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THE IMPACT OF MOVING FROM TWO-PERSON TO FOUR-PERSON TEAMS ON SEVENTH-GRADE STUDENTS' ATTITUDES AND BELIEFS TOWARDS SCHOOL

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By

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THE IMPACT OF MOVING FROM TWO-PERSON TO FOUR-PERSON TEAMS ON SEVENTH-GRADE STUDENTS' ATTITUDES AND BELIEFS TOWARDS SCHOOL

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ABSTRACT

THE IMPACT OF MOVING FROM TWO-PERSON TO FOUR-PERSON TEAMS ON SEVENTH-GRADE STUDENTS' ATTITUDES AND BELIEFS TOWARDS SCHOOL

By

Zachary B. Sedgwick

The purpose of this mixed methods study was to examine the impact moving seventh-grade students from two-person to four-person teams had on students' attitudes and beliefs towards school. The review of literature provided the reader a brief analysis of the history of the *middle school philosophy* and teaming, recommendations for schools to address the unique needs of early adolescents, a review of key literature regarding middle level programing and structure, and a discussion highlighting the importance and impact of smaller learning communities. Two main theories makeup the framework for this report: *Social Cognitive Theory* and *Human Relations Theory*. The research findings are intended to advance the knowledge of leadership and practice for educational practitioners working with adolescents, specifically as it pertains to the concept of teaming within middle schools. The results of the study followed four general themes: students' relationships with their teachers; students' relationships with their classmates; students' feelings towards themselves; and students' feelings towards the team

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DEDICATION

This thesis is dedicated to my amazing wife,

Angela, who has remained both patient and

supportive throughout this project.

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This thesis follows the format prescribed by the *APA Publication Manual* and the *Northern Michigan University Guide to the Preparation of Theses*.

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Chapter One: Introduction

Unlike the junior-high model, where teachers are generally assigned to a subject-specific department and teach students within and across grade levels, middle schools implementing the teaming model assign a small group of teachers, or interdisciplinary team of teachers, a specific group of students from one grade level; these students spend the entire academic part of their day with only their team's teachers, as opposed to the junior-high model where students can see any combination of teachers from the various subjects they are taking (Alexander & McEwin, 1989; National Middle School Association, 2003). The intention is to create smaller learning communities where teachers and students are better able to develop close relationships, along with a stronger sense of community and belongingness within their team, which becomes a family of sorts within the school walls (National Middle School Association, 2003). Teaching and learning in these teams is more holistic in nature, with a focus on the unique social, emotional and intellectual needs of early adolescents, as opposed to the focus of the secondary level on academics and the elementary level's focus on skill-development (Jackson & Davis, 2000; Williams, 2005). This early-adolescent-specific pedagogical approach has come to be known as the *middle school philosophy*.

Team-size within the middle-school framework generally ranges anywhere from two teachers for 60 students to four teachers for 120 students (Jackson & Davis, 2000; National Middle School Association, 2000). Teachers in the smaller teams (i.e., two-person teams) generally teach their students two subjects, as opposed to teachers within the four-person teams who generally teach their students one subject. Some research indicates that the teams should be as small as possible (Hackmann, Petzko, Valentine,

Clark, Nori & Lucas, 2002; Jackson & Davis, 2000). Regardless of the size, the teaming model is designed to accommodate the unique needs of adolescent learners (Anfara & Lipka, 2003; National Middle School Association, 2003). Furthermore, some research does indicate that this form of restructuring and programming can have a positive impact on student achievement (Anfara & Lipka, 2003; Lee & Smith, 1993; Mertens & Flowers, 2006). However, there has also been research criticizing teaming as a viable initiative, since its implementation can put additional strain on school schedules and finances (Flowers, Mertens, & Mulhall, 1999; Rottier, 2000). Deciding on the number of teachers in each team can complicate matters further as the smaller team sizes demand specific scheduling structures and teacher assignments (Mertens & Flowers, 2003). Deciding on the value of teaming, as well as the size of the teams, in light of these relative challenges is a factor to consider for administrators making programming decisions within restricted budgets and scheduling limitations.

Federal and State legislation require each teacher to be *Highly Qualified* in the subject(s) they teach, which in turn requires the teacher to possess the appropriate state certification for those subject(s) (Linn, Baker, & Betebenner, 2002; Michigan Department of Education, 2016). This matter of certification may present certain challenges since candidates being considered for middle-level teaching positions generally have either a secondary certification or an elementary certification, instead of a middle-school specific certification (Bishop & Nagle, 2016). For example, in Michigan, to earn an elementary certification at some universities, teacher candidates are only required to have one major (Central Michigan University, 2014). After satisfying the necessary eligibility requirements, and based on the certification designation, these

single-certified elementary candidates are generally able to teach all subjects within grades kindergarten through fifth grade, but only one subject in grades sixth through eighth-grade (Michigan Department of Education, 2016). Although potentially best-suited for the position, the single-certified elementary teachers cannot be placed within two-person teams, since this model requires each teacher to teach their respective students two subjects. The secondary candidates possessing two certifications would be able to teach within either model, assuming they have the appropriate certifications, but may not be interested in the position due to the nature of the makeup of students and the less academic-focused programming (Bishop & Nagle, 2016; Howell, Faulkner, Cook, Miller, & Thompson, 2016). Finding teachers with the interest, and appropriate certification, for middle-level positions may therefore be challenging. Furthermore, some research indicates that, although there are many more states requiring specific middle level training, there are not as many teacher candidates properly trained for these middle-level positions (Bishop & Nagle, 2016; Howell, et al., 2016).

When hiring teachers and structuring programming, middle-level administrators must consider whether the *middle school philosophy*, and teaming, outweighs the potential scheduling and budgetary limitations, certification challenges and training issues that may arise. When considering whether or not to organize teams in two or four teachers, educational leaders would likely ask themselves whether or not the size of the team impacts student learning and success. Furthermore, if the two-person model is more effective, then these leaders would need to determine if this outcome is worth the potential challenge of using the smaller team size.

Purpose of the Study

The purpose of this study is to examine the impact moving seventh-grade students from two-person to four-person teams had on students' attitudes and beliefs towards school. As stated previously, the decision to use the two-person versus four-person teams is an important factor to consider for those responsible for programming and scheduling decisions.

For this study, seventh-graders were surveyed while in two-person teams and then again as eighth-graders the following year in four-person teams. The two-person model in seventh-grade required each teacher to teach two subjects for approximately 60 students. The four-person model in the eighth-grade required each teacher to teach one subject for approximately 120 students. This study was not designed to assess differences in teaching styles employed across the two grade levels; however, certain differences were apparent when making informal observations during the research process. For example, as mentioned before, seventh-grade teachers taught two academic subjects for approximately 60 students, while eighth-grade teachers taught one academic subject for approximately 120 students. This structure seemed to provide the teachers in the seventh-grade an opportunity to better provide an interdisciplinary approach to the curriculum, since they were responsible for multiple subjects. The observation that teachers within smaller teams may have had a better structure for teaching across disciplines, since they had the same students for multiple subjects, seems to be supported by research that smaller teams provide teachers a better opportunity to present adolescent learners a broader curriculum, where subjects are taught less in-depth than those taught in larger teams with more departmentalized structures (Cotton, 2001; Kahne, Sporte, & de

la Toree, 2006; Jackson & Davis, 2000). Furthermore, the structure of the two-person teams seemed to provide the seventh-grade teachers more opportunities to work as a team, since they were responsible for fewer students and had more flexibility to adjust their schedules. The seventh-grade teams made a concerted effort to build relationships and community, especially during the beginning of the year, and took advantage of their flexible schedules to plan a variety of team-building activities. It is worth noting that these same observations were apparent in the eighth-grade, however, the structure of the larger teams in the eighth-grade did appear to make some of these activities more difficult to manage. This observation seems consistent with research indicating smaller teams provide teachers the structure necessary to better establish a smaller learning community, with more opportunities for students to participate in team-building activities (Arhar & Kromrey, 1993; Felner, Jackson, Kasak & Mulhall, 1997; Hackmann et. al., 2002).

Although research on teaming is well established, and despite the literature supporting the positive impact of teaming on students' sense of community and belongingness in school, there is currently little evidence indicating the impact of the size of the team on students' overall educational success, and no research indicating the impact moving seventh-grade students from two-person to four-person teams has on students' attitudes and beliefs towards school.

Research Questions

Balancing the potential challenges (i.e., scheduling and budgetary limitations, certifications, and possible lack of appropriate training), against the value of teaming, and the size of the teams, appears to be a factor for administrators to consider when deciding whether to employ teaming in their middle school. It is along this line of thought that this

paper examined the impact moving seventh-grade students from two-person to four-person teams had on students' attitudes and beliefs towards:

Their teachers

Their classmates

Themselves

Their team

Chapter Two: Review of Literature

The Middle School concept gained much traction during the late 1960's as a result of the general dissatisfaction with the junior high schools' ability to properly educate young adolescents (Alexander & McEwin, 1989). The concept was developed out of the growing desire for schools to address the specific needs of those between the ages of 10 and 15 (Williams, 2005). Two key documents came out of this movement: The first, developed by The Carnegie Council on Adolescent Development, was called *Turning Points* (Quattrone, 1990); the second, developed by the National Middle School Association (NMSA) in 1992, was titled *This We Believe*. The Carnegie report laid out changes in structure, curriculum and assessment designed to accommodate the unique needs of the middle-level student. Along with these changes were eight middle school recommendations to positively impact student achievement (Jackson, 2000). Similarly, the NMSA report was designed to outline a vision for middle-level education and proposed what, after multiple revisions, would become their six middle school best practices (NMSA, 2003). One of the recommendations from both of these reports was the development of teams. The teams were designed to accommodate approximately 50 students. The smaller groups were purposed to give every student the opportunity to be known well by at least one teacher, as well as to develop communities where students could work and learn together with teachers and classmates with whom they identify (NMSA, 2003).

Middle-level learners are under a barrage of social, emotional and intellectual changes (NMSA, 2003; The Society of Neuroscience, 2007). The NMSA (2003) found that "young people undergo more rapid and profound personal changes between the ages

10 and 15 than at any other time in their lives" (p. 3). For many, they have departed from a self-contained K-5 elementary classroom and school where strong community was built very methodically over the successive years that a student was a member of the school (Brown, 2008). Then, they enter into middle schools that can be two to three times the size of their elementary schools. They have to switch classes, navigate lockers, and study increasing loads of information (Brown, 2008). In order for schools to be successful with these learners, there must be a system in place that enables these students to feel comfortable amidst the many changes going on within and around them. School structure, curriculum, instructional strategies and special programming are all means to this end.

Research on middle schools indicates that the restructuring of programming can have an impact on student achievement (Anfara & Lipka, 2003; Lee & Smith, 1993; Mertens & Flowers, 2006). More specifically, Anfara and Lipka (2003) reviewed the current research on *middle school philosophy* recommendations, and found the following elements to have a positive impact on student achievement: "reduced or eliminated departmental structure, heterogeneously grouped instruction and team teaching" (para. 3). One of these elements, namely, interdisciplinary teaming, was said, based on Anfara and Lipka's (2003) research, to "[create] smaller learning communities where middle grades youth are not lost within the larger school community…[and] evidence linked interdisciplinary teams with positive student outcomes–notably greater achievement" (para. 4). The NMSA (2003) found that "they [middle school teachers] recognize the value of interdisciplinary studies and integrative learning and make sound pedagogical decisions based on the needs, interests, and special abilities of their students" (p. 9).

Governments and private foundations have given hundreds of millions of dollars for the purpose of researching how schools can downsize to create smaller schools or smaller schools within schools (Cotton, 2001). After conducting a review of historical literature related to smaller school environments, Cotton determined, based on her research, that the small school climate was superior to large school climates on many measures of success, including measures related to students' sense of acceptance, belongingness and learning. Although there did not appear to be any universal standard to define small, some research indicated that a limit of 400 was best (Cotton, 2001).

Quint (2006) performed a study on three different high school redesign efforts to create smaller learning environments, and came to a similar conclusion, namely, that smaller learning environments improved school climate. In 2001, researchers studied the results of an initiative in Chicago where large urban schools were restructured into smaller learning communities, and found the smaller learning community climate to be more personal and supportive as a result (Allensworth & Easton, 2007; Evan, Huberman, Means, Mitchell, Shear, Shkolnik, Smerdon, Song, Storey, & Uekawa, 2006; Kahne, Sporte, & de la Toree, 2006).

