" scale, which identifies behavioral and emotional engagement as two key components of engagement. Some researchers combine engagement subscales into a

general scale to determine engagement, but for this study, the subscales were not combined in order to examine distinct concepts of engagement (Fredricks et al., 2004). After data analysis, no statistically significant changes occurred in student perception of their behavioral engagement in either interdisciplinary team size configuration after a semester in the environments. Students in both schools produced mean scores that suggested "very high" levels of behavioral engagement. The researcher has assumed as a result of the findings that the three- and five-teacher teaming configurations successfully supported behavioral engagement which consists of student willingness to try hard in school, listen to their teachers, stay focused, and pay attention in class. Studies have concluded that behavioral engagement decreases over time for students in secondary school environments (Engels et al., 2016; Fredricks et al., 2004). Both teaming configurations in this study experienced a decrease in behavioral engagement, which is consistent with previous research mentioned above related to behavioral engagement decline in secondary schools.

Engels et al. (2016) also found that students experiencing positive student and teacher relationships over time had higher levels of behavioral engagement compared to students who reported negative relationships with their teacher. The results from this study reported in Chapter IV indicate that students in three-teacher configurations experienced a statistically significant increase in student perceptions of teacher and student academic and personal belonging after a semester in the environment. However, the students in three-teacher teams did not experience an increase in behavioral engagement. Research suggests that behavioral engagement decreases for students in

secondary schools, but students with better relationships with their teachers have higher levels of behavioral engagement (Engels et al., 2016; Fredricks et al., 2004).

In light of this research, middle-level administrators should continue to work to improve student and teacher relationships to minimize the expected reduction of behavioral engagement. It appears from this study that smaller interdisciplinary team configurations improve student and teacher relationships. Students in the smaller three-teacher environments interact with fewer core teachers and have the opportunity to take several classes from the same teachers compared to those in the larger five-teacher team environment who have one teacher for each core subject. The smaller team configurations provide opportunities for teachers to interact more frequently with fewer students that may have resulted in better relationships over the course of the year. These improved relationships lead to higher levels of behavioral engagement for students (Engels et al., 2016).

There were statistically significant positive and negative differences within interdisciplinary team sizes in emotional engagement. The results from students participating in three-teacher interdisciplinary teams indicated statistically significant increases in emotional engagement. Students entered the three-teacher team environment with a "high" level of emotional engagement and increased their mean engagement to "very high" levels after one semester. Five-teacher interdisciplinary team student results revealed a statistically significant decrease in emotional engagement. Students entered the environment with "very high" levels of emotional engagement but experienced a decrease to "high" levels. When considering emotional engagement, the three-teacher

team students experienced a statistically significant increase compared to five-teacher teams, which reported a statistically significant decrease.

While the levels of emotional engagement were still satisfactory, the significant increase in the smaller teams compared to the significant decrease in the larger teams is interesting. An emotionally engaged student enjoys being in school and learning new things whereas an emotionally disengaged student worries or feels discouraged and believes that school is not a fun place to be (Newell & Van Ryzin, 2007). Perhaps school leaders should consider developing smaller interdisciplinary teams to provide increased opportunities for teachers to interact with fewer students and develop higher quality relationships. Researchers reported that the quality of student and teacher relationships after a transition to middle school often declined, which resulted in lower adolescent engagement (Feldlaufer et al., 1988). Smaller interdisciplinary team size may be a tool for middle-level administrators in light of the statistically significant positive increases in emotional belonging to the three-teacher teams when compared to the significant decrease reported in five-teacher teams.

Belonging. Belonging was measured with the "Classroom Life Scale" that collects student perception data to identify four sub-variables related to academic and personal belonging between teachers and students and students and peers. After data analysis, no statistically significant differences were discovered in student and peer academic or student and peer personal belonging although smaller teams size has been shown to increase students' senses of belonging with their peers (Wallace, 2007). Ellerbrock, Kiefer, and Alley (2014) discussed the importance of interpersonal relationships between students and teachers that set the stage for belonging in middle

schools. Middle school students desire nurturing connections and have a need to be accepted emotionally and academically by their peers.

The results of this study do not concur with previous research on student and peer relationships within team size configurations nor do they support or necessarily refute the recommendations to utilize interdisciplinary teaming structures to foster supportive environments designed to nurture productive relationships with fellow students (Kingery et al., 2011; National Middle School Association C.O., 1995). Since both the three- and five-teacher interdisciplinary team students entered and persisted in their environments with "good" levels of student to peer academic and personal belonging, the researcher has assumed from the results that both teaming configurations were supportive of the student to peer belonging and would encourage their continued use in middle schools. Fenzel (1989) affirmed the importance of team teaching as a method to support students who were struggling with multiple sets of expectations simultaneously by reducing the size of the students' peer groups and creating opportunities for closer relationships with both teachers and students.

The results from the study provided insight on the effects of interdisciplinary team configuration on perceptions of teacher and student academic and personal belonging. Students who participated in the three-teacher team configuration experienced statistically significant improvements in both student and teacher academic and personal belonging. Students in five-teacher interdisciplinary teams experienced no significant changes in student and teacher academic belonging but did experience a statistically significant decrease in teacher and student personal belonging. It appears that the size of

a student's interdisciplinary team can positively or negatively affect that student's sense of belonging with his or her teachers.

Researchers have found that student and teacher relationships promote student well-being and increase engagement, which may improve achievement during the adjustment to middle school (Engels et al., 2016). The data indicated 61.9% of the students in the three-teacher teams studied were free and reduced lunch compared to just 32.6% in the five-teacher teams. Arhar and Kromrey (1993) found that students in low socio-economic status schools benefited from an interdisciplinary approach when compared to those students in high socio-economic status schools when measuring a sense of belonging. The significant increases in perception of teacher and student belonging in the three-teacher configurations might support the need for higher poverty schools to implement smaller team structures to support these students. Three-teacher teams had a significant effect on student perceptions of both academic and personal belonging, and middle schools should reconsider the structures of interdisciplinary teams to continue to improve student and teacher relationships. Eccles, Wigfield et al. (1993) utilized environmental stage-fit theory to explain that students entering the middle school environment may not be prepared to adjust to the multiple changes they face on entry to the new environment.

The students studied exchanged a more supportive environment at the elementary level for a less supportive environment at the middle school that may impact student success post-transition. Middle schools around the country have been charged with developing a culture and community that provides for a safe and nurturing environment where every child is guided by an adult advocate to meet the needs of their students

(Association for Middle Level Education, 2010). Smaller interdisciplinary team sizes could be a tool to meet this charge and lessen the stress for students during a transitional year.

