GROUPING PRACTICES IN AWARD-WINNING MIDDLE SCHOOLS: A STUDY OF PENNSYLVANIA DON EICHHORN SCHOOLS TO WATCH MIDDLE SCHOOLS

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Grouping practices in schools continue to be an ongoing debate in the research literature. It remains unclear what the most appropriate grouping practices are for middle schools when grouping students to form interdisciplinary teams. The research base on grouping practices for middle level education is limited in terms of recent evidence. The onset of the middle school movement that began nearly half a century ago offered guidance and direction for appropriate grouping practices for middle schools. However, the landscape of public education has changed significantly over the past five decades. This study surveyed 14 middle school principals of award-winning middle schools (Don Eichhorn Schools to Watch) in the Commonwealth of Pennsylvania. This investigation sought to determine 1) What are the most prevalent criteria used by principals of award-winning middle schools when grouping students to form interdisciplinary teams? 2) What are the beliefs of principals of award-winning middle schools relative to ability grouping practices? 3) How aligned are the philosophy and practices of principals of award-winning middle schools in relation to ability grouping? A survey with 44 questions was administered via a telephone call with each participant. Findings revealed that random assignment and ability grouping were the most prevalent criteria used by middle school

principals. However, teacher recommendation and students' prior academic record received the highest mean rank when principals were asked to rank in order the six criteria investigated in this study in terms of importance. Principals' beliefs for ability grouping were relatively consistent with the practices within their respective schools. The subject area of mathematics received the most support for grouping by ability followed by English language arts. The subject areas of science and social studies received almost unanimous endorsement for randomly assigning students. Coincidentally, the subject areas of math and English language arts are state tested subject areas in consecutive years in middle school. Further research would help to determine if differing beliefs across subject areas are the result of high-stakes testing and increased emphasis on student performance data. Moreover, future research would help to identify the influence such measures have on grouping students to form interdisciplinary teams.

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PREFACE

It is hard to believe that my dissertation journey has come to an end. Although it has been a long and at times challenging process, this experience afforded me the opportunity to grow as a researcher, as a thinker, and as a school district administrator. The result of this dissertation is the combined efforts of many important people in my life:

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accomplish my career goals. Thank you for being the best wife and mother. I love you, Shauna. My three children, Sydney, Anthony, and Isabella, are what kept me moving in this process. Some day the three of you will understand why daddy was at work on weekends and why he worked late at night. I often felt guilty for not being there for you. My absences were because I love you so much and knew that by me furthering my education, I would be able to provide you with a better life. Many times when I was ready to give up, I would look at pictures of you on my desk. Your little faces always reminded me of why I needed to continue to surge forward. I love and thank you with all my heart. And lastly, I want to acknowledge my father, John Rozzo Sr. Nearly forty years ago he dedicated his dissertation to me. It is very special for me to now dedicate my dissertation to him. My dad is my role model. Having both a PhD and the status of Colonel in the United States Air Force always made me proud of my father. But what I appreciated most about my father was the countless sacrifices he made in his life to give me the opportunities that I had. His work ethic and love for his family has served as a model for me. There is only one person that will be more proud than me of this accomplishment, and that is my father. We did it, dad! I love you!

1.0 INTRODUCTION

Several years ago I attended a forum where parents and educators were discussing the topic of differentiation of instruction in middle school. The focus of the discussion naturally led to how students should be grouped in school. That is, parents and educators alike shared their thoughts related to grouping practices that they believed were best for students. As I listened to the lengthy dialogue that occurred that evening, it became abundantly clear that there were a plethora of thoughts in terms of how to most effectively group students for learning. Although the dialogue encompassed passion and supporting evidence for many of the participants' responses and inputs, it was quite apparent that the basis of such claims were primarily supported by opinions and not research. The limited research that was shared appeared to be decades old. As I reflected on my observations upon leaving the forum, I felt obligated to further investigate grouping practices related to middle school students. Moreover, as a doctoral student at the University of Pittsburgh and as a former teacher, principal, and now assistant superintendent, I found this to be an opportunity that could serve twofold. First, it would afford me the experience of conducting research on a topic where I have a tremendous amount of professional interest. Secondly, conducting research on this topic will help provide more recent and existing research for educators, parents, and perhaps those who make the decisions that govern our schools.

1.1 RATIONALE

How to group students to maximize learning in schools is a question that should be central to all educators who make decisions regarding grouping practices in schools. Unfortunately, determining appropriate grouping arrangements for students in classrooms has been a longstanding discussion in the research literature (Slavin, 1987b). The findings in terms of the grouping practices that have the most positive impact on student learning vary greatly. This study will closely examine the current grouping practices in Pennsylvania middle schools. It will add to the existing and somewhat dormant research base related to grouping practicing in middle schools.

1.2 COMPONENTS OF THE STUDY

A thorough examination of the research literature was completed related to grouping practices in the United States school system. The specific focus areas of the literature review are detailed in the subsequent paragraphs. The review begins with a broad examination of grouping practices and concludes with a more narrow focus on middle school grouping practices.

The literature review provides a brief review of grouping practices stemming back to the onset of the 20th century. The review naturally leads to the notion and practice of grouping students in some capacity by ability. Appropriately then, the next section of the literature review transitions into the ability grouping debate. This section provides evidence of the varying and inconsistent research related to the most appropriate practices for grouping students in middle school. It is followed by a sampling and review of well-known legal cases and legislation

regarding grouping practices in our schools. Such a sampling is essential to the review as it demonstrates that grouping practices in schools are larger than a philosophical debate amongst educators, as they have been part of the legal system for more than a half-century. Further, the variation in legal rulings helps to provide a potential rationale for why the topic has been inconclusively debated in our schools.

The next section, 2.1, provides an overview for different types of practices where students are grouped by ability: whole class grouping, between-class/grade level grouping, and within-class grouping. Due to the majority of ability grouping practices occurring as within-class grouping practices, the bulk of this section focuses on specific examples of within-class grouping strategies.

Following the review of types of ability grouping practices, the literature review begins to transition into the middle school. Specifically, the researcher provides a review of the middle school movement. This review is critical with regard to examining the grouping practices in middle school in relation to the philosophical intent of the middle school movement. To help determine that relationship, the review explores common grouping practices implemented in middle schools.

The final section of the literature review examines criteria that is used to group students to form interdisciplinary teams in middle school. It specifically focuses on criteria and processes that are used in middle schools in terms of how students are initially grouped for learning. Additionally, it provides evidence of the lack research conducted over the past two decades with respect to grouping practices in middle schools.

Chapter Three focuses on my research methodology. This chapter presents the three research questions that will guide the study as well as the rationale and details of the study

design. An exploratory case study was selected using survey research via telephone. The specific framework guiding the study is detailed in this chapter. Chapter Three also defines the rationale and selection process for participants of the research study. This chapter concludes by outlining the data collection and data analysis procedures for the research study.

Chapter Four will reveal the results of the survey. An analysis of the data will be presented via descriptive statistics. Specifically, tables and narratives will be used to present the findings. An analysis will be conducted to determine if there are apparent trends across and within different criteria used in the study. This chapter will include connections to the research questions in relation to the findings of the study.

Chapter Five will offer further analysis and discussion relative to the findings of the study. It will describe the implications of the findings with regard to future work for educators and perhaps policymakers. Moreover, the potential for additional research associated with grouping practices in middle level education will be discussed.

1.3 PURPOSE OF THE STUDY

As an administrator in a high performing school district for the past decade, I have participated in many discussions and debates associated with how to best group students for learning. My work has been primarily at the middle school level. Such debates and discussions where I have both observed and participated has included teachers, parents, policymakers, and fellow administrators. They have also involved administrators representing other school districts. Although the practice of grouping students varies by school district, it has been quite clear to me that school principals are typically paramount in the decision making process. Unfortunately,

there does not appear to be much recent empirical evidence for these principals to reference as they make such critical decisions regarding grouping practices in their schools. As an advocate for middle level education, I feel obligated to conduct a research study related to grouping practices in middle schools. Therefore, the three subsequent research questions will be used to guide my inquiry: 1) What are the most prevalent criteria principals of award-winning middle schools use when grouping students to form interdisciplinary teams? 2) What are the beliefs of principals of award-winning middle schools relative to grouping students by ability as an effective practice for student learning? 3) How aligned are the philosophy and practice for principals of award-winning middle schools in relation to ability grouping?

1.4 GLOSSARY OF KEY TERMS

For the purposes of this study, the following definitions will be used:

Ability Grouping: The practice of placing students into classrooms or small groups based on readiness levels (Kulik, 1992; Gamoran, Nystrand, Berends, and Lepore, 1995).

Award-Winning Middle Schools: The National Forum to Accelerate Middle-Grades Reform is an alliance comprised of over 60 national associations, researchers, educators, officers from professional organizations, and foundations that are committed to the academic, social, and emotional development of young adolescents (The National Forum to Accelerate Middle-Grades Reform NFAMGR, 2014). The Forum's vision is to unite these groups to collectively reform middle level education. Part of their reform plan is to identify replicable models to serve as models for middle level learning. That is, the Forum developed a program called Schools to Watch (STW). The STW program is active in 17 states with 348 schools throughout the United

States. Being recognized as an STW is in effect for three years. To continue being an STW, schools must be reevaluated once the three years expires. STW is a program that is designed to identify high-performing middle schools based on 37 points of research-based criteria. Participants of this study are principals of STW schools in the Commonwealth of Pennsylvania.

Middle School: Eichhorn (1966) defined middle school as "a school unit which follows the elementary unit and precedes the high school unit; includes students from grades six, seven, and eight of a graded school organization" (p. 107). The term, middle school, is often inaccurately used synonymously with the term junior high school. Middle schools in this study have grade configurations that include grades 5-8, grades 6-8, and grades 7-8.

Middle School Teams: Unlike junior high school models, where teachers are departmentalized, middle schools are structured so that teachers work on interdisciplinary teams. All students are assigned to an interdisciplinary team. Interdisciplinary teams generally include several teachers representing the subject areas of mathematics, English Language Arts, science, social studies, and sometimes reading.

Tracking: The term tracking has evolved and changed over time. Thus, it is often used synonymously with the term ability grouping. Spear (1992) defined tracking as being a placement for students that is more permanent. On the contrary, he described ability grouping as a grouping practice that is for a shorter period of time (e.g., one class, one week, or part of the school day). A more recent definition of tracking is described as the practice of grouping students into classrooms based on their achievement, which is unlike tracking of the past where students were assigned to either general, vocational, or academic tracks based on their intelligence or career interests (Loveless, 2009).

1.5 SUMMARY OF CHAPTER ONE

The information presented in Chapter One was intended to provide the reader with an overview of the study. More importantly, it was written to convey the need for additional research relative to grouping practices in middle schools. It provided a brief description of the work that would be conducted within each chapter of the study. The results of this study can be used to further inform the work of educators, parents, policymakers, and researchers in relation to grouping practices at the middle school level.

2.0 LITERATURE REVIEW

The literature review begins by providing an overview of grouping practices stemming back to the onset of the 20th century. The review then transitions into the ability grouping debate, a grouping debate that garnered a great deal of attention in the latter half of the 20th century. It is followed by a sampling and review of well-known legal cases and legislation regarding grouping practices in our schools. The review then examines the different types of practices where students are grouped by ability: whole class grouping, between-class/grade level grouping, and within-class grouping. Because middle school is a common ground for ability grouping practices in schools, the review then transitions into a review of the middle school movement. It is followed by the examination of grouping practices in middle school in relation to the philosophical intent of the middle school movement. To help determine that relationship, the review explores common grouping practices implemented in middle schools. The final part of the review explores the research on the criteria used to group students to form interdisciplinary teams in middle school.

2.1 HISTORICAL PERSPECTIVE ON GROUPING PRACTICES IN SCHOOLS

How students should be grouped for learning is a longstanding discussion in education. Research has produced varying results in terms of how students should be grouped in classes (Slavin, 1987b). Slavin (1987b) asserts that the variance with regard to findings has initiated a debate amongst researchers that has existed as long as instruction has been delivered in schools. Specifically, Slavin (1987b) found that research relative to grouping arrangements in classrooms has been ongoing since the onset of the 20th century. Slavin (1987b) defines a rationale for grouping students by stating, "grouping of students for instruction is done for many reasons, but most grouping plans exist to deal with one central fact of mass education: that students differ in knowledge, skills, developmental stage, and learning rate" (p. 110). Terminology, such as ability grouping and tracking, is commonly used when discussing how students are grouped for learning in schools. Ability grouping and tracking are often used synonymously; however, they differ primarily in that tracking is intended to be for longer periods of time such as a school year or longer and is often less permeable. Both practices group students for instruction based on similar achievement levels; however, ability grouping has students being placed in small homogeneous groups within the same classroom while tracking groups students by ability between classes (Loveless, 1998). Other researchers' definitions of these grouping practices are analogous to those of Loveless (1998). Ability grouping is a practice where students are placed into classrooms or small groups based on readiness levels (Kulik,1992; Gamoran, Nystrand, Berends, and Lepore, 1995). In terms of tracking, Goodlad (1984) states, "tracking on the surface is an organizational arrangement by means of which students observed to be making varied progress in school are grouped so as to reduce the apparent range of achievement and performance in any one group" (p. 150). Other definitions of tracking reflect why the terms, tracking and ability

grouping, are often used interchangeably. Tracking is a practice where students are placed into classes based on ability or prior achievement with the expectation of instruction being differentiated within such classrooms (George, 1988). Using the term *ability* within the definition of tracking creates a connection between the two terms. Spear (1992) attempted to provide a more simplified way to tell the difference between ability grouping and tracking. Spear (1992) defined tracking as being a placement for students that is more permanent. On the contrary, he described ability grouping as a grouping practice that is for a shorter period of time (e.g., one class, one week, or part of the school day). A more recent definition of tracking is described as the practice of grouping students into classrooms based on their achievement, which is unlike tracking of the past where students were assigned to either general, vocational, or academic tracks based on their intelligence or career interests (Loveless, 2009).

Ability grouping in the United States can be traced back as early as 1867 when large groups of children needed to be organized for instruction in a single classroom (Manning & Lucking, 1990). Unlike Slavin (1987b), Manning and Lucking (1990) reported that grouping students by ability began well before the onset of the 20th century. At that time, schools were expected to prepare students for an industrial society where jobs were categorized based on ability levels (Persell, 1977; Oakes 1985). Since then, the effectiveness of various models of ability grouping has been an inconclusive debate among educational researchers. Some researchers have attempted to both recognize the attention ability grouping has received as well as the uncertainty associated with its effectiveness. Despite the fact that there has been a wealth of research conducted related to this topic, it remains unclear the effect ability grouping has on a child's education (Loveless, 1998). Furthermore, Loveless (1998) states, "The research on tracking and ability grouping is frequently summarized in one word: inconclusive" (p. 11).

As a result of immigration into the United States during the late 19th and early 20th centuries, the school-age population became increasingly more diverse. Schools began to engage in practices designed to segregate children into groups for learning, especially with the influx of immigrants into the United States between 1890 and 1920 (Ansalone, 2000). Unprecedented diversity existed in the schools as children spoke many different languages and represented many different races, cultures, and religions. In response to such diversity, schools began to arrange students for learning by placing them into groups, a reaction likely a response to the lack of acceptance of these students.

Many teachers complained that immigrant children were lacking in manners and cleanliness and were often too tired from working after school to learn. Immigrant children faced discrimination and prejudice not only from their teachers and native-born American classmates but also from their textbooks. Textbooks of that day were filled with stereotypes of groups that were different for the white Anglo-Saxon Protestant majority. Such stereotypes often caused a sense of inferiority and self-doubt in immigrant children (Burgan, Doak, Kachur & Mattern, 1999). Essentially, schools educated immigrant students differently from non-immigrant students, as non-immigrant students of higher class already knew the English language and possessed the prerequisite skills to function in society (Ravitch, 1985).

Educators began to claim that the wide range of intelligence was directly related to immigrant children entering the schools at the start of the 20th century. As a result, schools responded by categorizing students into groups based on race, ethnicity, and economic background. Moreover, schools provided scholarly education for students from affluent backgrounds, whereas students from impoverished backgrounds received vocational training. It is worth noting that immigrant groups held different values relative to public education and such

variation in values impacted learning. For example, the Jewish culture was reportedly one that placed a high value on education, while Italian and Irish cultures were viewed as valuing skills and practical knowledge (Burgan et al., 1999). Each cultures' values were based on the need for the child to help support the family (Burgan et al., 1999).

The increase in school enrollment from immigrants migrating to the United States was not the lone factor contributing to the prevalence of tracking and ability grouping practices. Spear (1992) believes the Industrial Revolution to be another contributing factor. He found American's obsession with industrial efficiency changed the landscape in schools. Moreover, Spear (1992) cited business people serving as school board members as a rationale for why such groupings emerged in school settings. That is, schools were to some degree functioning like factories where efficiency was essential to productivity.

As the number of immigrants entering the United States began to decline from 1935 to 1950, ability grouping became relatively inactive (Ansalone, 2000). However, it is clear that such grouping practices were not used solely for the influx immigrant students or the Industrial Revolution. These grouping practices began to reemerge in the 1960s in response to Sputnik, the first artificial satellite put into the Earth's orbit (Loveless, 1998). Educators in the United States reacted by identifying "gifted" students and providing them more rigorous instruction in the areas of mathematics and science. As a result, Loveless (1998) posits that secondary schools reinstituted ability grouping by assigning students to groups or tracks.

A more recent update of tracking and grouping is provided in the work of (Loveless, 2009). Loveless (2009) found that many middle schools who tracked students 20 years ago are no longer tracking. Loveless (2009) cited several factors that influence tracking by ability practices. First, Loveless (2009) identified that tracking by ability is less likely to be used in

schools serving more impoverished students and more common in schools serving students of higher socioeconomic backgrounds. Loveless (2009) also found grade configurations to be a key contributor in grouping practices. That is, middle schools that have grades 7-9 or grades 7-8 are more likely to have more grouping by ability. Middle schools with a 5-8 or 6-8 grade span are less likely to employ tracking by ability practices. Lastly, Loveless (2009) found that tracking by ability was more common in schools where parents have a stronger influence over the practices that occur within the school.

2.1.1 Ability Grouping Debate

The first recorded study associated with ability grouping was reportedly conducted in 1927 (Kulik, 1992). The study involved two comparable groups of elementary school students. Students from one group were homogeneously grouped by ability in their classes. The other group was placed into classes heterogeneously by ability. Both groups were assessed prior to being placed into their groups. At the conclusion of the school year, both groups were assessed on their growth. The students from the homogeneously grouped classes scored approximately two grade levels higher in mathematics than did their similar ability peers who were placed into the heterogeneously grouped classes (Kulik, 1992).

Although ability grouping practices in schools had been examined as early as 1927, it was not until much later in the century that a debate started. Tracking by ability attracted a great deal of criticism in latter half of the 20th century (Loveless, 1998). Loveless (1998) cited several key individuals who published work that denounced tracking students by ability, including James Rosenbaum's (1976) *Making Inequality*, Samuel Bowles and Herbert Gintis's (1976) *Schooling in Capitalist America,* John Goodlad's (1984) *A Place Called School,* and Jeannie Oakes's

(1985) *Keeping Track.* According to Loveless (1998), Oakes's (1985) work was the catalyst for igniting a movement against tracking students by ability. Loveless (1998) summarized the anti-tracking movement by stating, "The contemporary indictment of tracking boils down to the contention that ability grouping systems are inefficient and unfair, that they hinder learning and distribute learning inequitably" (p. 10).

During the 1980s and 1990s, placing students into groups based on ability received a great deal of attention amongst researchers. Some researchers argued that ability grouping makes education mediocre (Oakes, 1985). Oakes (1985) elaborated by stating that "high" ability students make no gains in such a structure. She contended that students, particularly students in the "low" groups, suffer academically and emotionally and ultimately lose their drive to learn. Oakes (1985) defined two types of tracking: curriculum tracking and ability grouping. Oakes (1985) views curriculum tracking as placing students in a track and expecting them to complete a progression of courses designed for college-preparatory students, vocational students, or general-track students. Not all tracked schools employ all three of these tracks. According to Oakes (1985), ability grouping is the separation of academic subjects (usually English, mathematics, science, and social studies) into classes at different levels for students with different abilities. Middle schools and high schools use common levels for such practices (Oakes, 1987).

In addition to types of tracking, Oakes (1987) identified common and predictable characteristics of tracking. First, students' academic performance is the basis for how they are assigned to a group. Second, classes and tracks are labeled based upon students' performance levels. Third, a hierarchy exists making the highest ability grouping of students appear to be superior to other groupings. Fourth, curriculum and instruction are tailored to the perceived needs of students within the track. Fifth, students view school differently based on their track.

Oakes (1987) further discusses the universal inconsistency that students in the "high track" benefit more academically when placed into classes with similar ability peers. Oakes (1987) notes that evidence of empirical data does not support grouping students by ability, yet ability grouping continues to be a widespread practice in schools.

Other researchers supported Oakes's (1987) claims. Ability grouping has no positive impact on student achievement (Slavin, 1987a). Slavin (1987a) asserts that no clear evidence exists to support grouping students in such a manner. In his later work, Slavin (1990) supported his earlier findings. Specifically, he prepared a report for the National Center on Effective Secondary Schools where he reviewed 29 studies that compared between-class ability grouping to heterogeneous grouping. Slavin's (1990) findings revealed that when between-class ability grouping, different forms of ability grouping, and ability grouping by subject (e.g., mathematics, English, and reading) exist, ability grouping has no direct effect on student achievement. Moreover, Slavin (1990) found neither advantages for students in "high" ability classes nor disadvantages for those students in "low" ability classes.

Despite Slavin's (1990) claims, other scholars argued that grouping students by ability or tracking students is problematic, as it produces a great deal of inequity (Spear, 1992). Spear (1992) shared that such educational practices often lead to low-achieving students, minority students, and low-income students having a lack of exposure to both suitable peers and quality instruction. Others cited that ability-grouping practices do not benefit any students. Empirical data revealed ability grouping to show no gains in student achievement and causes harm, as it has a negative impact on students' self-concept (Noland &Taylor, 1986). Grouping by ability creates a process where students in all placements receive instruction that is similar across groups rather than students receiving appropriate instruction that is differentiated to meet their

needs (Trimble & Sinclair, 1987). That is, even students placed in the "high" ability groups are not having their needs met. Trimble and Sinclair (1987) conclude that minimal evidence exists to support the claim that any student benefits from ability grouping practices.

Although there is a wealth of research denouncing ability grouping and tracking practices, other researchers have shared data that provided a different stance. Some have even argued there are flaws in prior research that condemns ability grouping and tracking practices. Hallinan (1990) scrutinized the work of Slavin (1990) by claiming that Slavin's (1990) work failed to consider the most pertinent area influencing the instructional process: content, pacing, and pedagogy. Instead, she argued Slavin (1990) relied solely on standardized test data. Hallinan (1990) concluded that Slavin's (1990) approach revealed considerable limitations in that it ignored both curriculum and instruction differences across the various classes. Others like Bode (1996) also discovered flaws with Slavin's (1990) synthesis on ability grouping in elementary schools. Bode (1996), for instance, argued that Slavin (1990) intentionally did not include special classes such as gifted, resource, or special education. Bode's (1996) criticism of Slavin's (1990) work implied a degree of intentionality on Slavin's (1990) part.

Slavin (1990) and Oakes's (1985) opposition to ability grouping continued to be scrutinized. Kulik (1993), for example, disagreed with the work of both Oakes (1985) and Slavin (1987, 1990) as his response to Oakes's (1985) work clearly reflected his opposing views in relation to grouping practices:

> Oakes's conclusions, however, are on her own selective and idiosyncratic review of older summaries of the literature and on her uncontrolled classroom observations. Objective analysis of findings from controlled studies provides little support for her speculations. Whereas Oakes believes that grouping programs are unnecessary, ineffective and unfair,

> the opposite appears to be true. American education would be harmed by the wholesale elimination of programs that group learners for instruction by ability. (p. 9)

Kulik's (1993) response to Oakes's (1985) work acknowledged that he believed ability grouping could be an effective practice for grouping students for learning. Further clarity relative to his position on ability grouping is evident when he compared the work of (Kulik & Kulik, 1991) to Slavin (1987a/1990). Kulik (1993) acknowledged the research of Kulik and Kulik (1991) had agreement with Slavin's (1987a/1990) work; however, on certain aspects of the same two major sets of meta-analyses their conclusions differed. The most notable difference was that Kulik and Kulik (1991) found effects in some ability grouping programs to have substantial positive benefits while other ability grouping programs had no clear effect. Kulik (1993) shared that Slavin (1987a/1990) found some ability grouping programs to have neither negative nor positive effects with other ability grouping programs that showed only moderate positive effects. Specifically, Kulik (1993) established that the strongest benefits of ability grouping are identified in settings where curriculum is modified for highly talented learners. Since Slavin (1987a/1990) did not study resource, special education, or gifted classes, he was unable to conclude that ability grouping programs were highly beneficial for higher aptitude students. Kulik (1993) found that high aptitude students typically have large academic gains when they are grouped by ability with peers of similar academic ability.

Contrary to his work that Kulik (1993) scrutinized, Slavin did participate in other research that produced findings that defined structures where tracking students by ability could be effective. Slavin, Braddock, Hall, and Petza (1989) identified the following practices where tracking positively influences student achievement:

1. Students remain in heterogeneous groups most of the day and are grouped by performance level only in such subjects as reading and mathematics in which reducing heterogeneity is particularly important.
2. The grouping plan reduces heterogeneity in the specific skill being taught.
3. Group assignments are both flexible and frequently reassessed.
4. Teachers adapt their level and pace of instruction in regrouped classes to accommodate students' levels of readiness and learning rates. (p. 264)

Such findings support the need for differentiation of instruction and flexibility of groupings. These practices will allow for grouping of ability in certain classes (e.g., reading and mathematics, as students are not permanently placed in settings where their needs do not facilitate the instruction).

It is apparent that research on grouping students by ability has varying results in terms of its overall effectiveness. The preponderance of evidence reviewed indicates inconsistency with respect to the overall effectiveness of grouping students by ability. An additional challenge with research associated with the topic of ability grouping in schools is the inactivity of debate over the past two decades (Tieso, 2003). Despite the inactivity of debating the effectiveness ability grouping, the longstanding inconsistency with respect to findings is also evident in many legal cases relative to grouping practices in schools. The following section will review the relationship between grouping practices in schools and their prominence in the U.S. courts.