According to Cotton (2001), smaller learning communities provided teachers an opportunity to know students better, as well as students more chances to participate in extracurricular activities, including social events--which she found to help build community, students' sense of belonging, and a safer school environment. This phenomenon is often times referred to as *human-scale schooling* (National Forum to Accelerate Middle-Grades Reform, 2004).

In 2004, the National Forum to Accelerate Middle-Grades Reform issued a report regarding middle level best practices and made the following recommendations for schools designing or implementing smaller learning communities: divide a large school into smaller, personalized environments; create interdisciplinary teams which share the same group of students; make the teams responsible for the students' core academic courses and sometimes their electives; provide team teachers regularly scheduled planning time to discuss teaching and learning; design flexible, tailored approaches to curriculum and instruction. These recommendations are consistent with those provided through *This We Believe* and *Turning Points* referenced earlier.

In partnership with the W. K. Kellogg Foundation, Felner, Jackson, Kasak and Mulhall (1997) conducted a longitudinal study purposed to determine the impact of implementing *Turning Points*-based recommendations on middle-level students' success in school. The project, which began in 1990-1991, started with a very small number of schools from Michigan. In cooperation with the University of Illinois Center for Prevention Research and Development (CPRD), the research team developed a survey to address the central issues that affected the education of young adolescents in Michigan. The team developed a strategic plan they called *Middle Start*, which was an initiative dedicated to helping schools make more effective learning environments, specifically at the middle-level, and especially for those students who felt school could not make a difference in their lives.

The *Middle Start* initiative was provided to every middle school in Michigan. The initial sample of 11 schools in 1990-1991 eventually grew to a network of more than 97 schools spanning multiple states and regions. The main focus for the study was

determining the level to which the participating schools implementing *Turning Points* recommendations impacted student achievement. The implementation level was determined based on recommendations that students be placed in teams of no more than 120 students, in class sizes of no more than 20-25 students per teacher, with team teachers who met regularly (minimum of four times per week), and in advisory classes with student/teacher ratios of no more than 22 students per teacher.

Participating schools' level of implementation was labeled as either low, medium or high. For the sample, team sizes ranged from 60 (high implementation) to 240 students (low implementation), team-sizes anywhere from two teachers (high implementation) to 12 teachers (low implementation), and student to teacher ratios ranging from 20 (high implementation) to 40 (low implementation). Planning time ranged from no common planning (low implementation) to daily common planning in addition to individual daily planning time (high implementation).

For schools with low levels of implementation, the researchers found the following: teams failed to engage in critical team-building activities; students reported a negative school climate; teachers reported more psychological and behavioral problems; student achievement lagged. Included in recommendations based on their findings, and possibly most pertinent to this paper, Felner, et al. (1997) suggested that smaller teams of two to four teachers on a team show better results than larger teams with five or more teachers.

As mentioned previously, there does not currently appear to be any universally-accepted standard concerning the ideal size of teams. Speaking on the *Turning Points* recommendations almost a decade after its original release, Jackson and Davis (2000)

advised middle-level practitioners that teams should be as small as possible. Hackmann, et al. (2002) reviewed the research on team size, and concluded that the trend towards teams of five or more teachers should be carefully evaluated, since, according to their research, teams that are too large become fractured by master schedules and other factors which minimize their effectiveness. The larger team sizes were also found to make it increasingly difficult for administration to maintain adjacent team classrooms (Hackmann et. al., 2002). Their research indicated that the lack of proximity between team classrooms eroded students' sense of team identity, feelings of belongingness and the smaller learning community environment.

This review of literature provided the reader a brief review of the history of the *middle school philosophy* and teaming, and how educational research supporting the importance of smaller learning communities seems to support the value of implementing the teaming model in middle schools. The teaming structure follows recommendations from key literature for middle schools to better address the social, emotional and intellectual qualities of early adolescents and the educational programming that best supports their unique needs.

Chapter Three: Theoretical Framework Underpinning the Study

This study focused on the impact moving seventh-grade students from two-person to four-person teams had on students' attitudes and beliefs towards school. Larger teams (i.e., four-person teams) imply less student contact with more teachers and peers, rather than more contact with fewer teachers and peers inherent within smaller teams (i.e., two-person teams). Two main theories are discussed in this report: Social-Cognitive Theory and Human-Relations Theory.

Social-Cognitive Theory

The concept of teaming has its roots in *Social Cognitive Theory* (SCT), which is an often times referenced concept in areas of psychology, education and communication. SCT premises individual's knowledge acquisition, at least in part, on the person's social interactions and experiences. Osterman (2000) outlined SCT on the basis of motivation, particular with young adolescents, and their need to sense a feeling of community and belongingness within a group. This sense of belongingness, according to Osterman, is a basic psychological need, and one that if absent, will inhibit the young-adolescent's motivation to learn. Furthermore, according to Osterman, the satisfaction of the individual's psychological needs affect perception and behavior, both of which are associated closely with success in school.

School Membership Theory. SCT leads to a very similar theory, *school membership theory*. Osterman asserted that young adolescents have a deep desire to belong, to have a sense of bonding and membership. Middle-school students who feel this sense of attachment, according to *school membership theory*, have a greater sense of commitment and involvement towards their school. Consequently, students with a sense of belonging towards a team are more likely to develop a belief of social and

psychological bonding towards their teachers and peers (Osterman, 2000). Goodman, Kuzmic, and Wu (1992) promoted the concept of teaming within the constructs of democracy, and warn that the absence of such structures stratifies students' roles and responsibilities and inhibits a sense of togetherness or community. Osterman (2000) suggested that young adolescents are particularly vulnerable to feelings of isolation, and the feeling seems to be growing. Moreover, according to Osterman, due to the fact that social institutions such as family and community are becoming increasingly weakened, it is increasingly important that schools, as social organizations, address the needs of these students, particularly the need to experience belongingness.

Resilience. One outcrop of the Social Cognitive Theory, associated with teaming, is the concept of resilience. Resilience is a person's ability to adapt to stress and adversity. According to Anderson, Christenson, and Sinclair (2004), there has in recent years been an increase in the interest of fostering resilience of children. One of the findings of their report was that positive, supportive relationships with adults are associated with resilience in children, and that the adult supporting the students need not be a parent. The implications for middle-level students are important, as many of these student's relationships with school staff can be among the most influential and positive they experience (Anderson, Christenson, & Sinclair, 2004). The study also found that for this age group, relationships with teachers were associated with motivation, achievement and feelings of belonging. Anderson, et al. also found middle school students' attitudes and beliefs towards school were strongly influenced by the perception that their teachers cared for them, and that these feelings were linked to improved student academic achievement.

Human Relations Theory

The theories of Social Cognitive theory, school membership theory and resilience have close ties with the human relations movement (i.e., human relations theory). Human relations theory is the study of people in groups. Within the scope of this project, human relations theory is closely tied to school culture and the concept of smaller learning communities where:

> Teams comprised of two or more teachers with the students they teach in common are essential to the process of creating learning communities. The team is a home away from home, the place where students work and learn together with teachers and classmates with whom they identify. (National Middle School Association, 2003, p. 13)

The human relations theory of middle school organization implies that smaller learning communities will build a more collaborative community of teachers and students. It is important to note that this concept does not necessarily lead to sounder curricular and pedagogical decisions on the part of the teachers within these groups (Supovitz, 2002). The National Middle School Association found that human relations are an essential component of curriculum, pedagogy and programs, and the developmental needs of young adolescents must be the basis for school organization. Furthermore, the NMSA recommended that schools need to ensure that students are known well by at least one adult and those adult role models are necessary for the middle-level learner as guidance and advocacy are crucial to their development. Based on this premise, NMSA recommendations included interdisciplinary teaming and integrative learning, as these initiated, it was believed, teachers to make sound decisions based on the individual needs

of their students. Arhar and Kromrey (1993) found that departmentalized structures which required students to move from teacher to teacher throughout the day (i.e., junior high model) inhibit students from bonding with their teachers and peers, and that large numbers of students are so alienated from school that they distrusted school activities in general and viewed their education as meaningless to their lives.

Teacher-Child Relationship. Another aspect of human relations theory is the concept of the teacher-child relationship. Birch and Ladd (1997) sampled a group of kindergarten children to examine the impact of three distinct features of the teacher-child relationship (closeness, dependency, and conflict) on children's school adjustment. Dependence was found to be strongly correlated to student's school adjustment, including academic performance and attitude towards school. In addition, teacher-child closeness was positively linked with children's academic performance. Murdock and Miller (2003) studied teachers as a source of eighth-grade students' motivational identify, and found teacher perceived caring accounted for significant amounts of variance in eighth-grade students' motivation and perceived motivational influences from parents and peers. According to Murdock and Miller (2003), there was little question that the quality of students' perceived relationship(s) with teachers was an important predictor of their commitment to schooling, and that seeing one's teacher as supportive and caring will increase the likelihood that the student will value education.

Holistic Education. The final element of human-relation theory is holistic education. Holistic education should not be seen as separate from the concepts previously mentioned in this framework, but instead as a summary. Holistic education seeks to define a person's passion for life and learning through a focus on community, the

natural world, and humanitarian values. Jackson and Davis (2000) contended that the middle school philosophy far exceeded that of the junior high, and that adolescent development, more than curriculum, should be the guiding principle for school organization. Their basis for such a premise was the nature of middle-school education, and the necessity to focus on concrete rather than abstract thinking, the exploration of many subjects with less depth versus fewer subjects with more depth, and the development of social development (e.g., self-concept and self-acceptance). Jackson and Davis (2000) argued that teachers responsible for large numbers of students will focus on subject matter instead of focusing on the individual needs of students, and that departmentalization will weaken the student-teacher relationships. According to Jackson and Davis, Holistic education's focus on a combination of intellectual and social health is threatened by a ranking philosophy where test scores and mental fortitude are seen as the driving force behind education. Middle-level education focuses on the whole person, and the understanding that these students are in many ways unprepared for the rigor of a more academically focused framework.

The concepts outlined in this report may not cover all the theoretical underpinnings of this study. For example, the theories just outlined are more social in nature. There are more scientific theoretical elements pertinent to the teaming concept, and middle school philosophy, not addressed here. For example, proponents of neuroscience and brain research seek to explain the biological forces behind students' development and learning. Some early-adolescent studies are closely tied with that of neuroscience research and the physiology of the brain, such as The Society of Neuroscience (2007), which asserted that the early-adolescent's hormones are raging and

the frontal lobe is not yet fully developed, therefore causing decreased impulse control. The National Middle School Association (2003) outlined the developmental needs of middle-level learners, and recommended schools understand the nature of early-adolescents, and the fact that physical changes, along with many pitfalls associated with contemporary life, cause this particular age to be critical to students' development, particularly their ability to learn and develop habits.

The concepts of Social-Cognitive Theory and Human Relations Theory are built around environmental factors such as community, feelings of belongingness, and a person's ability to adapt socially to the changes in their environment. These theories may be limited in that their focus is on a student's perceived feelings, which are highly subjective and affected by a myriad of factors that are difficult to ascertain, and control, when looking for causal relationships. Physiological factors are more manageable in this regard, but not strongly discussed in this study. However, these considerations may be as much, if not more, of a factor influencing students' attitudes and beliefs towards school.

Chapter Four: Research Methodological Frame

This study focused on the impact moving seventh-grade students from two-person to four-person teams had on students' attitudes and beliefs towards school. As mentioned before, seventh-graders were surveyed while in two-person teams and then again as eighth-graders the following year in four-person teams.

Leech and Onwuegbuzie (2009) performed a content analysis of various mixed-methods designs and developed a three-dimensional typology to help the researcher better identify the best approach to utilize when using the mixed-methods approach. The three typology dimensions were: 1) the level of mixing; 2) time orientation; and 3) emphasis of approaches. The level of mixing referred to the extent to which quantitative and qualitative analyses were either fully or partially mixed during the research process. Time orientation referred to whether the quantitative and qualitative analysis occurs concurrently or sequentially. The emphasis of approach factor illustrated the extent to which one phase of the process is given more priority over the other. Based on Leech and Onquegbuzie's (2009) typology, the methodological frame for this project is best described as a *Partially Mixed Concurrent Equal Status Design* (PMCESD).