Goal orientation. Goal orientation was measured with the "Patterns of Adaptive Learning Survey" scale that provides subscores for mastery and performance goal orientation. The results of this study determined that there were not statistically significant differences occurring as a result of interdisciplinary team configurations for either mastery or performance goal orientation after a semester in the environments. The students in both schools produced mean perceptions scores that suggested "excellent" levels of mastery goal orientation that persisted throughout the semester. The three-teacher teams reported "very good" mean levels of performance orientation that slightly improved over the semester. The five-teacher teams entered the environment with "excellent" levels of performance orientation at entry into the environment but experienced a slight decline to "very high" by the end of the semester. However, this drop was not statistically significant.

It is important to note in the findings in Chapter IV that performance goal orientation improvement is indicated by a decrease in the mean of performance orientation. Therefore, a decrease in the mean would indicate an improvement in the environment. Students with higher levels of mastery goal orientation report engaging in classroom work to satisfy an intrinsic need for learning or to improve their abilities. Students who experience increased performance goal orientation report engaging in academic work to demonstrate their skill relative to other students (Anderman, E.M. &

Midgley, 1996). Research also indicated that there is a decline in student intrinsic value for schoolwork after transitioning to middle school (Ryan, A., et al., 2013).

Increased levels of mastery orientation and decreased levels of performance orientation indicate a school environment that supports student development and promotes academic success (Ames & Archer, 1988, Anderman, E.M. & Midgley, 1996). Though not statistically significant, the three-teacher teaming environment showed the ability to improve mastery and performance goal orientations while the larger teaming environment students experienced an overall decrease in both measures, though not significant. Newell and Van Ryzin (2009) suggested schools should promote environments where student personal goal orientations are influenced by the positive orientations and activities of the school. When considering this research, principals should adjust their school's instructional practices to take advantage of adolescents' natural desire to be together and work together to motivate students (Juvonen, 2007). A focus on practices that reinforce effort over performance will allow students opportunities to overcome challenges and develop persistence to overcome academic challenges. Persistence and the development of thinking patterns that encourage students to find ways to meet challenges they face are also important to the development of hope (Marques et al., 2015; Walker et al., 2009).

Academic press. Academic Press was measured with the "Academic Press for Understanding" Scale. The data analysis indicated that there were no statistically significant changes in student perceptions of academic press as a result of experiencing either interdisciplinary team size configuration over the course of a semester. The variable of academic press, when examined through the EdVision scale, indicated that

both the three-teacher and five-teacher interdisciplinary team students entered and maintained “very good” levels of academic press. There was a slight improvement for three-teacher teams compared to a slight decrease in the mean for five-teacher teams. One can infer from the results that both schools provided environments that support high expectations from the teachers and that students will work to do their best in challenging environments that encourage student growth and learning (Hoy & Hannum, 1997). A school culture that promotes academic press has been linked to academic success (Shouse, 1996). School administrators could utilize smaller team sizes and the interdisciplinary team concepts to promote a culture of academic press. The smaller interdisciplinary team size students in this study reported increased levels of teacher and student academic belonging. The improved relationships and feelings of academic support from their teachers could be leveraged to support students in a challenging academic environment. In smaller teams with teachers who know them well and support them academically, students may be more willing to confront challenging tasks and take academic risks while being pushed to do their best work. The Association for Middle Level Education (2010) also called for middle schools to create challenging environments that recognize that every student can learn and that hold to high expectations for their learning.

Autonomy. Autonomy was measured with the “Learning Climate Questionnaire” scale. After data analysis, no statistically significant differences occurred in student perception of their autonomy in three teacher interdisciplinary teams. Students entered the three-teacher team environment with “good” levels of autonomy that increased over the semester but remained classified as “good.” Analysis of the five-teacher

interdisciplinary team students did find a statistically significant decrease in student perceptions of autonomy. Students in the five teacher interdisciplinary teams entered the environment with "very good" levels upon entry into the five-teacher team middle school and decreased to "good" after a semester in the environment. Autonomy refers to the need for students to have choice and the ability to make decisions in the educational setting that is important to student development.

High autonomy is manifested through motivation, engagement, and persistence, which can lead to higher levels of achievement and student success (Ryan, R. M., & Grolnick, 1986). When considering the results of this study, it appears that the three-teacher team environment was supportive of student needs related to autonomy. However, the five-teacher interdisciplinary team students had a significant decrease in perceptions of autonomy. Students entering the middle school need a balance between their developmental need for autonomy and their need to be guided by a caring adult (Mac Iver, 1990). This study of interdisciplinary team size reported that the five-teacher interdisciplinary teams have a negative impact on student perceptions of teacher and student personal belonging. It is possible that the larger team sizes with more teachers and students resulted in students making fewer connections with their teachers. Teachers in the three-team environment typically teach each child two periods per day due to the number of courses taught by each teacher. There were also roughly 50 fewer students on the three-teacher teams, which could provide teachers increased opportunities to connect with students.

The increased number of students on a five-teacher team, along with fewer opportunities for interaction between students and teachers compared to the three-teacher

teams, could lend itself to a more directed environment. If teachers do not know their students well, then they may not trust them. This could lead to more teacher control of the environment and control over the choices made by students within the environment. Eccles, Wigfield et al. (1993) reported that seventh-grade math teachers believed that their students were less trustworthy and needed to be controlled more compared to the student's previous sixth-grade teachers who did not indicate the same need for control. Feldlaufer et al. (1988) also reported that seventh-grade math students often face environments where less autonomy and a decline in decision making occurs. The more autonomous the classroom and school environment the more integrated and lasting the learning outcomes will be for the students (Grolnick & Ryan, 1987). Schools should seek to empower students with the knowledge and skills they need to take control of their own lives and learning (Association for Middle Level Education, 2010).

It would seem that the development of student autonomy would be an important focus of middle schools. Middle school administrators should examine their school environment to determine levels of student and teacher connectedness that could result in teachers feeling a need to be more directive, which may decrease opportunities for academic and personal choice important for student development.

Summary and Recommendations for Future Study

The researcher entered into this study while supporting several middle-level principals as they were seeking to improve their schools and support students who had recently transitioned into their schools. Direction provided by the researcher's school district encouraged these principals to look at the environment within their schools and perhaps adjust team sizes to better support the academic and socio-emotional needs of

every student during the transitional year. The researcher's desire to seek out best practices and study team size configurations motivated this study. Research and recommendations related to the use of interdisciplinary teaming were somewhat ubiquitous and strongly supported throughout the literature. However, while there are some recommendations to utilize smaller teaming configurations and developmentally appropriate practices (Association for Middle Level Education, 2010; National Middle School Association C.O., 1995), very little research related to team size and effects of smaller interdisciplinary teams on the school environment have been conducted. Therefore, the purpose of this quantitative study was to determine the effects of interdisciplinary team size on student perceptions of the school environment after the transition to middle school.