2.1.2 Legal Cases

The following section reviews several legal cases associated with grouping practices in schools. Such a sampling is essential to the literature review as it demonstrates that grouping practices in schools are larger than a philosophical debate amongst educators, as they have been contested in the legal system for more than a half-century. Specifically, the practice of ability grouping has often been connected to segregation practices in schools.

In 1954, legal cases began to frame the debate on grouping practices in schools. The landmark case of *Brown v. Board of Education* (1954) is arguably the most well known legal case in terms of racial segregation of students in schools. This prominent landmark desegregation case held that equal education should be provided for all and that assigning students to separate but equal educational systems was unconstitutional. Subsequently, schools found ways to avoid the desegregation ruling. In particular, schools in the southern United States used forms of ability grouping to avoid the court order and avoided compliance until the 1960s (Bryson & Bentley, 1980).

Brown v. Board of Education (1954) was not the end of the legal issues surrounding grouping in schools. The first case of consequence specific to ability grouping was *Hobson v. Hansen* (1967). A federal judge held that that when students are placed in ability groups or special tracks based off of tests or procedures, such tests and procedures are deemed discriminatory and in violation of the Fourteenth Amendment of the U.S. Constitution. The judge believed that a student's placement in such ability groups was directly correlated to his or her socioeconomic status. Only three years later, the federal courts were again dealing with the grouping practices in schools in relation to ability grouping and racial segregation. In the case of *Spangler v. Pasadena City Board of Education* (1970), the court ruled that racially segregating

practices within the school district were a direct result of ability grouping practices. More specifically, the courts supported their decision based on the fact that the school district was using the following information to group students: standardized test and I.Q. scores, teacher and administrator recommendations, and parent requests. The ruling was an attempt to end the segregation practices that continued to exist.

In the 1970s, the United States Fifth Circuit Court of Appeals attempted to end desegregated public schools from grouping students by ability as a way to segregate students. In the case of *Singleton v. Jackson Municipal Separate School District* (1970), the Fifth Circuit Court of Appeals was asked to rule against the utilization of standardized tests as a means of grouping students by ability. The court ruled that desegregated schools should refrain from using standardized tests for any reason whatsoever until they functioned as a completely desegregated school system. Subsequently, the United States Fifth Circuit Court of Appeals ruled in *Moses v. Washington Parish School Board* (1971) the usage of standardized testing in a unitary

Legal cases continued to be heard relative to how students were being grouped in schools. In *Lau v. Nichols* (1974) the Supreme Court ruled that English Language Learners (ELL) must learn the same academic content that fluent English-speaking students learn in school. The exception for ELLs is that they must do so at the same time as they are acquiring a new language. Subsequently, in *Morales v. Shannon* (1973/1975), the United States Fifth Circuit Court of Appeals ruled that Robb Elementary School in Texas was assigning Mexican-American students to classes inappropriately. Specifically, the school was placing an abundance of Mexican-American students in classes based on language, standardized test data, prior academic performance, and teachers' recommendations. The court deemed such grouping practices as

discriminatory as the school failed to desegregate its school system in violation of the Fourteenth Amendment to the United States Constitution and Title VI of the Civil Rights Act of 1964.

In the same year, the United States Fifth Circuit Court of Appeals ruled on a case that was somewhat contrary to their previous ruling. In *McNeal v. Tate County School District* (1975), the court ruled that ability-grouping practices were permissible as long as race was not a factor for student placements. Moreover, for student placement to be considered unconstitutional, evidence needed to exist that would prove that grouping practices were based on past segregation. An Ohio federal court made an opposing ruling the same year in the case of *Board of Education of Cincinnati v. Department of Health, Education and Welfare* (1975). The ruling stated that the burden was on the school district to provide a rationale for any ability grouping practice that assigned students of one race to one group instead of the other.

In 1981, the U.S. Court of Appeals provided some general guidance relative to ability grouping.

> Thus, as a general rule, school systems are free to employ ability grouping, even when such a policy has a segregative effect, so long, of course, as such a practice is genuinely motivated by educational concerns and not discriminatory motives. However, in school districts which have a past history of unlawful discrimination and are in the process of converting to a unitary school system, or have only recently completed such a conversion, ability grouping is subject to much closer judicial scrutiny. (*Elizabeth and Katherine CASTANEDA, by their father and next friend, Roy C. Castaneda v. Mrs. A. M. "Billy" PICKARD, 1981*)

To summarize, the court deemed schools and educators to be most qualified to determine if ability grouping is the most effective practice for meeting students' needs. School districts with

past issues related to the segregation of students would likely have to provide specific rationales for employing such grouping practices.

In the subsequent decade, legal cases associated with ability grouping practices appeared to have declined, yet they were not extinct. In 1985, the United States Eleventh Circuit Court of Appeals heard *NAACP v. Georgia* (1985). As with prominent cases from the prior decade, race continued to be a focal point for litigation. The court ruled that it was not discriminatory for a school system to assign more black students to lower ability groups as long as they could prove that the placement was not based on past segregation. Similarly to this ruling, in *Montgomery v. Starkville Municipal Separate School District* (1987) the Federal District Court in Mississippi ruled that socioeconomic status was not permitted as a means to group students in ability groups. Two years later, the United States Fifth Circuit Court of Appeals heard an additional case in Mississippi. In the case of *Quarles v. Oxford Municipal Separate School District* (1989), the court ruled that ability grouping by subject was acceptable and not racially discriminatory.

Litigation associated with how students are grouped continued into the 21st century. In *Holton v. City of Thomasville School District* (2005/2007) the court held that the school district's program of grouping students by ability was neither intentionally discriminatory nor did they violate any laws that prevented segregative practices. Despite all of the litigation that has occurred associated with grouping students by ability, schools continue to use it as a prevalent practice for grouping students. Data as recently as 2005 shows that 85% of secondary schools in the United States continue to use ability grouping practices (Oakes, 2005).

Table 1. Prominent Legal Cases and Legislation Related Grouping Practices in Schools

Case	Year	Focal Point of Case
Brown v. Board of Education	1954	Race
Hobson v. Hansen	1967	Ability Grouping
Spangler v. Pasadena Board of Education	1970	Ability Grouping
Singleton v. Jackson Municipal Separate School District	1970	Ability Grouping
Education for All Handicapped Children	1970	Learning Disabilities
Moses v. Washington Parish School Board	1971	Ability Grouping
Lau v. Nichols	1974	Race
Morales v. Shannon	1973 / 1975	Race
Individuals with Disabilities Education Act	1975	Learning Disabilities
McNeal v. Tate County School District	1975	Ability Grouping / Race
Board of Ed. of Cincinnati v. Department of Health, Education, and Welfare	1975	Ability Grouping / Race
Castaneda v. Mrs. A.M. "Billy" Pickard	1981	Ability Grouping / Race
NAACP v. Georgia	1985	Ability Grouping / Race
Montgomery v. Starkville Municipal Separate School District	1987	Ability Grouping / Socioeconomic Status
Quarles v. Oxford Municipal Separate School District	1989	Ability Grouping / Race
Holton v. City of Thomasville S.D.	2005 / 2007	Ability Grouping / Race

Note. Information derived from a review of well-known legal cases related to ability grouping.

Through this review of well-known legal cases associated with ability grouping practices in public schools, it is clear that such practices are closely related to potential discrimination of students. Federal and state legal mandates have provided direction for school districts to help

avoid such discriminating practices by identifying students earlier who are educationally underserved, at risk of failing socially or academically, and/or those students in need of specialized help (Vacca, 2005).

2.2 TYPES OF ABILITY GROUPING

Ability grouping can occur in many forms. Tieso (2003) identified thee common forms of grouping practices that are related to students' ability: whole class groupings, between-class/grade level groupings, and within-class groupings. The subsequent section of this literature review will provide an overview of each of those types of grouping arrangements.

2.2.1 Whole Class Grouping

Kulik (1993) refers to whole class groupings as XYZ classes where students are assigned to classes based on aptitude. Kulik (1993) explains that these aptitude placements are defined as high, middle, and low classes. Such classes are taught in separate classrooms for either the full school day or for an individual subject. Kulik (1993) further describes whole class groupings as classes that are taught with comparable or identical curricular resources across the entire grade level in all classrooms. Within whole class groupings, a traditional textbook significantly influences the curriculum (Goodlad, 1984). Goodlad (1984) suggests that movement through curriculum within a whole class grouping encompasses uniform pacing, methods, and materials. Goodlad (1984) also provides a primary advantage and disadvantage of whole class grouping. The advantage is that it appears to benefit teachers, as preparation for lessons focuses on

providing instruction that targets one's overall ability level. The disadvantage, which primarily harms students, is that their individual readiness levels and interests are often disregarded.

2.2.2 Between-Class and Grade Level Grouping

Between-class groupings are also referred to as the Joplin Plan, created by Cecil Floyd. Floyd was the assistant superintendent of schools in Joplin, Missouri in 1954. Kulik (1993) defines this type of grouping practice as one that is not driven by a student's grade level; instead, it is determined by a student's instructional needs. Kulik (1993) specifically describes this type of practice in this way: "children from several grades who are at the same level of achievement in a subject are formed into groups, and the groups are then taught the subject in separate classrooms without regard to the children's regular grade placement" (p. 8). Kulik (1993) shares that curricular resources differ for students of the same age with different aptitude levels.

There are several identified benefits of between-class groupings. The majority of these cross-grade grouping plans are single subject oriented and closely connected to an individual's skills (Tieso, 2003). Flexibility between groups is one advantage of such a structure. Tieso (2003) found that preassessments, specifically in the areas of math and reading, dictated students' movement between classrooms. Tieso's (2003) findings are consistent with (Slavin, 1987). Slavin (1987) described the process of regrouping as one that allows for correction in error if the students' initial placement is not meeting their needs.

A second advantage of between-class groupings is that curriculum can be modified to meet the needs of students within the group (Tieso, 2003). That is, students' needs are more closely examined as the curricular resources are tailored to the academic ability of the group. A

third advantage to this grouping structure is that the heterogeneity within the classroom can be reduced without negatively impacting the self-esteem of students in the lower ability groups.

Although there are clearly defined benefits of the regrouping arrangement presented by Joplin, research does exist that does not support this grouping arrangement. In particular, gains in students' reading achievement did not benefit by using the Joplin Plan. This finding was supported by comparing students' achievement in the Joplin Plan to students receiving reading instruction in self-contained classrooms (Powell, 1964).

2.2.3 Within-Class Grouping

Within-class grouping is a grouping arrangement where students within the same classroom are regrouped into smaller groups for specific activities and purposes (Kulik & Kulik, 1992). This grouping structure is also referred to as flexible grouping (Tieso, 2003). Kulik (1993) described within-class grouping as a practice where "a teacher forms ability groups within a single classroom and provides each group with instruction appropriate to its level of aptitude. The teacher usually uses different rates of instruction and different instructional materials for the within-class groups" (p. 8). In this type of grouping arrangement, the teacher typically begins the lesson by instructing the class as a whole and then divides students into smaller learning groups based on readiness levels, interests, and demonstrated performance (Renzulli, 1994).

Teachers must differentiate their instruction in order for within-class/flexible grouping to be most effective (Kulik & Kulik, 1992). They contend that it would defeat the premise of this grouping practice to deliver instruction via the same content, process, and products for all groups. There are two clear advantages of this grouping arrangement (Sorenson & Hallinan, 1986). First, instructional groups are smaller in terms of the number of students in each group.

Thus, students' attention to the task is increased. Second, teachers have more flexibility to adjust their instruction when teaching in smaller groups. In addition to the advantages of within-class/flexible grouping, Sorenson and Hallinan (1986) found less instructional time for students as a primary drawback. Being that students work in small groups, direct instruction time from the teacher is reduced for all students. Moreover, classroom management becomes more essential as students are working more independently in this type of arrangement.

2.2.3.1 Cooperative Learning

Cooperative learning is a very common form of within-class grouping arrangement. Cooperative learning can be helpful in terms of meeting students' needs within a classroom that has students regrouped within the same classroom by ability. Cooperative learning is a powerful strategy for meeting students' needs within small heterogeneous learning groups (Spear, 1992). Although students have similar ability levels within the small groups of classrooms that employ within-class/flexible grouping, some degree of heterogeneity always exists. Moreover, such a practice can help teachers provide instruction to students who are not part of the group receiving direct instruction from the teacher.

Cooperative learning is a grouping arrangement that is defined in various ways. Johnson and Johnson (1999) used five elements to define cooperative learning. The first element is positive interdependence, which ensures that individual success promotes success amongst other members of the group. The second element focuses on face-to-face promotive interaction. Promotive interaction's purpose is to have individuals encourage and activate efforts with the goal of helping each other learn. The third element is individual and group accountability. The rationale for this element is to make certain that all group members are contributing to the overall goal of the group and to ensure individual learning. The fourth element is interpersonal and

small-group skills. Effective group skills are the primary purpose of this element. The final element is group processing. This element focuses on the importance of both group and individual reflection and its influence on the overall effectiveness and success of the group. Unlike Johnson and Johnson (1999), other researchers believed that some and not all of these elements are needed for cooperative learning to exist (Dean, Hubbell, Pitler, & Stone 2012).

Despite there being over one hundred types of cooperative learning techniques, researchers have found simplistic ways to define cooperative learning in a manner that accurately describes it regardless of the type (Kagan, 1994). Definitions of cooperative learning vary. Cooperative learning is a process where students work together toward a common goal (Siegel, 2005). Cooperative learning is also a method of teaching where students work in groups and are expected to learn from one another rather than directly from the teacher (Yamarik, 2007). Cooperative learning is more than simply group work (Schul, 2011). Schul (2011) sees cooperative learning being different from collaborative groups in that cooperative learning promotes strong social interdependence amongst students where each student is held individually accountable for his or her work. Shizamoe and Aldrich (2010) capture the essence of cooperative learning by defining it as an instructional shift from a teacher-centered focus to a focus on students learning through interactions with their peers.

The recommended amount of students per cooperative group varies between two and five students based on assignment and age of group members (Schul, 2011). Schul (2011) makes clear that cooperative learning should never exceed five members. Recommendations for cooperative learning groups are most commonly identify the group size as a maximum amount of five members (Lou et al., 1996). Explicit recommendations for cooperative learning, relating

group size to age, are two students is an appropriate number for primary level classrooms, with the number increasing to as high as five for older students (Chaplin, 2009).

In addition to group size, researchers are specific with regard to how cooperative learning groups should be configured. Group size ultimately needs to be contingent upon the teacher's intentions of the group (Schul, 2011). Schul (2011) further describes cooperative learning groups as most effective when students are heterogeneously grouped by ability, race, gender, and social skills. Other researchers are uncertain of the group dynamics in relation to the effectiveness. Research varies in terms of the impact of group composition relative to cooperative learning (Yaramik, 2007). For instance, Lou, Abrami, & d'Apollina (2001) found that a meta-analysis of twelve studies showed low-ability students benefit when placed in cooperative learning groups heterogeneously by ability. On the contrary, the researchers found medium-ability students to benefit when grouped for cooperative learning homogeneously by ability. In terms of high-ability students, they concluded that ability grouping was not relevant in terms of the overall impact on students. A subsequent meta-analysis of twelve studies deemed it undeterminable to measure the impact of group composition on high-ability students due to the unsound nature of the methodology used (Neber, Finsterwald, & Urban, 2001).

Cooperative learning practices offer many benefits to students. In particular, Shimazoe and Aldrich (2010) identified six benefits. Such benefits include students promoting deeper learning and personal growth, students earning higher grades, students developing social skills and civic values, students developing positive attitudes toward autonomous learning, and students learning to think more critically.

2.3 THE MIDDLE SCHOOL

Middle schools have been identified as a common ground for practices where students are grouped by ability (McEwin & Greene, 2011). Middle schools have also been harshly criticized for their grouping practices (Loveless, 1998). Before examining common grouping arrangements in middle schools, it is imperative to review the concept of middle school. The following section provides a review of the middle school movement as well as its core tenets.

Students' experiences in middle school greatly influence their subsequent school experiences. According to some, the middle school experience is a critical phase in terms of the molding of one's personal and academic identity (MacIver & Epstein, 1991). Eichhorn (1966) defined middle school as "a school unit which follows the elementary unit and precedes the high school unit; includes students from grades six, seven, and eight of a graded school organization" (p. 107). The term, middle school, is often inaccurately used synonymously with the term junior high school. During the period of time when children are in middle school, they encounter a plethora of changes relative to their social, emotional, and intellectual development. In 1995, the National Middle Schools Association (NMSA) published a position paper, *This We Believe: Developmentally Responsive Middle Level Schools.* The paper provides further support with regard to changes middle school students encounter during this period of time:

> Young people undergo more rapid and profound personal changes during the years between 10 and 15 than at any other period of their lives. Although growth in infancy is also very extensive, infants are not the conscious witnesses of their development as are young adolescents. These developmental processes, while natural and necessary, often constitute challenges for youngsters as well as for their teachers, parents, and others entrusted with responsibility for their healthy development and education. (p. 5)

The middle school movement, an alternative to the junior high model, began in the1960s. The middle school was created to be a developmentally appropriate school structure for students encountering such significant changes in their lives (Eichhorn, 1980). In his earlier work, Eichhorn (1966) identified several justifications with respect to the validity of the structure of the middle school in place of the junior high school. One of those primary reasons was that the junior high structure was too similar to the high school structure and not considerate of the needs of the middle school student. Eichhorn's credibility in terms of making the distinction between a middle school and high school can be supported by his recognition of being one of the founding fathers of the middle school (David, 1988).

Eichhorn (1966) was highly focused on the needs of middle school students. In his 1966 book, *The Middle School,* he posited that one cannot justify all middle school students as prepubescents, early adolescents, or adolescents. Further, he determined that the term transescence should be used to describe middle school students and their stage of development. In terms of providing clarity on the term transescence, Eichhorn (1966) wrote:

> Transescence: the stage of development which begins prior to the onset of puberty and extends through the early stages of adolescence. Since puberty does not occur for all precisely at the same chronological age in human development, the transescent designation is based on the many physical, social, emotional, and intellectual changes in body chemistry that appear prior to the puberty cycle to the time in which the body gains a practical degree of stabilization over these complex pubescent changes. (p. 3)

Eichhorn's (1966) terms were reflective of the variation of middle school students. He recognized the simultaneousness of the social, emotional, physical, and intellectual changes students encounter. The middle school structure is intended to be responsive to such rapid

concurrent changes. To be responsive to such needs, a middle school must incorporate certain characteristics. NMSA (1995) identifies developmentally appropriate middle schools to include the following: "Educators committed to young adolescents; A shared vision; High expectations for all; An adult advocate for every student; Family and community partnerships; A positive climate." (p. 11) Furthermore, NMSA (1995) describes what middle schools must provide to be developmentally responsiveness to students: a curriculum that is integrative and rigorous, exploratory courses for students, variation in terms of instructional design, assessments and evaluative tools that enhance students' learning, flexible organizational structures, programs and systems that promote non-academic areas such as health, wellness and safety, and a sound guidance program.

To help enhance the middle school model, the Carnegie Council on Adolescent Development (CCAD) (1989) published a report on middle level reform, *Turning Points*. *Turning Points* includes several recommendations that support Eichhorn (1966) relative to the need for middle schools rather junior high schools. *Turning Points* serves as a guide for middle schools via recommendations providing clear distinction from a middle school structure and a junior high school structure. Such recommendations include but are not limited to students being placed on teams of teachers where the curriculum is integrative. Teachers on these teams would have common planning time. This placement process clearly contradicts the notion of tracking students. Tracking by ability has a negative impact socially and emotionally on students who temporarily achieve at a slower academic rate (David, 1995).

Other recommendations from *Turning Points* also include students having an adult advisor who serves as their advocate or mentor and who would remain with the student throughout their middle school experience. In terms of scheduling, the recommendation is to

give teachers flexibility with scheduling classes. To help further understand the middle school structure, it is imperative to examine the same grouping practices common to the middle school. Such grouping practices include the following: cooperative learning, ability grouping, and inclusionary practices in these schools.

2.4 GROUPING PRACTICES IN MIDDLE SCHOOLS

The middle school student is most appropriately grouped heterogeneously by ability where differentiated instruction would be used to meet students at their instructional readiness levels (Spear, 1992). Within the heterogeneously-grouped classes, Spear (1992) identified that modifications to instructional practices that are aligned with students' learning styles are essential in order to meet middle school students' needs. Moreover, the teacher's emphasis should be on attempting to individualize instruction within the heterogeneous classroom. The following section will review several common grouping practices in middle schools.

2.4.1 Cooperative Learning in Middle Schools

Cooperative learning has been found to be a commonly used grouping practice in middle schools. To ensure success in middle schools, cooperative learning is a recommended instructional strategy with students being assigned to classes heterogeneously by ability (Carnegie Council on Adolescent Development, 1989). This recommendation is supported and elaborated on by Evans, Gatewood, and Green (1993) who cited five reasons why cooperative learning fits well in middle school:

1. Cooperative learning is conducive to meeting the needs of children in the middle school age range. Via cooperative learning, students are given more opportunities to socialize, share feelings with others, develop a better understanding of other's perspectives, and to be part of a group.
2. Cooperative learning is like middle school in terms of basic philosophy relative to grouping; cooperative learning emphasizes the importance of grouping students heterogeneously by ability. Furthermore, students are not assigned to groups based on class, race, or gender.
3. Cooperative learning supports the concept of teaming. Students are grouped together to work toward a common goal. Ultimately it helps mitigate the amount of teasing, exclusion, and competition that occurs amongst students in middle school.
4. The outcomes of cooperative learning are consistent with the overall goals of the middle school. Such goals encompass more positive heterogeneous relationships, higher achievement rates, increased self-esteem, and improved attitudes toward school.
5. Due to the ease of implementation, cooperative learning has been easily accepted by middle school educators.

Research is relatively consistent with the findings of Evans et al. (1993). For instance, a study by Dotson (2001) found that middle school students demonstrated higher achievement rates when being taught using cooperative learning as an instructional strategy. Dotson (2001) compared two groups of sixth grade students. The total number of participants was fifty students. Twenty-five students were from a social studies class where cooperative learning was used as an instructional strategy (treatment group), and the other twenty-five students were from a social studies class where lecture and direct instruction were the more common instructional

strategies. Cooperative learning was not used in the second classroom. The same teacher taught both classes of students. Demographics and academic ability were similar between the two classes. Student academic achievement was measured by performance on the same ten curriculum-based assessments. The assessments were given throughout the first nine weeks of the school year. The average mean score on the assessments for the class that received instruction via cooperative learning was eighty-six percent. The class taught without use of cooperative learning had a mean score of seventy-seven percent. Eighty percent was identified as the mastery level. Furthermore, although specific findings were not shared, Dotson noted that the study proved to have a positive impact academically and socially on students with learning disabilities who participated in the treatment group. Lastly, for each of the ten curriculum-based assessments, the mean achievement score was always higher for the treatment group in comparison to the score of the control group.

Further support of the findings of Evans et al. (1993) are found in a study conducted by Gillies (2000). Gillies (2000) compared two groups of fifth grade students to examine the residual effects of cooperative learning experiences. Fifty-two students who participated in the study were trained in cooperative behaviors during third grade. Thirty-six fifth grade students had never received training in cooperative learning behaviors. The researcher used classroom observations and interviews with classroom teachers to compare the two groups. Findings for the students who had been previously trained on cooperative learning behaviors indicated that they were more cooperative than their peers who had not received the training in third grade. The trained groups were more task-oriented, better listeners to group members, and inclined to share resources with group members. The untrained group members demonstrated more off task and non-cooperative behaviors. In terms of verbal interactions, the trained group members

provided more explanations when responding to group member's requests for assistance. They were also more likely to promote each other's learning. It is quite evident that Gillies' (2000) findings were consistent with those of Evans et al. (1993) with respect to being an appropriate grouping practice for middle school. Gillies (2000) writes "The positive benefits of working cooperatively, such as the help provided, the relationships established, and the learning achieved may contribute to an overall sense of emotional well-being and adjustment that children remember and actively seek to maintain" (p. 20).

Contrary to the research that advocates the benefits of cooperative learning in middle school, others have identified potential areas of concern. Two middle school teachers were interviewed in a study by Sapon-Shevin (1994). Both teachers were proponents of cooperative learning in their classrooms. They expressed concern with criticism they received from other teachers and parents relative to the time they spent teaching social skills and ultimately techniques for working cooperatively with others. Specific criticism implied that they were losing instructional time related to testing and accountability processes by teaching cooperative learning strategies to their students.

In addition, certain middle school students have expressed concerns relative to cooperative learning. Matthews (1992) interviewed fifteen middle school students from a wealthy suburban school district on their view of cooperative learning. These fifteen students were each identified as gifted students. The findings from the interviews revealed that the gifted students preferred to work cooperatively when they were working with students of similar academic abilities. The students reported that they lacked trust with those who were less capable academically.

Like some students, certain teachers are resistant to cooperative learning. Kohn (1992) identified four reasons why some teachers struggle with the notion of cooperative learning: 1. The learning becomes student-centered as students have more control. 2. Social skills become an additional element for teachers to teach. 3. Cooperative learning opposes individualized learning. 4. Competition is reduced when cooperative learning exists. Kohn's (1992) findings are not consistent with the middle school and cooperative learning connections identified by Evans et al. (1992).

Despite the varying beliefs and evidence within the research regarding cooperative learning, the majority of what is reported with respect to cooperative learning is relatively positive. Generally speaking, cooperative learning regardless of instructional level typically produces positive outcomes for students (Johnson & Johnson, 1999). That is, cooperative learning is a grouping strategy that helps promote and foster collaborating, socializing, and teaming. Such skills fit appropriately with the recommended experiences a student should have during middle school. The next section of this review will more explicitly explore ability-grouping practices in middle school.

2.4.2 Ability Grouping in Middle Schools

Although middle schools use a variety of practices in terms of how they group students for instruction, the most common practice appears to be some type of ability grouping (Mills, 1997). Oakes (1987) supported Mills' (1997) claim that ability grouping is prevalent in middle schools. Mills (1997) further wrote that such grouping practices in secondary schools have been implemented despite the various harmful findings that have been reported in the research literature. Mills (1997) underscored a contradiction between research and practice with respect

to middle school; he claims there to be no known benefits of grouping students by ability in middle school with the possible exception of students who are considered accelerated in the area of mathematics.