The key independent variable for this study was the size of the student's team (i.e., number of teachers in each team). The key dependent variables for this study were students' attitudes and beliefs towards: their teachers, their classmates, themselves, and their team. For this project, a modified version of a statewide school climate survey from the east coast was utilized. The survey publishers gave the researcher permission to use the survey for this project, but asked that they not be given credit in any way if the survey was modified from its original form. Although much of the survey was used as it appeared in its original form, there were questions omitted or reworded so as to make the

survey more useful for this project. For example, the original survey included questions related to student's feelings regarding the length of the school day and the time allotted between classes. Questions of this nature didn't seem pertinent to this project.

It is worth noting that the original survey was based on key literature related to school climate, and the questions drawn from field-tested survey instruments. Furthermore, a validity and reliability study performed on the original survey found that the survey was an effective indicator of school climate. However, as a result of making modifications, the survey for this project would not necessarily meet those same standards. The survey for this study followed a mixed-methods design, with 21 fixed-form questions and five open-ended questions. For purposes of consistent language henceforth, this paper will refer to the fixed form questions from the survey as quantitative and the open-ended questions as qualitative. The survey in its entirety can be found in Appendix A.

Participants

Bothwell Middle School is located on the southern shores of Lake Superior in the Upper Peninsula of Michigan. Bothwell enrolls roughly 700 students in grades six through eight. As of May 2016, there were approximately 220 students in the eighth-grade who participated in this study, which was roughly the same as the number of them who participated the year before (as seventh-grade students). Of these students, roughly 48.4% were female and 51.6% male. Bothwell's total student population is comprised mostly of white students (87.2%), followed by Native American (3.3%), Hispanic (1.4%), Asian (1.0%), Black (0.7%) and other (6.4%). Approximately 27% of Bothwell's students qualify for free or reduced lunch.

The main researcher, and author, for this project was the assistant principal at Bothwell. The researcher was given the task of researching the concept of teaming, and whether or not this element of the middle school had a positive impact on students. As part of the school improvement process, students at Bothwell are surveyed each year to determine the level to which they felt successful (e.g., safe, accepted, cared for). The principal gave the researcher permission to use the results of this survey as a sample for the study (see Appendix B). Furthermore, the researcher received approval from the local Institutional Review Board (IRB), under the administrative review process, to use Bothwell students' responses to the survey for this study.

The initial survey was given to Bothwell's seventh-grade students in May, 2015. There were 205 students who participated in the study. The seventh-grade students at that time were grouped into four teams of two teachers, with each student placed into one of the eight teacher's advisory class. The advisory teachers administered the survey. Along with enough blank copies for each student, each teacher was given a list of codes to assign to the students. These codes would ensure that students' would remain anonymous. For the initial survey, all eight teachers were able to administer the survey.

The second survey was given to the same students as eighth-graders during May, 2016. There were 195 students who participated. The eighth-grade students at that time were grouped into two teams of four teachers, with each student placed into one of the eight teacher's advisory class. The advisory teachers again administered the survey, which was exactly the same as the previous year's survey. The teachers were again given enough blank copies of the survey for each student in their class. Students were again assigned codes from a list given to their advisory teacher. For the second survey, seven

out of eight teachers participated in the study. One teacher was unable to participate in the survey due to extenuating circumstances. This resulted in a smaller sample size for the second survey.

Data to be Collected

Each student was given a hard-copy of the survey, which they then completed by hand. As mentioned previously, the survey followed a mixed-methods design, with 21 fixed-form questions and five open-ended questions. The 205 seventh-grade student responses to the survey were gathered in May, 2015. The eight participating teachers brought the responses down to the office, where the surveys were then stored for safe-keeping. Similarity, the 195 eighth-grade student responses to the survey were gathered in May, 2016, approximately one year after the students had taken the survey as seventh-graders. These responses were again stored in the office for safe keeping.

Two research-assistants then transcribed and entered the hand-written data from both the seventh and eighth-grade surveys into an electronic format. The quantitative data were entered into an electronic spreadsheet program; the qualitative data were entered into an electronic word processing program. Both sets of data were then grouped and tabulated by individual student code and question. Upon completion of data-entry, the research-assistants shared the results with the researcher electronically, where the documents were then stored.

Quantitative Analysis

For the quantitative analysis, the researcher took the electronic spreadsheet where student responses from both seventh and eighth-grade were stored, and then converted each spreadsheet into Microsoft Excel. Initially, the data were organized by question.

After the initial analysis, it became apparent that re-grouping the questions according to constructs would be more effective (e.g., teachers, students, etc.). Utilizing Excel's data-analysis program, the researcher was able to perform basic descriptive statistical analysis for the results of each construct, or set, of data. Using Microsoft Word, the descriptive statistics for each construct were then tabulated and converted into bar graphs. For purposes of easier reading and analysis, the corresponding tables and graphs were grouped together (see Tables 2-5 and Figures 1-4). Every question included multiple prompts, or parts. For purposes of better organization, each part was labeled as "a", "b", "c", etc.

Qualitative Analysis

In regards to the results of the open-ended questions, or qualitative data, the researcher utilized an approach which followed Creswell's (2012) four-cycle coding process for analyzing qualitative data. For the first phase, student responses were transcribed, or typed, into a table on the computer. This was accomplished with the help of research assistants.

During the second phase, the researcher conducted a preliminary exploratory review of the data in an attempt to obtain a general sense of the student responses. At this phase, the researcher began pre-coding the responses, where hand-written notes were made in the margins of the transcribed data. The notes were often times in the form of simple brackets surrounding short phrases which captured the responses made by the students.

The data were then further analyzed for the third phase. First, *Open Coding* was employed, where each student response was assigned a code word or phrase. In many

instances, students' actual responses (in vivo codes) were used for this step. *Axial Coding* was then utilized, where connections were made between the various codes determined from the open coding in an effort to condense the list of codes into a smaller more manageable list.

Theming was used for the fourth phase, where the condensed lists of codes from the third phase were further condensed into major themes. The themes encompassed the major categories coming out of the students' responses. Table 1 gives examples of the coding process for student responses from each question.

Table 1

Example coding of text segment for qualitative survey

Question	Text segment	Code	Theme
5	They (teachers) care about the troubles I have	Caring teachers	Positive relationship
6	Some of my classmates are disruptive...	Classmates disruptive	Negative academic impact
7	Meeting new friends	Meeting new friends	Positive relationship with classmates
8	Getting used to team/Liked 2-person teams	Getting used to teams	Being on a team
9	Didn't connect with my teachers	Didn't connect w/teachers	Negative relationship w/teachers

It is important to note that student responses to qualitative questions often times lacked the depth of feedback needed to perform certain methods of qualitative analysis. This result could be attributed to characteristics of the age group being studied, or possibly due to the design of the survey. More discussion regarding the lack of substance in student responses is discussed later in the limitations and implications for further research sections of chapter six. For purposes of maximizing the value of the qualitative

component of the mixed-methods study, the researcher utilized *classical content analysis*. Leech and Onwuegbuzie (2011) describe this approach as intent by the researcher to determine the concepts, or themes, predominantly discussed in a study. In order to report the findings of this analysis, the researcher tabulated the predominant themes from student responses to each question and tallied the corresponding number of responses. The results were then depicted graphically to give the reader a better sense of the findings. See chapter five for a more detailed description of the themes, number of responses, and corresponding tables and figures.

Early in the coding process, it became apparent that congruencies were present between the responses of students as seventh and eighth-graders to the qualitative survey. This provided the researcher an opportunity to use the same codes for the two sets of data. By using the same codes for student responses from both years, the researcher was able to give a clear picture of the relationship between student responses at the two grade levels. Tables 6-10 and Figures 5-9 provide much more detail on this relationship. Since some student responses contained multiple text segments relevant to various codes and themes, the number of responses does not necessarily match the number of respondents. Similarly, some student responses were blank or written as not applicable.

Chapter Five: Results

Quantitative Results

The purpose of this mixed methods study was to examine the impact moving seventh-grade students from two-person to four-person teams had on students' attitudes and beliefs towards school. The exact questions discussed in the following sections, as they appeared in the survey, can be found in Appendix A.

Relationships with Teachers. The mean response for students to quantitative questions related to their relationships with teachers was greater for students as seventh-graders than as eighth-graders for ten out of ten questions falling within this construct (see Table 2, Figure 1). Worth noting was the greater average for students as seventh-graders (4.72) than as eighth-graders (4.14) to the first question in this construct, which asked students to indicate to what level their teachers provide them encouragement. Also worth noting was the greater average of student responses as seventh-graders (4.77) than as eighth-graders (4.32) to the last question in this construct, which asked students the level to which they felt the school provided adults who genuinely cared about them.

Table 2 provides the descriptive statistics resulting from student responses to quantitative questions pertaining to their relationships with teachers. Figure 1 gives the reader a graph illustrating the comparison of responses from students in seventh-grade and in eighth-grade to the questions relevant to this construct. As shown in Table 2 and Figure 1, the mean of responses for students as seventh-graders was greater than as eighth-graders for every question relevant to this construct. In addition to a greater average, the median of responses for students as seventh-graders was greater than as eighth-graders for five out of the ten questions. The standard deviation for students as

seventh-graders was less than as eighth-graders for all but three questions, indicating that student responses as seventh-graders were less spread out then they were a year later. The mode of responses was also greater for students as seventh-graders than as eighth-graders for seven out of ten questions for this category. The mean response to question 3b, which asked students the level to which they felt their teachers were knowledgeable in their subject area, was greater for students when they were in seventh-grade (mean = 5.21) and in eighth-grade (mean = 5.01) than all other questions relevant to this construct.

Table 2

Student Relationships with Teachers

7th grade results

Question:	1a	1b	1c	1d	1e	1f	3b	3c	3d	3e
Mean	4.72	4.51	4.62	4.23	4.78	4.92	5.21	4.48	4.81	4.77
Median	5.00	5.00	5.00	4.00	5.00	5.00	6.00	5.00	5.00	5.00
Mode	5.00	5.00	6.00	5.00	6.00	6.00	6.00	6.00	6.00	6.00
Standard Deviation	1.15	1.27	1.33	1.35	1.28	1.20	1.09	1.45	1.24	1.36
Range	4.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
Minimum	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Maximum	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
Count	205	205	205	205	205	205	204	205	205	205

8th grade results

Question:	1a	1b	1c	1d	1e	1f	3b	3c	3d	3e
Mean	4.14	3.98	4.23	3.96	4.42	4.56	5.01	4.38	4.54	4.32
Median	4.00	4.00	4.00	4.00	5.00	5.00	5.00	5.00	5.00	4.00
Mode	5.00	4.00	4.00	4.00	5.00	5.00	6.00	5.00	5.00	6.00
Standard Deviation	1.20	1.24	1.31	1.35	1.35	1.30	1.11	1.47	1.32	1.36
Range	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
Minimum	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Maximum	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
Count	195	195	195	195	195	195	195	195	195	195

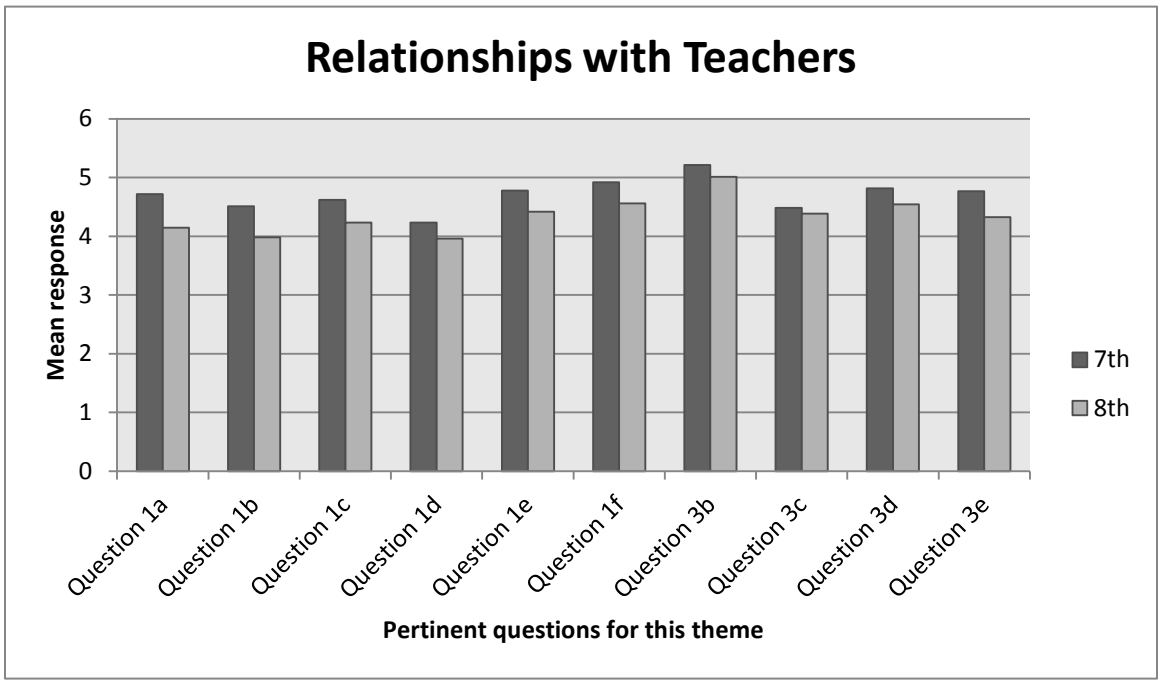

Figure 1: This graph illustrates the seventh and eighth-grade mean responses to quantitative questions related to their relationships with teachers.