The researcher utilized environmental stage-fit as the theoretical framework for this study. Eccles, Midgley et al. (1993) found the misfit between environment and student developmental needs that resulted in a loss of motivation for students. Students who are transitioning into middle school also feel the stress associated with a transition that finds them moving from a more supportive and nurturing elementary environment to a middle school environment of increased expectations, accountability, and control. The early transitions that students experience at this age decreased self-esteem when compared to later grade-level transitions for students. Environment stage-fit theory suggests that it is important for adolescents to experience an environment that meets the social-emotional and academic needs of students (Eccles, Midgley et al., 1993). Results from many studies support the importance of the school environment experienced by students and the impact it can have on factors related to emotional and academic

development (Alspaugh, 1998a, 1998b; Eccles, Midgley et al., 1993; Wigfield et al., 1991).

This study examined student perceptions of their environment on school environment measures that research has shown to be developmentally appropriate, improve student success within the environment, and support learning (Newell & Van Ryzin, 2009). EdVision provided the researcher access to the Hope Survey to measure the variables of hope, engagement, belonging, goal-orientation, academic press, and autonomy to determine student perceptions within the environment. This study determined that three-teacher interdisciplinary teams had a more positive effect on student perceptions on most variables compared to the five-teacher interdisciplinary teams studied. Three-teacher teams significantly improved student perception of emotional engagement, teacher and student academic belonging, and teacher and student personal belonging. Students in five-teacher interdisciplinary teams saw their perceptions on most variables decline. The results indicated statistically significant decreases for these students in emotional engagement, teacher and student personal belonging, and autonomy.

The limitations of this study mentioned previously make it impossible to determine with certainty that smaller interdisciplinary teams are more appropriate than larger interdisciplinary teams. In light of the research discovered, the researcher believes that smaller teaming configurations may increase the opportunity for students to make connections with their teachers and fellow students that can support their developmental and academic needs.

The researcher considered several changes to the study after considering the findings and recommendations. A mixed methods design may have allowed the researcher to understand better the student perceptions of the environment related to the variables studied. This additional feedback would have informed the findings and provided more context to how students experienced the activities and practices in each environment. Another suggested change would be to extend the duration of the study. A survey administration at the end of the students first year in the environment may have affected the findings and given the researcher the opportunity to see if students adjusted to the environment over the course of the school year. A teacher and administrator survey could have also been conducted to gather their perceptions of the school environment along with the instructional practices utilized in each environment.

Interdisciplinary teams and supportive collaborative cultures are recommended and widely utilized in middle schools across the country to meet the needs of adolescent learners (Association for Middle Level Education, 2010; National Middle School Association C.O, 1995). However, little research has been conducted to determine if the size of these structures have an impact on student success. This study focused on only two similarly sized middle schools located in the Midwest and South. A more extensive study would allow researchers the opportunity to address how various team sizes affect student learning and student perceptions as well as examine the topic through the lens of poverty or ethnicity. Future study should also include narrative feedback from students along with a similar perceptual survey for teachers. The positive effects on student perceptions in smaller teams and the decreases in perception observed in the larger teams seem to justify further study on the topic.

Conclusion

The purpose of this study was to determine the effects of interdisciplinary team size on student perceptions of the school environment after the transition to the middle school. The first two chapters of this study outlined the importance of middle schools and research related to how middle schools should be designed to meet the developmental and academic needs of students. The researcher reported that the school environments experienced by students after the transition often fail to adequately meet their needs when compared to the more supportive environments found at the elementary school (Eccles, Wigfield et al., 1993). Interdisciplinary teams are at the core of middle school best practice and are utilized to meet student needs. The interdisciplinary team concept is founded on the idea of breaking large groups of students into smaller groups of students to enhance their sense of belonging and create a small learning community to meet academic and social needs (National Middle School Association C.O., 1995). At the center of the research is the belief that closer and more meaningful relationships between students, peers, and their teachers can be leveraged to improve outcomes for students. However, most schools choose larger team sizes that are designed around the content to be taught instead of the relationships that need be developed to produce improved results. With this thought in mind, the researcher sought to determine if the size of the teaming structures affect student perceptions of the environment.

This study used student survey data of the school environment to determine if interdisciplinary team size affected a variety of variables related to developmental appropriate school environments. The variables of autonomy, academic press, belonging, engagement, goal-orientation, and hope were measured to determine if there were

positive or negative changes in student perceptions within three-teacher and five-teacher teaming environments. The results indicated that three-teacher interdisciplinary team students had a statistically significant increase in their perceptions of teacher and student personal and academic belonging as well as improved perceptions of emotional engagement. However, students on five-teacher teams experienced statistically significant decreases in their perceptions of teacher and student belonging, emotional engagement, and autonomy. Both environments appeared to support student needs in the measured school climate variables adequately. The smaller team sizes had a more positive increase in student perception compared to the larger team sizes, which had more decreases.

While the findings support the utilization of smaller team sizes, it would be impossible for the researcher to make more generalized claims due to the limitations of the study. Given the research presented throughout the study and the overall lack of literature related to team size configuration, it may be time for a closer examination of teaming configurations and how they can be used as a tool to increase belonging and improve the environment as a result.

Middle school leaders have been charged with the responsibility of creating developmentally appropriate environments for all students. Making adjustments to any aspect of a school environment requires the commitment of the staff and a school leader who is willing to support teachers throughout the change process. The findings of this study indicate a need for reexamination of current teaming configurations, which could ultimately lead to increases in student belonging and engagement.

References

Adams, S. K., Kuhn, J., & Rhodes, J. (2006). Self-esteem changes in the middle school years: A study of ethnic and gender groups. *Research in Middle Level Education Online, 29*(6), 1-9.

Akos, P. (2006). Extracurricular participation and the transition to middle school. *Research in Middle Level Education Online, 29*(9), 1-9.

Akos, P., & Galassi, J. P. (2004). Middle and high school transitions as viewed by students, parents, and teachers. *Professional School Counseling, 7*(4), 212-221.

Akos, P., & Kurz, M. S. (2016). Applying hope theory to support middle school transitions. *Middle School Journal, 47*(1), 13-18. doi:10.1080/00940771.2016.1059724

Alexander, W. M., & Williams, E. L. (1965). Schools for the middle school years. *Educational Leadership, 23*, 217-223. Retrieved from http://www.ascd.com/ASCD/pdf/journals/ed_lead/el_196512_alexander.pdf

Alspaugh, J. W. (1998a). Achievement loss associated with the transition to middle school and high school. *Journal of Educational Research, 92*(1), 20-25. doi:10.1080/00220679809597572

Alspaugh, J. W. (1998b). The relationship of school-to-school transitions and school size to high school dropout rates. *High School Journal, 81*(3), 154-160. Retrieved from http://www.jstor.org/stable/40364516

Alspaugh, J. W., & Harting, R. D. (1997). Effects of team teaching on the transition to middle school. *ERS Spectrum, 15*(1), 9-14.

