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Middle School Teacher Perspectives toward Classroom Practices and Groupings of Academically Gifted Students

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Academically Gifted Students

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Abstract

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This mixed-method research study was designed to examine middle school teacher perspectives toward the classroom practices and groupings of academically gifted students. The Classroom Practices Questionnaire (Archambault et al., 1993) was used to survey middle school teachers on their use of instructional strategies with gifted students. Focus groups were then held to gain insight on teacher perceptions of differentiation practices for gifted students and homogenous and heterogeneous groupings of gifted students.

An analysis of the data revealed that teachers held positive perceptions of teaching AIG students. Data also revealed that teachers believe that homogenous groupings are more beneficial for AIG students. The qualitative data provided by the focus groups allowed the researcher to establish that teachers in both focus groups had positive perceptions of differentiating for AIG students but admitted that they had both inadequate time and training to properly differentiate for AIG students. Teachers in both focus groups expressed negative feelings toward heterogenous groupings which included AIG students. The themes which emerged from this study can be impacted by professional learning opportunities and planning time for instructional units specifically tailored to AIG students' learning needs.

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Chapter 1: Introduction

Meeting the Needs of All Learners

The Every Student Succeeds Act (ESSA, 2015) requires that all students in the United States have their needs met so that they may reach their full potential. With increased emphasis on educational inclusiveness, classroom teachers are charged with meeting the needs of all students within the heterogeneous classrooms, including students with special learning needs such as those with learning disabilities as well as those who are gifted (Callahan, Tomlinson, Hunsaker, Bland, & Moon, 1995; Clarenbach, 2015; Kanevsky, 2011).

When it comes to the learning of all students, there has been considerable evidence over the last several years suggesting teacher behaviors and instructional approaches make a dramatic impact on how and to what degree students learn (VanTassel-Baska, 2012). There is also a link between teacher behavior and differentiated programs and services. In addition, studies report that regular education heterogeneous classrooms significantly limit the degree to which this broad spectrum of learners experience differentiation to meet their educational needs (Manning, Stanford, & Reeves, 2010; VanTassel-Baska & Stambaugh, 2005; Westberg, Archambault, Dobyns, & Salvin, 1993; Westberg & Daoust, 2003).

Meeting the Needs of Gifted Students

Gifted students have been defined as individuals who "exhibit high performance capability in intellectual, creative, and/or artistic areas, possess an unusual leadership capacity, or excel in specific academic fields" (U.S. Department of Education, 1993, p. 26). While meeting the educational needs of gifted students has long been in an

important goal in the United States, experts in the field of gifted education assert that the needs of gifted students are still not being met due to the increased focus on the improvement of education of the heterogeneous classroom.

Meeting the academic needs of gifted students has been an important goal in the United States for many decades; however, due to gifted students often being placed within heterogeneous classrooms, gifted students may still not have their needs met when teacher attention is often focused on lower performing students (Colangelo & Davis, 1997; Kanevsky, 2011; Little, McCoach, & Reis, 2014; Westberg & Daoust, 2003). Gifted teacher behaviors are not systematically monitored to determine to what degree teachers are differentiating for gifted students inside the heterogeneous classroom, yet gifted students require challenging educational experiences matching the pace of their learning regardless of ability grouping (Phillips, 2018; VanTassel-Baska, 2012).

Teacher Attitudes

Teacher attitudes and beliefs are developed over time; and for more than half a century, researchers have identified teacher attitudes as playing a major role in the daily delivery of instruction of students and that teachers have a significant influence on the learning environment (Albion & Entmer, 2002; McCoach & Siegle, 2007; Renzulli, 1968; Siegel & Moore, 1994). Tomlinson (1999) stated that teacher perceptions toward gifted students may be linked to subject matter and grades taught and previous experiences teaching with gifted students. Teacher attitudes toward gifted students may also be influenced by the belief that gifted students can achieve without the teacher providing special services or a differentiated curriculum (Davalos & Griffin, 1999; Hertberg-Davis; 2009; Mulhern, 2003; Tomlinson, 1999).

In a 1983 study by Hudson, Reisberg, and Wolf, teacher attitudes toward three

populations of students with exceptional needs were explored: students with disabilities, nonidentified students, and gifted students. According to the study, the practice of including gifted students in the regular education classroom may be defeated if teachers do not have a positive outlook on the inclusion of special needs students, including gifted learners. Rosenthal and Jacobson (1968) investigated teacher expectations on student academic performance, revealing that students of all ability levels performed better academically for teachers who held high expectations of them than students of teachers who did not hold those same high expectations.