Relationships with Classmates. Table 3 provides the descriptive statistics resulting from student responses in seventh and in eighth-grade to the quantitative question pertaining to their relationships with classmates. Figure 2 gives the reader a graph illustrating the comparison of student responses relevant to this construct for both years of the study. As shown in Table 3 and Figure 2, the mean of responses, when asked the level to which their school provided them a place where they could develop close friendships with other students, was greater for students as seventh-graders (mean = 5.14) than as eighth-graders (mean = 4.86).

In addition to the greater average for this question, the standard deviation for student responses as seventh-graders was less than as eighth-graders. The mode for student responses as seventh and eighth-graders was the same.

Table 3

Student Relationships with Classmates

7th grade results

Question:	3f
Mean	5.14
Median	6.00
Mode	6.00
Standard Deviation	1.16
Range	5.00
Minimum	1.00
Maximum	6.00
Count	205

8th grade results

Question:	3f
Mean	4.86
Median	5.00
Mode	6.00
Standard Deviation	1.31
Range	5.00
Minimum	1.00
Maximum	6.00
Count	195

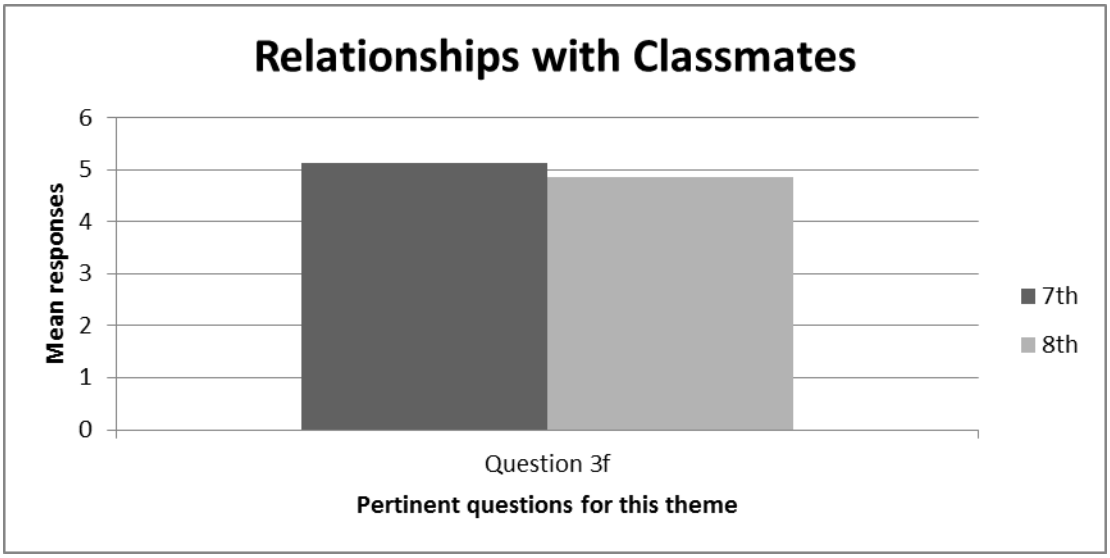

Figure 2: This graph illustrates the seventh and eighth-grade mean responses to quantitative questions related to their relationships with teachers.

Student Feelings towards Themselves. The mean response for students to quantitative questions related to their feelings towards themselves was greater for students in seventh-grade than in eighth-grade for four out of five questions falling within this construct (see Table 4, Figure 3), with the one exception resulting from the question which asked students the level to which they hated being in school. Worth noting was the greater average for student responses as seventh-graders (4.36) than as eighth-graders (4.20) to the fourth question in this construct, which asked students to indicate to what level they felt they had opportunities to express themselves. Also worth noting was the greater average of student responses as seventh-graders (4.20) than as eighth-graders (4.07) indicating they felt they had an opportunity to voice their concerns.

Table 4 provides the descriptive statistics resulting from student responses in seventh and in eighth-grade to quantitative questions pertaining to students' feelings towards themselves. Figure 3 gives the reader a graph illustrating the comparison of responses for students to the questions relevant to this construct. As shown in the Table 4 and Figure 3, the mean of responses for students in seventh-grade was greater than in eighth-grade for four out of five questions relevant to this construct, with the one question of exception being negative in nature (i.e., the level to which students hated being at school).

In addition to the greater average, the median of responses for students as seventh-graders was greater than as eighth-graders for three out of the five questions in this construct. The standard deviation for student responses as seventh-graders was greater than as eighth-graders for all questions, indicating that their responses were more spread the first year. The mode of responses was greater as seventh-graders than as

eighth-graders for two questions and the mode of responses greater as eighth-graders than as seventh-graders for one question. The mean response to question 3g, which asked students the level to which they felt the school provided them opportunities to express themselves, was greater as seventh-graders (mean = 4.36) and as eighth-graders (mean = 4.18) than it was for all other questions relevant to this construct.

Table 4

Students' Feelings towards Themselves

7th grade results

Question:	2a	2b	2c	3g	3h
Mean	3.70	3.83	3.00	4.36	4.20
Median	4.00	4.00	3.00	5.00	4.00
Mode	4.00	4.00	3.00	5.00	4.00
Standard Deviation	1.55	1.41	1.58	1.44	1.50
Range	5.00	5.00	5.00	5.00	5.00
Minimum	1.00	1.00	1.00	1.00	1.00
Maximum	6.00	6.00	6.00	6.00	6.00
Count	205	205	205	204	205

8th grade results

Question:	2a	2b	2c	3g	3h
Mean	3.37	3.22	3.26	4.18	4.07
Median	3.00	3.00	3.00	4.00	4.00
Mode	4.00	3.00	2.00	5.00	5.00
Standard Deviation	1.41	1.26	1.47	1.39	1.43
Range	5.00	5.00	5.00	5.00	5.00
Minimum	1.00	1.00	1.00	1.00	1.00
Maximum	6.00	6.00	6.00	6.00	6.00
Count	195	195	195	195	195

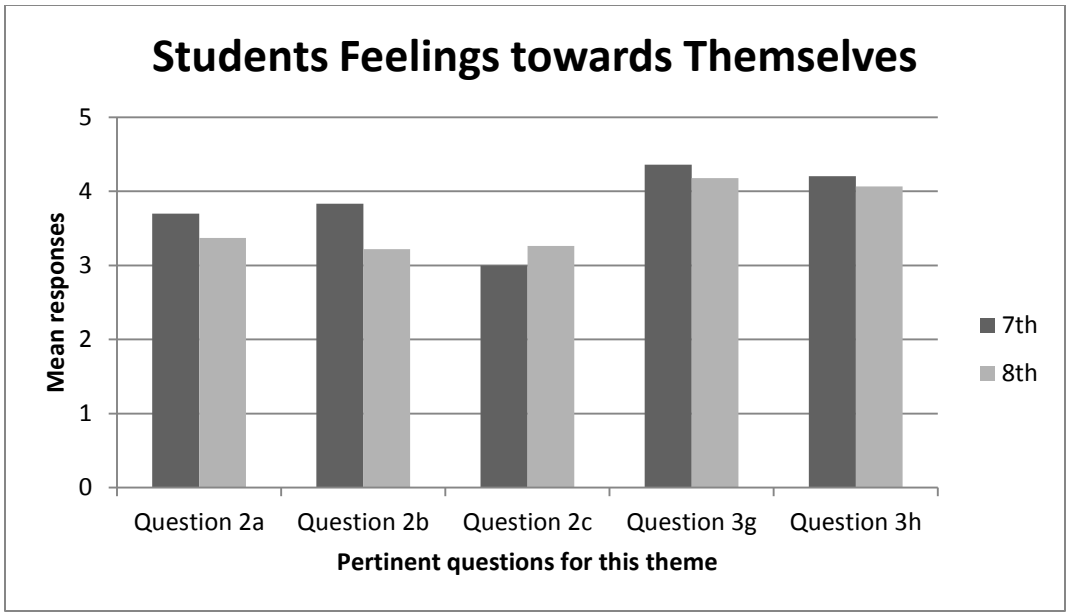

Figure 3: This graph illustrates the seventh and eighth-grade mean responses for quantitative questions relevant to students' feeling towards themselves.

Student Feelings towards the Team. The mean of student responses to quantitative questions pertaining to the impact of the team on relationships with teachers, was greater as seventh-graders (mean = 3.34) than as eighth-graders (mean = 2.67). Responses also indicated that students may have felt more strongly that their team had a positive impact on their relationships with classmates as seventh-graders (mean = 3.48) than they did as eighth-graders (mean = 2.78). Furthermore, findings imply that less students felt the team had a negative impact on their relationships with teachers and classmates in seventh-grade (mean for teachers = 3.48; mean for classmates = 3.80) than they did in eighth-grade (mean for teachers = 3.82; mean for classmates = 4.10).

Table 5 provides the descriptive statistics resulting from student responses in seventh and in eighth-grade to quantitative questions pertaining to students' feelings towards their team. Figure 4 gives the reader a graph illustrating the comparison of responses from students to the questions relevant to this construct. As shown in the Table 5 and Figure 4, the mean of student responses as seventh-graders was greater than as

eighth-graders for two of four questions. It is worth noting that the two questions resulting in greater averages as seventh-graders indicated that students felt more strongly that the team had a positive impact on their relationships with teachers and classmates, while the two questions resulting in lesser averages as seventh-graders imply that students, when in eighth-grade, felt more strongly that the team had a negative impact on their relationships with teachers and classmates.

The median of responses for students as seventh-graders was greater than as eighth-graders for the question indicating a positive relationship with teachers; the median of responses for students as seventh-graders was less than as eighth-graders for the question indicating a negative relationship with teachers. The median of responses for students as seventh and eighth-graders, for the question regarding relationships with classmates, for both the positive and negative indicators, were the same. The standard deviation for student responses as eighth-graders was greater than as seventh-graders for all but one question, indicating that student responses as eighth-graders were more spread out than as seventh-graders. The mode of responses for students as seventh-graders was greater than as eighth-graders for the two questions indicating their team had a positive impact on their relationships with teachers and classmates, and the mode of responses for students as eighth-graders greater than as seventh-graders for the two questions indicating their team had a negative impact on relationships with teachers and classmates.