Ames, C., & Archer, J. (1988). Achievement goals in the classroom: Students' learning strategies and motivation processes. *Journal of Educational Psychology, 80*(3), 260-267. doi:10.1037/0022-0663.80.3.260

Anderman, E. M., & Midgley, C. (1996). *Changes in achievement goal orientations after the transition to middle school*. Washington, DC: U.S. Dept. of Education, Office of Educational Research and Improvement, Educational Resources Information Center.

Anderman, L. H. (2003). Academic and social perceptions as predictors of change in middle school students' sense of school belonging. *Journal of Experimental Education, 72*(1), 5-22.

Arhar, J. M., & Kromrey, J. D. (1993). *Interdisciplinary teaming in the middle level school: Creating a sense of belonging for at-risk middle level students.* Paper presented at the annual meeting of the American Educational Research Association, Atlanta, GA.

Arkansas Department of Education. (2017, November). *Enrollment report*. Retrieved from https://adedata.arkansas.gov/statewide/schools/EnrollmentByRace.aspx?year=28&search=lingle&pagesize=10

Association for Middle Level Education. (2010). *This we believe: Keys to educating young adolescents.* Westerville, OH: Author.

Association for Middle Level Education. (2013, October). *This we believe: The 16 characteristics of successful schools.* Retrieved from http://www.amle.org/AboutAMLE/ThisWeBelieve/tabid/121/Default.aspx#122516-the-16-characteristics

Bailey, G., Giles, R. M., & Rogers, S. E. (2015). An investigation of the concerns of fifth graders transitioning to middle school. *RMLE Online: Research in Middle Level Education, 38*(5), 1-12.

Beland, K., (2014). Easing the transition to middle adolescence. *Journal of Character Education, 10*(1), 61-67.

Booth, M. Z., Sheehan, H. C., & Earley, M. A. (2007). Middle grades' school models and their impact on early adolescent self-esteem. *Middle Grades Research Journal, 2*(1), 73-97.

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

Cauley, K. M., & Jovanovich, D. (2006). Developing an effective transition program for students entering middle school or high school. *Clearing House, 80*(1), 15-25.

Clark, S. N., & Clark, D. C. (2003). Standards, accountability, and developmental appropriateness: A leadership challenge for middle school principals. *Middle School Journal, 34*(4), 56-61.

Clark, S. N., & Clark, D. C. (2006). Achieving teaming's full potential: A leadership challenge. *Middle School Journal, 38*(2), 52-58.

Creswell, J.W. (2008). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research* (3rd ed.). Upper Saddle River, NJ: Pearson.

Dickinson, T. S., & Butler, D. A. (2001). Reinventing the middle school. *Middle School Journal, 33*(1), 7-13.

Eccles, J. S., & Midgley, C. (1990). Changes in academic motivation and self-perception during early adolescence. In R. Montemayor, G. R. Adams, & T. P. Gullotta (Eds.), *Advances in adolescent development: An annual book series, Vol. 2, From childhood to adolescence: A transitional period?* (pp. 134-155). Thousand Oaks, CA: Sage Publications.

Eccles, J. S., Midgley, C., Wigfield, A., Buchanan, C. M., Reuman, D., Flanagan, C., & Mac Iver, D. (1993). Development during adolescence. The impact of stage-environment fit on young adolescents' experiences in schools and in families. *The American Psychologist, 48*(2), 90-101.

Eccles, J. S., Wigfield, A., Midgley, C., Reuman, D., Mac Iver, D., & Feldlaufer, H. (1993). Negative effects of traditional middle schools on students' motivation. *The Elementary School Journal, 93*(5), 553-574. doi:10.1086/461740

Echols, L. (2015). Social consequences of academic teaming in middle school: The influence of shared course taking on peer victimization. *Journal of Educational Psychology, 107*(1), 272-283. doi:10.1037/a0037440

EdVision. (2017). *The hope survey*. Retrieved February 15, 2017, from http://edvisions.org/the-edvision/hope-survey/

Ellerbrock, C., Kiefer, S. M., & Alley, K. M. (2014). School-based interpersonal relationships: Setting the foundation for young adolescents' belonging in middle school. *Middle Grades Research Journal, 9*(2), 1-18.

Engels, M., Colpin, H., Leeuwen, K., Bijttebier, P., Den Noortgate, W., Claes, S., … Verschueren, K. (2016). Behavioral engagement, peer status, and teacher-student relationships in adolescence: A longitudinal study on reciprocal influences.

Journal of Youth & Adolescence, 45(6), 1192-1207. doi:10.1007/s10964-016-0414-5

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

Erb, T. O. (2006). Middle school models are working in many grade configurations to boost student performance. *American Secondary Education, 34*(3), 4-13.

Erb, T. O, & Doda, N. M. (1989). *Team organization: Promise, practices and possibilities.* Washington, DC: National Education Association.

Espinoza, G., & Juvonen, J. (2011). Perceptions of the school social context across the transition to middle school: Heightened sensitivity among Latino students? *Journal of Educational Psychology, 103*(3), 749-758. doi:10.1037/a0023811

Feldlaufer, H., Midgley, C., & Eccles, J. S. (1988). Student, teacher, and observer perceptions of the classroom environment before and after the transition to junior high school. *The Journal of Early Adolescence, 8*(2), 133-156. doi:10.1177/0272431688082003

Fenzel, L. M. (1989). Role strains and the transition to middle school: Longitudinal trends and sex differences. *The Journal of Early Adolescence, 9*(3), 211-226. doi:10.1177/0272431689093003

Finn, J. D., & Rock, D. A. (1997). Academic success among students at risk for school failure. *Journal of Applied Psychology, 82*(2), 221-234. doi:10.1037/0021-9010.82.2.221

Fredricks, J. A., Blumenfeld, P. C., & Paris, A. H. (2004). School engagement: Potential of the concept, state of the evidence. *Review of Educational Research, 74*(1), 59-109. doi:10.3102/00346543074001059

Furtak, E. E., & Kunter, M. (2012). Effects of autonomy-supportive teaching on student learning and motivation. *Journal of Experimental Education, 80*(3), 284-316. doi:10.1080/00220973.2011.573019

George, P. S. (2003). The evolution of middle schools. *Educational Leadership, 58*(2), 40-44.

George, P. S. (2009). Renewing the middle school: The early success of middle school education. *Middle School Journal, 41*(1), 4-9.

Greene, R. W., & Ollendick, T. H. (1993). Evaluating of a multidimensional program for sixth-graders in transition from elementary to middle school. *Journal of Community Psychology, 21*(2), 162-176.