Epstein and Mac Iver (1990) used data from a survey conducted by the John Hopkins Center for Research on Elementary and Middle Level Schools. The survey included participation from 1,753 middle schools. Findings revealed that over 40% of the schools used between-class grouping and more than 20% of schools placed students in classes based on their ability. According to a 1993 survey with the National Association of Secondary School Principals, 82% of middle schools that participated indicated use of some form of ability grouping for student placement (Valentine, Clark, Irvin, Keefe, & Melton, 1993). Epstein and Mac Iver (1990) argued that whole class ability grouping becomes more common as students proceed through middle school. With regard to specific subject areas, they reported ability grouping to be most frequent for grades five and six in math and reading. For grades seven through nine, ability grouping is most often used in math and English.

Later work by Loveless (1998) supported and expanded on Epstein and Mac Iver's (1990) findings. Loveless (1998) stated that middle schools are most likely to group students by ability in some disciplines but not all disciplines. In particular, Loveless (1998) found that middle schools more frequently group students by ability in their mathematics and English classes. Placement in these two classes is typically based on district-created placement tests, prior performance, and/or teachers' recommendations. Loveless (1998) further noted that parent input often influences student placement in middle school. In the areas of science and social studies placement in middle school, Loveless (1998) found the grouping of students to be done more heterogeneously by ability.

In terms of practices relative to grouping middle school students for English classes, Loveless (1998) provides detail with respect to how placement in those courses is determined. Specifically, he writes that it is not uncommon for middle schools to begin grouping by ability in English classes until seventh or eighth grade. Course offerings would include honors English classes for advanced students and remedial classes for students who have been determined to have low academic ability. He cites the scheduling of double reading or English periods as another practice of middle schools regarding the placement of students who are struggling academically (Loveless, 1998).

Unlike in English classes, middle schools begin to group students for mathematics starting in sixth or seventh grade (Loveless, 1998). Loveless (1998) found that tracking students by ability for mathematics begins by eighth grade. He identifies the onset of students taking an advanced class as usually being when they take a pre-algebra course before their grade level peers. Remedial mathematics courses are offered to students and usually have a curriculum that is based on basic arithmetic.

In addition to what research reports relative to the frequency of ability grouping practices in middle schools, other essential findings have been reported with regard to the impact of ability grouping in middle schools. Urdan, Midgley, and Wood (1995) worked for three years with a middle school that had previously assigned students to classes based on their ability. One of the key findings of their work was that grouping students by ability influences how teachers think about teaching. In another study of a middle school that abolished tracking students by ability by Roe and Radeburgh (1993), several positive occurrences were identified. Specifically, teachers reported less parental competition, positive social benefits, academic gains, and positive behavioral consequences (Roe & Radeburgh, 1993). Long-term effects of students who were

placed in math classes based on ability in middle school were studied by Hoffer (1992). Hoffer (1992) concluded that students who were grouped by ability in the lowest performing classes did not perform as well in high school math classes as their counterparts who were not grouped by ability in middle school. Furthermore, Hoffer (1992) contended that instruction, particularly the type of instruction delivered in the higher ability classes, would be more beneficial to students in the lower group than grouping by ability.

A possible benefit to ability grouping could be high achievement for "high" ability math students (Mills, 1997). However, in a study by Mason, Schroeter, Combs, & Washington (1992) high-achieving middle school math students benefited from being grouped heterogeneously. The high-achieving students did not demonstrate any regression in terms of problem solving and computation. They did however demonstrate a higher rate of performance with respect to their conceptual understanding in comparison to their peers from previous years who were grouped homogeneously by ability. More recent findings reveal that tracking students by ability continues to exist. Harris (2011) shares findings that suggest a rationale for why such practices still exist in middle schools. In a study involving six middle schools, Harris (2011) reports that tracking continues to exist as a response to student achievement. Specifically, teachers believe that tracking by ability helps students meet state standards. Secondly, Harris found political factors such as parental involvement heavily impacted student placement as a barrier to removing tracking by ability. Harris (2011) cited administrative concern with regard to losing support and resources from influential parents. Such a finding is supported by Loveless (1999). Third, the cultural norms that exist within a school that historically tracks by ability often prevents detracking. Lastly, Harris (2011) suggested lack of understanding as another obstacle for effectively moving away from tracking.

2.4.3 Inclusion in the Middle School

Mental and physical abilities of students are critical elements of information in terms of how students are assigned to classes and grouped for learning. In 1975 the United States Congress enacted the Education for All Handicapped Children Act (EAHCA) (P.L. 94-142). This act has been reauthorized several times, most recently in 2004. It is presently titled Individuals with Disabilities Education Act (IDEA). Under IDEA, public schools must develop an individualized education program for students with disabilities. The act includes four sections (Section B addresses students ages 3-21). The premise for IDEA is to ensure that all students with disabilities receive a free and appropriate public education in the least restrictive environment. A least restrictive environment is one component of a free and appropriate public education. It can be defined as students who are disabled being educated to the fullest extent possible with their non-disabled peers (Osbourne & Russo, 2006). IDEA has significantly influenced how students with disabilities are assigned to schools and/or grouped for learning. As a result of IDEA, students that were sent to alternative placements and not their neighborhood schools are now being educated in the same schools and classes as their neighbors, peers, and siblings (Willis, 2007).

Inclusion is a grouping practice that provides the least restrictive environment for many students whose educational experience is governed by IDEA. IDEA does not require inclusion for all students; however, it does require students being placed in the least restrictive environment. That is, inclusion is a practice where disabled students (special education) primarily receive their education in general classrooms with other students who are not identified as in need of special education services (York, Doyle, & Kronberg, 1992). The terms, mainstreaming and inclusion, are often used relative to the concept of least restrictive

environment. Mainstreaming and inclusion are the practices that operationalize the least restrictive environment (Fox & Ysseldyke, 1997). To comprehend the concept of inclusion, it is imperative to clarify the difference between mainstreaming and inclusion. Mainstreaming is a selective placement of special education students in one or more "regular" education classes (Stout, 2001). Stout's (2001) description of inclusion expresses commitment to each student remaining to the maximum extent possible in the school and classes they would attend if they were not identified as in need of special education services. Stout (2001) expands her description of inclusion by identifying the practice of full inclusion as one where special education students are fully included in the regular education setting; thus, all needed supports are provided to those students in the regular education classrooms. Moreover, Stout (2001) clarifies the contrast between mainstreaming and inclusion by sharing that the proponents of mainstreaming believe in students having their initial placements outside of the regular education setting. Students would have to demonstrate the need to be placed into the regular education classes. On the contrary, Stout (2001) describes full inclusion as a belief that students should be placed in the regular education setting and only removed when appropriate services cannot be offered.

Students who are disabled may have inclusion as their least restrictive environment regardless of their level in school. Middle schools are structured in a manner that is conducive to inclusion practices (Hines, 2001). Specifically, Hines (2001) cites the success with regard to inclusion in middle schools as a result of common planning time that is shared by the interdisciplinary teams of teachers. Several studies have been conducted relative to inclusion in the middle school. Hines and Johnston (1997) shared findings of a study involving twenty-five middle school teachers. The teachers' schedules consisted of regular education, co-taught

(inclusive), and mainstream settings. Although instructional time was relatively consistent across all settings, general education teachers perceived via a corresponding survey, to have less instructional time when special educations students were present (inclusive). The most time being spent on managerial interactions was found in the mainstream setting. In terms of student behavior, the co-taught class presented the least need for corrective action via the teacher.

Similar to the findings shared by Hines and Johnston (1997), Staub and Peck (1995) examined studies of both elementary and middle school students where they used control groups to study non-disabled students from inclusion settings in comparison to non-disabled students in classrooms were no disabled students were placed. Staub and Peck (1995) found no significant differences without disabled students included in terms of time allotted for instruction and behavior issues between inclusion and the regular education setting.

Ritter, Michel, & Irby (1999) reported a study that examined the perceptions of middle school students, their parents, and teachers. The ethnographic study included fifth and sixth grade middle school students with learning disabilities who participated in inclusion classes at the middle school level. Their elementary school experiences, particularly in fourth grade, had them included in more traditional special education classes where they were not part of the inclusive setting. The study reported shared beliefs amongst these stakeholders relative to the special education students being included in the regular education classroom. Their beliefs encompassed five central themes: 1. Increased Self-Confidence – In comparison to being the traditional special education placement from elementary school, the participants of the study believe the inclusion placement increases students' social and academic confidence. 2. Camaraderie – Participants found that the inclusion placement allowed for more camaraderie as the students were no longer forced to leave classes where their friends were placed. 3. Teacher

Support - Parents and students, in particular, reported that the teacher support in the inclusion classes was critical to the students' overall success. In particular, the special education students did not display low esteem issues that can occur as a result of being educated outside of the regular education setting. 4. Poor Self-Esteem in the Traditional Special Education Classes – All students reported lower esteem when participating in the traditional special education class in elementary school. Several parents echoed the students' feelings as they found that the removal from the regular education classroom created a perception that their children were different. 5. Higher Expectations – Parents and all students reported that the workload in the traditional special education classroom was both less in terms of quantity and rigor. Although the workload was more challenging in the inclusion class, parents and students preferred this placement. In addition to the parent and student interviews, the teacher focus groups had both similar and different themes emerge. The three central themes were: increased student confidence as a result of being placed in the inclusion class, interventions to accommodate improved both teaching and learning (that is, smaller class sizes and sound professional development training were identified as essential for the effectiveness of teaching and learning), and improved academic performance for the special education students.

Regardless of grade level, research exists in terms of the overall benefits of inclusion (Kochhar, West, and Taymans, 2000). Kochar, West, and Taymans (2000) found that the benefits of inclusion far outweigh the drawbacks of inclusionary practices. With respect to disabled students being included in the regular education setting, the researchers identified the positive outcomes for disabled students as being more appropriate social behavior, higher achievement levels, support from non-disabled peers, and an improvement in both teachers' and students' ability to adjust to varying teaching and learning styles. Regarding the general

education non-disabled students who participate in inclusion classes, Kochlar et al. (2000) found these students received additional instructional support due to the added teacher or aide in the classroom, a greater acceptance of students with disabilities, an awareness that students with disabilities are not always easily recognized, and a deeper understanding of the similarities that all students have regardless if they are disabled or not. The overall effectiveness of inclusionary practices research is inconsistent, as both proponents and opponents of it can find data to support their respective views (Hines, 2001). It is apparent that there are clear advantages and disadvantages for not only middle school constituents but for constituents of all levels.

2.5 ASSIGNING STUDENTS TO MIDDLE SCHOOL TEAMS

Instructional grouping practices vary amongst middle schools. To better understand the disparity of practices that are used in middle schools to group students for learning, it is imperative to examine the types of criteria middle schools use to make decisions regarding students' placements. A 25 year perspective on the practices and progress of America's middle schools reported the findings of a 1993 study where 1,798 middle schools were represented via survey participation from principals and other professional staff members (McEwin, Dickinson, & Jenkins, 1996). The premise of McEwin, Dickinson, & Jenkins' (1996) work was to provide a historical perspective of middle schools. To provide such a perspective, the researchers compared data collected in 1993 with that of studies done by Alexander (1968) and Alexander and McEwin (1988). A portion of what McEwin et al. (1996) examined was the criteria that middle schools were using to make placement decisions for the subjects of mathematics, science, social studies, and language arts. The study included six primary criteria: teacher

recommendations, achievement test data, intelligence levels (I.Q. scores), students' prior academic records, random assignment, and parental input. Slight differences existed relative to the three studies; the 1968 and 1988 studies both included age as an additional criterion. The 1993 study did not include age but was the lone study of the three to use parental input as a criterion.

Key findings exist in relation to the percentage of middle schools that were using specific criteria with respect to students' placements in the four core subject areas (McEwin et al., 1996). In comparing the data from Alexander and McEwin (1988) to the 1993 survey, McEwin et al. (1996) reported that all criteria used by the middle schools for grouping students represented a decline at all grade levels (6-8) with the exception of random assignment. Their findings revealed that grade level had little impact on the variation of criteria employed by middle schools. The quantity of middle schools randomly assigning students to their placements essentially doubled within the five year span. For sixth grade, the amount of middle schools using random assignments increased from 25% to 52%, seventh grade went from 24% to 52%, and eighth grade changed from 25% to 51%. In terms of the criterion that had the largest decline, achievement test was found to be that criterion across middle schools. The use of achievement tests in sixth grade declined from 68% to 44%, seventh grade went from 70% to 44%, and eighth grade decreased from 68% to 48%. Teacher recommendations declined 19% in both sixth and seventh grade and 17% in eighth grade. However, even with such a decrease, teacher recommendations still represented the most prevalent criterion amongst middle schools for grouping students. That is, 61% of schools used it as a criterion in eighth grade, 60% for seventh grade, and 57% for sixth grade. McEwin et al's. (1996) findings in terms of teacher

recommendations being the most commonly used criterion by middle schools for students' placements is consistent with the findings of (Alexander, 1968).

In addition to examining criteria the 1,798 middle schools used for grouping students into the four core subject areas, elective course placements were also reviewed by McEwin et al. (1996). They found that randomly assigning students to elective courses to be the criterion used the most by middle schools in both the data from Alexander and McEwin (1988) and the 1993 survey. In 1988, at all grade levels (6-8), approximately half of the participating middle schools used random assignment as a criterion for student placement. Data collected in 1993 for all grade levels was similar to the 1988 data with a slight increase in the percentage of middle schools using random assignment as a criterion. Random assignment was not reported as criterion that was referenced by middle schools in the work of Alexander (1968). Unlike random assignment, the criterion of middle schools using previous academic records was discovered to have had a significant increase with regard to the percentage of middle schools referencing it in terms of student placement for all grade levels. For sixth grade, the percentage of middle schools using previous academic records increased from 12% in 1988 to 30% in 1993. The amount of middle schools for seventh grade went from 13% in 1988 to 31% in 1993. For eighth grade placements in elective courses, the number of middle schools using this criterion rose from 14% to 32%. Alexander's data from 1968 found the criterion used by most middle schools for placement in elective courses to be teacher recommendations (27%). Achievement test data was used by 17% of middle schools, followed by previous academic record at 15%. By 1993, the three leading criterion for elective course placements by middle schools for all grade levels was random assignment, then previous academic record, followed by parental input.

The following comparisons were made between core and elective course placements (McEwin et al. 1996):

- Random assignment was the most consistently used grouping practice when both basic and elective subjects were considered.
- Random assignment was the only criterion that increased at all grade levels between 1988 and 1993 for grouping students in both basic and elective subjects.
- Parental input was a more significant factor in grouping students in elective subjects than in grouping students in basic subjects.
- While using previous academic records has shown a decline between 1988 and 1993 at all grade levels for grouping students for basic subjects, it had significant increases during the same time period for all grade levels for elective subjects. (p. 70)

Table 2. Key Findings from McEwin et al.'s (1996) Study of 1,798 Middle Schools

Teacher Recommendation	Achievement Test	Intelligence Levels	Prior Academic Records	Random Assignment	Parental Input
Use of criterion declined across grades 6-8	Criterion that had the largest decline in use across grade level	Use of criterion declined across grades 6-8	Increase in use of this criterion across grades 6-8 for elective grouping	Only criterion that did not decline in use	With random assignment and prior academic records, this criterion is in the top three most widely used.
Remains most widely-used criterion in middle schools			Decrease use of this criterion across grades 6-8 for basic subject grouping	Use of criterion doubled across grades 6-8 Most widely-used criterion in both 1988 and 1993 surveys.	More significant factor in elective grouping than basic subject

Note: All findings come from McEwin et al.'s (1996) review of the 1993 survey unless stated.

Middle school students' placement on teams, when based upon standard criteria, is fairly consistent (Harris, 2011). Such criteria is comparable to the findings of McEwin et al. (1996) in that schools use standardized test data, teacher recommendations, parent input, and prior performance. Harris (2011) further explored the topic of criteria relative to student grouping on teams by studying if middle school principals used ability grouping in their schools as a criterion.

Harris (1998) surveyed 132 middle schools in the state of Virginia. His findings were consistent with Alexander (1968), Alexander and McEwin (1988), and McEwin et al. (1996) in that teachers' recommendations are the most commonly referenced criterion for assigning students to classes in middle school. Principals from 64% of the schools indicated that they use teacher recommendations as a factor for placing students. Equally represented, 64% of the principals shared that students' prior performance was used as a reference point. Standardized test data was reported as a factor for placement in 58% of the schools. Harris (1998) found differences in his work with respect to the work of McEwin et al. (1996). Harris (1998) found that 37% of the principals used parental request as a criterion for students' placements. Earlier work by McEwin et al. (1996) had an average between 8% and 9% in terms of the amount of middle schools that incorporated parental input as a factor when making placement decisions. Furthermore, unlike McEwin et al. (1996), Harris (1998) surveyed principals to determine if they were using ability grouping as a criterion for students' placements. Harris (1998) found a high percentage of schools to be using ability grouping. Specific data will be shared in subsequent paragraphs.

It is clear that middle schools refer to various criteria when making decisions regarding student placements. A phenomenological study to further explore these factors was partly devoted to examining principals' prevalence for grouping students for instruction based on

ability levels (Stoud, 2002). Stoud's (2002) study included 20 middle school principals from the eastern Tennessee region. The study entailed three months of interviewing. Findings from her work revealed inconsistency with regard to practice and philosophy. That is, 17 of the principals indicated that some form of homogenous grouping exists in at least a portion of the school day. The other three principals shared that their schools have students grouped heterogeneously by ability for all classes. However, only five of the participants shared that they believed homogeneous grouping of students to be what is best for students. Half of the principals participating could not provide a strong opinion relative to ability grouping. The remaining five participants strongly opposed grouping students by ability. Stoud's (2002) findings were reflective of a 1993 survey conducted by the National Association of Secondary School Principals where the majority of middle level principals who participated favored grouping students for instruction by ability. Moreover, Stoud's (2002) findings supported the work of Harris (1998) who reported that 76% of the participating middle schools were using ability grouping as a criterion for assigning students to classes. Specifically, 91% of the larger size middle schools that were included in Harris (1998) were found to use ability grouping for students' placements.

All participants in Stoud's (2002) study identified the pressure of high stakes testing as an influence on students' placements. The participants shared that performance on such tests is used when assigning students to specific ability groups. Such findings are inconsistent with that of McEwin et al. (1996). McEwin et al. (1996) reported a significant decline with regard to the number of middle schools that use standardized testing as a criterion for students' placements by comparing data from 1993 to the work of Alexander and McEwin (1988). Although Stoud's (2002) sampling of participants is substantially smaller than McEwin et al's. (1996), it does

represent data that supports the claim that middle schools are giving more consideration to standardized test data, as there was approximately a 40% increase in prevalence relative to using it as a placement criterion.

More recent research conducted on a national scale provides a relatively current update on instructional grouping in middle schools. McEwin & Greene (2011) conducted two studies in 2009. The first study involved 827 randomly selected middle schools in the United States. The second study, which specifically targeted highly successful middle schools (National Blue Ribbon Award recipients or National Schools to Watch recipients), was significantly smaller with 101 participating middle schools. The former study was intended to identify the current status of middle schools in the United States, while the latter study was aimed at finding practices of high performing middle schools. The random selection study reveals that there is a movement away from randomly grouping students in middle schools. In 2009, only 23% of the participating schools reported to use random groping. Thus, McEwin & Greene (2011) identified this as a finding that indicates movement toward more homogeneous grouping.

A thorough analysis of the increase of ability grouping and tracking practices in middle schools was completed by examining the prevalence of these practices by subject area (McEwin & Greene, 2011). The findings of both of their 2009 studies validate each other. That is, both studies reported that almost 80% of middle schools employ some type of ability grouping or tracking in the area of mathematics. The next highest subject area to use such grouping practices was language arts with 33% of the schools in the random selection study and 41% of the schools in the high performing middle schools study. In the area of reading, the random selection study found 30% of schools using ability grouping or tracking practices with a 19% total from the high performing middle schools. Both studies had less than 20% of middle schools using ability

grouping or tracking as grouping practices in the areas of science and social studies. Mathematics is overwhelmingly the most common subject area to have students grouped by ability or tracked by ability in middle school. The data from McEwin & Greene (2011) clearly indicates that ability grouping and tracking remain commonly used practices for grouping students for learning in middle school.

2.6 CONCLUSION

The effectiveness of grouping practices in schools has been ongoing debate in the research literature. Grouping students by ability has received extensive attention in the research literature; however, its impact on student learning remains unclear. Middle schools, despite the recommendations in the research literature, commonly use some form of ability grouping. Ability grouping in middle schools is often contingent upon subject area, with mathematics being the most prevalent discipline to have students grouped by ability. Regardless of the history and legal cases associated with grouping practices in schools, limited research appears to exist relative to the decision-making and placement process for middle school students. Criteria such as teacher recommendations, prior achievement data, and random assignment, are used most often when placing students in teams. To help increase the data with respect to how students are assigned to teams in the middle school, further research that includes the participation from middle school principals needs to be conducted.

3.0 RESEARCH METHODOLOGY

3.1 STATEMENT OF THE PROBLEM

Determining appropriate grouping arrangements for students in classrooms has been a longstanding discussion in the research literature (Slavin, 1987). Specifically, the literature indicates that the notion of grouping students by ability has led to a debate amongst researchers. Despite the extensive debate of determining the effectiveness of such a grouping arrangement, the research literature can be summarized as being unsettled (Loveless, 1998).

The literature indicates that middle schools quite frequently use some form of ability grouping when arranging students for learning (Epstein & Mac Iver, 1990; Loveless, 1998; Mills, 1997; McEwin & Greene, 2011; Oakes, 1987; Oakes, 2005; Stoud, 2002). However, a contradiction exists with respect to recommendeding grouping practices for middle schools and the practice of grouping students. That is, proponents of the middle school concept do not support grouping students by ability (Carnegie Council on Adolescent Development, 1989; Spear, 1992; David, 1995; NMSA, 2010).

However, there is limited research that identifies the criteria middle school principals use when making decisions with regard to how students are grouped to form interdisciplinary teams. We have minimal knowledge about the criteria they are using and if ability grouping for all or

certain subject areas is part of such criteria. To address that gap, the following research questions frame the inquiry.

3.2 RESEARCH QUESTIONS

The following section includes the research questions that will guide the research study. It also includes a rationale for the study. The three research questions guiding this study are as follows:

1. What are the most prevalent criteria that principals of award-winning middle schools use when grouping students to form interdisciplinary teams?
2. What are the beliefs of principals of award-winning middle schools relative to grouping students by ability as an effective practice for student learning?
3. In relation to ability grouping, how aligned are philosophy and practices as described by principals of award-winning middle schools?

The aim of the research is to provide data for middle school principals relative to the most prevalent criteria used for grouping students to form interdisciplinary teams. The results of this study add to the existing research literature with respect to alignment of practice and philosophy in relation to ability grouping.

The intent of the research study is to determine what the participants, principals of award-winning middle schools, use as criteria when grouping middle school students to form interdisciplinary teams. The study is also focused on determining if there is alignment between the participants' beliefs relative to ability grouping in core academic subjects and the practice of incorporating ability grouping into criteria for student placement within their schools. The study is not intended to prove that certain criteria for grouping students to form interdisciplinary teams

are why those middle schools are award-winning. Rather, the study is designed to research the current practices and beliefs of principals of award-winning middle schools regarding assigning students to interdisciplinary teams. There are many factors that contribute to why participating schools in the study are award-winning. The research for this study lies in determining the common criteria and philosophy that principals of award-winning middle schools in Pennsylvania have in relation to grouping students on interdisciplinary teams.

The next section in this chapter reviews the selection of participants for the study.

3.3 SELECTION OF PARTICIPANTS

This section outlines the rationale and process by which participants for the study were identified. Specifically included are a brief overview of the population and sample for this study and a review of the diversity of schools/participants represented in the study.

3.3.1 Selection Protocol

The population under consideration is principals of award-winning middle schools. The sample under study, however, is principals of middle schools that are recognized as Pennsylvania Donald Eichhorn Schools to Watch (STW). While many middle schools in Pennsylvania share in other types of recognitions, STW recognizes schools for having practices and data that are reflective of being a model middle school. Moreover, STW is named after Dr. Donald Eichhorn, one of the pioneers in the formation of middle schools. The 33 principals recruited to this study

were selected as a result of being a principal of a middle school and a principal of a Donald Eichhorn STW.

3.3.2 Background Information for Study Sample

The National Forum to Accelerate Middle-Grades Reform is an alliance comprised of over 60 national associations, researchers, educators, officers from professional organizations, and foundations that are committed to the academic, social, and emotional development of young adolescents (The National Forum to Accelerate Middle-Grades Reform [NFAMGR], 2014). The Forum's vision is to unite these groups to collectively reform middle level education. Part of their reform plan is to identify replicable models to serve as models for middle level learning. That is, the Forum developed a program called Schools to Watch (STW). The STW program is active in 17 states with 348 schools throughout the United States. Being recognized as a STW is in effect for three years. To continue being an STW, schools must be reevaluated once the three years expires. STW is a program that is designed to identify high-performing middle schools based on 37 points of research-based criteria. Specifically, NFAMGR (2014) arranges the criteria into four categories:

- Academic Excellence – Middle schools that are high-performing in terms of being academically excellent by meeting the academic needs of all learners;
- Developmental Responsiveness – Middle schools that are attentive to the developmental needs of early adolescent children;

- Organizational Structures and Processes – Middle schools that incorporate structures, norms, and organizational arrangements that promote and maintain a trajectory toward excellence;
- Social Equity – Middle schools that provide quality and equity to students in terms of teachers, resources, opportunities for learning, and needed supports.

Pennsylvania is one of the 17 states participating in the STW program. There are 33 active Schools to Watch in Pennsylvania; however, four of the schools are 2014 designees. Thus, their demographic information is not available. Table 3 shares available demographic information for the other 29 Pennsylvania STW. The 29 schools represent diversity with respect to geographical location, socioeconomic status, grade configuration, and enrollment. Column one shares common grade configurations in STW schools. The second column indicates the percentage of students who qualify for free or reduced lunch. The third column identifies the counties in Pennsylvania where STW schools are located. Column four lists the type of communities that house STW schools i.e., rural, suburban, and rural/suburban. The final column provides enrollment ranges. Following each descriptor in the table, the number of schools applying to that descriptor is listed parenthetically. The coding N/A represents information that is not available.