Table 5

Relationships with Team

7th grade results

Question:	4a	4b	4c	4d
Mean	3.34	3.48	3.48	3.80
Median	3.00	3.00	3.00	4.00
Mode	3.00	3.00	3.00	3.00

Standard Deviation	1.62	1.63	1.49	1.50
Range	5.00	5.00	5.00	5.00
Minimum	1.00	1.00	1.00	1.00
Maximum	6.00	6.00	6.00	6.00
Sum	684	713	713	779

8th grade results

Question:	4a	4b	4c	4d
Mean	2.66	3.82	2.78	4.06
Median	2.00	4.00	3.00	4.00
Mode	1.00	6.00	1.00	6.00
Standard Deviation	1.56	1.70	1.53	1.53
Range	5.00	5.00	5.00	5.00
Minimum	1.00	1.00	1.00	1.00
Maximum	6.00	6.00	6.00	6.00
Count	194	194	194	194

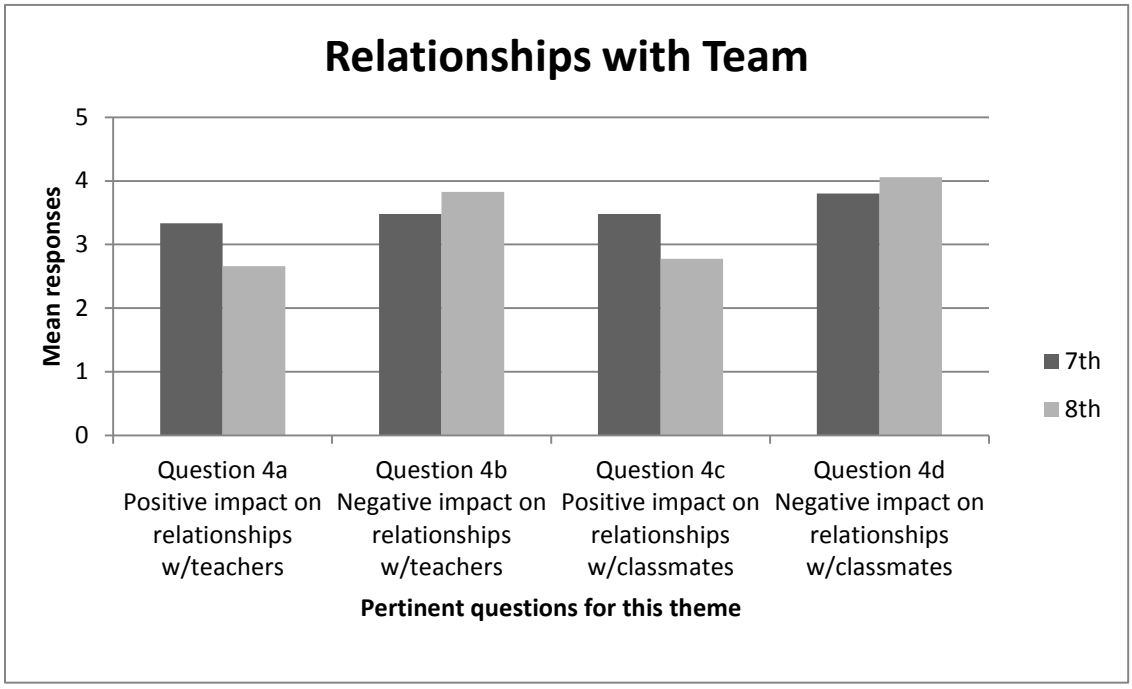

Figure 4: This graph illustrates the seventh and eighth-grade mean responses for quantitative questions relevant to students' feeling towards the team.

Qualitative Results

As mentioned previously, it is important to note that student responses to qualitative questions would at times include multiple text segments relevant to various codes, as well as responses that had no text or text not applicable to any form of coding. Based on this result, the number of responses does not necessarily match the number of respondents, which in turn means that the relative frequency should not be interpreted as the percent of students responding according to a specific theme. The questions discussed in the following sections, as they appeared in the survey, can be found in Appendix A.

Relationships with Teachers. Question five asked students to describe the relationship they had with their teachers. Responses from students as both seventh and eighth-graders fell into the same five themes: Mixed relationship; Negative relationship;

Positive relationship; Negative academic impact; Positive academic impact. Table 6 provides the relative frequencies for student responses falling into each of the five themes. Figure 5 provides the reader a graph illustrating the comparison of student responses to questions in this theme. There was a greater frequency of student responses as eighth-graders indicating they had a positive relationship with their teachers (relative frequency = .72) than as seventh-graders (relative frequency = .53). There was also a greater frequency of student responses as seventh-graders indicating their teachers had a negative academic impact (relative frequency = .02) than as eighth-graders (relative frequency = .01), as well as a greater frequency of student responses as seventh-graders indicating they had a negative relationship with their teachers (relative frequency = .13) than as eighth-graders (relative frequency = .08). However, the frequency of student responses indicating their teachers had a positive academic impact was greater in seventh-grade (relative frequency = .24) than in eighth-grade (relative frequency = .09). Overall, the theme of a positive relationship was the most frequent student response for students in both seventh and eighth-grade when asked to describe the relationship they have with their teachers.

Table 6

Qualitative Question #5—Relationships with Teachers

Theme	7th	8th
Mixed relationship	0.08	0.11
Negative academic impact	0.02	0.01
Negative relationship	0.13	0.08
Positive academic impact	0.24	0.09
Positive relationship	0.53	0.72

Note: This table shows the relative frequency for student responses matching each of the given themes for this question.

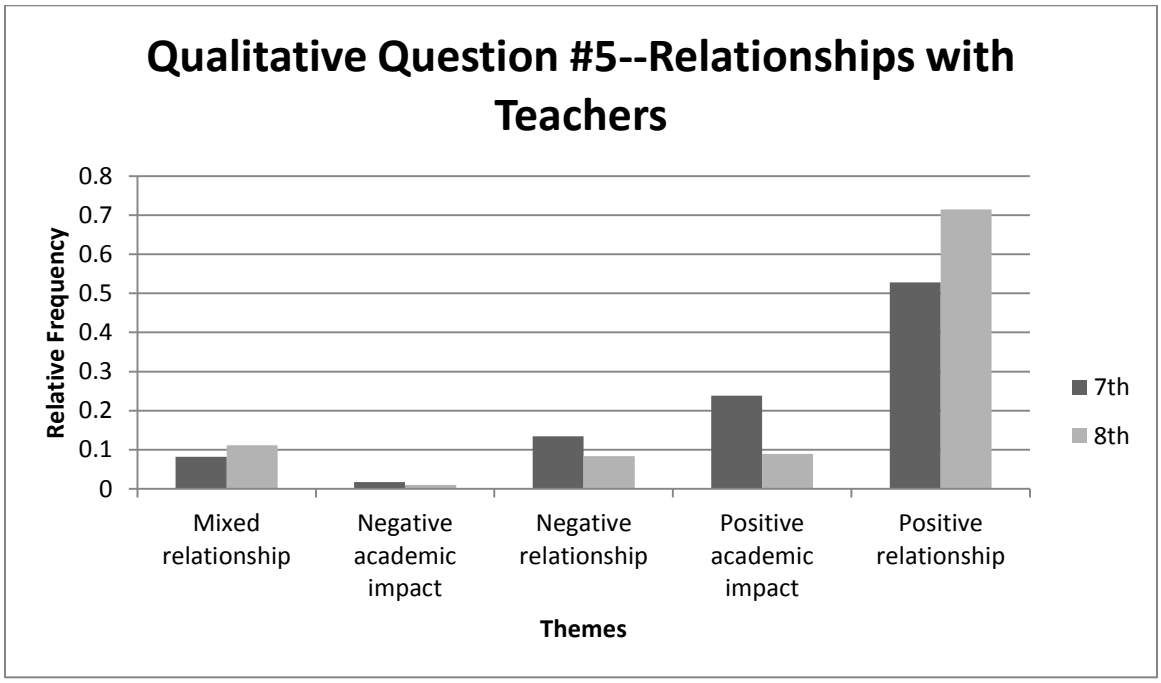

Figure 5: This graph illustrates the relative frequency for seventh and eighth-grade responses to question five from the qualitative survey.

Relationships with Classmates. Question six asked the students to describe the relationship they had with the other students in their classes. Student responses in both seventh and eighth-grade fell into the same six themes: Mixed relationship; Negative relationship; Positive relationship; Mixed academic impact; Negative academic impact; Positive academic impact. Table 7 provides the relative frequencies for student responses falling into each of the six themes. Figure 6 provides the reader a graph illustrating the comparison of themes resulting from student responses from both years of the study. There was a greater frequency of student responses as seventh-graders indicating a positive relationship with their classmates (relative frequency = .69) than as eighth-graders (relative frequency = .59) and a lesser frequency of student responses implying a negative relationship with their classmates as seventh-graders (relative frequency = .05) than as eighth-graders (relative frequency = .11). However, the frequency of student

responses as seventh-graders indicating that their classmates had a positive academic impact (relative frequency = .01) was less than as eighth-graders (relative frequency = .02). Overall, the theme of a positive relationship was the most frequent response for students in both seventh and eighth-grade when asked to describe the relationship they have with their classmates.

Table 7

Qualitative Question #6—Relationships with Classmates

Theme	7th	8th
Mixed academic impact	0.01	0.01
Mixed relationships	0.21	0.22
Negative academic impact	0.05	0.05
Negative relationships	0.05	0.11
Positive academic impact	0.01	0.02
Positive relationships	0.69	0.59

Note: This table shows the relative frequency for student responses matching each of the given themes for this question.

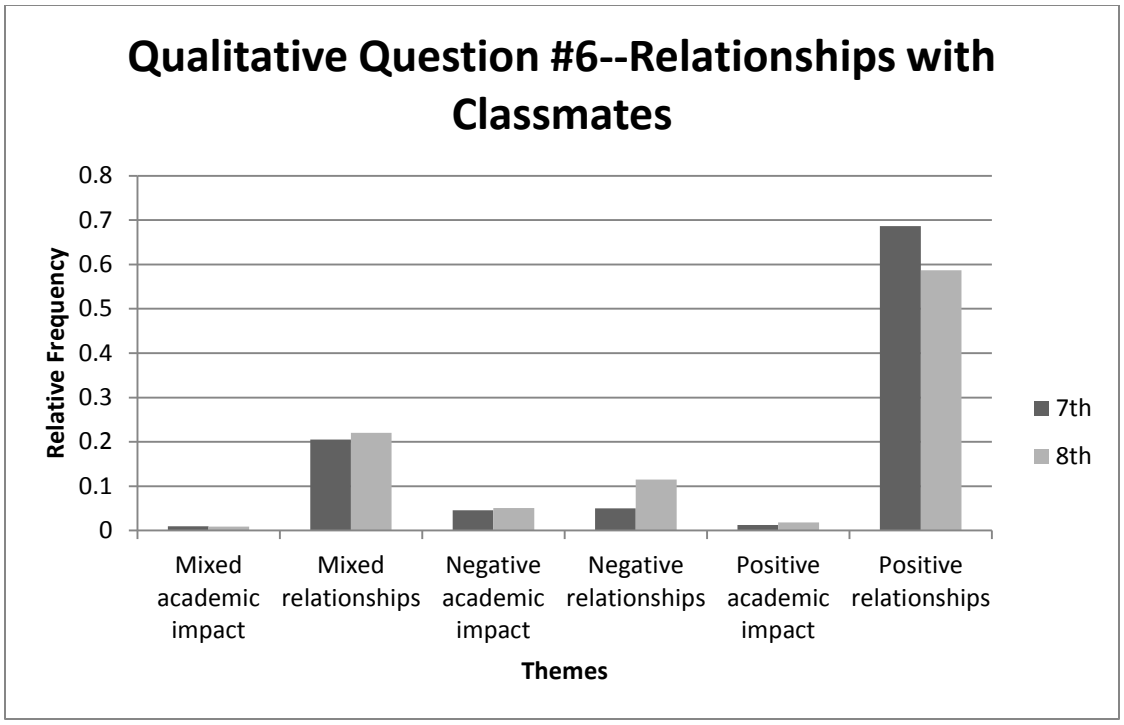

Figure 6: This graph illustrates the relative frequency for seventh and eighth-grade responses to question six from the qualitative survey.