Grills-Taquechel, A., Norton, P., & Ollendick, T. H. (2010). A longitudinal examination of factors predicting anxiety during the transition to middle school. *Anxiety, Stress & Coping, 23*(5), 493-513. doi:10.1080/10615800903494127

Grolnick, W. S., & Ryan, R. M. (1987). Autonomy in children's learning: An experimental and individual difference investigation. *Journal of Personality and Social Psychology, 52*(5), 890-898. doi:10.1037/0022-3514.52.5.890

Hofferber, N., Eckes, A., & Wilde, M. (2014). Effects of autonomy supportive vs. controlling teachers' behavior on students' achievements. *European Journal of Educational Research, 3*(4), 177-184.

Holas, I., & Huston, A. (2012). Are middle schools harmful? The role of transition timing, classroom quality and school characteristics. *Journal of Youth & Adolescence, 41*(3), 333-345. doi:10.1007/s10964-011-9732-9

Hoy, W. K., & Hannum, J. W. (1997). Middle school climate: An empirical assessment of organizational health and student achievement. *Educational Administration Quarterly, 33*(3), 290-311.

Hunt, D. E. (1975). Person-environment interaction: A challenge found wanting before it was tried. *Review of Educational Research, 45*(2), 209-230. Retrieved from http://www.jstor.org/stable/1170054

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

Juvonen, J. (2007). Reforming middle schools: Focus on continuity, social connectedness, and engagement. *Educational Psychologist, 42*(4), 197-208.

Kiefer, S. M., Alley, K. M., & Ellerbrock, C. R. (2015). Teacher and peer support for young adolescents' motivation, engagement, and school belonging. *Research in Middle Level Education Online, 38*(8), 1-18.

Kim, H., Schwartz, K., Cappella, E., & Seidman, E. (2014). Navigating middle grades: Role of social contexts in middle grade school climate. *American Journal of Community Psychology, 54*(1), 28-45. doi:10.1007/s10464-014-9659-x

Kingery, J. N., Erdley, C. A., & Marshall, K. C. (2011). Peer acceptance and friendship as predictors of early adolescents' adjustment across the middle school transition. *Merrill-Palmer Quarterly, 57*(3), 215-243.

Mac Iver, D. J. (1990). Meeting the needs of young adolescents: Advisory groups, interdisciplinary teaching teams, and school transition programs. *Phi Delta Kappan, 71*, 458-464.

Mac lver, D. & Epstein, J. (1991). Responsive practices in the middle grades: Teacher teams, advisory groups, remedial instruction, and school transition programs. *American Journal of Education, 99*, 587-622.

Marques, S. C., Lopez, S. J., Fontaine, A. M., Coimbra, S., & Mitchell, J. (2015). How much hope is enough? Levels of hope and students' psychological and school functioning. *Psychology in the Schools, 52*(4), 325-334. doi:10.1002/pits.21833

McNeely, C., & Falci, C. (2004). School connectedness and the transition into and out of health-risk behavior among adolescents: A comparison of social belonging and teacher support. *Journal of School Health, 74*(7), 284-292 9p. doi:10.1111/j.1746-1561.2004.tb08285.x

McPartland, J. M. (1987). *Balancing high quality subject-matter instruction with positive teacher-student relations in the middle grades: Effects of departmentalization, tracking and block scheduling on learning environments* (Report No. 15). Baltimore, MD: Johns Hopkins University, Center for Research on Elementary and Middle Schools.

Meyer, P. (2011). The middle school mess: If you love bungee jumping, uou're the middle school type. *Education Next, 11*(1), 40-47.

National Middle School Association. C.O. (1995). *This we believe: Developmentally responsive middle level schools: A position paper.* Westerville, OH: Author.

Nebraska Department of Education. (2017, November). *School enrollment report*. Retrieved from http://nep.education.ne.gov/Schools/Index/77-0001-005?DataYears=20162017&type=MIDDLE%20SCHOOL

Newell, R.J., & Van Ryzin, M.J. (2007). Growing hope as a determinant of school effectivness. *Phi Delta Kappan, 88*(6), 465-471

Newell, R. J., & Van Ryzin, M. J. (2009). *Assessing what really matters in schools: Creating hope for the future*. Lanham, MD: Rowman & Littlefield Education.

Perkins, P. G., & Gelfer, J. I. (1995). Elementary to middle school: Planning for transition. *The Clearing House, 68*(3), 171-173. Retrieved from http://www.jstor.org/stable/30189070

Pickhardt, C. E. (2011, April 18). Adolescence and the transition to middle school. [Web log post]. Retrieved from https://www.psychologytoday.com/blog/surviving-your-childs-adolescence/201104/adolescence-and-the-transition-middle-school

Rockoff, J. E., & Lockwood, B. B. (2010). Stuck in the middle: Impacts of grade configuration in public schools. *Journal of Public Economics, 94*(11), 1051-1061. doi:10.1016/j.jpubeco.2010.06.017

Rottier, J. (2001). *Implementing and improving teaming: A handbook for middle level leaders.* Westerville, OH: National Middle School Association.

Rudolph, K. D., Lambert, S. F., Clark, A. G., & Kurlakowsky, K. D. (2001). Negotiating the transition to middle school: The role of self-regulatory processes. *Child Development, 72*(3), 929.

Rueger, S., Chen, P., Jenkins, L., & Choe, H. (2014). Effects of perceived support from mothers, fathers, and teachers on depressive symptoms during the transition to

middle school. *Journal of Youth & Adolescence, 43*(4), 655-670. doi:10.1007/s10964-013-0039-x

Russell, J. F., Jarmin, H. R., & Reiser, M. L. (1997). Interdisciplinary teaming in the middle school: The relationship of implementation to teachers' attitudes over time. *ERS Spectrum, 15*(4), 32-33.

Ryan, A., Shim, S., & Makara, K. (2013). Changes in academic adjustment and relational self-worth across the transition to middle school. *Journal of Youth & Adolescence, 42*(9), 1372-1384. doi:10.1007/s10964-013-9984-7

Ryan, R. M., & Grolnick, W. S. (1986). Origins and pawns in the classroom: Self-report and projective assessments of individual differences in children's perceptions. *Journal of Personality and Social Psychology, 50*(3), 550-558. doi:10.1037/0022-3514.50.3.550

Schwerdt, G., & West, M. R. (2012). The impact of alternative grade configurations on student outcomes through middle and high school. *Journal of Public Economics, 97*, 308-326. doi:10.1016/j.jpubeco.2012.10.002

Shell, M. D., Gazelle, H., & Faldowski, R. A. (2014). Anxious solitude and the middle school transition: A diathesis X stress model of peer exclusion and victimization trajectories. *Developmental Psychology, 50*(5), 1569-1583. doi:10.1037/a0035528

Shoshani, A., & Slone, M. (2013). Middle school transition from the strengths perspective: Young adolescents' character strengths, subjective well-being, and school adjustment. *Journal of Happiness Studies, 14*(4), 1163-1181. doi:10.1007/s10902-012-9374-y

Shouse, R. C. (1996). Academic press and sense of community: Conflict, congruence, and implications for student achievement. *Social Psychology of Education, 1*(1), 47-68.