Statement of the Problem

The majority of U.S. schools provide programs to accommodate the needs of gifted students, including the pull-out model, self-contained classrooms, cluster grouping, and resource rooms (Adams, 2015; Purcell & Eckert, 2006; Wu, 2013). Due to budget cuts and an increased focus on heterogeneous learning, a review of literature concerning the groupings of gifted and talented students revealed that gifted students, students with special needs, and regular education students spend most of their time served together within the same classroom environment, thus requiring general education teachers to broaden their expertise in differentiating instruction to meet the needs of their students (Betts, 2004; Hong, Greene, & Higgins, 2006; Kanevsky, 2011; Tomlinson, 2015).

As educators may find themselves challenged to meet a greater variety of learning needs within the mixed-ability classroom, it has been suggested that students learn best when individual learning needs are met in terms of pace and instruction (Johnson, 2004; Winebrenner, 2012). Teachers may find it difficult individualizing instruction when working large groups of students, and the basic curriculum provided in the heterogeneous classroom does not offer students with advanced cognitive abilities appropriate academic

challenges (Adams, 2015; Maker & Nielson, 1996; Mulhern, 2003; Winebrenner, 2012).

While differentiation is often considered by researchers to be the best answer when

teachers are working with a group of heterogeneously grouped students, these same

researchers have reported that differentiation is typically minimal for gifted students in

the mixed-ability classroom (Adams, 2015; Folsom, 2006; Maker & Nielson, 1996;

VanTassel-Baska, 1992; Westberg & Daoust, 2003; Winebrenner, 2012).

Gifted students may be classified as difficult to teach when their teachers find

themselves unable to meet their special learning needs (McCollister & Sayler, 2010;

Weber, Johnson, & Tripp, 2013). Also, teachers who have not been trained in the

characteristics of gifted children may be at a loss as to how to teach them (Berman,

Schultz, & Weber, 2012; Johnson, VanTassel-Baska, & Robinson, 2008; Winebrenner,

2000). Gifted students are often viewed as doing well in class, making good grades,

scoring high on standardized tests, and achieving just because they are gifted; and

therefore, are not in need of specialized services (Davalos & Griffin, 1999; George, 2005;

Tomlinson, 1999; Tomlinson et al., 1994; Winebrenner, 2000; Winner, 1996).

While the needs of gifted and talented students have long been addressed in

research, the perceptions of teachers of the gifted are not as readily available (Allen,

2005; Berman et al., 2012; Purcell & Eckert, 2006; Webb et al., 2005. This study is

designed to provide a better understanding of general and certified gifted teacher

perspectives toward gifted education in the middle school setting.

Change in Gifted Education

Gifted education is experiencing rapid change in a time of budget cuts, emphasis

on inclusion, and charges of elitism (Adams, 2015; Denisco, 2015). These changes have

also placed an increased responsibility on general education teachers to differentiate

instruction in order to address the needs of gifted students (Adams, 2015; Denisco, 2015; Gallagher, 2004; Hong et al., 2006; Wu, 2013); therefore, the goal of this research was to describe the perceptions of middle school teachers with regard toward heterogeneous and homogenous groupings as well as toward differentiated curriculum.

Background/Justification

Multiple factors have increased teacher frustrations in the regular education classroom as they attempt to meet the needs of students with varying levels of ability. Those factors include limited educational funding, the attitude that gifted students do not require special services, and a push toward heterogeneous grouping (Davalos & Griffin, 1999; Hertberg-Davis, 2009; Ozturk & Debelak, 2008). Research supports that gifted students have educational needs and require a differentiated curriculum (Tomlinson, 2015; Tomlinson & Javius, 2012).

Accountability. There is plentiful research on the benefits of tailoring curriculum to meet the abilities of students of all abilities (Adams, 2015; Csikszentmihalyi, 1996; Fasko, 2001; Hertberg-Davis, 2009). ESSA (2015) guarantees quality education for all children in the United States with provisions for identifying and serving gifted and talented students, including staff development in gifted-specific instructional practices. Accountability is a major component of ESSA, and all states must assess students to provide evidence of achievement. Districts and states now must publish student achievement data from state assessment tests, disaggregated by student subgroup at each achievement level; while before, the only data collection required was for students achieving at proficiency and below (Welch, 2016). Bassett (2002) concluded that teachers who mainly teach the content of standardized assessments may neglect teaching higher-order thinking skills. Curriculum and teaching strategies that promote higher-

order thinking skills include high-level content knowledge, metacognition, self-regulation, and creativity, which are considered major components of an appropriate education for gifted students (Adams, 2015; Darling-Hammond, 1997; Hertberg-Davis, 2009; Marzano, 1993; VanTassel-Baska & Little, 2003).