Favorite Part of Being on a Team. Question seven asked the students to describe their favorite part of being on a team. Student responses in both seventh and eighth-grade fell into the same five themes: Impact on learning; School climate; Students; Teachers; Being part of a team. Table 8 provides the relative frequencies for student responses falling into each of the five themes. Figure 7 provides the reader a graph illustrating the comparison of themes resulting from student responses from the two years of the study. There was a greater frequency of student responses as seventh-graders indicating their favorite part of being on a team was the impact on learning (relative frequency = .10) than as eighth-graders (relative frequency = .09). There was also a greater frequency of responses as seventh-graders indicating their favorite part of being on a team was the team itself (relative frequency = .22) than as eighth-graders (relative frequency = .20). Furthermore, there was a greater frequency of student responses as

seventh-graders than as eighth-graders indicating that teachers were their favorite part of being on a team (seventh-grade relative frequency = .44; eighth-grade relative frequency = .34). Conversely, the frequency of student responses as eighth-graders indicating school climate was their favorite part of being on a team (relative frequency = .03) was greater than as seventh-graders (relative frequency = .02), and there were was a greater frequency of student responses as eighth-graders indicating that the other students were their favorite part of being on a team (relative frequency = .34) than as seventh-graders (relative frequency = .21).

Overall, the theme of teachers was the most frequent response for students as seventh graders when asked their favorite part of being on a team, and the theme of students and teachers the most frequent response for the same students as eighth-graders when asked the same question.

Table 8

Qualitative Question #7—Favorite Part of being on a Team

Theme	7th	8th
Impact on learning	0.10	0.09
School climate	0.02	0.03
Students	0.21	0.34
Teachers	0.44	0.34
Being part of a team	0.22	0.20

Note: This table shows the relative frequency for student responses matching each of the given themes for this question.

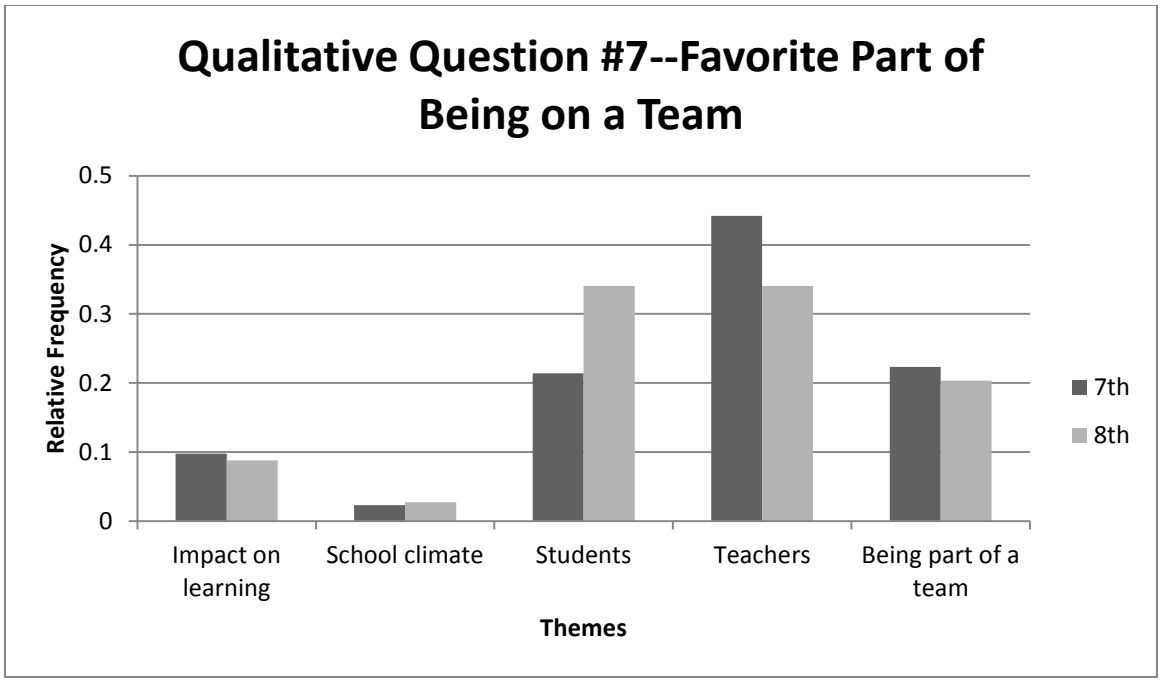

Figure 7: This graph illustrates the relative frequency for seventh and eighth-grade responses to question seven from the qualitative survey.

Least Favorite Part of being on a Team. Question eight asked the students to describe their least favorite part of being on a team. Student responses in both seventh and eighth-grade fell into the same five themes: Impact on learning; School climate; Students; Teachers; Being part of a team. Table 9 provides the relative frequencies for student responses falling in each of the five themes. Figure 8 provides the reader a graph illustrating the comparison of themes resulting from student responses from the two years of the study. There were approximately the same frequency of student responses in both seventh and eighth-grade indicating their least favorite part of being on a team was the impact on learning (relative frequency = .18). There was a greater frequency of student responses as seventh-graders indicating their least favorite part of being on a team was the school climate (relative frequency = .13) than as eighth-graders (relative frequency = .06). Furthermore, there was a greater frequency of student responses as seventh-graders indicating that teachers were their least favorite part of being on a team (relative

frequency = .24) than as eighth-graders (relative frequency = .10). The frequency of the students' responses as eighth-graders indicating other students were their least favorite part of being on a team (relative frequency = .43) was greater than as seventh-graders (relative frequency = .23). Overall, the theme of students was the most frequent response for students as eighth-graders, when asked their least favorite part of being on a team, and the theme of teachers the most frequent response for students as seventh-graders when asked the same question.

Table 9

Qualitative Question #8—Least Favorite Part of being on a Team

Theme	7th	8th
Impact on Learning	0.18	0.18
School climate	0.13	0.06
Students	0.23	0.43
Teachers	0.24	0.10
Being on a team	0.22	0.24

Note: This table shows the relative frequency for student responses matching each of the given themes for this question.

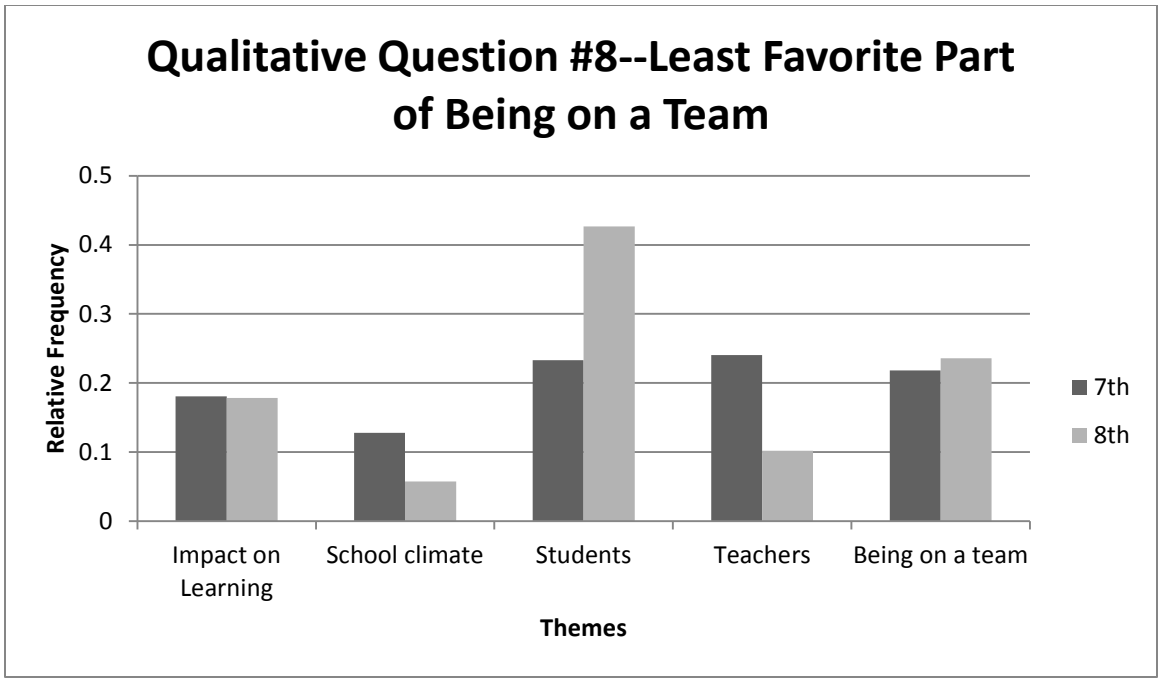

Figure 8: This graph illustrates the relative frequency for seventh and eighth-grade responses to question eight from the qualitative survey.

Feelings towards School. Question nine asked the students to describe their feelings towards school this year. Student responses in both seventh and eighth-grade fell into the same six themes: Positive relationship with teachers; Positive relationship with students; Positive school experience; Negative relationship with teachers; Negative relationship with students; Negative school experience. Table 10 provides the relative frequencies for student responses falling into each of the five themes. Figure 9 provides the reader a graph illustrating the comparison of student responses to questions in this theme. There was a greater frequency of student responses as seventh-graders indicating a positive relationship with teachers (relative frequency = .07) than as eighth-graders (relative frequency = .03). There was also a greater frequency of student responses as seventh-graders indicating a positive relationship with classmates (relative frequency = .08) than as eighth-graders (relative frequency = .04). However, there was a greater frequency of student responses as seventh-graders indicating that their feelings towards

school this year was best described as a negative relationship with teachers (relative frequency = .02) than as eighth-graders (relative frequency = .01).

Overall, the theme of a positive school experience was the most frequent response for students in both seventh-grade and eighth-grade when asked their feelings towards school this year.

Table 10

Qualitative Question #9—Feelings towards School

Theme	7th	8th
Positive relationship w/teachers	0.07	0.03
Positive relationships w/students	0.08	0.04
Positive school experience	0.60	0.60
Negative relationship w/teachers	0.02	0.01
Negative relationship w/students	0.03	0.03
Negative school experience	0.20	0.30

Note: This table shows the relative frequency for student responses matching each of the given themes for this question.

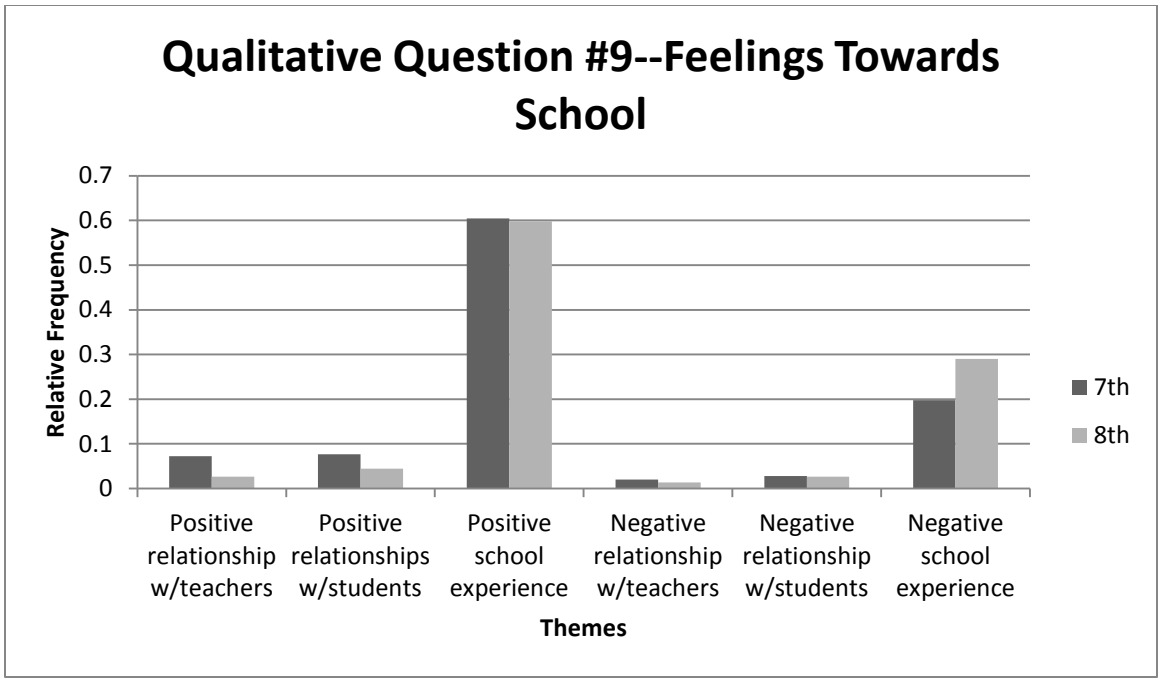

Figure 9: This graph illustrates the relative frequency for seventh and eighth-grade responses to question nine from the qualitative survey.