Simmons, R. G., Burgeson, R., Carlton-Ford, S., & Blyth, D. A. (1987). The impact of cumulative change in early adolescence. *Child Development, 58*(5), 1220-1234.

Sklarz, D. P. (1982). A primer for middle school transition. *The Clearing House, 55*(5), 197-98.

Snyder, C. R., Rand, K. L., & Sigmon, D. R. (2002). Hope theory: A member of the positive psychology family. In C. R. Snyder, S. J. Lopez, C. R. Snyder, S. J. Lopez (Eds.), *Handbook of positive psychology* (pp. 257-276). New York, NY: Oxford University Press.

Styron, J., & Nyman, T. R. (2008). Key characteristics of middle school performance. *Research in Middle Level Education Online, 31*(5), 1-17.

Thornburg, H. D., & Jones, R. M. (1982). Social characteristics of early adolescents: Age versus grade. *The Journal of Early Adolescence, 2*(3), 229-239. doi:10.1177/027243168200200304

Valentine, J., Clark, D., Hackmann, D., & Petzko, V. (2004). *Leadership for highly successful middle level schools: A national study of leadership in middle level schools.* Reston, VA: National Association of Secondary School Principals.

Vanlede, M., Little, T. D., & Card, N. A. (2006). Action-control beliefs and behaviors as predictors of change in adjustment across the transition to middle school. *Anxiety, Stress & Coping, 19*(2), 111-127. doi:10.1080/10615800600632896

Van Ryzin, M. J. (2010). Protective factors at school: Reciprocal effects among adolescents' perceptions of the school environment, engagement in learning, and hope. *Journal of Youth and Adolescence. 40*(12) 1658-1580

Walker, C. O., Winn, T. D., Adams, B. N., Shepard, M. R., Huddleston, C. D., & Godwin, K. L. (2009). Hope & achievement goals as predictors of student behavior & achievement in a rural middle school. *Middle Grades Research Journal*, *4*(4), 17-30.

Wallace, J. J. (2007). Effects of interdisciplinary teaching team configuration upon the social bonding of middle school students. *Research in Middle Level Education Online, 30*(5), 1-18.

Wentzel, K. R. (1998). Social relationships and motivation in middle school: The role of parents, teachers, and peers. *Journal of Educational Psychology*, *90*(2), 202-209. doi: 10.1037/0022-0663.90.2.202

Wentzel, K. R., & Caldwell, K. (1997). Friendships, peer acceptance, and group membership: Relations to academic achievement in middle school. *Child Development, 68*, 1198–1209. doi:10.1111/j.1467-8624.1997.tb01994.x

Wigfield, A., Eccles, J. S., Mac Iver, D., Reuman, D. A., & Midgley, C. (1991). Transitions during early adolescence: Changes in children's domain-specific self-perceptions and general self-esteem across the transition to junior high school. *Developmental Psychology, 27*(4), 552-565. doi:10.1037/0012-1649.27.4.552

Williams-Boyd, P. (2003). *Middle grades education: A reference handbook.* Santa Barbara, CA: ABC-CLIO.

APPENDICES

Appendix A

Academic Affairs
Administration Room 200
1509 North Boulder Avenue
Russellville, Arkansas 72801

Office: 479-968-0319
Fax: 479-968-0644
www.atu.edu/academics

4/27/17

To Whom It May Concern:

Robert Allen Moore's IRB application "The Effects of Interdisciplinary Team Size on Student Hope, Belongingness, Engagement, Goal-Orientation, and Academic Press After Transition to Middle School" is approved through April 27, 2020. The approval code is Moore_042717.

Thank you,

Jack Tucci, Ph.D.

IRB Chair

Appendix B

On Wed, Aug 16, 2017 at 1:27 PM, Tiffany Henry <thenry1@atu.edu> wrote

Your amended IRB application is approved and given approval code Moore_081617.

Thank you,

Tiffany

Tiffany Henry
Coordinator, Office of Sponsored Programs and University Initiatives
Arkansas Tech University
1509 N Boulder Ave, Administration 207
Russellville, AR 72801

Appendix C

Re: Hope Survey Follow-up

Moore Personal x

Ron Newell <ronnewell.rn@gmail.com>

to me, Steven

Robert,

As we discussed earlier by phone, my colleague Steven Rippe and I agree to allow use of the hope surveys for your research if you share the data.

Good luck, and let us know if we can do anything else to help.

Ron Newell

Appendix D

Date: 8.30.17

Dear Parent/Guardian,

I am writing to you about the research I am conducting as part of my doctoral dissertation at Arkansas Tech University in Russellville, Arkansas. I am interested in determining the student perceptions of the educational environment based upon the size of their current interdisciplinary team. Your child's school uses a five-teacher (English, math, science, social studies, reading) team configuration. The purpose of my study is to determine if interdisciplinary size impacts student perceptions of the educational environment. Students in the seventh grade will be given two surveys over the course of the semester. The first survey is a 20-25-minute survey asking each student to rate their previous elementary school on a scale ranging from 1 to 7 with questions similar to the following:

"In my previous school, I energetically pursued my goals."
"In my previous school, other students liked to help me learn"
"In my previous school, I felt that my teachers provided me choices and options."

The second survey is a 20-25-minute survey asking each student to rate their current middle school on a scale ranging from 1 to 7 with questions similar to the following:

"In my current school, I energetically pursue my goals."
"In my current school, other students like to help me learn"
"In my current school, I feel that my teachers provide me choices and options."

The results of the survey will be compared to middle school students in another state who learn on smaller interdisciplinary teams. I have received permission and support from the administration of Bellevue Public Schools and Doug Schaefer, Principal at Logan Middle School to conduct this study. Students will be administered the online survey using the EdVision Schools Hope Survey. All individual student information and responses will remain confidential.

I have attached additional informational about the study.

If you have any further questions about the research, please contact me at rmoore44@atu.edu or Doug Schaefer, Logan Middle School.

If you would prefer that your child **does not** take part in the survey, then please sign and return the form enclosed to Logan Middle School.

Sincerely,

Robert Moore
Doctoral Candidate, Arkansas Tech University

Appendix E

INFORMATION SHEET

The Effects of Interdisciplinary Team Size On Student Hope, Belongingness, Engagement, Goal-Orientation, and Academic Press After the Transition to Middle School

Researcher: Robert Moore

Supervisor: John Freeman, Ph.D; Arkansas Tech University

This information sheet explains why I am conducting this research and what it will involve. Please contact me if there is anything that is not clear or if you would like more information.
rmoore44@atu.edu

What is this study about?
I am trying to determine if the size of a student's interdisciplinary team impacts their perceptions of the school environment. An interdisciplinary team is an organizational structure that is commonly used by middles schools to create a smaller environment for students. These teams are designed to support student learning and meet the developmental needs of the students. Some schools utilize small teams with approximately 50-75 students with 2-3 teachers while other schools use larger teams of approximately 100-150 students with 4-5 teachers. I am surveying students to determine how they feel about their current school environment. I will compare the survey data for the different team sizes to determine if there is a statistically significant difference in the perceptions of the learning environment for students on small and large teams.