Table 3. Demographic Information for Pennsylvania STW Middle Schools

Configuration	Free/Reduced Lunch	County	Community	Enrollment
Grades 6-8 (16)	Less than 5% (4)	Allegheny (7)	Rural (12)	100-250 (2)
Grades 7-8 (8)	5% - 15% (4)	Warren (3)	Suburban (11)	251-500 (7)
Grades 5-6 (1)	16% - 25% (8)	Washington (3)	Rural/Suburban (6)	501-750 (9)
Grades 7-9 (1)	26% - 35% (5)	Centre (2)		751-1000 (6)

Table 3 (continued)

Grades 4-8 (1)	36% - 45% (5)	Crawford (2)	Over 1000 (3)
Grades N/A (1)	46% - 55% (1)	Montgomery (2)	N/A (1)
	56% - 60% (2)	Counties with one STW school (10)	

Note. Information derived from Pennsylvania Association of Middle Level Education (2014).

The participants of the study represent schools with various grade configurations. The 6-8 grade configuration is the most prominent among all participating schools/principals. The majority of schools targeted for this study have between 16% and 25% of students receiving free or reduced lunch. The highest percentage school in terms of students receiving free or reduced lunch is 60%. Diversity amongst participating schools is reflected in Table 3 as 16 counties throughout the state of Pennsylvania have schools that have been selected for this study. Counties that have only one school participating in the study are: Beaver, Bucks, Butler, Cambria, Chester, Clearfield, Cumberland, Lackawanna, Lawrence, and Union. The schools selected for the study represent counties throughout all regions of Pennsylvania. Community types represented are primarily rural and suburban. Enrollment ranges in participating schools vary with the majority schools ranging between 501 and 750 students.

3.4 FRAMEWORK FOR STUDY

A review of the literature provided specific criteria to use for determining how middle schools group students to form interdisciplinary teams. Specifically, six criteria emerged from studies that investigated the criteria middle school principals use when grouping students. The studies allow for assumptions to be made relative to how students are grouped for learning. However, the literature does not report specifics with regard to the process and meaning that each of the six criteria have in the student placement process. Moreover, it does not allow one to fully garner if principals and schools are grouping students by ability. Thus, to be clear on determining if students are grouped by ability, each criterion included in this research study entails follow-up questions with respect to specifics for each criterion and the individual faculty who are involved in the placement process. While each of the research studies that frame the criteria for this study are reviewed in detail in section 2.5, Table 4 has been created as a means to present the reader with a reference guide to each criterion and the associated research literature included in this study. The third column of Table 4 provides the specific focus areas that were researched within each criterion.

The six criteria incorporated in this study are teacher recommendations, standardized test data, students' prior academic record, random assignment, parent input, and ability grouping. The research literature that frames this study consists of four national studies related to middle level education: Alexander (1968), Alexander and McEwin (1988), McEwin et al. (1996), and McEwin and Greene (2011). Additionally, two dissertations will contribute to the framework: Harris (1998) and (Stoud, 2002).

Table 4. Investigative Criteria for Framing Research Study

Criterion	Associated Research	Specific Focus Areas
Teacher Recommendations	• Alexander (1968) • Alexander and McEwin (1988) • McEwin et al. (1996) • Harris (1998) • Stoud (2002)	Recommendations related to: • Behavior • Academics • Specific Teachers
Standardized Test Data	• Alexander (1968) • Alexander and McEwin (1988) • McEwin, Dickinson, and Jenkins (1996) • Harris (1998) • Stoud (2002)	Test data related to: • State Math Exams • State Reading Exams • State Writing Exams • State Science Exams • PVAAS Growth Data • Other Exams
Students' Prior Academic Record	• Alexander (1968) • Alexander and McEwin (1988) • McEwin, Dickinson, and Jenkins (1996) • Harris (1998)	Records related records: • Report Cards • Parent Conference Notes • IEPs (if applicable) • Service Agreements (if applicable) • Evaluation Reports (if applicable) • I.Q. Scores (if available) • Other Data
Random Assignment	• Alexander (1968) • Alexander and McEwin (1988) • McEwin et al. (1996)	• None

Table 4 (continued)

Parent Input	Alexander (1968) • Alexander and McEwin (1988) • McEwin et al. (1996) • Harris (1998) • Stoud (2002)	Parent input related to: • Academic History • Personal Information • Friend Requests • Teacher Requests
Ability Grouping	• Harris (1998) • Stoud (2002) • McEwin and Greene (2011)	Ability grouping related to: • Specific Subject Areas • Principal's Philosophy of Ability Grouping Practices

3.5 METHODOLOGY

According to Babbie (2013), social research is conducted for three primary purposes: description, exploration, and explanation. Babbie (2013) provides criteria for each of the three purposes. In terms of exploratory studies, Babbie (2013) states the following purposes, "(1) to satisfy the researcher's curiosity and desire for better understanding, (2) to test the feasibility of undertaking a more extensive study and (3) to develop the methods to be employed in any subsequent study" (p. 90). The premise of this research study was aligned to each of Babbie's (2013) purposes for exploratory studies.

The methodology used in this study was survey research. Survey research is often used for exploratory purposes (Babbie, 2013). Moreover, Babbie (2013) describes survey research to be the most effective research method for a social researcher who is attempting to efficiently describe a larger population. Survey research was primarily used in this research study to collect

data that were not available through any other source. In addition, survey research is an effective resource for collecting data when no other source provides data that the researcher is attempting to analyze (Fowler, 1989).

The survey in this study was administered via the telephone. Administering a survey via the telephone has many advantages. Telephone surveys are cost efficient, time saving, and often allow the participants to be more honest in their responses than if they were being interviewed or surveyed in person (Babbie, 2013). Furthermore, phone surveys allow participants of a study to elaborate on responses and researchers to probe as needed (Babbie, 2013).

3.6 DATA COLLECTION

All data for this research study was collected in Qualtrics Survey Software. The data collection procedures included the following:

1. The Executive Director of the Pennsylvania Schools to Watch program was contacted by email for permission to conduct the study with the Pennsylvania Schools to Watch and to forward the researcher's recruitment letter (see Appendix A and Appendix B). See Appendix C for the approval email from the executive director.
2. Within the recruitment script, the participants were asked to respond directly to the researcher within ten days to indicate if they were willing to participate in the research study. Subsequently, a follow-up email was sent to all participants who did not respond requesting a response email within five days.
3. Interview times and dates were coordinated with all participating principals. The coordination occurred via, Doodle, a free online scheduling service.

4. All participants of the study were emailed a copy of the survey that was used in the subsequent telephone call. (See Appendix D.)
5. Surveys were administered via telephone calls. The researcher recorded all responses in Qualtrics Survey Software. The survey interview took approximately 30 minutes to complete. To help improve the quality of the survey, the researcher piloted it with principals who are in the School Leadership Program at the University of Pittsburgh. Specifically, the researcher participated in a semester long course that provided guidance in the dissertation process. Within this course, the researcher piloted the survey with three school principals who were also participating in the course. Two of the principals were currently principals in Pennsylvania middle schools. The other principal is an elementary school principal in Pennsylvania who used to work as a middle school principal in Pennsylvania. Piloting the survey helped determine the length of the time the survey would take to administer. It also helped the researcher to improve questions to aid in participants' understanding. At the conclusion of the telephone call, participants were thanked for their time, and permission was requested in the event that additional information needs to be acquired.
6. Data was downloaded from Qualtrics and formatted into Excel. Data will be saved on a USB storage drive and saved in a locked box in the researcher's home for five years. Data will also be saved in an electronic file on the researcher's computer. All data on the computer will be password protected.

3.6.1 Data Collection Instrument

The instrument was a survey that was administered via a telephone interview (see Appendix E for interview script). The survey was constructed and responses were recorded using Qualtrics Survey Software, an Internet-based tool for constructing and administering surveys. Qualtrics is a software program required by the University of Pittsburgh for conducting research. Qualtrics Survey Software allows for the researcher to efficiently and accurately record all responses from the participants in the study. Contingency questions were used in the survey. Depending on participants' responses, certain participants did not need to respond to all questions. The survey consisted of 44 questions (see Appendix D for a copy of the survey).

All survey items were aligned to the practical standards for question development as recommended by Fowler (1989). Fowler (1989) describes the following four standards as a practical guide for researchers when constructing questions for surveys:

1. Is this a question that can be asked exactly the way it is written?
2. Is this a question that will mean the same thing to everyone?
3. Is this a question that people can answer?
4. Is this a question that people will be willing to answer, given the data collection procedures? (p. 101).

In addition to following Fowler's (1989) recommendations, all questions were closed-ended. The value in using closed-ended questions is that the researcher can solicit greater uniformity in terms of participants' responses, thus they will be more clearly processed than if the questions allowed for open-ended responses (Babbie, 2013).

Furthermore, the questions within the survey were knowledge-based questions. That is, the questions assessed the principals' knowledge of the practices and criteria within their school

that is used to group students to form interdisciplinary teams. Knowledge-based questions are recommended in surveys to gauge people's knowledge of programs (Mertens, 2010). Knowing the practices and criteria for grouping students requires principals to have extensive knowledge of the middle school program in their district.

Lastly, all survey questions were aligned to one or more of the three research questions identified in Section 3.2. The survey questions were divided into six categories. The six categories are derived from the research literature. In addition to the six categories, all questions are aligned to the research questions for the study.

3.7 DATA ANALYSIS

Data analysis within this study occurred at each step throughout the process. Table 5 provides a visual in terms of the organization, alignment, and analysis of data collected in this study. The first step in the process was to administer the survey via a telephone interview. Survey items 1-7 are aligned to demographical and logistical information of the school (via the principal) being surveyed. This demographical and logistical information will be shared in the findings; however, no analysis of these survey items is needed. In terms of alignment to research questions, survey items 8-39 are aligned to research question number one. Items 40-44 are aligned to research question number two. Survey items 36-44 are aligned to research question number three.

Descriptive statistics were used to share the findings of survey items 8-39. All items are reported by the percentage of *yes* and *no* responses. Within items 8-39, the researcher surveyed grouping practices in relation to six criteria: teacher recommendations, standardized test data,

students' permanent files, random assignment, parent input, and ability grouping. For each category, the data are displayed via tables and figures. A narrative accompanies each table and set of figures. The analysis focuses on frequencies in proportion of *yes* and *no* responses for whether different criteria are being used. An analysis was conducted to determine if there are trends across and within different criteria.

Survey items 40-44 are aligned solely to criteria number six, ability grouping. The analysis of these data focuses first on the comparison of ability grouping practices across subject areas: mathematics, language arts, science, and social studies. The data are reported via tables and figures and accompanied by a narrative. The comparative analysis across subject areas is reported with percentages in relation to responses which include: yes, no, only high-achieving students, only low-achieving students, and other. The second focus of analyzing this data is to determine if the findings per subject are consistent with the research literature in terms of prevalence. The third focus of this analysis is to find whether ability grouping is done by subject area (for all or specific groups of students) versus whether the principal believes ability grouping should be done by subject (for all or specific groups of students). Moreover, the analysis is set up to identify if the principals' beliefs differ from practices in their respective schools. If so, the analysis examines if they differ by reporting category. This data are reported through tables, figures, and a narrative. Survey item number 44 is analyzed by reporting the average rank of each of the six criteria.

Table 5. Alignment of Research Questions to Survey Items

Research Question	Evidence	Data Collection	Format for Reporting Data
1) What are the most prevalent criteria that	Principals' responses via survey interviews	Survey questions (8-39)	Tables/Figures Narrative

Table 5 (continued)

principals of award-winning middle schools use when grouping students to form interdisciplinary teams?			
2) What are the beliefs of principals of award-winning middle schools relative to grouping students by ability as an effective practice for student learning?	Principals' responses via survey interviews	Survey questions (40-44)	Tables/Figures Narrative
3) In relation to ability grouping, how aligned are philosophy and practices as described by principals of award-winning middle schools?	Principals' responses via survey interviews	Survey questions (36-44)	Tables/Figures Narrative

4.0 FINDINGS

The primary purpose of this study was to investigate the criteria that are used in Pennsylvania Donald Eichhorn award-winning middle schools when grouping students to form interdisciplinary teams. The framework that guided the inquiry included the following criteria: teacher recommendations, standardized test data, students' prior academic record, random assignment, parent input, and ability grouping. The research literature that framed this study consisted of four national studies related to middle level education: Alexander (1968), Alexander & McEwin (1988), McEwin et al. (1996), and McEwin & Greene (2011). Additionally, two dissertations contributed to the framework: Harris (1998) and Stoud (2002).

The findings in this chapter are presented by the responses to the following research questions:

1. What are the most prevalent criteria that principals of award-winning middle schools use when grouping students to form interdisciplinary teams?
2. What are the beliefs of principals of award-winning middle schools relative to grouping students by ability as an effective practice for student learning?
3. In relation to ability grouping, how aligned are philosophy and practices as described by principals of award-winning middle schools?

The findings for the three research questions are the results of individual telephone surveys administered to each participant. For the first research question, the intent was to look for

frequencies in proportion of yes and no responses for whether different criteria are being used. An analysis was conducted to determine if there are apparent trends across and within different criteria.

The second research question was designed to investigate the participants' beliefs relative to grouping students by ability for core subject areas: math, English language arts, science, and social studies. The third research question focused on analyzing the relationship between the participants' beliefs about ability grouping for core subject areas and the practices of grouping students by ability for the core subject areas in their respective schools.

In addition to presenting the data from each of the three research questions, a section is included to provide analysis for the final question of the survey that had participants rank the importance of the individual criterion addressed in the survey. The chapter concludes with a summary of anecdotal data collected during the administration of the phone survey. Prior to presenting the data collected as part of this research study, a profile of the participants is included to help provide context to the findings.

4.1 PROFILE OF DON EICHHORN SCHOOLS AND THE PARTICIPANTS OF THIS STUDY

Of the 33 Don Eichhorn Schools to Watch (STW) Middle Schools in the Commonwealth of Pennsylvania, 42% (n=14) principals from 14 school districts agreed to participate in the phone survey interviews. The participants of the study ranged in tenure with their respective principal positions from 2-11 years. Three of the principals have been in their current roles for two years, one principal has been in his/her current role for three years, two principals have been their

current role for five years, three principals have been in their current roles for six years, one principal has been in his/her current role for eight years, one principal has been in his/her current role for nine years, and two principals have been in their current roles for 11 years. Moreover, 50% (n=7) of the participants were principals of their school when it was first recognized as a STW.

The participants of the study represent STW schools that range in community types, geographical location, grade configurations, enrollment, and socioeconomic status. Community types in the study were represented by suburban, rural, and suburban/rural schools. Of the 33 STW schools in Pennsylvania, 13 are in rural communities, 12 are in suburban communities, and eight are in suburban/rural communities. Schools in this study in terms of community types were as follows: rural 21% (n=3), suburban 64% (n=9), and rural/suburban 14% (n=2).

Of the 33 STW schools in Pennsylvania, seven are located in Allegheny County, three are located in Warren County, three are located in Washington County, two are located in Centre County, two are located in Crawford County, two are located in Delaware County, two are located in Montgomery County, and 12 other counties in the Commonwealth of Pennsylvania have one STW middle school.

The 14 STW schools in this study were located across the Commonwealth of Pennsylvania. Five schools are located in Allegheny County, and one school is located in each of the following counties: Warren County, Cambria County, Centre County, Delaware County, Lackawanna County, Montgomery County, Berks County, Butler County, and McKean County.

Grade configurations for schools that participated in this study were represented by the following arrangements: grades 5-8, grades 6-8, grades 5-6, and grades 7-8. Of the 33 STW schools, 20 of them have a 6-8 grade configuration, seven have a 7-8 grade configuration, one

has a 5-6 configuration, one has a 7-9 configuration, and three have a 5-8 grade configuration. Schools in this study had the following grade configurations: 50% (n=7) had a 6-8 configuration, 29% (n=4) had a 7-8 configuration, 7% (n=1) had a 5-6 configuration, and 14% (n=2) had a 5-8 configuration.

The enrollment of schools that participated in this study ranged from under 200 students to over 1000 students. Of the 33 STW schools, two schools have less than 250 students, eight schools have between 251-500 students, 10 schools have between 501-750 students, eight schools have between 751-1000 students, two schools had over 1000 students, and two schools did not have enrollment data available. Schools in this study in terms of enrollment ranges were as follows: 14% (n=2) of schools between 100-250 students, 7% (n=1) of school between 251-500 students, 50% (n=7) of schools between 501-750 students, 14% (14% n= 2) of schools between 751-1000 students, and 14% (n=2) of schools over 1000 students.

Table 6 presents an individual demographic profile for all schools that were represented in the study. Table 7 provides a summary of the demographic data and a summary of data relative to the participants of the study.

Table 6. Profile of Schools Represented by Participants

School	Grade Configuration	Percent of Free/Reduced Lunch Range	County	Community Type	School Enrollment Range
School A	6-8	10%-20%	Montgomery	Suburban	100-250
School B	7-8	20%-30%	Lawrence	Suburban	100-250
School C	6-8	30%-40%	Cambria	Rural	251-500
School D	6-8	20%-30%	Centre	Rural/Suburban	751-1000
School E	7-8	Under 10%	Allegheny	Suburban	501-750
School F	5-6	Under 10%	Allegheny	Suburban	501-750
School G	6-8	Over 40%	Allegheny	Rural/Suburban	501-750
School H	6-8	Over 40%	Warren	Rural	501-750
School I	5-8	Over 40%	Allegheny	Suburban	501-750
School J	5-8	Under 10%	Lackawanna	Suburban	Over 1000
School K	6-8	10%-20%	Delaware	Suburban	751-1000
School L	7-8	10%-20%	Butler	Suburban	Over 1000
School M	6-8	20%-30%	Cumberland	Suburban	501-750
School N	7-8	Under 10%	Allegheny	Rural	501-750

Table 7. Demographic Information (N = 14)

Item	*n*
Years in principal role	14
(See also Figure 2)	*M*=6.1
	SD=3.3
Principal when school was designated a School to Watch	
Yes	7
No	7
Grade configuration	
Grades 5 & 6	1
Grades 5 – 8	1
Grades 6 – 8	7
Grades 7 & 8	5
Community type	
Rural	3
Suburban	9
Rural/Suburban	2
Percent of students, free/reduced lunch	
< 10%	4
10% – 20%	3
20% – 30%	3
30% – 40%	1
> 40%	3

Of individuals involved in grouping students to form interdisciplinary teams, school principals were identified as most often involved. One hundred percent (n=14) of participants identified that the principal is involved. Eighty-six percent (n=12) indicated that the school counselor is part of the process, and 86% (n=12) of participants responded that teachers are included. Fifty-seven percent (n=8) of participants mentioned that assistant principals are involved and 21% (n=3) of participants responded that central office administration is part of the decision-making process.

Figure 1 represents a visual of the frequency of responses related to individuals who are involved in the decision-making process for grouping students to form interdisciplinary teams. Figure 2 provides visual representation for frequency of responses with regard to the participants' tenure in their respective positions.

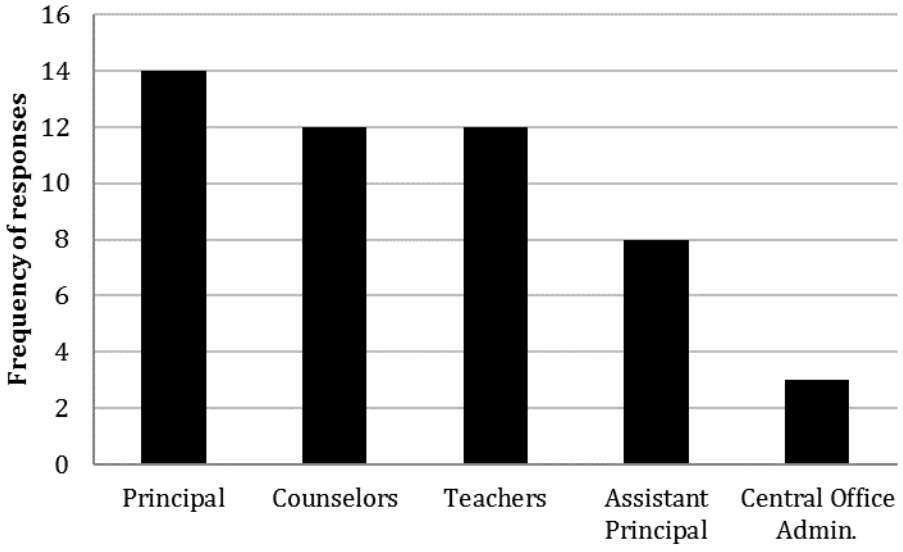

Figure 1. Individuals Involved in the Decision-Making Process

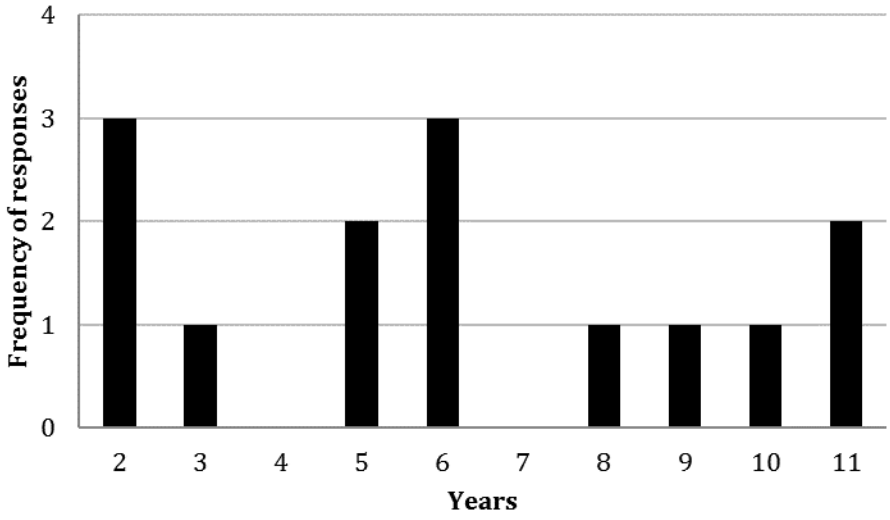

Figure 2. Years in Principal Role (N = 14)

4.2 ADDRESSING THE RESEARCH QUESTIONS

The goals of this study were to investigate the prevalent criteria used by principals in award-winning middle schools when grouping students to form interdisciplinary teams, to investigate the beliefs of principals of award-winning middle schools with regard to grouping students by ability for specific subject areas, and to investigate if this an alignment between the beliefs and practices of principals of award-winning middle schools in relation to grouping students by ability. In this section, participants' responses from the survey are presented for each research question. Findings are reported via narratives, figures, and/or tables. Descriptive statistics are used to analyze the data (i.e., frequencies of responses and percentages).

4.2.1 What are the most prevalent criteria that principals of award-winning middle schools use when grouping students to form interdisciplinary teams?

In order to answer the first research question, participants were asked to respond by answering either yes or no if they use each of the following criteria when grouping students to form interdisciplinary teams: teacher recommendations, standardized test data, information within students' permanent files (prior academic record), random assignment, parent input, and ability grouping. To acquire specific data relative to each criterion, follow-up questions were asked if the participant responded yes to the initial question for each criterion. Data in this section are presented by criterion. The criteria used to frame this study were derived from the following the research: teacher recommendations (Alexander, 1968; Alexander & McEwin 1988; Harris, 1998; McEwin et al., 1996; and Stoud 2002), standardized test data (Alexander, 1968; Alexander & McEwin, 1988; McEwin, Dickinson, & Jenkins, 1996; Harris, 1998; and Stoud, 2002), students' prior academic record (Alexander, 1968; Alexander & McEwin, 1988; Harris, 1998; and McEwin, Dickinson, & Jenkins, 1996), random assignment (Alexander 1968; Alexander & McEwin, 1988; and McEwin et al., 1996), parent input (Alexander, 1968; Alexander & McEwin, 1988; Harris, 1998; McEwin et al., 1996; and Stoud, 2002), and ability grouping (Harris, 1998; McEwin & Greene, 2011).

4.2.1.1 Teacher Recommendations

If participants answered yes to typically using teacher recommendations when grouping students to form interdisciplinary teams, the subsequent list of follow-up questions were asked:

- Are teachers' recommendations related to students' academics?
- Are teachers' recommendations related to placing students with specific teachers?

- Are teachers' recommendations related to students' social interactions with other students?

Of the 14 survey respondents, 86% (n=12) positively answered the question, "Are recommendations of students' current teachers used when grouping students into teams for the subsequent school year?" For these 12 respondents, additional details of teacher recommendations are presented in Table 8. In the follow up questions, participants were given the option of answering yes, no, or sometimes. Responses to follow up questions for how teachers' recommendations are used were as follows: related to students' academics (71% yes, 8% no, 17% sometimes), related to students' placement with specific teachers (25% yes, 33% no, 42% sometimes), and related to students' social interactions with other students (67% yes, 8% no, 25% sometimes). Table 8 is included to help provide the reader with more visual representation of the participants' responses with respect to the criterion, teacher recommendations.

Table 8. Types of Teacher Recommendations Used for Grouping in Schools That Use Teacher Recommendations (n=12)

Are teachers' recommendations related to...	Response frequency		
	Yes	Some-Times	No
...students' academics?	9	2	1
...students' social interactions with other students?	8	3	1
...placing students with specific teachers?	3	5	4

The majority of participants 86% (n=12) indicated that they use teacher recommendations as a criterion when grouping students to form interdisciplinary teams. Teacher recommendations related to students' academics were the most common way in which the participants use the

recommendations. Placement with specific teachers was the least common way the teacher recommendations were used by the participants.

4.2.1.2 Standardized Test Data

If participants answered yes to typically using standardized test data when grouping students to form interdisciplinary teams, the subsequent list of follow-up questions were asked:

- Do you use students' PSSA math (state assessment) scores from the previous year when grouping onto teams?
- Do you students' PSSA reading (state assessment) scores from the previous year when grouping students onto teams?
- When taken in the previous year, do you use students' PSSA writing (state assessment) scores to group them onto teams?
- When taken in the previous year, do you use students' PSSA science (state assessment) scores to group them onto teams?
- Do you use PVAAS growth data (growth measure from PSSA exams) when grouping students onto teams?