   Inclusion and teacher training. The number of heterogeneous classrooms is increasing due to the result of inclusion practices. While most students spend the majority of their time learning the same state standards designed for all students, there are few differences in the manner in which teachers differentiate the curriculum to meet the needs of gifted students in the heterogeneous classroom (Folsom, 2006; Hertberg-Davis, 2009; Willard-Holt, 2003). Tomlinson (2004) and Mulhern (2003) suggested that teachers are responsible for having knowledge of child development, learning goals, various assessment strategies, and use of data assessment in order to implement the standards in such a way that the needs of the individual student are met as well as those of the whole class. Both the National Association for Gifted Children (NAGC) and The Association for the Gifted (TAG) advocate for general education personnel to strengthen the effectiveness of any teacher who works with gifted learners. According to Robinson (2008), the increased diversity of learners in the regular education classroom combined with the push from state standards to promote higher level thinking skills contributes to the challenges classroom teachers already face. Teachers may then turn to traditional teaching methods and activities due to lack of knowledge and training to meet the needs of all their students (Robinson, 2008). Gifted students also may be used as peer tutors for struggling students when teachers do not know what else to do with students who have already mastered the content being taught to the class (Brighton, Hertberg, Moon, Tomlinson, & Callahan, 2005).

Curriculum modification. There is research supporting that gifted students are more motivated and perform better academically when they are exposed to challenging content at a pace designed to meet their needs. These same students have been found to outperform gifted peers who are not exposed to a curriculum specifically designed to meet their learning needs (Sisk, 2009; VanTassel-Baska & Stambaugh, 2005). There is also research to support that when students who experience learning challenges are grouped with gifted students in the same classes, the needs of academically struggling students are more readily addressed than those of gifted students (Colangelo, Assouline, & Marron, 2013). An example of this is a study conducted by Archambault et al. (1993) of third- and fourth-grade teachers who taught both regular education and gifted students in the regular education classroom. It was revealed that those teachers made only slight curriculum modifications to meet the needs of both gifted and nongifted students.

According to Tomlinson (2002), it is the regular education classroom teacher who has the first opportunity to identify gifted learners and modify the curriculum to meet their specific learning needs; however, Grey (2004) is quoted stating, "Three million gifted and talented students are currently our nation's most underserved and underfunded human resource" (Television Interview). In most classrooms across the nation, many gifted students are able to score at a level beyond proficiency on standardized tests before the school year begins (Tomlinson, 2002; VanTassel-Baska & Stambaugh, 2005). When the curriculum is not matching and developing the academic needs of gifted students, and teachers are not showing gifted students that they care about their education as much as that of regular education and special needs students, they may not achieve their highest level of academic performance (Csikszentmihalyi, Rathmunde, & Whalen, 1997; Rubenstein, Siegle, Reis, McCoach, & Burton, 2012; Tieso, 1999; Tomlinson, 2002).

The need for gifted research in the middle grades. When it comes to gifted middle school students and ensuring their highest level of performance in school, it is a pivotal goal of middle schools to focus on the success of all learners (Carnegie Task Force on the Education of Young Adolescents, 1989). Spear (1992) stated that middle school teachers desire for all students to achieve success regardless of ability, but gifted middle school learners often experience academic standards which underchallenge them. Many gifted middle school students have the ability to master high-level material and require complex and meaningful learning experiences (Tomlinson, 1994); but Beane (1990) stressed that there is uncertainty in not only what defines an appropriate curriculum for middle school but also what constitutes an appropriate curriculum for middle school learners. According to Tomlinson (1994), it is necessary to train middle school teachers on how to group students both heterogeneously and homogeneously to provide appropriate academic challenges and to design curricula to meet the needs of gifted learners. Despite the years of calls to action to provide suitable academic groupings and challenges for gifted learners, there is still little documented research on how well or in what ways ability groupings and differentiation methods meet the needs of gifted middle school learners (Swan et al., 2015).

For these reasons, the researcher seeks to examine the perceptions of middle school teachers toward gifted students concerning academic groupings and classroom practices targeted toward gifted learners.