How will my child be involved?
Your child will take two 25-minute online surveys to determine their perceptions of the school environment.

Who will have the access to the research information (data)?
EdVision Schools will collect the survey results through the Hope Survey online platform and retain the data to develop cumulative reports for your child's school. EdVisions will provide me non-identifiable raw student survey data that I will use to compare Logan students to other middle school students on smaller interdisciplinary teams in another state. The data will be stored safely by EdVision schools for future use by your child's school district. No individually identifiable data will be provided to Logan Middle School from the EdVision or the researcher. All non identifiable survey data used for school comparisons will be stored on researcher's password protected computer. Dr. John Freeman at Arkansas Tech University will have access to the survey data to support the statistical analysis.

Who has reviewed the study?
The research study has been approved under the regulations of Arkansas Tech University College of Graduate Education and Arkansas Tech University Institutional Review Board research ethics committee.

Who do I speak to if I have questions about this research?
If you would like more information or have any problems with this research, please let me know. You can contact me at rmoore44@atu.edu.

What do I do next?
If you are happy for your child to be involved in my research you do not need to do anything. Please keep this information for reference.

If you **do not** want your child to be involved in this research and participate in the survey, then please complete the attached form and return to Logan Middle School. Your child may also return the form to the main office.

Can you change your mind?
You and your child have the right to withdraw from the research at any time.

Thank you very much for your time.

Appendix F

PARENT OPT-OUT FROM

(RETURN TO LOGAN MIDDLE SCHOOL MAIN OFFICE)

The Effects of Interdisciplinary Team Size On Student Hope, Belongingness, Engagement, Goal-Orientation, and Academic Press After The Transition to Middle School

I have read the information about the study and talked about this with my child.

Please tick the box below.

I am not willing for my child to take part in the study. ☐

Name of child: ……

School: ……

Class: ……..

Signature of parent/guardian: ……..

Date: ……..

Appendix G

Date: 8.31.17

Dear Parent/Guardian,

I am writing to you about the research I am conducting as part of my doctoral dissertation at Arkansas Tech University in Russellville, Arkansas. I am interested in determining the student perceptions of the educational environment based upon the size of their current interdisciplinary team. Your child's school uses a three-teacher team configuration. The purpose of my study is to determine if interdisciplinary size impacts student perceptions of the educational environment. Students in the sixth grade will be given two surveys over the course of the semester. The first survey is a 20-25-minute survey asking each student to rate their previous elementary school on a scale ranging from 1 to 7 with questions similar to the following:

"In my previous school, I energetically pursued my goals."
"In my previous school, other students liked to help me learn"
"In my previous school, I felt that my teachers provided me choices and options."

The second survey is a 20-25-minute survey asking each student to rate their current middle school on a scale ranging from 1 to 7 with questions similar to the following:

"In my current school, I energetically pursue my goals."
"In my current school, other students like to help me learn"
"In my current school, I feel that my teachers provide me choices and options."

The results of the survey will be compared to middle school students in another state who learn on smaller interdisciplinary teams. I have received permission and support from the administration of Rogers Public Schools and Mary Elmore, Principal at Lingle Middle School to conduct this study. Students will be administered the online survey using the EdVision Schools Hope Survey. All individual student information and responses will remain confidential.

I have attached additional informational about the study.

If you have any further questions about the research, please contact me at rmoore44@atu.edu or Mary Elmore, Principal of Lingle Middle School.

If you would prefer that your child **does not** take part in the survey, then please sign and return the form enclosed to Lingle Middle School.

Sincerely,

Robert Moore
Doctoral Candidate, Arkansas Tech University

Appendix H

INFORMATION SHEET

The Effects of Interdisciplinary Team Size On Student Hope, Belongingness, Engagement, Goal-Orientation, and Academic Press After the Transition to Middle School

Researcher: Robert Moore

Supervisor: John Freeman, Ph.D; Arkansas Tech University

This information sheet explains why I am conducting this research and what it will involve. Please contact me if there is anything that is not clear or if you would like more information.
rmoore44@atu.edu

What is this study about?
I am trying to determine if the size of a student's interdisciplinary team impacts their perceptions of the school environment. An interdisciplinary team is an organizational structure that is commonly used by middles schools to create a smaller environment for students. These teams are designed to support student learning and meet the developmental needs of the students. Some schools utilize small teams with approximately 50-75 students with 2-3 teachers while other schools use larger teams of approximately 100-150 students with 4-5 teachers. I am surveying students to determine how they feel about their current school environment. I will compare the survey data for the different team sizes to determine if there is a statistically significant difference in the perceptions of the learning environment for students on small and large teams.

How will my child be involved?
Your child will take two 25-minute online surveys to determine their perceptions of the school environment.

Who will have the access to the research information (data)?
EdVision Schools will collect the survey results through the Hope Survey online platform and retain the data to develop cumulative reports for your child's school. EdVisions will provide me non-identifiable raw student survey data that I will use to compare Lingle students to other middle school students on smaller interdisciplinary teams in another state. The data will be stored safely by EdVision schools for future use by your child's school district. No individually identifiable data will be provided to Lingle Middle School from the EdVision or the researcher. All non identifiable survey data used for school comparisons will be stored on researcher's password protected computer. Dr. John Freeman at Arkansas Tech University will have access to the survey data to support the statistical analysis.

Who has reviewed the study?
The research study has been approved under the regulations of Arkansas Tech University College of Graduate Education and Arkansas Tech University Institutional Review Board research ethics committee.

Who do I speak to if I have questions about this research?
If you would like more information or have any problems with this research, please let me know. You can contact me at rmoore44@atu.edu.

What do I do next?
If you are happy for your child to be involved in my research you do not need to do anything. Please keep this information for reference.

If you **do not** want your child to be involved in this research and participate in the survey, then please complete the attached form and return to Lingle Middle School. Your child may also return the form to the main office.

Can you change your mind?
You and your child have the right to withdraw from the research at any time.

Thank you very much for your time.

Appendix I

PARENT OPT-OUT FROM

(RETURN TO LINGLE MIDDLE SCHOOL MAIN OFFICE)

The Effects of Interdisciplinary Team Size On Student Hope, Belongingness, Engagement, Goal-Orientation, and Academic Press After The Transition to Middle School

I have read the information about the study and talked about this with my child.

Please tick the box below.