Of the 14 respondents, 64% (n=9) positively answered the question, "Is performance on standardized tests used when grouping students onto teams?" For these respondents, additional details of teacher recommendations are presented in Table 9. In the follow up questions, participants were given the option of answering yes, no, or only for certain groups of students. Responses to follow up questions related to the types of standardized test data that is used were as follows: PSSA Math (56% yes, 0% no, 44% only for certain groups of students), PSSA Reading (67% yes, 0% no, 33% only for certain groups of students), PSSA Writing (11% yes,

89% no, 0% only for certain groups of students, PSSA Science (11% yes, 89% no, 0% only for certain groups of students, PVAAS Growth Data (11% yes, 89% no, 0% only for certain groups of students). Table 9 is included to help provide the reader with more visual representation of the participants' responses with respect to the criterion standardized test data.

Table 9. Types of Standardized Test Data Used for Grouping in Schools That Use Standardized Test Scores (n=9)

	Response frequency		
	Yes	Certain student groups	No
Do you use students' PSSA reading scores from the previous year when grouping students onto teams?	6	3	–
Do you use students' PSSA math scores from the previous year when grouping students onto teams?	5	4	–
Table 9 (continued)			
When taken in the previous year, do you use students' PSSA writing scores to group them onto teams?	1	–	8
When taken in previous year, do you use students' PSSA science scores to group them onto teams?	1	–	8
Do you use PVAAS growth data when grouping students onto teams?	1	–	8

The majority of participants 64% (n=9) indicated that they use students' performance on standardized tests as a criterion when grouping students to form interdisciplinary teams. Student performance on PSSA reading assessments was the most commonly used form of standardized test data that participants use when grouping students to form interdisciplinary teams. PSSA math data was also used by a majority of the participants 56% (n=9). PSSA writing, science, and PVAAS growth data, are used by 11% (n=1) of the participants.

4.2.1.3 Prior Academic Record

If participants answered yes to using any data within students' permanent files when grouping students to form interdisciplinary teams, the subsequent list of follow-up questions was asked:

- Do you typically use report cards from the previous year when grouping students onto teams?
- Do you typically use parent conference notes from the previous year when grouping students onto teams?
- Do you typically use students' attendance records from the previous year when grouping students onto teams?
- If applicable, do you typically use IEPs when grouping students onto teams?
- If applicable, do you typically use service agreements when grouping students onto teams?
- If available, do you typically use I.Q. scores when grouping students onto teams?

Of the 14 respondents, 86% (n=12) positively answered the question, "Do you use any data within students' permanent files when grouping them onto teams?" In the follow up questions, participants were given the option of answering yes or no. Responses to follow up questions

related to the types of data within the students' permanent file that are used are as follows: Report cards (42% yes 58% no), parent conference notes (33% yes 67% no), attendance records (8% yes 92% no), IEPs (100% yes), service agreements (92% yes 8% no), and I.Q. scores (8% yes 92% no). Table 10 is included to help provide the reader with more visual representation of the participants' responses with respect to the criterion prior academic record and provides additional details of what types of data were used in these schools.

Table 10. Permanent File Data Used for Grouping Students (n=12)

	Response frequency	
When grouping students onto teams...	Yes	No
...if applicable, do you typically use IEPs?	12	–
...if applicable, do you typically use service agreements?	11	1
...do you typically use report cards from the previous year?	5	7
...do you typically use parent conference notes from the previous year?	4	8
...do you typically use students' attendance records from the previous year?	1	11
...if available, do you typically use I.Q. scores?	1	11

Table 10 (continued)

The majority of participants 86% (n=12) indicated that they use documentation within students' permanent file as a criterion when grouping students to form interdisciplinary teams. IEPs and service agreements were the two most commonly used sources of information that are used to group students onto teams. Specifically, IEPs were the only documentation that received a unanimous response by the participants who use students' permanent files. Attendance records

and I.Q. scores are used the least by the participants who use students' permanent files with only 8% (n=1) participant responding yes.

4.2.1.4 Random Assignment

If participants answered yes to grouping any students randomly when forming interdisciplinary teams, the subsequent list of follow-up questions were asked:

- Are any students randomly grouped for science class?
- Are any students randomly grouped for math class?
- Are any students randomly grouped for English language arts class?
- Are any students randomly grouped for social studies class?

Of the 14 respondents, 93% (n=13) positively answered the question, "Are any students randomly grouped onto teams in your middle school?" In the follow up questions, participants were given the option of answering yes or no. Responses to follow up questions related the specific subject areas where some students are randomly grouped are as follows: Science (100% yes), math (69% yes 31% no), English language arts (77% yes 23% no), and social studies (100% yes). Table 11 is included to help provide the reader with more visual representation of the participants' responses with respect to the criterion random assignment and provides additional details of random grouping.

Table 11. Random Groupings of Students (n=13)

Are any students randomly grouped for...	Response frequency Yes	No
...science class?	13	–
...social studies class?	13	–
...English language arts class?	10	3
...math class?	9	4

The majority of participants 93% (n=13) indicated that some students are randomly grouped when forming interdisciplinary teams. Each of the 13 participants responded that all students are randomly grouped for the subject areas science and social studies. The subject area of math had the least amount of random grouping with 69% (n=9) of the 13 participants responding that they group some students randomly.

4.2.1.5 Parent Input

If participants answered yes to using parent input when grouping students to form interdisciplinary teams, the subsequent list of follow-up questions were asked:

- When grouping students onto teams, do you typically use parent input related to students' academic history?
- When grouping students onto teams, do you typically use parent input related to students' personal information?
- When grouping students onto teams, do you typically use parent input for friend requests?
- When grouping students onto teams, do you typically use parent input for teacher requests?

Of the 14 respondents, 64% (n=9) positively answered the question, "Is parent input used when grouping students onto teams in your middle school?" In the follow up questions, participants were given the option of answering yes or no. Responses to follow up questions related to the types of parent input that is used are as follows: Parent input for academic history (78% yes 22% no), parent input for students' personal information (78% yes 22% no), parent input for friend requests (44% yes 56% no), and parent input for teacher requests (44% yes 56% no). Table 12 is

included to help provide the reader with more visual representation of the participants' responses with respect to the criterion parent input.

Table 12. Parent Input Used for Grouping Students (n=9)

When grouping students onto teams, do you typically use parent input...	Response frequency	
	Yes	No
...related to students' academic history?	7	2
...related to students' personal information?	7	2
...for friend requests?	4	5
...for teacher requests?	4	5

Table 12 (continued)

The majority of participants 64% (n=9) indicated that they use parent input when grouping students to form interdisciplinary teams. Parent input related to students' academic history and personal information are both used by 78% (n=7) of the participants who use the criterion of parent input. Equally represented was parent input related to friend requests and teacher requests. Both types of input are used by 44% (n=4) of the participants who use the criterion parent input.

4.2.1.6 Ability Grouping

If participants answered yes to grouping students by ability for any subject areas when forming interdisciplinary teams, the subsequent list of follow-up questions were asked:

- Are students grouped by ability in math class?
- Are students grouped by ability in English Language Arts Class?
- Are students grouped by ability in science class?

- Are students grouped by ability in social studies class?

Of the 14 respondents, 93% (n=13) positively answered the question, "When grouping students onto teams, are they grouped by ability for any subjects?" In the follow-up questions, participants were given the option of answering yes (all students), no, only high-achieving students, only low-achieving students, or other. Responses to follow up questions related to the subject areas where students are grouped by ability are as follows. Math: (42% all students, 0% no, 25% only high-achieving students, 0% only low-achieving students, and 33% for other). Of the four participants who responded other three responded that they group by ability for only the high and low-achieving students, and one participant responded that grouping by ability is done only in grades seven and eight, not grades five and six.

English Language Arts: (15% all students, 31% no, 15% only high-achieving students, 23% only low-achieving students, and 15% other). Of the two participants who responded other one responded that only the high and low-achieving students are grouped by ability, while the other participant indicated that an accelerated class is offered to students and is based off of performance data and student choice in entering the class.

Social Studies: (92% no, 8% only high-achieving students). No participants group students by ability in science class. Table 13 presents a visual representation of the participants' responses with respect to the criterion ability grouping.

Table 13. Classes Where Students Are Grouped by Ability (n=13)

	Response frequency				
Are students grouped by ability in...	Yes, All Students	Only high achievers	Only low achievers	No	Other
...math class?	5	3	–	–	5

Table 13 (continued)

...English language arts class?	2	2	3	4	2
...social studies class?	–	1	–	12	-
...science class?	–	–	–	13	–

The majority of participants 93% (n=13) indicated that they use ability grouping for certain subjects when grouping students to form interdisciplinary teams. The subject of math was the subject area with the highest percentage of participants indicating that they group all students by ability 42% (n=5). English language arts was the only other subject area that also had participants indicating that all students are grouped by ability in their school 15% (n=2). In terms of schools only grouping high-achieving students by ability, the math had the highest percentage response with 25% (n=3). English language arts was second with 15% (n=2), followed by social studies with 8% (n=1). No participants indicated that they group high-achieving students by ability in science classes. With respect to low-achieving students, 23% (n=3) of the participants indicated that they group by ability for English language arts class. No participants responded that they group low-achieving students by ability for any other subject areas. The participants indicated that science was the only subject area where no students were grouped by ability, followed by social studies with 92% (n=12) of the participants stating that students were not grouped by ability. English language arts had 31% (n=4) of participants responding that they do not group any students by ability. Math was the only subject that all participants reported that some form ability grouping occurs within their school. For participants who responded other for grouping by math class ability, 31% (n=4) indicated their use of ability grouping was not on the provided list of options. That is, three of the four participants responded that they only use ability grouping for high-achieving and low-achieving students. The other

respondent indicated that students are grouped by ability for math in grades 7 and 8 but not grades 5 and 6. Similarly, for participants 15% (n=2) who responded other for English language arts ability grouping, one respondent mentioned that he or she only groups high-achieving and low-achieving students by ability, while the other participant responded that an accelerated class for students based on performance data and student choice.

4.2.2 What are the beliefs of principals of award-winning middle schools relative to grouping students by ability as an effective practice for student learning?

In order to answer the second research question, participants were asked to respond to questions about their beliefs related to grouping students by ability for four subject areas: math, English language arts, science, and social studies. The specific questions they were asked are as follows:

- Do you believe middle school students should be grouped by ability in math class?
- Do you believe middle school students should be grouped by ability in English language arts class?
- Do you believe middle school students should be grouped by ability in science class?
- Do you believe middle school students should be grouped by ability in social studies class?

Their options in terms of responses were as follows: yes (all students), no, only high-achieving students, only low-achieving students, or other. Responses, with respect to participants' beliefs, are categorized by subject area.

All participants responded to questions regarding their beliefs about grouping middle school students by ability in particular subjects. Overall, the response pattern was similar to that from the previous questions pertaining to the grouping practices that are implemented.

Math: Of the 14 participants, 86% (n=12) indicated that they believe some form of ability grouping should occur for math classes. Twenty-nine percent (n=4) felt that all students should be grouped by ability for math. Twenty-one percent (n=3) believed that only high-achieving students should be grouped by ability for math. Fourteen percent (n=2) did not believe in ability grouping for math. No participants responded that they believe in ability grouping for only low-achieving students. Thirty-six percent (n=5) of the participants responded other. Responses from those participants were as follows:

- only for low-achieving and high-achieving students;
- only for low-achieving and high-achieving students;
- only for low-achieving and high-achieving students;
- for all students once they reach 7th grade;
- for all students if the groupings are flexible.

English Language Arts: Of the 14 participants, 50% (n=7) indicated that they believed some form of ability grouping should occur for English language arts class. Twenty-nine percent (n=4) felt that all students should be grouped by ability for English language arts class. Seven percent (n=1) believed that only low-achieving students should be grouped by ability for English language arts class. No participants believe that only high-achieving students should be grouped by ability for English language arts class. Fifty percent (n=7) do not believe in grouping any students by ability for English language arts class. Fourteen percent (n=2) of the participants responded other. Responses from those participants were as follows:

- only for low-achieving and high-achieving students;
- for all students if the groupings are flexible.

Science: Of the 14 participants, 14% (n=2) responded that they believed some form of ability grouping should exist in science class. Both of those participants believed that all students should be grouped by ability in science. No participants believed that only high or only low-achieving students should be grouped by ability in science. Eighty-six percent (n=12) believed that no students should be grouped by ability in science.

Social Studies: Of the 14 participants, 14% (n=2) responded that they believed some form of ability grouping should exist in social studies class. Seven percent (n=1) believed that all students should be grouped by ability in social studies. Seven percent (n=1) believed that only high-achieving students should be grouped by ability in social studies class. No participants indicated that they believed in ability grouping for only low-achieving students in social studies. Eighty-six percent (n=12) responded that they believed no students should be grouped by ability in social studies. Table 14 displays participants' beliefs about ability grouping by subject.

Table 14. Beliefs about grouping students by subject (N=14)

Do you believe that students should be grouped by ability for...	Response frequency				
	All Students	Only high achievers	Only low achievers	No	Other
...math class?	4	3	–	2	5
...English language arts class?	4	–	1	7	2
...social studies class?	1	1	–	12	–
...science class?	2	–	–	12	–

4.2.3 In relation to ability grouping, how aligned are philosophy and practice as described by principals of award-winning middle schools?

To answer the third research question, a general comparison was made of the participants' responses to questions related to ability grouping practices by subject area in their respective schools with that of the participants' responses related to their beliefs regarding grouping students by ability for specific subject areas. The overall alignment between practices and beliefs among the participants was relatively consistent. Several key findings for each subject area emerged from the analysis.

- The subject area of math had the highest amount of participating schools grouping all students by ability as well as the highest amount of participants believing that all students should be grouped by ability. There was also alignment for practices and beliefs for high-achieving students being grouped by ability in math, as three participants indicated that they group only high-achieving students by ability in math. Three participants also responded that they believed that only high-achieving students should be grouped by ability for math.
- The subject area of social studies had alignment in terms of beliefs and practices relative to ability grouping. Twelve participants indicated they did not group students by ability for social studies. Twelve participants also responded that they did not believe in ability grouping for social studies.
- The subject area of science had alignment in terms of beliefs and practices relative to ability grouping. Thirteen participants responded that they did not group by ability for science class. Twelve participants also responded that they did not believe in ability grouping for science.

- Of the four core subjects, English language arts had the least amount of alignment in terms of practices and beliefs. There is not enough data to conclude a strong alignment to any of the available options for the participants.

Due to the volume of response options and limited participants of the study, individual comparison tables do not provide useful data. Tables 13 and 14 are provided below to offer a visual comparison for the reader.

Table 15. Classes where students are grouped by ability (n=13)

	Response frequency				
Are students grouped by ability in...	Yes, All Students	Only high achievers	Only low achievers	No	Other
...math class?	5	3	–	–	5
...English language arts class?	2	2	3	4	2
...social studies class?	–	1	–	12	-
...science class?	–	–	–	13	–

Table 16. Beliefs about grouping students by subject (N=14)

	Response frequency				
Do you believe that students should be grouped by ability for...	All Students	Only high achievers	Only low achievers	No	Other
...math class?	4	3	–	2	5
...English language arts class?	4	–	1	7	2
...social studies class?	1	1	–	12	–
...science class?	2	–	–	12	–

4.3 ADDITIONAL FINDINGS

The final question of the survey asked the participants to order the following criteria in terms of most important to least important when grouping students to form interdisciplinary teams: teacher recommendations, standardized test data, prior academic record, random assignment, parent input, and ability grouping.

All but one participant ranked teacher recommendations as one of the top three most important, with four ranking it as most important, six ranking as second most important, and three ranking it as third most important (Mean rank = 2.1, SD = 1.1). For prior academic record, four participants ranked as most important, five ranked as second most important, and two as third most important (Mean rank = 2.4, SD = 1.4). Achievement test data was ranked most important by three participants, second most important by two participants and third most important by three (Mean rank = 3.4, SD = 1.8) participants. Random assignment (Mean rank = 4.1, SD = 1.7) and ability grouping (Mean rank = 4.2, SD = 1.4) were ranked in the top three most important by three and four participants, respectively. Finally, parent input (Mean rank = 4.7, SD = 1.3) was ranked in the top three most important by three participants and ranked as lowest importance by five participants. Figure 3 provides a graphical comparison of means and standard deviations of ranked importance of grouping criteria.

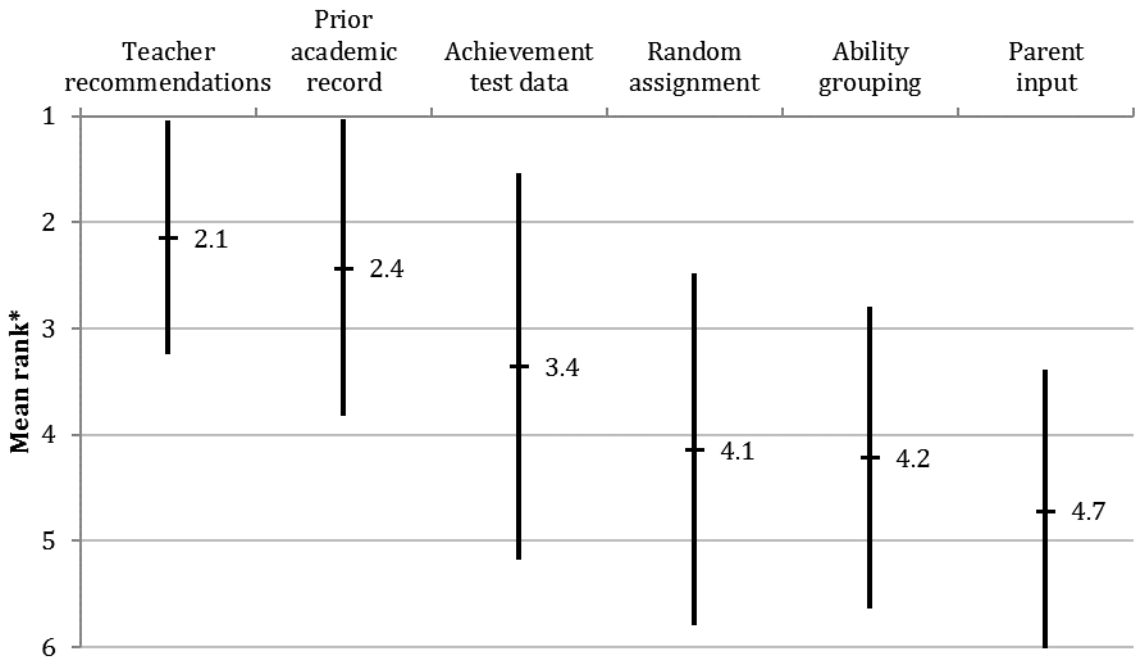

Figure 3. Means and Standard Deviations for Ranked Importance of Grouping Criteria

Note. *A rank of 1 corresponds to most important and 6 corresponds to least important. The range of +/-1 SD is depicted by plot whiskers.

4.4 ANECDOTAL DATA

In the process of administering the survey via a telephone call with each participant, several pieces of anecdotal data were collected. The following is a list of themes that emerged from the anecdotal data.

- Three participants expressed frustration that parents have too much influence over students' placements.
- All participants who acknowledged that they do not use parent input as a criterion for students' placement indicated that they would do so in extreme situations.

- Five participants shared that they will likely be using PVAAS growth data as a future criterion for grouping students when forming interdisciplinary teams.
- Four participants mentioned that components of the new teacher evaluation model in the Commonwealth of Pennsylvania will likely influence more ability grouping across subject areas.
- Four participants of the study indicated that they find math to be the subject where students present the most variation in terms of readiness levels.

5.0 DISCUSSION

This research study was guided by three questions:

- What are the most prevalent criteria that principals of award-winning middle schools use when grouping students to form interdisciplinary teams?
- What are the beliefs of principals of award-winning middle schools relative to grouping students by ability as an effective practice for student learning?
- In relation to ability grouping, how aligned are philosophy and practices as described by principals of award-winning middle schools?

A survey with 44 questions was administered via a telephone call to 14 principals of Pennsylvania Don Eichhorn Schools to Watch middle schools. These findings have several implications worth discussing in this chapter. This chapter includes a discussion of the major research findings in relation to the research literature, implications for practice, implications for future research, and limitations of the study.

5.1 FINDINGS AND DISCUSSION RELATED TO THE RESEARCH LITERATURE

5.1.1 Criteria Used to Group Students to Form Interdisciplinary Teams

Various criteria are used to group students to form interdisciplinary teams in middle schools. This inquiry included the following criteria: teacher recommendations, standardized test data, students' prior academic record, random assignment, parent input, and ability grouping. The research literature that framed this study consisted of four national studies related to middle level education: Alexander (1968), Alexander and McEwin (1988), McEwin et al. (1996), and McEwin and Greene (2011). Additionally, two dissertations contributed to the framework: Harris (1998) and Stoud (2002). For this section, each criterion investigated in this study will be presented individually. The organization of this information will first include a comparison to the research literature with respect to the criterion, followed by a discussion of the findings.

Teacher recommendations are the most widely used criterion in middle schools (Alexander, 1968; Alexander & McEwin, 1988; Harris, 1998; and McEwin et al., 1996). The findings of this study are relatively consistent with the research literature. That is, 86% (n=12) of the participants indicated that they use teacher recommendations when grouping students to form interdisciplinary teams. Further evidence of agreement with the research literature was provided by participants' responses to the survey, as teacher recommendations received the highest mean rank when participants ordered the importance the six criteria of this study have when grouping students to form interdisciplinary teams. Additionally, McEwin et al.'s (1996) study of 1,798 middle schools compared data from those middle schools at two points in time, 1988 and 1993. During both studies, teacher recommendations were the most commonly used criterion used among the 1,798 middle schools. However, teacher recommendations had

declined considerably as a criterion within that five-year period. Between 1988 and 1993, teacher recommendations declined as a criterion for grouping students to form interdisciplinary teams at several grade levels. At the eighth grade level, teacher recommendations declined from 78% to 61% of the schools, at the seventh grade level, it declined from 79% to 60% of the schools, and at the sixth grade level, it declined from 76% to 57%. The findings for this study are more aligned to data from 1988 than 1993 in terms of the percentage of schools using teacher recommendations to group students to form interdisciplinary teams.

Clearly, teacher recommendations continue to be highly valued by middle school principals in terms of the student placement process. However, anecdotal data captured from the phone surveys indicated that teacher recommendations might lose value moving into the future. Principals shared the increasing importance of PVASS growth data, and the new teacher effectiveness model for the Commonwealth of Pennsylvania, for grouping students to form interdisciplinary teams. Both reference points (PVASS growth data and components of teacher effectiveness model) are directly aligned to recent legislation in Pennsylvania. Specifically, they are both components of a new accountability model that is used to evaluate teachers and school principals. PVAAS growth data is one criterion within the new evaluation model. Thus, both of these reference points could be held in higher value than teacher recommendations with respect to criteria that are used when placing students.

The second criterion investigated in this study was the use of standardized test data. Standardized test data are normally used as a criterion when grouping students to form interdisciplinary teams in middle school (Alexander, 1968; Alexander & McEwin, 1988; Harris, 1998; McEwin et al. 1996). McEwin et al's (1996) review of 1,798 middle schools found the standardized test data to have had the largest decline amongst all criteria used to group students

to form interdisciplinary teams. At the eighth grade level, standardized test data declined from 68% to 48%, at the seventh grade level, it declined from 70% to 44%, and at the sixth grade level, it declined from 68% to 44%. Conversely, this study found a higher percentage of schools using standardized test data as a criterion with 64% (n=9) of participants positively endorsing that it is used in their school. Such findings are more consistent with the research of Harris (1998) and Stoud (2002). Harris's (1998) findings were identical to the results of this study, as 64% of the participants reported that they use standardized test data. Stoud (2002) found that high stakes testing heavily influenced students' placement in middle school.

With the recent adoption in the Commonwealth of Pennsylvania of the *Act 82 of 2012 Educator Effectiveness* (2012), I anticipate standardized test data will continue to be used at a much higher frequency as a criterion for grouping students to form teams in middle schools throughout the state. Because of Act 82, student performance on standardized tests will, for the first time, be part of both teachers' and principals' annual evaluations. Specifically, 30% of their evaluations will stem from student performance data, teacher specific scores, and a building score. Teacher specific scores will be worth 15% of teachers' annual evaluations, and another 15% of their annual evaluations will be the building score (School Performance Profile). The School Performance Profile is a combination of teacher scores. The only teachers who receive a teacher specific score are those teachers who instruct in the state tested subject areas of math and English language arts. All teachers who instruct in non-tested subject areas, or in the area of science, will have the School Performance Profile Score doubled. Thus, it will count for 30% of their annual evaluations. The School Performance Profile will count for 15% of principals' annual evaluations. An additional 15% will derive from a category called correlational data. Correlational data means that school districts must examine the relationship between principals'

evaluations of teachers who receive teacher specific scores, and the growth data from their students on state required math and English language arts exams. The power of student achievement data in relation to teachers' and principals' evaluations will undoubtedly increase the importance of using standardized test data as a criterion for student placement. Because schools are not required to implement the new teacher evaluation model until their collective bargaining agreements expire, which will likely include all participants of this study over the next two years, it is reasonable to suggest that all participants of this study will be endorsing this criterion in the near future.

The next criterion investigated in this study was the use of students' prior academic record. It is worth noting that limited research exists about the frequency of students' prior academic records being used when grouping them to form interdisciplinary teams. The findings of this study provide evidence that students' prior academic records are used when grouping students onto teams as 86% (n=12) of the participants responded that they use it as a criterion. This number is substantially higher than that of McEwin et al's (1996) finding that 64% of the participants used students' prior academic records. Participants of this study also gave this criterion the second highest mean rank behind teachers' recommendations when ranking the importance of criteria for grouping students to form interdisciplinary teams.

This finding was a bit contradictory. That is, the majority of participants 86% (n=12) positively endorsed the use of students' prior academic records for placement on interdisciplinary teams. However, when I asked follow-up questions about the specific types of information that was used from students' prior academic records, only two of the six types of documentation investigated in this study were used by the majority of participants, Individualized Education Program (IEP) and 504 Service Agreements. Unlike the other four

areas that were addressed in follow-up questions (report cards, attendance records, parent conference notes, and I.Q. scores), IEPs and 504 Service Agreements are legally binding documents. Perhaps this is a rationale for why such a large discrepancy exists between the use of the various criteria investigated in the follow-up questions related to students' prior academic records. It is plausible to conclude that principals do not use the other items in students' prior academic as often because of the potential accessibility issues to such items if they are not stored in an electronic format. Moreover, since teacher recommendations are so frequently used, it is possible that principals believe that such recommendations are including a referencing of students' report cards, attendance records, parent interactions, and intelligence levels.