Purpose of the Study

The academic needs of gifted students are addressed by NAGC (2013; Purcell & Eckert, 2006). NAGC believes that teachers are responsible for the academic growth of gifted students and should provide a differentiated curriculum to meet their specific

learning needs even within homogeneous and heterogeneous learning environments (Moon, Swift, & Shallenberger, 2002; VanTassel-Baska & Stambaugh, 2005). Therefore, the purpose of this mixed-methods study was to examine the perceptions held by general education and AIG certified middle school teachers regarding their classroom practices. The study also examined the perceptions of general education teachers regarding homogeneous and heterogeneous groupings.

Research Questions

The research questions guiding this research were

1. How do middle school teachers perceive the way they differentiate the curriculum for gifted students?

2. What are middle school teacher perceptions regarding the groupings of AIG students?

Nature of the Study

This study used a mixed methods research design. According to Creswell and Plano-Clark (2011), a mixed methods research design allows the researcher to collect, analyze, and mix quantitative and qualitative methods in order to provide a better sense of the research problem and questions rather than either method by itself. The quantitative portion of this study included a survey that allowed the researcher to summarize data and make appropriate comparisons (Creswell, 2003). The qualitative portion of this study was comprised of open-ended interviews in the form of focus groups which provided actual words of the participants in the study, providing different perspectives on the topic of ability groupings and differentiation for gifted learners.

Conceptual Framework

Tomlinson (2003) referred to differentiation as a type of instruction which

supports a wide array of learning needs. Tomlinson (2004) also asserted that gifted

learners require a curriculum specifically designed and differentiated to meet their needs.

Within this study, differentiation will connect the framework of this study. The

researcher will focus primarily on Vygotsky's (1962, 1978) Zone of Proximal

Development (ZPD) and Sociocultural Cognitive Theory, Piaget's (1951) Theory of

Cognitive Development, and Bloom's (1956) Theory of Cognitive Taxonomy.

Vygotsky's ZPD and Social Cognitive Theory support the structure of the learning

experience as being a collaborative process between the teacher and students (Riddle &

Dabbagh, 1999; Shambaugh & Magliaro, 2001). Specifically, the social cognitive theory

offers teachers support in the areas of classroom arrangement and challenging instruction

designed to meet each student's learning needs. There is also the belief that the

influences of people outside of the classroom, such as family and friends, are just as

important as the social influences that occur inside the school building (Vygotsky, 1978).

Social Cognitive Theory supports the belief that peer interaction inside the

classroom and social acceptance are vital parts of adolescent school experiences.

Educators often use cooperative learning to promote peer relationships; however,

research presents differing views on the effectiveness of heterogeneous cooperative

learning groups for gifted students. There is research to support the success of

heterogeneous cooperative learning groups if each group member is provided with

differentiated tasks ensuring that each student is challenged according to his/her abilities

(Schniedewind & Davidson, 2000). Cooperative learning can allow students of various

abilities to work together and improve communication between varying student groups,

but gifted learners may develop feelings of resentment if they feel they are being used as

peer tutors (Baker & Clark, 2010; Coleman & Gallagher, 1995). On the other hand, there

are also researchers who strongly believe that gifted learners should be homogenously grouped for learning experiences in order to receive any real academic benefit (Feldhusen, 1989; Rogers, 1993).

Both Vygotsky's (1962, 1978) Social Cognitive Theory and ZPD support cooperative learning to gain new knowledge and engage socially (Kearsley, 2005; Riddle & Dabbagh, 1999). In order to develop ZPD and to develop socially, learners must interact with a teacher who understands their needs and with peers on their same academic level (Riddle & Dabbagh, 1999). In addition to Vygotsky's theories serving as guides for developing activities and programs for gifted learners, Bloom's Cognitive Taxonomy Model also draws attention to higher level thinking skills (Bain, Bourgeois, & Pappas, 2003). Bloom and a group of educational psychologists developed the original model in 1956, which included a series of cognitive levels categorized as knowledge, comprehension, application, analysis, synthesis, and evaluation which were later revised to remember, understand, apply, analyze, evaluate, and create following a recent call for a more standards-based curriculum (Anderson & Krathwohl, 2001; Bloom, 1985). In recent years, the taxonomy has been revised from nouns to verbs as the call has been made for a more standards-based curriculum (Anderson & Krathwohl, 2001). These new categories encourage teachers to explore the various levels of cognitive thinking and have students use the knowledge they obtain in real world situations (Delisle, 2006; Hmelo-Silver, 2004).