I am not willing for my child to take part in the study. ☐

Name of child: ……

School: ……

Class: ……...

Signature of parent/guardian: ……

Date: ……..

Appendix J

Fecha: 8.31.17

Queridos padres/tutor,

Les escribo acerca de la investigación que estoy realizando como parte de mi tesis doctoral en Arkansas Tech University en Russellville, Arkansas. Estoy interesado en determinar las percepciones de los estudiantes sobre el ambiente educativo basado en el tamaño de su equipo interdisciplinario actual. La escuela de su hijo usa una configuración de equipo de tres maestros. El propósito de mi studio, es determinar si el tamaño interdisciplinario afecta la percepción de los estudiantes sobre el ambiente educativo. Los estudiantes en el sexto grado recibirán dos encuestas a lo largo del semestre. La primera encuesta es una encuesta de 20-25 minutos pidiendo a cada estudiante que califique su escuela primaria anterior en una escala que va de 1 a 7 con preguntas similares a las siguientes:

"En mi escuela anterior, perseguí mis metas energéticamente."
"En mi escuela anterior, a otros estudiantes les gustaba ayudarme a aprender"
"En mi escuela anterior, sentí que mis maestros me proporcionaron alternativas y opciones".

La segunda encuesta es una encuesta de 20-25 minutos pidiendo a cada estudiante que califique a su escuela actual intermedia, en una escala que va de 1 a 7 con preguntas similares a las siguientes:

"En mi escuela actual, persigo enérgicamente mis metas".
"En mi escuela actual, a otros estudiantes les gusta ayudarme a aprender"
"En mi escuela actual, siento que mis maestros me proporcionan opciones y opciones".

Los resultados de la encuesta serán comparados con estudiantes de secundaria de otro estado que aprenden en equipos interdisciplinarios más pequeños. He recibido permiso y apoyo de la administración de las Escuelas Públicas de Rogers y Mary Elmore, directora de la Escuela Secundaria Lingle, para llevar a cabo este estudio. A los estudiantes se les administrará la encuesta en línea, utilizando EdVision Schools Hope Survey. Toda la información y respuestas de los estudiantes serán confidenciales.

He adjuntado información adicional sobre el estudio.

Si tiene alguna pregunta sobre la investigación, por favor póngase en contacto conmigo en rmoore44@atu.edu o Doug Schaefer, Logan Middle School.

Si prefiere que su hijo/a **no** tome parte en la encuesta, por favor, firme y devuelva el formulario adjunto a Lingle Middle School.

Atentamente,

Robert Moore
Candidata a doctorado, Arkansas Tech University

Appendix K

HOJA DE INFORMACIÓN

Los efectos del tamaño del equipo interdisciplinario sobre el estudiante, esperanza, compromiso, Orientación hacia el objetivo, pertenecientes y Academic Press después de la transición a Middle School

Investigador: Robert Moore

Supervisor: John Freeman, PhD; Arkansas Tech University

Esta hoja informativa explica por qué estoy realizando esta investigación y en qué consistirá. Por favor póngase en contacto conmigo si hay algo que no está claro o si desea obtener más información. rmoore44@atu.edu

¿Qué es este estudio?
Estoy tratando de determinar si el tamaño del equipo interdisciplinario de un estudiante afecta sus percepciones del ambiente escolar. Un equipo interdisciplinario es una estructura organizacional que es comúnmente usada por las escuelas medianas para crear un ambiente más pequeño para los estudiantes. Estos equipos están diseñados para apoyar el aprendizaje de los estudiantes, y satisfacer las necesidades de desarrollo de los estudiantes. Algunas escuelas utilizan equipos pequeños con aproximadamente 50-75 estudiantes con 2-3 maestros, mientras que otras escuelas usan equipos más grandes de aproximadamente 100-150 estudiantes con 4-5 maestros. Estoy examinando a los estudiantes para determinar cómo se sienten acerca de su entorno escolar actual. Voy a comparar los datos de la encuesta con los diferentes tamaños de equipo para determinar si hay una diferencia estadísticamente significativa en las percepciones del entorno de aprendizaje para los estudiantes en equipos pequeños y grandes.

¿Como estará mi niño(a) involucrado(a)?
Su hijo(a) tomará dos encuestas en línea de 25 minutos, para determinar sus percepciones acerca del ambiente escolar.

¿Quién tendrá el acceso a la información de la investigación (datos)?
EdVision Schools recopilará los resultados de la encuesta a través de la plataforma en línea Hope Survey y conservará los datos para desarrollar informes acumulativos para la escuela de su hijo. EdVisions me proporcionará datos crudos de encuesta de estudiantes no identificables que usaré para comparar estudiantes de Lingle, con otros estudiantes de secundaria en equipos interdisciplinarios más pequeños en otro estado. No se proporcionarán datos identificables individualmente a Lingle Middle School por parte de EdVision o del investigador. Todos los datos de encuestas no identificables utilizados para las comparaciones escolares, se almacenarán en la computadora protegida por la contraseña del investigador. El Dr. John Freeman de Arkansas Tech University, tendrá acceso a los datos de la encuesta para apoyar el análisis estadístico.

¿Quién ha examinado el estudio?
El estudio de investigación ha sido aprobado bajo la reglamentación del colegio Arkansas Tech University College of Graduate Education y Arkansas Tech University Institutional Review Board.

¿Con quien debo hablar si tengo preguntas acerca de esta investigación?
Si desea obtener más información, o si tiene algún problema con esta investigación, por favor hágamelo saber. Usted puede ponerse en contacto conmigo, Robert Moore en rmoore44@atu.edu.

¿Qué debo hacer a continuación?
Si usted con gusto desea que su niño(a) participe en mi investigación, no necesita hacer nada. Conserve esta información como referencia.

Si usted **no desea** que su hijo participe en esta investigación y encuesta, entonces complete el formulario adjunto, y regréselo a Lingle Middle School. Su hijo también puede devolver el formulario a la oficina principal.

¿Puede cambiar su mente?
Usted y su hijo tienen derecho a retirarse de la investigación en cualquier momento.

Muchas gracias por su tiempo.

Appendix L

FORMULARIO PARA LOS PADRES PARA "OPTAR POR NO"
(REGRESELO A LA OFICINA PRINCIPAL DE LA ESCUELA SECUNDARIA LINGLE)

Los Efectos del Tamaño del Equipo Interdisciplinario Sobre la Esperanza del Estudiante, Pertenencia, Participación, Orientación de Metas, y Presión Académica Después de la Transición a La Escuela Secundaria

He leído la información sobre el studio, y hablé sobre esto con mi hijo.

Por favor, marque la casilla de abajo.

☐ **No estoy dispuesto** a que mi hijo tome parte en el estudio.

Nombre del niño(a): ……

Escuela: ……....

Clase: …….....

Firma del padre/tutor: ……..

Fecha: ……...