The fourth criterion that was explored in this study was random assignment. Random assignment is a criterion that is heavily relied upon when grouping students to form interdisciplinary teams (McEwin et al. 1996). Specifically, McEwin et al. (1996) found this criterion to show the largest increase among the 1,798 participating middle schools from the years 1988 to 1993. In contrast to this finding, a more recent study by McEwin & Greene (2011) found that only 23% of 827 randomly selected middle schools used random grouping as a criterion. McEwin & Greene's (2011) study is not supported by this research study as 93% (n=13) of the participants endorsed random assignment as a criterion.

Perhaps the difference in findings of this research study and the more recent research literature of McEwin & Greene (2011) was that the sample population of this research study are principals of schools that are recognized as award-winning for being middle schools that are closely aligned to the recommended practices of the middle school movement. Such a movement advocated for students to be heterogeneously grouped by ability in all classes. It is

unlikely that McEwin & Greene's (2011) study included many participating schools that were recognized as Schools to Watch.

Once the follow-up questions of this research study were asked relative to random grouping, I was able to determine if random grouping occurs more frequently by subject area. These data, coupled with the follow-up questions related to grouping by ability for specific subjects areas, revealed random assignment to be more common in the subject areas of science and social studies. It is quite plausible to conclude that unlike math and English language arts, these subject areas are not state tested in Pennsylvania in consecutive years throughout the middle school. Currently, social studies has no state required assessment, and science is only administered in grade 8. Moreover, the science exam is not part of the criteria that determines teachers' and principals' annual evaluations in *Act 82 Educator Effectiveness* (2012). This might lead one to conclude that random assignment would have not been as positively endorsed in this study if standardized test data in the areas of science and social studies were required components of the new evaluation model for teachers and principals in the Commonwealth of Pennsylvania.

Due to the lack of quantitative measures in the subject areas of science and social studies, it is reasonable to associate this phenomenon with the prevalence of principals randomly assigning students in these subject areas. Unlike math and English language arts, science and social studies have little to no data stemming from diagnostic testing, achievement testing, benchmark testing, or other forms of standardized testing. Perhaps the lack of data points in these two subjects areas contribute to the overwhelming practice of grouping students randomly. Furthermore, such data points in math and English language arts might possibly give principals more confidence with grouping students by ability.

The fifth criterion investigated in this study was ability grouping. Grouping students by ability is quite common in middle schools (Harris, 1998; McEwin & Greene, 2011; Mills, 1997; Oakes, 1987; Stoud, 2002; and Valentine et al., 1993). The findings of this study support the research literature, as 93% (n=13) of the participants responded that some form of ability grouping exists in their schools. Additional research that investigated use of ability grouping by subject area helped me design the follow-up questions for this criterion. Middle schools are more likely to group students by ability in some subjects but not all subjects (Loveless, 1998). Loveless (1998) identified math as a subject area to have students more often grouped by ability, while the subjects of science and social studies rarely group students in this manner. A more recent study provided further support for Loveless's (1998) work, as McEwin & Greene (2011) compared data from a study including 827 randomly selected middle schools and a study of 101 award-winning (National Blue Ribbon) middle schools. A summary of those findings are as follows:

- Almost 80% of middle schools employ some type of grouping by ability in the area of mathematics in both studies;
- Forty-one percent of award-winning (National Blue Ribbon) middle schools group by ability in English language arts;
- Thirty-three percent of schools in the random selection study responded that they group by ability in English language arts;
- Less than 20% of middle schools in both studies grouped by ability for science and social studies.

The findings of this study are closely aligned to both the work of Loveless (1998) and McEwin & Greene (2011). That is, participants of this study identified math as the subject area

with the highest response of some form of grouping by ability existing in their respective schools with 57% (n=8) positively endorsing it. The second highest subject area to use some form of ability grouping was English language arts with 50% (n=7) of the participating schools. The subject of social studies had only 7% (n=1) of participants responding that some form of ability grouping exists, while science had no participants responding that they group by ability.

The findings of this research study with respect to students being grouped by ability for subject areas were closely aligned to my unstated hypothesis at the onset of this research study. Being that the participating schools of this research study have students in all grade levels taking annual state exams in the areas of math and English language arts, it is my belief that these external forces heavily influence student placement in certain subject areas. By grouping them by ability, principals have more control over team and teacher placement. Furthermore, perhaps middle school principals are most comfortable grouping students by ability in math classes, as there is a segment of the research literature that strongly supports grouping certain students by ability for math instruction (Harris, 2011; Kulik, 1992; Mason, Schroeter, Combs, & Washington, 1992; Mills, 1997). Moreover, with the continued focus on American students not performing as well on standardized math assessments as students in other countries, it is plausible that principals are more comfortable keeping their grouping practices similar to that of other award-winning schools. McEwin & Greene's (2011) study included data from 101 (Blue Ribbon) award-winning schools. Findings were similar from their study in terms of the prevalence of grouping students by ability for math instruction. Additionally, parental influence on students' placements in certain school districts is quite possibly a dominant factor in explaining why students continue to remain grouped by ability in many middle schools. This belief is supported by Loveless (2009).

As a former middle school teacher, principal, and supervisor of middle level education, I often found that principals' decisions were influenced by their own educational experiences. The participants of this study are likely no different. When it comes to grouping practices, most principals were probably students in schools where grouping by ability most often occurred in math and English language arts and/or reading classes. Although I believe standardized testing and other variables influence the prevalence of ability grouping in math and English language arts classes, I find it difficult not to attribute a portion of this influence to the principals' own school experiences. Furthermore, if this model of grouping worked for them as students, it is understandable why they would endorse it so highly in the schools they lead.

The last criterion investigated in this study was parent input. Parent input is not reported to be as valued of a criterion in comparison to the other criteria investigated in previous research studies (Harris, 1998; McEwin et al., 1996). Harris (1998) found that 37% of the 132 principals who were surveyed used parent input in the placement process. McEwin et al.'s (1996) study of 1,798 middle schools found there to be between 8% and 9% of the participants using parent input as a criterion. The findings of this study with respect to parent input appear to have a slightly higher value than reported in previous research. That is, 64% (n=9) of the participants stated that they used parent input as a criterion for placement. However, in the follow-up questions related to the types of parent input that is used, friend and teacher requests received significantly lower values with only 29% (n=4) of the participants endorsing it. Such findings are more consistent with the research literature.

The findings of this study relative to parent input are a bit contradictory. The majority of participants 64% (n=9) positively endorsed using parent input. However, in terms of ranking the importance of the six criteria investigated in this study, parent input received the lowest overall

mean score. Conceivably, the participants of this study are concerned about losing support and resources from influential parents if they do not offer them some voice in the placement process. Of the 14 participants, only four participants represented schools that have a free reduced lunch percentage of more than 30%. Perhaps there is a correlation between the criterion parent input and the socioeconomic status of the schools participating in this research study. Parents are more influential in schools that have higher socioeconomic status (Loveless, 2009). Interestingly, although participants of this study use parent input, they clearly do not value it in most instances.

5.1.2 Principals' Beliefs Related to Ability Grouping

The majority of research literature reviewed in this study found ability grouping to be an ineffective practice for grouping students in middle school (David, 1995; Noland & Taylor, 1986; Oakes, 1985; Oakes, 1987; Slavin, 1987a; Slavin, 1990; Spear, 1992; Trimble & Sinclair, 1987). Furthermore, a wealth of legal cases associated with the lack of student equity of this practice were reviewed earlier in this study. In addition to the preponderance of evidence in the research literature that denounced ability grouping and the legal attention ability grouping has garnered, the middle school movement strongly supported grouping students heterogeneously by ability. The Carnegie Council on Adolescent Development (CCAD) (1989) published a report on middle level reform, *Turning Points.* This publication supported the work of Eichhorn (1966). Such support emphasized the importance of a middle school structure being one that is highly considerate of the unique needs of middle school students. Moreover, the notion of grouping students homogeneously by ability was not deemed to be best for the middle school.

Contrary to the research literature, middle school is a common ground for students to be grouped by ability (McEwin & Greene, 2011). The findings of this study support the work of McEwin

and Greene (2011). That is, 86% (n=12) of the participants endorsed some form of ability grouping for mathematics, and 50% (n=7) of the participants endorsed some form of ability grouping for English language arts. The subject areas of science and social studies were only endorsed by 14% (n=2) of the participants. In the area of mathematics, 71% (n=10) of the participants believe that ability grouping is appropriate for high ability students. Additional research findings that are consistent with this study are that of Valentine, Clark, Irvin, Keefe, and Melton (1993). They revealed that a study conducted by the National Association for School Principals found 82% of middle school principals believed in some form of ability grouping practices.

There appears to be a quandary between the original intent of the middle school movement and some of the practices and beliefs of the award-winning middle schools represented in this study. As previously stated, the middle school movement promoted heterogeneously grouping students by ability. The findings of this study revealed that principals of award-winning schools do believe in ability grouping for certain subjects and certain groups of students. Interestingly, the participants of this study represent schools that are recipients of an award named after one of the founding fathers of the middle school movement, Dr. Donald Eichhorn. As a school administrator who worked for fifteen years in middle level education, I believe that the participants of this study are using many of the recommended practices as part of the middle school movement. Conceivably, the accountability measures that existed in public education at the onset of the middle school movement in the 1960s did not exist as they do in 2015. Federal legislation such as *No Child Left Behind* (No Child Left Behind [NCLB], 2002) and state legislation such as *Act 82 Educator Effectiveness* (2012) are two examples of legislation that changed accountability measures in public schools by placing an emphasis on

student achievement and growth data as measured by criterion referenced standardized tests. In addition to these pieces of legislation changing how schools, principals, and teachers are evaluated and perceived, there is also an abundance of public data and reporting measures that rank schools regionally, throughout the Commonwealth, and nationally. Such mediums promote competition amongst school districts. Interestingly, the commonality in legislation, public data, and reporting that exists in 2015 is that they are closely linked to student performance data in the subject areas of math and English language arts. Thus, the participants of this study are presumably more comfortable grouping students by ability in these two subject areas, as they can have more control over student placement. There is a strong belief that grouping students by ability enhances student achievement and helps to meet state standards (Harris, 2011). It would be interesting to survey the participants of this study about their beliefs associated with ability grouping, particularly those who believe in some form of ability grouping in the areas of math and English language arts, if the accountability measures and pubic reporting of school performance did not exist. By doing so, it would likely become clearer if these participants are philosophically aligned to the initial middle school movement with respect to beliefs about ability grouping or if they are perhaps conditioned by the accountability era that exists in public education in 2015.

Although 86% (n=12) and 50% (n=7) of the participants believe students should be grouped by ability for math and English language arts, respectively, the same participants also gave ability grouping the second to lowest mean rank score when ranking the six criteria investigated in this study. As an administrator who has worked extensively in middle level education, I often found that ability grouping has a negative connotation. As a result of this connotation, educators are reluctant to acknowledge their agreement with ability grouping

practices. Perhaps this is a one explanation for the discrepancy between the participants' beliefs and their rank ordering of the investigated criteria in this study.

5.1.3 Alignment of Principals' Beliefs and Practices in their Schools

There is limited research available relative to the alignment of principals' beliefs of ability grouping practices with that of the practices within their respective schools. This study found the beliefs of the participants with respect to practices and philosophy of ability grouping to be relatively aligned. That is, the practices in their respective schools were quite similar to their beliefs. Such data is not consistent with Stoud's findings (2002). Stoud (2002) found the practices and beliefs of the principals in her study to lack alignment. There were no significant discrepancies found in this study; moreover, there was strong alignment in the areas of science, social studies, and particularly high-achieving math students. Although limited research exists relative to the benefits of ability grouping, there is data to support grouping students by ability for high-achieving students to be an effective practice (Kulik, 1992; Kulik, 1993; Mason, Schoreter, Combs, & Washington, 1992; Mills, 1997).

Perhaps this study found strong alignment with regard to the practice and beliefs of grouping high-achieving students by ability in math class because of the commonality of it in middle schools. McEwin and Greene (2011) found 80% of middle schools that participated in their national study had some form of ability grouping for students in math class. Furthermore, as previously mentioned, math classes for high-achieving students are one of the few areas where research supports academic gains when the students are grouped by ability. It is possible that the difference in findings with respect to this study and Stoud's (2002) study are that Stoud (2002)

did not investigate ability grouping practices by subject area but investigated the alignment on more of a general scale.

A final idea regarding participants' beliefs and practices associated with ability grouping is that principals strongly influence student placement in their schools. Due to the alignment that exists, it is reasonable to conclude that principals' beliefs with respect to ability grouping practices clearly impact how students are grouped for instruction in specific subject areas.

5.2 IMPLICATIONS FOR PRACTICE

The findings of this study were reflective of the research literature: grouping practices are not universal across all middle schools. Moreover, the 14 school principals who participated in this study representing Pennsylvania Don Eichhorn award-winning schools were not completely aligned in their practices and beliefs. This construct has several implications for practice.

Effective January 1, 2013, teacher certification in the Commonwealth of Pennsylvania changed to include a specific middle school level certificate (Pennsylvania State Education Association [PSEA], 2013). Training to earn such a certificate places an emphasis on understanding the middle school structure and the unique needs of middle school age students. However, a specific certification for principals relative to the middle school level does not exist. Although principal preparation programs address components of middle level education, there appears to be a discrepancy between the certification requirements for teachers and the requirements for school administrators. Since principals are paramount in making decisions regarding students' placement in middle school, it would be of high value for them to have more in-depth training and specific certification requirements relative to the unique needs of middle

school students. The most feasible and logical action would be for the Pennsylvania Department of Education to require middle school principals to complete specific courses related to middle school age children and middle school concepts as part of their required continuous education requirements. The expected outcome of such requirements would be that students' placement in middle schools would be more universally aligned across all middle schools. Further, the additional training for school principals would hopefully help provide better guidance in terms of students' placements in order to ensure that they are primarily based on what is beneficial for the students.

A second implication is for the Pennsylvania Schools to Watch Organization, the Pennsylvania Association for Middle Level Education, the Association for Middle Level Education, and any other middle school advocacy groups. Due to the increased focus on high-stakes testing, specifically the role student performance data has on the evaluations of schools, principals, and teachers, the work of middle school advocacy groups is quite possibly needed more now than ever before. The premise of their advocating should focus on educating policymakers relative to the negative and potentially damaging consequences of accountability measures in public schools. Such advocating with local and state legislators needs to occur to help preserve the middle school model. This model was built with the foundation that students would be assigned heterogeneously by ability to interdisciplinary teams of teachers. Unfortunately, changes in accountability measures for public schools may possibly influence principals' decision-making relative to student placement in schools to focus more on these criteria generated from these accountability mandates. The risk of this influence is that criterion such as standardized tests, student growth data, teacher and principal evaluations, and building evaluation scores, will become the most prevalent criteria used by middle school principals.

A third implication for practice would be for the National Forum to Accelerate Middle-Grades Reform. The Forum established the rubric that is used for Schools to Watch evaluators. The purpose of the rubric is twofold: to evaluate the application of schools applying to become a school to watch and for the evaluators to use as an assessment tool during the site visit to those schools that passed the written application part of the process (See Appendix F STW Application and Appendix G STW Rubric). One of the four domains within the rubric is social equity. The social equity domain has a combined total of ten general criteria. The first general criterion in this domain focuses on schools placing all students into classes where they are heterogeneously grouped by ability to the fullest extent possible. The findings of this study support the need for action from the National Forum to Accelerate Middle-Grades Reform and the Pennsylvania Association of Schools to Watch. That is, with 93% of this study's participants responding that some form ability grouping occurs in their schools and 86% and 50% believing ability grouping is appropriate for math class and English language arts class, respectively, this general criterion would appear to have a low overall success rate. Perhaps these organizations could incorporate more professional development associated with this criterion at their professional development workshops and conferences as well as within the various publications they provide to their members.

5.3 IMPLICATIONS FOR FUTURE RESEARCH

There are several implications for future research to be conducted based off of the design and findings of this study. The study investigated prevalent criteria that are being used by principals

of award-winning middle schools (Pennsylvania Don Eichhorn Schools to Watch). To help make the data more generalizable, the following types of research could be conducted.

The Schools to Watch (STW) organization is active in 19 states with 348 member schools (The National Forum to Accelerate Middle-Grades Reform [NFAMGR], 2014). Conducting a study with all member schools would provide data that more accurately reflects the current grouping practices within STW schools. Additionally, a comparison could be done between STW in Pennsylvania with STW throughout the United States. A second strategy to assist in generalizing the data would be to conduct a similar study with other award-winning middle schools such as those with National Blue Ribbon recognition. The outcome would be to do a comparison between STW and National Blue Ribbon schools to help determine if the grouping practices of STW are similar with other middle schools that have been deemed to be award-winning.

This study was focused on investigating criteria that were studied in previous research studies. It would be interesting to explore additional criteria that may also influence students' placement when forming interdisciplinary teams. Teacher recommendations were found to be a prevalent and deemed most important criterion by the participants within this study. However, this study did not investigate the decision-making autonomy that teachers of the interdisciplinary teams have once students are assigned to their teams. Perhaps a future study with STW team teachers would help examine the relationship between the value of their recommendations with the autonomy of their decision-making in terms of student placement.

Most of the questions in the study required only a yes or no response. This study helped expand upon the specific types of criteria that were used in previous research studies. However,

a future qualitative study would allow the researcher to capture the rationale behind why principals use specific types of criteria.

This study did not directly investigate principals' decision-making practices. However, the findings were related to decisions that were made with respect to grouping practices in middle school. Additional research relative to the rationale and scope of decision-making processes that middle schools principals use for operating their schools would likely add additional meaning to the findings of this study.

Lastly, the implementation of *ACT 82 of 2012, Educator Effectiveness* in the Commonwealth of Pennsylvania is likely to influence student placement in the middle school grades. As part of the unsolicited anecdotal data collected in this study, 35% (n=5) of the participants reported that they will likely use PVAAS growth data in future years as a criterion when grouping students to form interdisciplinary teams. Additionally, 29% (n=4) of the participants anecdotally reported that they are concerned that the impact of ACT 82 will influence more grouping of students by ability. Being that requirements of Act 82 are relatively new to most school districts, it is too early to evaluate the actual impact it has on grouping practices in middle schools. Perhaps a future study would help to determine the influence ACT 82 has on student placements. Specifically, the study could investigate the prevalence of criteria used by school principals when grouping students to form interdisciplinary teams associated with this legal mandate, standardized tests, ability grouping frequencies by state tested subject areas, and the use of PVAAS growth data.

5.4 LIMITATIONS

This study included 14 of the 33 principals of Pennsylvania Don Eichhorn Schools to Watch (STW) middle schools. Although the findings of this study will contribute to the research literature about current grouping practices in middle schools, the generalizability of the findings is limited. The study only included school principals from a specific type of award-winning middle school in the Commonwealth of Pennsylvania. Therefore, the data cannot be generalized beyond this sample. A second limitation associated with this study is the sample size. The response rate was adequate (42%); however, the findings are representative of 14 middle school principals. The participants of this study represent a small percentage of the available population of middle school principals. A third limitation of the study is that the sample group only included participants of one type of an award-winning school, the Don Eichhorn STW. Although the STW program evaluates four domains, academic excellence, social equity, developmental responsiveness, and organizational structures and processes, there are other recognitions with different criteria that also deem middle schools to be award-winning. Another limitation of this study is the lack of demographic diversity of the participants. That is, no participants represented middle schools that are located in an urban community setting. Furthermore, only 29% (n=4) of the participants reported having a free or reduced lunch percentage in their school that was above 40%. Lastly, this was an exploratory study, thus limiting the depth of the inquiry into the decision-making processes that principals use when grouping students to form interdisciplinary teams.

5.5 CONCLUSION

This study found that various criteria are used when grouping students to form interdisciplinary teams in middle schools. Random assignment and ability grouping were the most prevalent criteria used in Pennsylvania Don Eichhorn Schools to Watch middle schools. Although these criteria were the most prevalent, the findings show that some form of ability grouping is most prevalent in math class followed by English language arts. In contrast to this finding, social studies had very few participants reporting that students are grouped by ability for class, and no participants reporting grouping by ability in science class. Therefore, the random assignment criterion was highly prevalent when grouping students in science and social studies classes, but significantly less prevalent in math and English language arts.

The next two most prevalent criteria were teacher recommendations and students' prior academic record with the majority of participants responding that they use each criterion. The two criteria that were used the least by the participants were parent input and standardized test data.

In terms of principals' beliefs relative to ability grouping practices, the majority of the participants endorsed some form of ability grouping for mathematics, and half of the participants endorsed some form of ability grouping for English language arts. The subject areas of science and social studies were endorsed by very few of the participants. In the area of mathematics, a majority of the participants believe that ability grouping is appropriate for high-ability students.

Principals' beliefs were found to be highly aligned with the practices in their respective schools. Thus, it is reasonable to conclude that principals influence the grouping practices in their schools with respect to grouping students by ability. It is unclear, however, if the practices and beliefs of middle school principals relative to grouping students by ability for specific

subject areas and not all subject areas are a product of high-stakes testing and the various accountability measures associated with student performance data that exist in public education in 2015.

My hope in doing this research study was to provoke researchers, policymakers, and school leaders to carefully examine the relationship between accountability measures via student performance data and grouping practices in today's middle schools. Moreover, it is quite evident for the need to further evaluate the viability of the original middle school model in an era where high-stakes testing and school accountability legislation clearly influence decision-making practices in schools.

APPENDIX A

REQUEST LETTER TO EXECUTIVE DIRECTOR OF SCHOOLS TO WATCH

Mr. Bruce Vosburgh
Executive Director
Pennsylvania Schools to Watch Program
1905 Lenape Unionville Road
Kennett Square, PA 19348

Dear Mr. Vosburgh:

You are receiving this letter as a request for me to conduct my dissertation research study with the principals of the Schools to Watch schools. I am currently a doctoral student in the University of Pittsburgh's School Leadership Program. The goal of my study is to examine how principals of Schools to Watch schools group students to form interdisciplinary teams, and to study how they group students for academic subjects within interdisciplinary teams. To collect these data, I will be administering a survey via a telephone call. The survey interview will take approximately 20-30 minutes to complete. Principals' participation will be anonymous. Data that are collected will remain confidential. I would like contact the head principals from the 33 Pennsylvania Schools to Watch middle schools as listed on Pennsylvania Schools to Watch webpage. My dissertation study will be guided by the following research questions:

- What are the most prevalent criteria principals of award winning middle schools use when grouping students to form interdisciplinary teams?
- What are the beliefs of principals of award winning middle schools relative to grouping students by ability as an effective practice for student learning?
- How aligned are the philosophy and practice for principals of award winning middle schools in relation to ability grouping?

Thank you for considering my request to conduct my dissertation study with the Schools to Watch Program. I am attaching the survey and my recruitment letter for your review. If you have any questions regarding my request, please contact me by telephone at 412-736-6491. If I have your consent to conduct the study, I would greatly appreciate it if you could provide me with a letter to serve as your approval. Within your letter, I need for you to verify the following information:

1. That I have your consent to use Schools to Watch principals as participants in my study.
2. That you agree to forward my recruitment letter to all Schools to Watch Principals.

Sincerely,

John T. Rozzo
Doctoral Student
University of Pittsburgh

APPENDIX B

RECRUITMENT LETTER

Dear Principal:

You are receiving this letter as a request for participation in a dissertation research study that I will be conducting. I am currently a doctoral student in the University of Pittsburgh's School Leadership Program. Additionally, I am the Assistant Superintendent for the Upper St. Clair School District. Prior to this appointment, I spent my entire career in middle level education. I was a teacher, assistant principal, principal, and then supervisor of middle level education. I always have been and continue to be a staunch advocate for middle level education. As part of my dissertation study, I will be surveying via phone interviews, principals of Don Eichhorn Schools to Watch middle schools. The goal of my study is to investigate grouping practices from award-winning middle schools. Specifically, I will be collecting data related to the following: criteria used for grouping students to form teams in your school, your professional perspective on ability grouping, and the alignment between ability grouping practices in your school with that of your professional perspective on ability grouping.

If you decide to participate, you will receive an electronic invitation to complete one (1) approximately 20-30 minute survey via phone interview. The survey will consist of primarily closed-ended questions. There are no foreseeable risks associated with your participation in this research study. All responses will be confidential and results will be kept under in a secured location. It is my hope that this research will add to the existing research literature relative to grouping practices in middle schools. Your input will help identify grouping practices that are used in award-winning middle schools.

Your participation in the study is voluntary. If you are willing to participate in my research study, or if you have any questions, please contact me via email at jrozzo@uscsd.k12.pa.us or by telephone at 412-736-6491. If you would be kind enough to contact me by December 5 (via email), I would greatly appreciate it. Once I receive notification that you are willing to participate in my research study, I will send you an electronic invitation to schedule the phone call. The invitation will be sent via Doodle. The online scheduling tool will allow for us to easily schedule a day and time that is convenient for you. Once confirmed, I will email you the

survey so that you can preview it prior to our phone call. Thank you for considering participating in my study. As an administrator in a school district with two Don Eichhorn Schools to Watch, I am honored and excited about the potential of working with you.

Sincerely,

John T. Rozzo

John T. Rozzo
Doctoral Student
University of Pittsburgh

APPENDIX C

APPROVAL LETTER

11/19/2014
Mail - John Rozzo

[redacted]

John Rozzo

[redacted] Tue, Nov 18, 2014 at 7:54 PM

John,

I have read your proposal and survey questions and fully support your Initiative. Feel free to send information to our current STW schools. Please let me know if you need me to send any information out to the schools.

Thanks,
Bruce Vosburgh
Director - Don Eichhorn Schools:

Schools to Watch Sent from Xfinity

Connect Mobile App

Original Message —

From: Rozzo John
To: [redacted]
Sent: November 18, 2014 at 5:28 PM
Subject: John Rozzo

Figure 4. Approval Letter

APPENDIX D

SURVEY

Grouping Practices in Award Winning Middle Schools

For purposes of this study, the following definition of ability grouping will be used.