In summary, differentiation practices connected the theories guiding this study. These varied differentiated practices include common elements from the works of Vygotsky (1962, 1978), Piaget (1951), and Bloom (1956). Also, by focusing on research-based practices, insight may be provided about how teachers perceive the

implementation of differentiation.

Definitions of Terms

The following are the definitions of terms that were used within the scope of this research and study.

Ability grouping. When students of a similar ability or achievement level are placed in a class or group based on observed behavior or performance (NAGC, 2016).

Acceleration. Progressing through education either faster or younger than what is considered the normal established rate. This can occur through grade skipping or subject acceleration (e.g., a fifth-grade student taking sixth-grade math; NAGC, 2016).

Adolescence. The period in children's lives from ages 10 to 15 in which emotional, physical, cognitive, and social changes take place (Blakemore & Mills, 2014).

Differentiated instruction. "A systematic way to conceptualize the process of teaching and learning such that each student's learning needs are honored and, consequently, each student's learning potential and outcomes are maximized" (Tomlinson & Santangelo, 2012, p. 312).

Differentiation. A modified curriculum and instruction designed to meet the learning needs of students in an academically diverse classroom. This includes adaptations to the content, process, product, and learning environment (Tomlinson, 1999, 2001, 2003).

Heterogeneous grouping. Grouping students by mixed ability levels; also referred to as inclusion classroom (NAGC, 2016).

Homogeneous grouping. Students grouped by need, ability, or interest (NAGC, 2016).

Summary

Research supports that while there are programs available to provide academic growth for gifted students, many gifted students simply are not having their needs met (Colangelo & Davis, 1997; Geake & Gross, 2008; Little et al., 2014; Westberg & Daoust, 2003). Regular education students, students with learning challenges and disabilities, and gifted students are grouped together in the heterogeneous classroom (Denisco, 2015; Kauffman & Hallahan, 1994). Teachers are then faced with the challenge of meeting a variety of instructional needs (Callahan et al., 1995; Clarenbach, 2015; Kanevsky, 2011). Differentiation within heterogeneous and homogeneous classrooms provides teachers with the means of meeting the needs of gifted students (Tomlinson, 2015; Tomlinson & Javius, 2012). This study was designed to answer questions about the perceptions of middle school teachers and gifted students concerning differentiation of the curriculum as well as heterogeneous and homogenous groupings of AIG students. In Chapter 2, a review of related literature is presented in the areas of adolescent development, gifted adolescents, differentiation options, and student and teacher perceptions of differentiation and student groupings. Chapter 3 outlines the methodology used for the research process.

Chapter 2: Literature Review

Introduction

  This research study focuses on understanding middle school teacher perceptions of the groupings of AIG students and the ways in which they differentiate for AIG students. This chapter focuses on information in understanding gifted education in the middle grades. The review of the literature includes (a) definitions of giftedness, (b) adolescent development, (c) characteristics of the middle school gifted learner, (d) teacher perceptions of gifted students and differentiation options, (e) middle school gifted programming options, (e) teacher preparedness, and (f) perceptions of student groupings.

  According to Tomlinson (2002), it is the regular education classroom teacher who has the first opportunity to identify gifted learners and modify the curriculum to meet their specific learning needs; however, Grey (2004) claimed that over three million gifted and talented students are currently our nation's most underserved and underfunded human resource, with gifted learners not being adequately identified or served. Even though there are certainly gifted students being both identified and served, the growing number of heterogeneous classrooms may be jeopardizing the level of challenge gifted students receive. Heterogeneous classrooms, as opposed to grouping gifted students homogeneously, are increasing as a result of inclusion practices which may result in a decline of gifted students' learning motivation and classroom performance declining in the absence of intellectually stimulating content (Grey, 2004). Goree (1996) claimed that when students with learning difficulties and gifted students are grouped in the same classes, the needs of students with learning difficulties are more readily addressed than those of gifted students. When the curriculum is not matching the educational needs of gifted students and teachers are not showing gifted students that they care about their

education as much as that of regular education and special needs students, they may not achieve their highest level of academic performance (Csikszentmihalyi et al., 1997; Tieso, 1999; Tomlinson, 2002). If middle schools are to meet the needs of gifted learners, studies designed to determine how to best meet the needs of these students are imperative.