Chapter Six: Summary and Conclusions

Limitations

This study was purposed to examine the impact moving seventh-grade students from two-person to four-person teams had on students' attitudes and beliefs towards school. As the research process unfolded, it became apparent that student responses were very much based on unique situations that created a level of subjectivity not easily accounted for in the data. For example, survey responses from student while in seventh-grade included references to personality conflicts students had with certain teacher(s). When asked to comment on relationships with teachers, some students spoke simply in terms of the latest interaction they had with that teacher rather than in more general terms of their overall relationship with that teacher. For example, one student referenced the homework assignment the teacher had given and how they felt about that assignment, rather than speak to the nature of the relationship they had with the teacher as a whole. The responses appeared to be skewed by this type of effect from recent experiences, especially when students were responding to qualitative questions. For future research, interviewing students individually or in small groups might give the researcher a chance to better explain the scope and purpose of the questions, thus potentially yielding more substantive responses from the students.

As the researcher further explored the existing literature on teaming, and after analyzing the results from the survey, certain themes became apparent. These themes became the research questions (e.g., relationships with teachers, relationships with classmates, etc.). With this in mind, it would have been helpful to organize the survey in a similar fashion. Due to the nature of this project, it was necessary to have the survey

designed very early in the process. This resulted in a survey tool that did not always address certain topics in depth. For example, the quantitative survey only had one question which addressed students' relationships with their classmates (see Table 3, Figure 2), as opposed to ten questions which addressed students' relationships with their teachers (see Table 2, Figure 1). Furthermore, the qualitative survey did not include any questions prompting students to indicate their feelings towards themselves specifically, but included three questions related to students' feelings towards their school and team. It is worth noting, however, that student responses to questions regarding their school and/or team did provide the researcher some valuable information regarding their feelings towards themselves, which is included later in this paper.

There were various school-based organizational and programming changes that occurred from the first year to the second of this project, some of which may have impacted the results. For example, during the second year of this study, Bothwell incorporated schoolwide programs and activities which were designed to create a more positive school climate (i.e., schoolwide assemblies and special presentations to address bullying). These initiatives were not present during the first year of the study. Some student responses included references to these activities, specifically during the second year of the study, which made it apparent that the schoolwide activities may have had an impact on student responses. The fact that there were not similar initiatives during the first year could have skewed the data.

It is worth noting that Bothwell does not necessarily follow middle school recommendations (e.g., *Turning Points*) exactly. For example, although team teachers do have a common planning period each day as recommended, there is no additional

individual prep period. Therefore, this common planning time must also be used for various other teacher responsibilities, such as lesson planning, parent contacts and grading. Based on Felner, et al.'s (1997) research, less than full implementation of the middle school best practices can limit the extent to which positive results will be realized. The impact of moving from two to four-person teams for the sample of Bothwell students who were surveyed for this study may not have been fully realized as a result of Bothwell's limited implementation of the middle-school recommendations.

Research Questions

This paper was purposed to examine the impact moving seventh-grade students from two-person to four-person teams had on students' attitudes and beliefs towards:

Their teachers

Their classmates

Themselves

Their team

Summary of Findings

This study examined the impact moving seventh-grade students from two-person to four-person teams had on students' attitudes and beliefs towards school. As mentioned previously, seventh graders were surveyed while in two-person teams, then again as eighth graders the following year while in four-person teams.

Relationships with Teachers. The mean response for students as seventh-graders to quantitative questions related to their relationships with teachers was greater than as eighth-graders for ten out of ten questions falling within this construct (see Table 2, Figure 1). Worth noting was the greater average for student responses as seventh-

graders (4.72) than as eighth-graders (4.14) to the first question in this construct, which asked students to indicate to what level their teachers provide them encouragement. This result seemed to imply that students may have felt more strongly in seventh-grade that their teachers gave them a lot of encouragement than they did in eighth-grade. Also worth noting, the mean student response for the last question in this construct, which asked students the level to which they felt the school provided adults who genuinely cared about them, was greater for students in seventh-grade (4.77) than a year later in eighth-grade (4.32), which seemed to indicate that students felt more strongly that teachers cared for them in seventh-grade than in eighth-grade. Furthermore, the results for students in seventh-grade to qualitative questions addressing their relationships with teachers, included more responses indicating that teachers were caring (25) than they did in eighth-grade (6); there was also a greater frequency of student responses as seventh-graders indicating their teachers had a positive impact on their academics (relative frequency = .24) than as eighth-graders (relative frequency = .09). However, there was also a greater frequency of student responses as seventh-graders which fell into the theme of a negative relationship with teachers (relative frequency = .13) than as eighth-graders (relative frequency = .08), as well as a greater number of student responses as seventh-graders being coded as feeling isolated (9) than as eighth-graders (1).

Overall, the relative frequency of student responses to question five of the qualitative survey, which addressed the students' relationships with teachers, was more frequently positive for students in both seventh-grade (relative frequency = .53) and in eighth-grade (relative frequency = .72) than it was negative (seventh-grade relative frequency = .13; eighth-grade relative frequency = .08).

It is important to note, that as mentioned before, responses for qualitative questions did often include more than one text segment falling within a certain code. Therefore, the results for qualitative questions should not be interpreted as a greater or lesser number and/or percentage of students responding to a given question.

Relationships with Classmates. The mean response for students to the quantitative question related to their relationships with their classmates was greater as seventh-graders (5.14) than as eighth-graders (4.90) (see Table 3, Figure 2). As mentioned before, the quantitative portion of this study is somewhat limited when addressing this construct, since the survey design failed to include more questions related to student relationships with their classmates.

The results for students while in seventh-grade to qualitative questions regarding their relationships with classmates included more responses indicating that students felt a sense of family and acceptance with their peers (4) than they did a year later as eighth-graders (1). Moreover, the relative frequency of student responses to question six of the qualitative survey, which addressed the students' relationships with their classmates, was more frequently positive for students as seventh-graders (relative frequency = .69) and as eighth-graders (relative frequency = .59) than it was negative (seventh-grade relative frequency = .05; eighth-grade relative frequency = .11). Also, the number of student responses as seventh-graders indicating students felt isolated from their peers (6) were lower than as eighth-graders (14). However, there were more responses from students while in seventh-grade which indicated the presence of bullying (4) than there were in eighth-grade (2).

Feelings towards Themselves. The mean response for students to quantitative questions related to their feelings towards themselves was greater for students while in seventh-grade than in eighth-grade for four out of five questions falling within this construct (see Table 4, Figure 3), with the one exception resulting from the question which asked students the level to which they hated being in school. Worth noting, was the greater average for student responses in seventh-grade (4.36) than in eighth-grade (4.20) to the fourth question in this construct, which asked students to indicate the level to which they felt they had opportunities to express themselves. Also worth noting was the greater average for student responses as seventh-graders (4.20) than as eighth-graders (4.07) indicating they felt they had an opportunity to voice their concerns.

As mentioned before, there were no qualitative questions which addressed students' feelings towards themselves, however, there were more responses to question nine indicating that students felt a feeling of academic success and/or that they had learned a lot, for students in seventh-grade (9) than a year later in eighth-grade (6).

Student Feelings towards the Team. The findings from student responses to quantitative questions pertaining to the impact of the team on relationships with teachers, indicated that students in seventh-grade, when they were in teams with fewer teachers, felt more strongly that the team had a positive impact on their relationships with teachers (mean = 3.34) than they did as eighth-graders (mean = 2.67). Student responses as seventh-graders also indicated they may have felt more strongly that their team had a positive impact on their classmates (mean = 3.48) than as eighth-graders (mean = 2.78). Furthermore, findings seemed to show that students felt less strongly as seventh-graders that the team had a negative impact on their relationships with their teachers (mean =

3.48) and classmates (3.80) than they did as eighth-graders (mean for teachers = 3.82; mean for classmates = 4.10).

In regards to the qualitative survey, the theme of teachers was the most frequent response for students as seventh-graders (relative frequency = .44) when asked their favorite part of being on a team, and the theme of students and teachers the most frequent response for students as eighth-graders (relative frequency = .34) when asked the same question (see Table 8, Figure 7).

The results from the qualitative survey indicated that the theme of teachers was the most frequent response for students as seventh-graders (relative frequency = .24) when asked their least favorite part of being on a team, and the theme of students the most frequent response for students as eighth-graders (relative frequency = .43) when asked the same question (see Table 9, Figure 8). However, the frequency of responses indicating students felt their teachers and classmates to be their least favorite part of being on a team were less than the frequency of responses indicating students felt their teachers and classmates to be their favorite part of being on a team for both years.

Student responses to qualitative questions generally fell within themes related to their relationships with their teachers and classmates. Responses indicated that these relationships had a positive and/or negative impact on both their learning and overall feelings towards school. Student responses to qualitative questions seemed to imply that the team did impact both their relationships with teachers and classmates, as well as their feelings towards the school in general (i.e., school climate).

Discussion

As mentioned before, the mean response for students to quantitative questions related to their relationships with teachers was greater in seventh-grade than in eighth-grade for ten out of ten questions falling within this construct (see Table 2, Figure 1). Worth noting was the greater average for student responses in seventh-grade than in eighth-grade when asked to indicate to what level their teachers provided them encouragement. Also worth noting was the greater average for student responses in seventh-grade indicating school provided adults who genuinely cared about them.

In addition to quantitative results, students' qualitative responses to questions regarding the impact of their team, from both years, generally fell within themes related to their relationships with their teachers and classmates. Qualitative results also seemed to show that students in seventh-grade may have felt more strongly that their teachers had a positive academic impact and that teachers were caring, than they did in eighth-grade.

These results seem to imply that overall students in seventh-grade, who were in teams with fewer teachers, had a more positive perspective on their relationships with teachers than they did a year later in eighth-grade. This finding is supported by research indicating smaller learning communities provide students the opportunity to develop closer and more nurturing relationships with their teachers (Cotton, 2001; Jackson & Davis, 2000; NMSA, 2003; Osterman, 2000), as well as Murdock and Miller's (2003) research on the *teacher-child relationship* (i.e., *human relations theory*), where they found that smaller learning communities provide adolescents a better environment for developing strong bonds with their teachers.

In what seems to possibly be a more negative impact of smaller teams, when asked qualitative questions regarding their relationships with teachers, there was a greater frequency of student responses in seventh-grade which fell into the theme of a negative relationship, as well as a greater frequency of student responses in seventh-grade indicating teachers had a negative academic impact, than there were for the same students in eighth-grade. These results still implied the smaller teams may have had an impact on the students' perceived feelings towards their teachers. However, the findings did also seem to contradict Cotton's (2001) and Jackson and Davis's (2000) research on the impact of smaller learning communities and smaller teams, whereby these smaller teams should have had the opposite effect. It is worth noting that the frequency of comments indicating students felt their relationships with teachers were negative, and that their teachers had a negative impact on academics, were less than those indicating a positive relationship and positive academic impact for both years of the study. As mentioned previously, it may be possible that seventh-grade teachers within the smaller teams (where they taught the same students multiple subjects) had an opportunity to better provide an interdisciplinary approach to the curriculum, which seems to be supported by research that smaller teams provide teachers better opportunities to present adolescent learners a broader and less academically-focused curriculum (Cotton, 2001; Kahne, Sporte, & de la Toree, 2006; Jackson & Davis, 2000).

As shown in the Table 3 and Figure 2, when asked the level to which their school provided them a place where they could develop close friendships with other students, the mean response for students in seventh-grade was greater than in eighth-grade. Furthermore, the results for students in seventh-grade, to qualitative questions regarding

their relationships with classmates, included a greater frequency of responses indicating that students felt a sense of family and acceptance with their peers, than they did in eighth-grade. In summary, there was a greater frequency of responses indicating students in seventh-grade felt their relationships with classmates were positive, and a lesser frequency of responses implying students in seventh-grade felt their relationships with classmates were negative, than was the case a year later in eighth-grade.