Ability Grouping -- The practice of placing students into classrooms or small groups based on readiness levels (Kulik, 1992; Gamoran, Nystrand, Berends, and Lepore, 1995).

Q1. How long have you been principal of your current school?

Q2. Were you principal of your current school when the school was designated as a Pennsylvania Don Eichhorn School to Watch?

- ○ Yes
- ○ No

Q3. Please identify which of the following individuals are part of the decision making process to group to students when forming interdisciplinary teams? Check all that apply.

- ☐ Principal
- ☐ Assistant Principal
- ☐ Teachers
- ☐ Central Office Administration
- ☐ School Counselors

Q4. I am going to list for you several different grade configurations. Can you please tell me the one that exists in your middle school?

- Grades 5 and 6 only
- Grades 5 through 8
- Grades 6 through 8
- Grades 7 and 8 only
- Grades 7 through 9
- Other (please describe)

Q5. Which of the following community types best describes your school community?

- Rural
- Suburban
- Urban
- Rural/Suburban

Q6. Which of the following ranges represents the percentage of students in your school receiving free or reduced lunch?

- Less than 10%
- Between 10% and 20%
- Between 20% and 30%
- Between 30% and 40%
- More than 40%

Q7. Would you like a copy of the report when this research study is completed?

- Yes
- No

Q8. Are the recommendations of students' current teachers typically used when grouping students onto teams for the subsequent school year?

- Yes
- No

Q9. Are teachers' recommendations related to students' academics?

- Yes
- No
- Sometimes

Q10. Are teachers' recommendations related to placing students with specific teachers?

- Yes
- No
- Sometimes

Q11. Are teachers' recommendations related to students' social interactions with other students?

- Yes
- No
- Sometimes

Q12. Is student performance on standardized tests used when grouping students onto teams?

- Yes
- No

Q13. Do you use students' PSSA math scores from the previous year when grouping students onto teams?

- Yes
- No
- Only for certain groups of students

Q14. Do you use students' PSSA reading scores from the previous year when grouping students onto teams?

- Yes
- No
- Only for certain groups of students

Q15. When taken in the previous year, do you use students' PSSA writing scores to group them onto teams?

- Yes
- No
- Only for certain groups of students

Q16. When taken in previous year, do you use students' PSSA science scores to group them onto teams?

- Yes
- No
- Only for certain groups of students

Q17. Do you use PVAAS growth data when grouping students onto teams?

- Yes
- No
- Only for certain groups of students

Q18. Do you use any data within students' permanent files when grouping them onto teams?

- Yes
- No

Q19. Do you typically use report cards from the previous year when grouping students onto teams?

- Yes
- No

Q20. Do you typically use parent conference notes from the previous year when grouping students onto teams?

- Yes
- No

Q21. Do you typically use students' attendance records from the previous year when grouping students onto teams?

- Yes
- No

Q22. If applicable, do you typically use IEPs when grouping students onto teams?

- Yes
- No

Q23. If applicable, do you typically use service agreements when grouping students onto teams?

- Yes
- No

Q24. If available, do you typically use I.Q. scores when grouping students onto teams?

- Yes
- No

Q25. Are any students randomly grouped onto teams in your middle school?

- Yes
- No

Q26. Are any students randomly grouped for science class?

- Yes
- No

Q27. Are any students randomly grouped for math class?

- Yes
- No

Q28. Are any students randomly grouped for English language arts class?

- Yes
- No

Q29. Are any students randomly grouped for social studies class?

- Yes
- No

Q30. Is parent input used when grouping students onto teams in your middle school?

- Yes
- No

Q31. When grouping students onto teams, do you typically use parent input related to students' academic history?

- Yes
- No

Q32. When grouping students onto teams, do you typically use parent input related to students' personal information?

- Yes
- No

Q33. When grouping students onto teams, do you typically use parent input for friend requests?

- Yes
- No

Q34. When grouping students onto teams, do you typically use parent input for teacher requests?

- Yes
- No

Q35. When grouping students onto teams, are they grouped by ability for any subjects?

- Yes
- No

Q36. Are students grouped by ability in math class?

- Yes, all students
- No
- Only high achieving students
- Only low achieving students
- Other

Q37. Are students grouped by ability in English language arts class?

- Yes, all students
- No
- Only high achieving students
- Only low achieving students
- Other

Q38. Are students grouped by ability in science class?

- Yes, all students
- No
- Only high achieving students
- Only low achieving students
- Other

Q39. Are students grouped by ability in social studies class?

Yes, all students

No

Only high achieving students

Only low achieving students

Other

Q40. Do you believe middle school students should be grouped by ability in math class?

Yes, all students

No

Only high achieving students

Only low achieving students

Other

Q41. Do you believe middle school students should be grouped by ability in English language arts class?

Yes, all students

No

Only high achieving students

Only low achieving students

Other

Q42. Do you believe middle school students should be grouped by ability in science class?

Yes, all students

No

Only high achieving students

Only low achieving students

Other

Q43. Do you believe middle school students should be grouped by ability in social studies class?

Yes, all students

No

Only high achieving students

Only low achieving students

Other

Q44. If you could use any or all of the below listed criteria, please rank order from most important to least important in terms of their value when grouping students onto teams in middle school. The number one represents the criteria that you deem has the most importance.

Teacher Recommendations

Achievement Test Data

Prior Academic Record

Parent Input

Random Assignment

Ability Grouping

APPENDIX E

PHONE SURVEY SCRIPT

Introduction

Thank you for your willingness to participate in my study. The following survey interview will take approximately 30 minutes to complete. As you already know, the goals of my research study are to determine the criteria used for grouping students onto teams in award winning middle schools, to collect data related to the principals' perspectives on ability grouping, and to identify if there is an alignment between ability grouping practices in award winning middle schools and ability grouping believes of principals of award winning middle schools.

There are no foreseeable risks associated with your participation in this research study. All responses will be confidential and results will be kept under lock and key. It is my hope that this research will add to the existing research literature relative to grouping practices in middle schools. Your input will help identify grouping practices that are used in award winning middle schools.

I am going to ask you questions related to various criteria that are referenced in the research literature in terms of grouping students on to interdisciplinary teams in middle schools. Those criteria include: teacher recommendations, standardized test data, random assignment, parent input, students' prior academic record, and ability grouping. I will then conclude the interview with a section where I will ask you to place an importance value on those criteria as well as I will have you identify for me the steps involved in your process when grouping students onto interdisciplinary teams. Before we get started, can you look over the survey that I sent to you through email? This will help guide you through our interview. Do you have any questions about the survey?

Prior to beginning, I need your consent to participate. If you agree, I would like to audiotape this interview, unless you tell me not to. Again, the interview should last no longer than 30 minutes. Please know that you can chose to not answer a question or withdraw yourself from the interview

at any time. You may contact me by telephone if you have questions after the interview is completed. I can be reached at 412-736-6491.

Are you willing to participate in this telephone interview? _____

I will begin the interview by asking you a few demographical questions.

Demographic Questions

1. How long have you been principal of your current school? _____

2. Were you principal of your current school when the school was designated as a Pennsylvania Don Eichhorn School to Watch? Yes _____ No _____

3. Please identify which of the following individuals are part of the decision making process to group students when forming interdisciplinary teams? Check all that apply.

___ Principal
___ Assistant Principal
___ Teachers
___ Central Office Administration
___ School Counselor or Counselors

4. I am going to give you several grade configurations. Can you please tell me the one that exists in your middle school?

Grades 5 and 6 only
Grades 5 through 8
Grades 6 through 8
Grades 7 and 8 only
Grades 7 through 9
Other (please describe)

5. Which of the following community types best describes your school community?

Rural
Suburban
Urban
Rural/Suburban

6. Which of the following ranges represents the percentage of students in your school receiving free or reduced lunch?

Less than 10%
Between 10% - 20%

Between 20% - 30%
Between 30% - 40%
More than 40%

7. Would you like a copy of the report when this research study is completed?

Yes ____ No ____

The next section of the survey will focus on questions related to the six criteria used for grouping students in middle school.

Teacher Recommendations

8. Are the recommendations of students' current teachers used when grouping students onto teams for the subsequent school year?

Yes _____ No _____

Depending on the subject's response, the following options are available for the researcher.

Since you answered no, we will move to question 12.

Since you use teachers' recommendations as part of your placement process, can you please answer yes, no, or sometimes for questions for questions 9-11.

9. Are teachers' recommendations related to students' academics?

Yes ____ No ____ Sometimes ____

10. Are teachers' recommendations related to placing students with specific teachers?

Yes ____ No ____ Sometimes ____

11. Are teachers' recommendations related to students' social interactions with other students?

Yes ____ No ____ Sometimes ____

Standardized Test Data

12. Is student performance on standardized tests used when grouping students onto teams?
Yes ____ No ____

Depending on the subject's response, the following options are available for the researcher.

Since you answered no, we will move to question 18.

Since you use standardized test data as part of your placement process, we will move to questions 13-18.

13. Do you use students' PSSA math scores from the previous year when grouping students onto teams? Yes ___ No___ Only for certain groups of students ___

14. Do you use students' PSSA reading scores from the previous year when grouping students onto teams?
Yes ___ No ___ Only for certain groups of students _____

15. When taken in the previous year, do you use students' most recent PSSA writing scores to group them onto teams?
Yes ___ No ___ Only for certain groups of students ____

16. When taken in the previous year, do you use students' most recent PSSA science scores to group them onto teams?
Yes ___ No___ Only for certain groups of students ____

17. Do you use PVAAS growth data when grouping students onto teams?
Yes ___ No___ Only for certain groups of students ____

Students' Permanent Files

18. Do you use any data within students' permanent files when grouping them onto teams?
Yes ____ No ____

Depending on the subject's response, the following options are available for the researcher.

Since you answered no, we will move to question 25.

Since you use students' prior academic records, please answer yes or no to questions 19-24 in terms of if you use the data when grouping them onto teams.

19. Do you typically use report cards from the previous year when grouping students onto teams? Yes ____ No ____
20. Do you typically use parent conference notes from the previous year when grouping students onto teams? Yes ____ No ____
21. Do you typically use students' attendance records from the previous year when grouping students onto teams? Yes ____ No ____
22. If applicable, do you typically use IEPs when grouping students onto teams?
Yes ____ No ____
23. If applicable, do you typically use service agreements when grouping students onto

teams? Yes ____ No ____

24. If applicable, do you typically use I.Q. scores when grouping students onto teams?
Yes ____ No ____

Random Assignment

25. Are any students randomly grouped onto to teams in your middle school?

Yes ____ No ____

Depending on the subject's response, the following options are available for the researcher.

Since you answered no, we will move to question 30.

Since you randomly assign students in your school, can you please respond yes or no, in terms of if you randomly group students for the following subject areas, questions 26-29?

26. Are any students randomly grouped for science class? Yes ____ No ____
27. Are any students randomly grouped for math class? Yes ____ No ____
28. Are any students randomly grouped English Language Arts Class?
Yes ____ No ____
29. Are any students randomly grouped for social studies class? Yes ____ No ____

Parent Input

30**.** Is parent input used when assigning students to interdisciplinary teams in your school?
Yes _____ No _____

Depending on the subject's response, the following options are available for the researcher.

Since you answered no, we will move to question 35.

Since you utilize parent input when you group students onto teams, can you please answer yes or no to each of the following specific types of input you collect from parents, questions 31-34?

31. When grouping students onto to teams, do you typically use parent input related to students' academic history? Yes ____ No _____
32. When grouping students onto to teams, do you typically use parent input related to students' personal information? Yes ____ No _____
33. When grouping students onto to teams, do you typically use parent input for friend requests? Yes ____ No _____
34. When grouping students onto to teams, do you typically use parent input for teacher requests? Yes ____ No _____

Ability Grouping

35. When grouping students onto teams are they grouped by ability for any subjects?
Yes ____ No ____

Depending on the subject's response, the following options are available for the researcher.

Since you answered no, we will move to question 40.

Since you use ability grouping in your school, can you please tell me if you group by ability for each of the following subject areas? Please listen carefully to all of your options before answering, questions 36-39.

36. Are students grouped by ability in math class?

Yes, all students ____
No ____
Only high achieving students ____
Only low achieving students ____
Other ____ Please explain

37. Are students grouped by ability in English language arts class?

Yes, all students ____
No ____
Only high achieving students ____
Only low achieving students ____
Other ____ (Please explain)

38. Are students grouped by ability in science class?

Yes, all students ____
No ____
Only high achieving students ____
Only low achieving students ____
Other ____ (Please explain)

39. Are students grouped by ability in social studies class?

Yes, all students ____
No ____
Only high achieving students ____
Only low achieving students ____
Other ____ (Please explain)

Can you tell me if you believe middle schools should group by ability for the following subject areas? Again, please listen carefully to all of your options before responding to the question.

40. Do you believe middle school students should be grouped by ability for math class?

    Yes, all students ____
    No ____
    Only high achieving students ____
    Only low achieving students ____
    Other ____ Please explain

41. Do you believe middle school students should be grouped by ability for English language arts class?

    Yes, all students ____
    No ____
    Only high achieving students ____
    Only low achieving students ____
    Other ____ Please explain

42. Do you believe middle school students should be grouped by ability for science class?

    Yes, all students ____
    No ____
    Only high achieving students ____
    Only low achieving students ____
    Other ____ Please explain

43. Do you believe middle school students should be grouped by ability for social studies class?

    Yes, all students ____
    No ____
    Only high achieving students ____
    Only low achieving students ____
    Other ____ Please explain

Rank Ordering Criteria

44. If you could use any or all of the below listed criteria, please rank order from most important to least important in terms of their value when grouping students onto teams in middle school. The number one represents the criteria that you deem has the most importance.

Teacher Recommendations	____
Achievement Test Data	____
Prior Academic Record	____
Parent Input	____
Random Assignment	____
Ability Grouping	____

Thank you. You participation in this interview has been very helpful.
Thank you for your time today.

APPENDIX F

PENNSYLVANIA DON EICHORN SCOOLS: SCHOOLS TO WATCH 2015-2016

APPLICATION

PENNSYLVANIA DON EICHHORN SCHOOLS: SCHOOLS TO WATCH 2015-2016 Application

The National Forum to Accelerate Middle-Grades Reform
in collaboration with the
Pennsylvania Association for Middle Level Education,
Pennsylvania Department of Education,
Duquesne University, Edinboro University of Pennsylvania,
Shippensburg University
and The Horace-Mann Companies

Your school is invited to demonstrate its progress in becoming a high-performing middle level school by applying for this prestigious recognition. Schools to Watch are schools that demonstrate

- **Academic Excellence**. These schools challenge all students to use their minds well.
- **Developmental Responsiveness.** These schools are sensitive to the unique developmental challenges of early adolescence.
- **Social Equity.** These schools are democratic and fair, providing every student with high-quality teachers, resources, learning opportunities, and supports.
- **Organizational Structures and Processes.** High-performing schools establish norms, structures, and organizational arrangements to support and sustain their trajectory toward excellence.

Schools to Watch: An Initiative of the National Forum to Accelerate Middle-Grades Reform

PROGRAM DESCRIPTION

The Pennsylvania Don Eichhorn Schools: Schools to Watch program seeks to establish a network of schools willing to serve as models and mentors for others. Recognized schools will be featured in state and national publications, and will be visited by educators from around the country looking to see where "things are being done right." Schools will also participate in professional development, and will serve as a model for other schools using the Schools to Watch Criteria to guide school improvement and reform. Schools visited by the selection committee but not selected for Schools to Watch recognition will be offered a half-day follow-up visit to discuss particular strengths and challenges of the school and ways in which Pennsylvania Don Eichhorn Schools: Schools to Watch can assist the school in its efforts to meet the criteria. After one or more years of implementing changes the school may re-apply for recognition.

WHAT IS A PENNSYLVANIA DON EICHHORN SCHOOL?

A Pennsylvania Don Eichhorn School is a school that is conscientiously moving to meet fully the nationally endorsed criteria for high performing middle schools, one that has made marked progress in meeting all of the criteria, including measurable gains in the academic achievement of all students over time.

BEFORE YOU BEGIN

Your school may be a high-performing, high-impact middle school, but is it ready to be designated as a model for others? Eligibility is limited to public schools or publicly funded charter schools. Making an application is not an easy process, so before you begin, **it is required that all applicant schools complete** the Schools to Watch Self Study and Rating Rubric online. The extent to which your school engages in the practices listed on this rubric may lead you to decide to delay submitting an application and to use the information as a professional school improvement guide. **In addition, every school considering application must call Bruce Vosburgh, Director, 610-945-4434. ALL**

schools applying MUST be Institutional Members of Pennsylvania Association for Middle Level Education (PAMLE), or Dual Institutional Members of PAMLE/AMLE. It is also suggested strongly that if any of the following are true for your school, you should delay application: 1) a change of leadership will occur for the following school year, 2) a principal new to your school, 3) a major change in program, student body, or grade configuration, or 4) test scores that do not reflect an upward trajectory.

ASSEMBLE YOUR TEAM

A leadership team must be assembled to read the application carefully and collaborate in its preparation and completion. Your team may wish to visit the National Forum Schools to Watch website (http://www.middlegradesforum.org) to take virtual tours of current Schools to Watch.

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The National Forum to Accelerate Middle-Grades Reform
PENNSYLVANIA DON EICHHORN SCHOOLS: SCHOOLS TO WATCH
2014-2015 Application

CONTACT INFORMATION

School Name: _____
Street Address: _____
City: _____State: _____ Zip: _____
Phone: _____ Fax: _____Web site: _____
Name of Principal: _____
Principal's email: _____Years as Principal at this site: _____
School District: _____
Intermediate Unit # _____
PAMLE Institutional Membership #_____

Members of Application Writing Team:

	Name	Position
1.	_____	_____
2.	_____	_____
3.	_____	_____
4.	_____	_____
5.	_____	_____
6.	_____	_____
7.	_____	_____
8.	_____	_____

(List additional team members as needed)

Applications prepared by external grant writers or paid consultants will not be accepted.

SCHOOL CHARACTERISTICS

1. What grades are included in your school? _____

2. What is your total school enrollment? _____

3. What is the total number of students in your school district? _____

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TELL US WHAT MAKES YOUR SCHOOL A "SCHOOL TO WATCH"

Attach a narrative, not to exceed 8 pages, that describes how your school is making its way toward becoming a high-performing middle level school. (format = 12 point font, 1" margins) We are especially interested in learning about what you are doing to ensure that your school is on a trajectory toward excellence and **programs that can be easily replicated by other middle grades schools** in the following domains:

- Academic Excellence
- Developmental Responsiveness
- Social Equity
- Organizational Structures and Processes

Please cite specific examples of how your school addresses each domain, using the Schools to Watch Criteria. Organize information by domain and criteria.

In addition, please provide the following information:

- What overall progress have you made in raising student achievement scores?
- Describe your Pennsylvania System School Assessment (PSSA) performance composite trends over the last 3 years. (Schools not required to administer the PSSA, please submit comparable assessment data.)
- Did your school make Adequate Yearly Progress (AYP)? If not, what area(s) did you miss, and what are your plans for making AYP this year?

FUTURE INITIATIVES

Based on analysis of the data provided in your application, write an additional narrative, not to exceed 2 pages, on your school's plan for the future. Select two or three areas that you can commit to improving during the next three years.

APPLICATION DATA

Complete the **PA Don Eichhorn Schools: Schools to Watch** Application Data, pages 7-17. Your information must be entered on this or a similar locally created **form, upon agreement of the PA STW Director, using Microsoft Word. Your completed form must be included as the final portion of the Schools to Watch Application.** This information will also be accessed by the National Forum.

DOCUMENTATION OF YOUR SCHOOL'S ACADEMIC PERFORMANCE

Following the last page of this application, attach the last three years state report scores on the following tests:

- PSSA
- Any other standardized test instruments

Disaggregated data is important when submitting these scores.

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The National Forum to Accelerate Middle-Grades Reform

PENNSYLVANIA DON EICHHORN SCHOOLS: SCHOOLS TO WATCH

Application Checklist

School Name: _____

Please review the Pennsylvania Don Eichhorn Schools: Schools to Watch application procedures packet to assure you have completed each step of the application process according to directions. Only information requested will be accepted.
Use the following checklist and check to see that each item is complete. Number each page throughout your application and assemble in the following order:

__1. Contact Information
__2. School Characteristics
__3. Online completion of the Self Study and Rating Rubric
__4. 8 page narrative telling us what makes your school a "School to Watch"
__5. 2 page narrative describing your school's future initiatives
__6. Application Data
__7. Documentation of your school's academic performance
__8. Signature and Permission

Make ONE complete packet for your records, mail ONE complete packet and ONE CD of your application (all parts must be WORD documents), and email a complete application to: (DO NOT send pdf Files)

Mr. Bruce Vosburgh – Director PA STW
1905 Lenape Unionville Road
Kennett Square, PA 19348
bvosbur@comcast.net

ALL MATERIALS MUST BE RECEIVED on or before, August 25, 2015.

Selection Timeline:

- August 25, 2015 Applications due

Confirmation of receipt of application sent via e-mail

- September 25, 2015 All schools informed of the status of their application

Selected schools will be scheduled for visitations between October and January.

- By January 4, 2016 Announcement of 2015-2016 Pennsylvania Don Eichhorn Schools
- February 2016 PA STW schools are honored and featured as presenters at the Annual PAMLE PDI – State College, PA

SIGNATURE AND PERMISSION

We are aware that applications prepared by external grant writers or paid consultants will not be accepted and certify that this application was a collaborative process involving site administrators, teachers and other key stakeholders. We understand that the Pennsylvania Don Eichhorn Schools: Schools to Watch State Team may conduct a site visit to the school some time between September 2015 and January 2016. We will gladly host such a visit and provide meals for the visiting team. If selected as a Pennsylvania Don Eichhorn School:

- A documentation team may visit the school in order to gather further information for a case study, such as written, photographic and/or videotaped documentation. District and school staff would cooperate to the fullest extent possible and would assist in obtaining any necessary releases.
- Visits from other educators and media publicity would result. We will gladly participate in a network of middle-level practitioners, share our knowledge and experience with others in order to accelerate middle-grades reform and document these mentorship experiences using simple forms provided by Pennsylvania Don Eichhorn Schools: Schools to Watch.
- I/we would agree to participate as presenters and participants in the following:
  - PAMLE Professional Development Institute – February/March 2016
  - National Schools to Watch Conference, June 2016
- In addition, I/we would:
  - Provide pertinent materials to be posted to the PAMLE and National STW websites
  - Attend state training and serve as member(s) of the Pennsylvania Don Eichhorn Schools: Schools to Watch State Team (activities include reading applications, visiting potential Pennsylvania Don Eichhorn School sites, coaching and mentoring future applicants, etc.)
  - Agree that if there is a change of principal leadership at the school, the new principal will fulfill the obligations and take Pennsylvania Don Eichhorn Schools: Schools to Watch training at the earliest opportunity
  - Agree to annually review our programs and to keep Pennsylvania Don Eichhorn Schools: Schools to Watch apprised of our continuous improvement
- We certify that our school is currently and if recognized will continue to be an Institutional member of Pennsylvania Association for Middle Level Education, not in school Program Improvement or a school being monitored and we have a well defined plan included in future initiatives. We further certify that the Office of Civil Rights does not have any outstanding findings of civil rights statute violations by the school or district which may affect the school and that there are no pending suits by the Department of Justice against the district alleging that the school, or the district as a whole, has violated one or more of the civil rights statutes or the Constitution's equal protection clauses.

_____

Principal's Signature Date

District Administrator's (Superintendent or Designee) Signature Date

Schools to Watch: An Initiative of the National Forum to Accelerate Middle-Grades Reform

PA Don Eichhorn Schools: Schools to Watch
Application Data*
School Year 2015-2016

**Recognized Schools will be required to submit these data elements annually.*

SPECIFIC INSTRUCTIONS: Your information must be entered on this or a similar locally created form, upon agreement of the PA STW Director, using Microsoft Word. Your completed form must be included as the final portion of the Schools to Watch Application. Some of the data may not be applicable to your school, so those cells may be empty. If you have any questions about your "Application Data," please contact Bruce Vosburgh, PA STW Director bvosbur@comcast.net

School/Student Demographics

General School Information

School Name:
District Name:
Street Address:
City/State/Zip:
Phone with Area Code: **Fax:** **Website:**
Grades in School:
Name of the Principal: **Email:**
School Community: Urban ☐ Rural ☐ Suburban ☐

Student Information

Enrollment Data							
Student Populations	**5th**	**6th**	**7th**	**8th**	**9th**	**Total Students**	**Percent of Total Enrollment**
African American							
Asian							
Caucasian							
Latino(a)/Hispanic							
Native American							
Other							
Total							**100%**

Male Students							
Female Students							
Free/Reduced Lunch Students							
Identified Special Education Students							
English Language Learner Students							

What was the average attendance rate (percent of all students) in your school during the last full school year?

Would you define your student population as "mobile" or "stable"? Mobile ☐ Stable ☐

Suspension Data, School Year:					
In-School Suspensions					
		1-5 Days		**6-10 Days**	
Student Populations	**Total Number of Students in School**	**Number of Different Students (Unduplicated Count)**	**Number of Cases (Duplicated Count)**	**Number of Different Students (Unduplicated Count)**	**Number of Cases (Duplicated Count)**
All Students					
African American					
Asian					
Caucasian					
Latino(a)/Hispanic					
Native American					
Other					
Male Students					
Female Students					
Free/Reduced Lunch Students					
Special Education Students					
English Language Learner Students					
Out of School Suspensions					
		1-5 Days		**6-10 Days**	
Student Populations	**Total Number of Students in School**	**Number of Different Students (Unduplicated Count)**	**Number of Cases (Duplicated Count)**	**Number of Different Students (Unduplicated Count)**	**Number of Cases (Duplicated Count)**
All Students					
African American					

Asian					
Caucasian					
Latino(a)/Hispanic					
Native American					
Other					
Male Students					
Female Students					
Free/Reduced Lunch Students					
Special Education Students					
English Language Learner Students					

Were there any students suspended for more than 10 days? **Yes** ☐ **No** ☐

Were there any student expulsions during the last school year? **Yes** ☐ **No** ☐

How many of your students were <u>not promoted</u> to the next grade at the end of the last school year? (Include actual number and the percent of the total enrollment for the grade level.)

Students Not Promoted (Retained) at the End of the Last School Year										
Student Populations	**Grade 5**		**Grade 6**		**Grade 7**		**Grade 8**		**Grade 9**	
	Number Not Promoted	**Percent Of Total In Grade**	**Number Not Promoted**	**Percent Of Total In Grade**	**Number Not Promoted**	**Percent Of Total In Grade**	**Number Not Promoted**	**Percent Of Total In Grade**	**Number Not Promoted**	**Percent Of Total In Grade**
All Students										
African American										
Asian										
Latino(a)/ Hispanic										
Native American										
Caucasian										
Other										
Male Students										
Female Students										
Free/ Reduced Lunch Students										
Special Education Students										
English Language Learner										

Students										

Student Achievement Data

Academic Performance Data

School Performance Profile (SPP) 2011-12 -				
All Students				
African American				
Asian/Asian American				
Caucasian				
Latino(a)/Hispanic				
Native American				
Multiracial*				
Students with Disabilities*				
Limited English Proficient*				
Economically Disadvantaged*				

*Terms used on NCLB reports of AYP.

State Testing Data, 2011-2012 School Year, State:

Name of Test:

Percent of Students Passing State Assessment at the "Meets" or "Exceeds" Level *(Combine Your School's Data for "Meets" and "Exceeds" and Enter on this Chart)*							
5th Grade							
Student Populations	**Language Arts**	**Mathematics**	**Science**	**Social Studies**	**Reading**	**Other:**	**Other:**
All Students							
African American							
Asian							
Latino(a)/Hispanic							
Native American							
Caucasian							
Other							
Male Students							
Female Students							

Free/Reduced Lunch Students							
Special Education Students							
English Language Learner Students							
6th Grade							
Student Populations	**Language Arts**	**Mathematics**	**Science**	**Social Studies**	**Reading**	**Other:**	**Other:**
All Students							
African American							
Asian							
Latino(a)/Hispanic							
Native American							
Caucasian							
Other							
Male Students							
Female Students							
Free/Reduced Lunch Students							
Special Education Students							
English Language Learner Students							
7th Grade							
Student Populations	**Language Arts**	**Mathematics**	**Science**	**Social Studies**	**Reading**	**Other:**	**Other:**
All Students							
African American							
Asian							
Latino(a)/Hispanic							
Native American							
Caucasian							
Other							
Male Students							
Female Students							
Free/Reduced Lunch Students							
Special Education Students							
English Language Learner Students							
8th Grade							
Student Populations	**Language Arts**	**Mathematics**	**Science**	**Social Studies**	**Reading**	**Other:**	**Other:**

All Students							
African American							
Asian							
Latino(a)/Hispanic							
Native American							
Caucasian							
Other							
Male Students							
Female Students							
Free/Reduced Lunch Students							
Special Education Students							
English Language Learner Students							

State Testing Data, 2012-2013 School Year, State:

Name of Test:

Percent of Students Passing State Assessment at the "Meets" or "Exceeds" Level *(Combine Your School's Data for "Meets" and "Exceeds" and Enter on this Chart)*							
5th Grade							
Student Populations	**Language Arts**	**Mathematics**	**Science**	**Social Studies**	**Reading**	**Other:**	**Other:**
All Students							
African American							
Asian							
Latino(a)/Hispanic							
Native American							
Caucasian							
Other							
Male Students							
Female Students							
Free/Reduced Lunch Students							
Special Education Students							
English Language Learner Students							
6th Grade							
Student Populations	**Language Arts**	**Mathematics**	**Science**	**Social Studies**	**Reading**	**Other:**	**Other:**
All Students							
African American							
Asian							

Latino(a)/Hispanic							
Native American							
Caucasian							
Other							
Male Students							
Female Students							
Free/Reduced Lunch Students							
Special Education Students							
English Language Learner Students							
7th Grade							
Student Populations	**Language Arts**	**Mathematics**	**Science**	**Social Studies**	**Reading**	**Other:**	**Other:**
All Students							
African American							
Asian							
Latino(a)/Hispanic							
Native American							
Caucasian							
Other							
Male Students							
Female Students							
Free/Reduced Lunch Students							
Special Education Students							
English Language Learner Students							
8th Grade							
Student Populations	**Language Arts**	**Mathematics**	**Science**	**Social Studies**	**Reading**	**Other:**	**Other:**
All Students							
African American							
Asian							
Latino(a)/Hispanic							
Native American							
Caucasian							
Other							
Male Students							
Female Students							
Free/Reduced Lunch Students							

Special Education Students							
English Language Learner Students							

State Testing Data, 2013-2014 School Year, State:

Name of Test:

Percent of Students Passing State Assessment at the "Meets" or "Exceeds" Level *(Combine Your School's Data for "Meets" and "Exceeds" and Enter on this Chart)*							
5th Grade							
Student Populations	**Language Arts**	**Mathematics**	**Science**	**Social Studies**	**Reading**	**Other:**	**Other:**
All Students							
African American							
Asian							
Latino(a)/Hispanic							
Native American							
Caucasian							
Other							
Male Students							
Female Students							
Free/Reduced Lunch Students							
Special Education Students							
English Language Learner Students							
6th Grade							
Student Populations	**Language Arts**	**Mathematics**	**Science**	**Social Studies**	**Reading**	**Other:**	**Other:**
All Students							
African American							
Asian							
Latino(a)/Hispanic							
Native American							
Caucasian							
Other							
Male Students							
Female Students							
Free/Reduced Lunch Students							
Special Education Students							
English Language Learner Students							

7th Grade							
Student Populations	**Language Arts**	**Mathematics**	**Science**	**Social Studies**	**Reading**	**Other:**	**Other:**
All Students							
African American							
Asian							
Latino(a)/Hispanic							
Native American							
Caucasian							
Other							
Male Students							
Female Students							
Free/Reduced Lunch Students							
Special Education Students							
English Language Learner Students							
8th Grade							
Student Populations	**Language Arts**	**Mathematics**	**Science**	**Social Studies**	**Reading**	**Other:**	**Other:**
All Students							
African American							
Asian							
Latino(a)/Hispanic							
Native American							
Caucasian							
Other							
Male Students							
Female Students							
Free/Reduced Lunch Students							
Special Education Students							
English Language Learner Students							

Teacher Demographics

Teacher Populations	Number
Total Number of Teachers in School	
Number of Regular Education Teachers	
Number of Special Education Teachers	
Number of ESL/ELL Teachers	
Number of "Core" Subject Teachers	

Subject	5th Grade	6th Grade	7th Grade	8th Grade	9th Grade
Language Arts					
Mathematics					
Science					
Social Studies					

Teacher Certification/Licensure*		
Elementary Certificate/License	Grade Span:	Number:
Middle Grades Certificate/License	Grade Span:	Number:
Secondary Certificate/License	Grade Span:	Number:
Other Certificate/License	Grade Span: K-12 or	Number:
Middle Grades Endorsements*	Grade Span:	Number:
*Certificates/Licenses are "initial" credentials while "Endorsements" are "add-ons" to an initial credential. Numbers may reflect that some teachers have an initial elementary or secondary credential but also have a middle grades endorsement.		

Test data for the 2014-2015 school year is requested and should be provided as soon as available to
Bruce Vosburgh bvosbur@comcast.net

1/2015 revised – PA Schools to Watch

APPENDIX G

NATIONAL FORUM TO ACCELERATE MIDDLE GRADES REFORM SCHOOLS TO WATCH® SELF-STUDY AND RATING RUBRIC®

Schools To Watch®

A School Self-Study and Rating Rubric©

The Schools To Watch Program is a copyright protected program of the National Forum to Accelerate Middle Grades Reform.
Criteria established by the National Forum is used as the basis for the Forum's Schools To Watch Program. The following Self Study and Rating Rubric may be used freely by any middle grades or secondary school to study and rate its practices. No adaptations to this self-study and rubric may be used without written permission from the Schools To Watch Committee and Board of the National Forum to Accelerate Middle Grades Reform.

This is a continuing-improvement tool as well as a mandatory self-rating for schools interested in applying for a state Schools To Watch designation. Schools applying for a STW state designation should be consistently averaging scores between 3.4 and 4.0 in all sections and components.

The rubric is divided into four sections: **Academic Excellence, Developmental Responsiveness**, **Social Equity**, and **Organizational Support and Processes**. Under each section there is general criteria followed by concrete, detailed, expected examples of excellence. Self-rate each general and detailed component. The **ultimate goal** is to be consistently excellent and rate a well-evidenced score point 4 in every component (general and detail) of every section. Even when that ultimate goal is reached, a true high performing middle school will continue to seek ways to improve as new challenges arise
A **4** in any general and detail component means the practice is highly and completely implemented, systemic, coherent in every classroom, by every teacher, across the school.
A **3** in any general and detail component means that there is a high degree or maturing quality of implementation that is systemic, but it may not be coherent or of the highest quality in every classroom and by every teacher, but certainly by most, 75 percent or better.

A **2** in any general and detail component means that there is a mixed, fair, immature quality of implementation. A 2 also means that practices may include many teachers but not the majority. The program may be too new to have realized accountable results or to be evaluated as effective.
A **1** in any general and detail component means that the practice may just have gotten started, (very immature), or is only practiced by a handful of practitioners).
No score is equivalent to a **0.**

Academic Excellence

High-performing schools with middle grades are academically excellent. They challenge all students to use their minds well.

General Criteria	Detailed Evidence of Criteria	Self-Rating				
1. All students are expected to meet high academic standards		**4**	**3**	**2**	**1**	Average
	• Expectations are clear for students and parents.	4	3	2	1	
	• Prior to students beginning an assignment, teachers supply students with exemplars of high quality work that meet the performance standard or level.	4	3	2	1	_____
	• Students know what high quality work should be like.	4	3	2	1	
	• Students revise their work based on meaningful feedback until they meet or exceed the performance standard or level.	4	3	2	1	
2. Curriculum, instruction, assessment, and appropriate academic interventions are aligned with high standards.		**4**	**3**	**2**	**1**	Average
	• Standards provide a coherent vision for what students should know and be able to do.	4	3	2	1	_____
	• Students, teachers and families understand what students are learning and why.	4	3	2	1	
	• In any class and at any time, students can explain the importance of what they are learning.	4	3	2	1	_____
	• The curriculum is rigorous, non-repetitive, and moves forward substantially.	4	3	2	1	
	• Work is demanding and steadily progresses.	4	3	2	1	
3. The curriculum emphasizes deep understanding of important concepts and the development of essential skills.		**4**	**3**	**2**	**1**	Average
	• Teachers make connections across the disciplines to reinforce important concepts and assist students in applying what they have learned to solve real-world problems.	4	3	2	1	_____
	• All teachers incorporate academic and informational literacy into their course work (i.e. reading, writing, note taking, researching, listening, and speaking)	4	3	2	1	

4. Instructional strategies include a variety of challenging and engaging activities that are clearly related to the grade-level standards, concepts, and skills being taught.		**4**	**3**	**2**	**1**	Average
	• To reach students, all teachers draw from a common subset of instructional strategies and activities such as: • Direct instruction	4	3	2	1	
	• Cooperative learning	4	3	2	1	
	• Project-based learning	4	3	2	1	
	• Simulations	4	3	2	1	
	• Hands-on learning – integrated technology	4	3	2	1	
	• Other	4	3	2	1	

4 = High quality, complete, mature, and coherent implementation – NEARLY PERFECT, LITTLE ROOM FOR IMPROVEMENT
3 = Good quality, incomplete, maturing, or not fully implemented by all – STILL ROOM FOR REFINEMENT and IMPROVEMENT
2 = Fair quality, mixed implementation, immature practice, sporadic by some – SIGNIFICANT IMPROVEMENT NEEDED
1 = Poor quality, low level of implementation, new program, by a few –CONSIDERABLE STRATEGIC PLANNING, CONSENSUS BUILDING AND IMPROVEMENT NEEDED
0 = No score, isolated or not in practice – INITIATE DISCUSSION

Academic Excellence (continued)

General Criteria	Detailed Evidence of Criteria	Self-Rating				
5. Teachers use a variety of methods to assess and monitor the progress of student learning (e.g., tests, quizzes, assignments, exhibitions, projects, performance tasks, portfolios).		**4**	**3**	**2**	**1**	Average
	• All teachers use common, frequent assessments to benchmark key concepts and the achievement of their students.	4	3	2	1	_____
	• Students learn how to assess their own and others' work against the performance standards, expectations, or levels.	4	3	2	1	
6. The faculty and master schedule provide students time to meet rigorous academic standards		**4**	**3**	**2**	**1**	Average
	• Students are provided more time to learn the content, concepts or skills if needed.	4	3	2	1	
	• Flexible scheduling enables students to engage in academic interventions, extended projects, hands-on experiences, and inquiry-based learning.	4	3	2	1	_____
7. Students are provided the support they need to meet rigorous academic standards.		**4**	**3**	**2**	**1**	Average
	• Teachers know what each student has learned and still needs to learn.	4	3	2	1	
	• Students have multiple opportunities to succeed and receive extra help as needed, such as: o co-teaching or collaborative resource model,	4	3	2	1	

	○ support and intervention classes.	4	3	2	1	
	○ before- and after-school tutoring.	4	3	2	1	
	○ homework centers	4	3	2	1	
	○ other	4	3	2	1	
8. The adults in the school are provided time and frequent opportunities to enhance student achievement by working with colleagues to deepen their knowledge and to improve their standards-based practice.		**4**	**3**	**2**	**1**	Average
	• They collaborate in analyzing student achievement data and making decisions about rigorous curriculum, standards-based assessment practice, effective instructional methods, and evaluation of student work.	4	3	2	1	_____
	• The professional learning community employs coaching, mentoring, and peer observation as a means of continuous instructional improvement	4	3	2	1	

4 = High quality, complete, mature, and coherent implementation – NEARLY PERFECT, LITTLE ROOM FOR IMPROVEMENT
3 = Good quality, incomplete, maturing, or not fully implemented by all – STILL ROOM FOR REFINEMENT and IMPROVEMENT
2 = Fair quality, mixed implementation, immature practice, sporadic by some – SIGNIFICANT IMPROVEMENT NEEDED
1 = Poor quality, low level of implementation, new program, by a few –CONSIDERABLE STRATEGIC PLANNING, CONSENSUS BUILDING AND IMPROVEMENT NEEDED
0 = No score, isolated or not in practice – INITIATE DISCUSSION

Developmental Responsiveness

High-performing schools with middle grades are sensitive to the unique developmental challenges of early adolescence.

General Criteria	Detailed Evidence of Criteria	Self-Rating				
1. The staff creates a personalized environment that supports each student's intellectual, ethical, social, and physical development		**4**	**3**	**2**	**1**	Average
	• Adults and students are grouped into smaller communities (i.e. teams, houses, academies) for enhanced teaching and learning.	4	3	2	1	
	• These small learning communities are characterized by stable, close, and mutually respectful relationships.	4	3	2	1	_____
	• Every student has a mentor, advisor, advocate, or other adult he/she trusts and stays in relationship with throughout the middle school experience.	4	3	2	1	
2. The school provides access to comprehensive services to foster healthy physical, social, emotional, and intellectual development.		**4**	**3**	**2**	**1**	Average
	• Teachers are trained to recognize and handle student problems.	4	3	2	1	
	• Students with difficulties, and their families, can get help.	4	3	2	1	_____
	• The school houses a wide range of support—nurses, counselors, resource teachers—to help students and families who need special assistance.	4	3	2	1	

	• The school staff-members offer parent education activities involving families.	4	3	2	1	
3. Teachers foster curiosity, creativity and the development of social skills in a structured and supportive environment.		**4**	**3**	**2**	**1**	Average
	• All Teachers: ○ enhance standards-based learning by using a wide variety of instructional strategies;	4	3	2	1	
	○ incorporate well-developed procedures and routines for effective classroom management;	4	3	2	1	
	○ facilitate learning by deliberately teaching study and organizational skills;	4	3	2	1	
	○ integrate creative activities in the lessons, e.g., current technologies, visual and performing arts, etc.	4	3	2	1	
4. The curriculum is both socially significant and relevant to the personal and career interests of young adolescents.		**4**	**3**	**2**	**1**	Average
	• Students talk about daily issues in their own lives, their community and their world.	4	3	2	1	
	• Students take action, make informed choices, work collaboratively, and learn to resolve conflicts.	4	3	2	1	

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Developmental Responsiveness (continued)

General Criteria	Detailed Evidence of Criteria	Self-Rating				
5. Teachers use an interdisciplinary approach to reinforce important concepts, skills, and address real-world problems.		**4**	**3**	**2**	**1**	Average
	• For example, students may read a historical novel for language arts and history and then study music from the same time period in music class.	4	3	2	1	_____
	• Students can work on the same project in several different classes.	4	3	2	1	
6. Students are provided multiple opportunities to explore a rich variety of topics and interests in order to develop their identity, learn about their strengths, discover and demonstrate their own competence, and plan for their future.		**4**	**3**	**2**	**1**	Average

	• Teachers and counselors push students to challenge themselves and set high academic and career goals for their future.	4	3	2	1	
7. All students have opportunities for voice—posing questions, reflecting on experiences, and participating in decisions and leadership activities.		**4**	**3**	**2**	**1**	Average
	• All students have a real say, or have legitimate representation, in what happens at school.	4	3	2	1	
	• School staff members have an "open-door" policy to encourage student involvement and connection.	4	3	2	1	
	• Students take an active role in school-family conferences.	4	3	2	1	
8. The school staff members develop alliances with families to enhance and support the well-being of the children.		**4**	**3**	**2**	**1**	Average
	• Parents are more than just volunteers or fund-raisers; they are meaningfully involved in all aspects of the school.	4	3	2	1	_____
	• Parents are informed, included, and involved as partners and decision-makers in their children's education.	4	3	2	1	
9. Staff members provide all students with opportunities to develop citizenship skills, to use the community as a classroom, and to engage the community in providing resources and support.		**4**	**3**	**2**	**1**	Average
	• Students take on projects to improve their school, community, state, nation, and world.	4	3	2	1	_____
10. The school provides age-appropriate, co-curricular activities to foster social skills and character, and to develop interests beyond the classroom environment.		**4**	**3**	**2**	**1**	Average
	• Student co-curricular activities cover a wide range of interests—team sports, clubs, exploratory opportunities, service opportunities, and a rich program in the visual and performing arts.	4	3	2	1	_____

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Social Equity

High performing schools with middle grades are socially equitable, democratic, and fair. They provide every student with high- quality teachers, resources, learning opportunities, and supports. They keep positive options open for all students.

General Criteria	Detailed Evidence of Criteria	Self-Rating

_____

1. To the fullest extent possible, all students, including English learners, students with disabilities, gifted and honors students, participate in heterogeneous classes with high academic and behavioral expectations.		**4**	**3**	**2**	**1**	Average
	• Faculty and administrators are committed to helping each student produce proficient work.	4	3	2	1	
	• Evidence of this commitment includes tutoring, mentoring, enrichment assignments, differentiated instruction, special adaptations, supplemental classes and other supports.	4	3	2	1	
	• Accelerated, short-term interventions for students with similar needs are fluid and do not become low-level or permanent tracks.	4	3	2	1	
2. Students are provided the opportunity to use many and varied approaches to achieve and demonstrate competence and mastery of standards.		**4**	**3**	**2**	**1**	Average
	• Teachers know each student's learning style.	4	3	2	1	
	• Teachers differentiate instruction in order to give each student equal opportunity to comprehend the standards-based curriculum.	4	3	2	1	
3. Teachers continually adapt curriculum, instruction, assessment, and scheduling to meet their students' diverse and changing needs.		**4**	**3**	**2**	**1**	Average
	• The faculty is always seeking ways to improve programs, curriculum, and assessment to better meet student needs.	4	3	2	1	_____
4. All students have equal access to valued knowledge in all school classes and activities.		**4**	**3**	**2**	**1**	Average
	• All students use technology to do research and analyze data, read more than textbooks, and understand how to solve complex problems.	4	3	2	1	
	• To the fullest extent possible, students with disabilities are in regular classrooms that are co-taught by special education professionals.	4	3	2	1	_____
	• All students have access to participate in interest-based classes, activities, or opportunities.	4	3	2	1	
5. Students have ongoing opportunities to learn about and appreciate their own and others' cultures.		**4**	**3**	**2**	**1**	Average
	• The school values knowledge from the diverse cultures represented in the school, community, and our nation.	4	3	2	1	
	• Materials in the media center represent all of the cultures of the students.	4	3	2	1	
	• Families often come and share their traditions and beliefs.	4	3	2	1	_____
	• Teachers use multi-cultural materials and methods.	4	3	2	1	
	• Multiple viewpoints are encouraged.	4	3	2	1	

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Social Equity (continued)

General Criteria	Detailed Evidence of Criteria	Self-Rating				
6. The school community knows every student well.		**4**	**3**	**2**	**1**	Average
	• Each student is appreciated and respected.	4	3	2	1	
	• Staff members do not use negative labels or discuss students in negative ways.	4	3	2	1	
	• Every student has an adult advocate and supporter in the school.	4	3	2	1	_____
7. The faculty welcomes and encourages the active participation of all its families and makes sure that all its families are an integral part of the school, such as:		**4**	**3**	**2**	**1**	Average
	• Transportation, meals, childcare, and translation support are provided so all families of diverse cultures and languages can attend school events.	4	3	2	1	_____
8. The school's reward system is designed to value diversity, civility, service, and democratic citizenship.		**4**	**3**	**2**	**1**	Average
	• The faculty recognizes the contributions of all its students.	4	3	2	1	
	• Awards are not limited to sports and academic honors.	4	3	2	1	
	• Students' success and good deeds are always noticed.	4	3	2	1	
9. Staff members understand and support the family backgrounds and values of its students.		**4**	**3**	**2**	**1**	Average
	• The school recruits a culturally and linguistically diverse staff.	4	3	2	1	_____
	• The staff members are a good match to the school's community.	4	3	2	1	
10. The school rules are clear, fair, and consistently applied.		**4**	**3**	**2**	**1**	Average
	• Students and parents are informed of school rules and know exactly what will and does happen if students break the rules.	4	3	2	1	
	• The school's suspension rate is low.	4	3	2	1	_____
	• Staff members routinely analyze and act upon referral and suspension data to make sure that no one group of students is unfairly singled out by classroom and school staff.	4	3	2	1	
	• The school's disciplinary referrals and suspension rate are low as a result of proactive interventions that keep students engaged, resilient, healthy, safe, and respectful of one another.	4	3	2	1	

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Organization Structures and Processes High-performing schools with middle grades are learning organizations that establish norms, structures, and organizational arrangements to support and sustain their trajectory toward excellence.

General Criteria	Detailed Evidence of Criteria	Self-Rating				
1. A shared vision of what a high-performing school is and does, drives every facet of school change.		**4**	**3**	**2**	**1**	Average
	• The shared vision drives constant improvement.	4	3	2	1	
	• Shared, distributed, and sustained leadership propels the school forward and preserves its institutional memory and purpose.	4	3	2	1	_____
	• Everyone knows what the plan is and the vision is posted and evidenced by actions.	4	3	2	1	
2. The principal has the responsibility and authority to hold the school-improvement enterprise together, including day-to-day know-how, coordination, strategic planning, and communication.		**4**	**3**	**2**	**1**	Average
	• Lines of leadership for the school's improvement efforts are clear.	4	3	2	1	
	• The school leadership team has the responsibility to make things happen.	4	3	2	1	_____
	• The principal makes sure that assignments are completed.	4	3	2	1	
3. The school is a community of practice in which learning, experimentation, and reflection are the norm.		**4**	**3**	**2**	**1**	Average
	• School leadership fosters and supports interdependent collaboration.	4	3	2	1	
	• Expectations of continuous improvement permeate the school culture.	4	3	2	1	
	• Everyone's job is to learn.	4	3	2	1	_____
4. The school and district devote resources to content-rich professional development, which is connected to reaching and sustaining the school vision and increasing student achievement.		**4**	**3**	**2**	**1**	Average
	• Professional development is intensive, of high quality, ongoing, and relevant to middle-grades education.	4	3	2	1	
	• Teachers get professional support to improve instructional practice (i.e. classroom visitations, peer coaching, demonstration lessons, etc.)	4	3	2	1	_____
	• Opportunities for learning increase knowledge and skills, challenge outmoded beliefs and practices, and provide support in the classroom.	4	3	2	1	
5. The school is not an island unto itself; it is a part of a larger educational system, i.e., districts, networks and community partnerships.		**4**	**3**	**2**	**1**	Average
	• There are deliberate vertical articulation and transition programs between feeder elementary schools and destination high schools.	4	3	2	1	_____

	• The district supports (funding and time) its schools' participation in best practice networks, associations, learning communities, and professional development focused on middle grades improvement and achievement.	4	3	2	1	
	• School and district work collaboratively to bring coherence to curriculum, instruction, assessment, intervention, data collection, analysis, and accountability for student achievement.	4	3	2	1	

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Organizational Structures and Processes (continued)

General Criteria	Detailed Evidence of Criteria	Self-Rating				
6. The school staff holds itself accountable for the students' success.		**4**	**3**	**2**	**1**	Average
	• The school collects, analyzes, and uses data as a basis for making decisions.	4	3	2	1	
	• The administrators and faculty grapple with school-generated evaluation data to identify areas for more extensive and intensive improvement.	4	3	2	1	
	• The staff delineates benchmarks, and insists upon evidence and results.	4	3	2	1	
	• The school staff intentionally and explicitly reconsiders its vision and practices when data call them into question.	4	3	2	1	
7. District and school staff possess and cultivate the collective will to persevere, believing it is their business to produce increased achievement and enhanced development of all students.		**4**	**3**	**2**	**1**	Average
	• The faculty and administrators see barriers as challenges, not problems.	4	3	2	1	
8. The school and district staffs work with colleges and universities to recruit, prepare, and mentor novice and experienced teachers.		**4**	**3**	**2**	**1**	Average
	• Principals insist on having teachers who promote young adolescents' intellectual, social, emotional, physical, and ethical growth.	4	3	2	1	
9. The school includes families and community members in setting and supporting the school's trajectory toward high performance.		**4**	**3**	**2**	**1**	Average

	• The administrators and teachers inform families and community members about the school's goals for student success and the students' responsibility for meeting those goals	4	3	2	1	
	• The administrators and teachers engage all stakeholders in ongoing and reflective conversation, consensus building, and decision making about governance to promote school improvement.	4	3	2	1	

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