The results from questions related to students' relationship with their classmates, from both the quantitative and qualitative surveys, seem to support the findings from *Turning Points* and *This We Believe* which indicated that teaming helps establish community, as well as research showing that smaller teams provide students a better opportunity to experience a feeling of acceptance and belongingness with their classmates (Arhar & Kromrey, 1993; Cotton, 2001; Osterman, 2000). The results are also supported by *human relations theory* as it relates to the importance of establishing smaller learning communities and the improved relationships between students therein (NMSA, 2003).

In what appears a departure from research on the topic of smaller teams, such as that of *Turning Points* and *This We Believe*, there was a greater frequency of responses for students in eighth-grade which indicated that their favorite part of being on a team was their classmates, than there were in seventh-grade. This could be considered a positive impact of larger teams, and may imply that older students prefer being placed with a larger and more diverse group of students. Also worth noting was the greater frequency of student responses in seventh-grade which implied the presence of bullying

(this result is also a departure from the findings of *This We Believe* and *Turning Points*), which could be considered a possible negative impact of smaller teams.

When asked to express their feelings towards themselves, the mean response of students in seventh-grade was greater than in eighth-grade for four out of five quantitative questions (see Table 4, Figure 3) for this construct, with the one exception resulting from the question which asked students the level to which they hated being in school. Furthermore, there was a greater average for student responses in seventh-grade than in eighth-grade to the quantitative question which asked students to indicate the level to which they felt they had opportunities to express themselves. Also worth noting was the greater average for student responses in seventh-grade than in eighth-grade indicating they felt they had an opportunity to voice their concerns. These results seem to support Anfara and Lipka's (2003) research indicating that students placed within smaller teams are provided better opportunities to express themselves and work with other students with whom they identify. Furthermore, these findings appear to be supported by the National Middle School Association' (2003) *This We Believe* report, which suggested that students placed within teams are better able to identify with their teachers and classmates, and Osterman's (2000) research on *school membership theory* (i.e., *social cognitive theory*), whereby students with a sense of belonging towards a team are more likely to develop a belief of social and psychological bonding towards their teachers and peers.

In what appears to be a departure from Anfara and Lipka's (2003) and Osterman's (2000) research, there was a greater frequency of student responses in seventh-grade,

indicating a feeling of isolation, than in eighth-grade (the frequencies of these responses were less than those indicating a feeling of acceptance and belongingness).

In regards to the impact of teaming, the average response for students while in seventh-grade was greater than in eighth-grade for both questions of the quantitative survey referencing the team having a positive impact on their relationships with teachers and classmates (see Table 5; Figure 4). Worth noting was the greater frequency of student comments in seventh-grade, when prompted to indicate their favorite part of being on a team, falling within the theme of being on a team, and the greater frequency of student comments in seventh-grade implying their favorite part of being on a team was the impact the team had on their learning, than in eighth-grade.

However, in what appears to contradict Evan et al.'s (2006) research findings that smaller learning environments facilitate more positive relationships between students and teachers, the theme of teachers was the most frequent response for students in seventh-grade when asked their least favorite part of being on a team, and the theme of students the most frequent response for the same students a year later as eighth-graders when asked the same question (see Table 9, Figure 8). The frequencies of these responses, from students during both years, were less than the frequency of responses indicating students felt their teachers and classmates to be their favorite part of being on a team. It is important to note that the presence of these themes in student responses, whether positive or negative, does seem to indicate that students felt their relationships with teachers and classmates were important when considering the impact of being on a team, especially in seventh-grade.

As mentioned previously, the structure of two-person teams may have given more scheduling flexibility to seventh-grade teachers, where teachers may have been better able to plan team-building opportunities, which seems to be supported by research indicating smaller teams provide the structures necessary to provide students opportunities to participate in these type of activities (Hackmann et. al., 2002). Furthermore, the results seem to be supported by Arhar and Kromrey's (1993) research on *human relations theory*, where they found departmentalized structures which require students to move from teacher to teacher throughout the day inhibit students from bonding with their teachers and peers.

Overall, the results from this study seem to support research indicating that interdisciplinary teams provide students an environment where they are more encouraged to work and learn together (Cotton, 2001; Jackson & Davis, 2000; NMSA, 2003; Osterman, 2000), as well as best practice recommendations which indicate that students should be placed in teams as small as possible (Felner, Jackson, Kasak & Mulhall, 1997; Jackson & Davis, 2000). As a result of the findings from this project, it does appear that the size of the team (i.e., moving from two-person to four-person teams) had an impact on seventh-grade students' attitudes and beliefs towards school. Furthermore, since teaching in smaller teams may provide teachers better opportunities to address the unique needs of adolescent learners, it is this author's recommendation that local, state and federal decision-makers consider providing teachers better opportunities to work at the middle level. Whatever the means, it seems prudent to provide educators more flexibility to design middle-level programming purposed to meet the unique needs of adolescent

learners. Unfortunately, this does not always seem possible when considering the demands of certain state and federal requirements placed on them.

Implications for Further Research

This study was purposed to address the impact of moving from two to four-person teams on students' attitudes and beliefs towards school. However, it is impossible to avoid the myriad of potential confounding variables associated with the study. Possibly most notable was the nature of the change which occurred in the students being studied from the first to second year. First, students were of course older during the second year of the study. Based on the findings of *Turning Points* and *This We Believe*, adolescence is a period of tremendous growth, and changes during this stage of development have a dramatic impact on students' sense of well-being, belongingness and overall success in school--as these students experience significant growth, albeit physical, biological or emotional (The Society of Neuroscience, 2007; NMSA, 2003). One year of development could have a profound impact on student responses to the survey. Second, there were various schoolwide programs implemented during the second year of this study which were designed to address students' overall attitudes and beliefs towards school. These programs may have had an impact on student responses to the surveys. Third, teaching styles in seventh and eighth-grade are potentially much different. Eighth-grade teachers are likely more focused on preparing students for the transition to high school, and may be less focused on some of the key areas addressed in this paper. This dynamic could potentially impact student responses from one year to the next. Lastly, there were certain limitations which resulted from student responses lacking substance, especially when analyzing the results from the qualitative survey.

Based on the implications of these factors, it may serve future researchers helpful to design a project which studies students from two and four-person teams within the same grade level and during the same year, utilizing a design better able to glean the deeper thoughts and feelings of this unique age group. For example, in addition to the quantitative and qualitative components of this survey, it may have been helpful for future researchers to interview students either individually or in small groups so as to better ascertain their beliefs regarding the subjects being discussed. With that said, the results from this study do seem to indicate that moving seventh-grade students from two-person to four-person teams impacted students' attitudes and beliefs towards school. These findings have important implications for middle-level practitioners as they determine whether the impact of teaming, and the size of the teams, outweighs the potential associated challenges associated when implementing this model.

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APPENDIX A: SURVEY

Q1 Please indicate how much you agree with the following statements:

My teachers...

	Strongly Disagree (1)	Disagree (2)	Neither Agree or Disagree (3)	Agree (4)	Strongly Agree (5)
Give me a lot of encouragement	❍	❍	❍	❍	❍
Make learning interesting	❍	❍	❍	❍	❍
Encourage students to share their ideas about things we are studying in class	❍	❍	❍	❍	❍
Notice when I am doing a good job and let me know about it	❍	❍	❍	❍	❍
Will help me improve my work if I do poorly on an assignment	❍	❍	❍	❍	❍
Provide me with lots of chances to be part of class discussions or activities	❍	❍	❍	❍	❍

Q2 Please indicate how much you agree or disagree with the following:

Thinking back over the past year in school, how often do you...

	Strongly Disagree (1)	Disagree (2)	Neither Agree or Disagree (3)	Agree (4)	Strongly Agree (5)
Enjoy being in school	❍	❍	❍	❍	❍
Feel that the school work you were assigned was meaningful and important	❍	❍	❍	❍	❍
Hate being in school	❍	❍	❍	❍	❍

Q3 Please indicate how much you agree or disagree with the following statements about your school:

I feel that my school provides me…

	Strongly Disagree (1)	Disagree (2)	Neither Agree nor Disagree (3)	Agree (4)	Strongly Agree (5)
A safe learning environment	❍	❍	❍	❍	❍
Teachers who are knowledgeable in their subject area	❍	❍	❍	❍	❍
An opportunity to talk with an adult one-on-one	❍	❍	❍	❍	❍
An opportunity to get extra help from teachers	❍	❍	❍	❍	❍
Adults who genuinely care about me.	❍	❍	❍	❍	❍
A place where I can develop close	❍	❍	❍	❍	❍

friendships with other students.					
Opportunities to express myself.	❍	❍	❍	❍	❍
An opportunity to voice my concerns.	❍	❍	❍	❍	❍

Q4 Please indicate how much you agree or disagree with the following statements about your school:

I would like to have…

	Strongly Disagree (1)	Disagree (2)	Neither Agree nor Disagree (3)	Agree (4)	Strongly Agree (5)
Fewer teachers in my day, so that I have the same teacher more than once.	❍	❍	❍	❍	❍
More teachers in my day, so that I rarely have the same teacher more than once.	❍	❍	❍	❍	❍
Classes with the same students throughout the day.	❍	❍	❍	❍	❍
Classes with different students throughout the day.	❍	❍	❍	❍	❍

Q5 Please describe the relationship you have with your teachers

Q6 Please describe the relationship you have with the other students in your class

Q7 Please describe your favorite part of being in a team this year

Q8 Please describe your least favorite part of being part of a team this year

Q9 Please describe your feelings towards your school this year

APPENDIX B: LETTER FROM PRINCIPAL

BOTHWELL MIDDLE SCHOOL
1200 TIERNEY STREET
MARQUETTE, MICHIGAN 49855
906/225-4262
www.mapsnet.org/schools/BothwellMiddleSchool

Daniel S. Gannon — ***Principal***
Zack Sedgwick — ***Assistant Principal***

March 27th, 2015

Dr. Derek Anderson, chair
Northern Michigan University
1401 Presque Isle Avenue
Marquette, MI 49855

Dr. Anderson:

I'm writing to give permission to our assistant principal, Zack Sedgwick, to use the results from this year's 7th survey, as well as the results from next year's 8th grade survey, as part of his thesis research for the Educational Specialist program at Northern Michigan University. The survey is given as a means to evaluate our students' attitudes and beliefs towards school, and is intended for use as part of our yearly school improvement process. It is also my understanding that this survey may yield useful information as we transition our current 7th grade class from the two-person teams they are in currently, to 4-person teams next year as 8th graders.

Bothwell Middle School desires to provide a stable, healthy learning environment for our students. It is our mission that students feel ownership of their school, and that their feelings and beliefs matter to those of us responsible for the planning, programming and day-to-day operations of the building. It is my hope that the survey results will provide Zack meaningful data to help serve this mission, and look forward to the information provided through this project.

It is our intention to protect the students' confidentiality throughout this project. By no means will the information shared be used outside of the school. Students names will remain confidential and in no way will the information be used for any purpose not already stated in this letter.

Please feel free to contact me at any time with questions concerning the nature of this project or how it will be administered. My contact information is listed below.

Sincerely,

Dan Gannon, Principal
(906) 225-4262, ext. 153
dgannnon@mapsnet.org

Northern Michigan University

Office of Graduate Education and Research
1401 Presque Isle Avenue
Marquette, MI 49855-5301
906-227-2300
FAX: 906-227-2315
Web site: www.nmu.edu

Memorandum

TO: Zack Sedgwick
Education, Leadership and Public Service

CC: Derek Anderson
Education, Leadership, and Public Service

FROM: Dr. Brian Cherry
Assistant Provost/IRB Administrator

DATE: April 8, 2015

SUBJECT: IRB Proposal HS15-655
"The Impact of moving from 2-person teams to 4-person teams on 7th grade Students"
IRB Approval Dates: 4/8/2015-4/8/2016**
Proposed Project Dates: 5/1/2015-5/1/2016

Your proposal "The Impact of moving from 2-person teams to 4-person teams on 7th grade Students" has been approved under the administrative review process. Please include your proposal number (HS15-655) on all research materials and on any correspondence regarding this project.

Any changes or revisions to your approved research plan must be approved by the Institutional Review Board (IRB) prior to implementation.

**If you do not complete your project within 12 months from the date of your approval notification, you must submit a Project Renewal Form for Research Involving Human Subjects. You may apply for a one-year project renewal up to four times.

All forms can be found at the NMU Grants and Research website:
http://www.nmu.edu/grantsandresearch/node/102

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