Giftedness Defined

The definition of intelligence in the early 20th century stemmed from the measurement of the intelligence quotient (IQ). Alfred Binet, a French psychologist, is credited with fashioning the first intelligence test in France in the early 1900s (Gardner, 1999). In 1912, German psychologist Wilhelm Stern came up with the name and measure of the intelligence quotient, or the ratio of a person's mental age to one's chronological age, with the ratio to be multiplied by 100. Since Binet's time, intelligence tests have heavily weighted verbal reasoning, appreciation of logical sequences, and problem-solving (Gardner, 1999). In the 1920s and 1930s, Stanford University psychologist Lewis Terman and Harvard professor Robert Yerkes prepared versions of intelligence tests that could be administered to multiple students at once, while Binet's test had been administered to students individually (Gardner,1999).

Terman (1925) defined giftedness as, "the top one percent level in general intellectual ability as measured by the Stanford-Binet Intelligence Scale or comparable instrument" (p. 43). Terman also stated that gifted children score in the top 2% on a test of intelligence. "Schoolhouse giftedness," also known as "test-taking giftedness" or "lesson-learning giftedness," is the most easily measured by IQ or other cognitive ability tests. Schoolhouse giftedness is most often used for selecting students for entrance to special programs (George, Renzulli, & Reis, 1997).

While the IQ score may have once been used to conduct searches for gifted children, it may be considered an inadequate measure of giftedness (Reis & Renzulli, 2004; Siegler & Kotovsky, 1986). According to George et al. (1997), in recent years, it has become necessary to put less emphasis on abilities reflected in IQ and aptitude tests and more emphasis on the opinions of qualified professionals such as teachers. Giftedness may be identified through various methods: (a) observation of processes used in learning in any content area, in or out of the classroom; (b) observation of performance or products from any content or problem-solving encounter; (c) results of psychometric instruments including tests of intelligence, achievement, and creativity; (d) self-reporting and reporting from others such as parents, teachers, and peers (Clark, 2002).

Formal definitions of giftedness are utilized for identification, programming, and placement services. The federal Elementary and Secondary Education Act (U.S. Congress, 2002) defined gifted and talented students as

> Students, children, or youth who give evidence of high achievement capability in areas such as intellectual, creative, artistic, or leadership capacity, or in specific academic fields, and who need services and activities not ordinarily provided by the school in order to fully develop those capabilities. [Title IX, Part A, Definition 22. (2002)]

Many states and districts follow the federal definition. North Carolina's definition of giftedness is,

> Academically or Intellectually gifted children exhibit high performance capability in intellectual areas, specific academic fields, or in both intellectual areas and specific academic fields. Academically or Intellectually gifted students require differentiated educational services beyond those ordinarily provided by the

regular educational program. Outstanding abilities are present in students from all

cultural groups across all economic strata and all areas of human endeavor.

(NC General Statutes, Chapter 115C Elementary and Secondary Education,

Article 9B § 115C-150.5)

The definition of giftedness can also include the ability to problem-find and

problem-solve (Gardner, 1983; Getzels, 1978; Siegler & Kotovsky, 1986; Sternberg,

1985). Witty (1940) defined gifted children as those "whose performance is consistently

remarkable in any potentially valuable area" (p. 517). Renzulli (1978) defined giftedness

as consisting of above average levels of ability, task commitment, and creativity.

Gardner (1983) viewed intelligence not just including academic ability but many areas of

giftedness. Gardner (1991) defined intelligence as "an ability or set of abilities that

permit an individual to solve problems or fashion products that are of consequence in a

particular cultural setting" (p. 56). Gardner's (2006) theory of multiple intelligences

were known as linguistic, logical, mathematical, spatial, musical, bodily-kinesthetic,

interpersonal, intrapersonal, natural, and existential intelligence.

With all these definitions of giftedness over the past century, it is clear that

gifts and talents among these learners vary widely (Reis, n.d.). In 1925, Terman asserted

that giftedness should be equated with high IQ, and that legacy still remains to present

day; however, research conducted in the 1980s and 1990s supported that there are

multiple types and components of intelligence. For example, Sternberg and Davidson

(1986) presented different conceptions of giftedness in distinct yet interrelated ways,

stating that giftedness can be comprised of multiple qualities with not all of them relating

to IQ. High levels of motivation and a positive self-concept have also been included in

definitions of giftedness (Siegler & Kotovsky, 1986). While many school districts adopt

a broad definition of giftedness to include non-intellectual gifts and talents, there are still others that only focus on intellectual ability when identifying and serving students (Reis, n.d.). For the purpose of this study, the definition of giftedness is the same one used by the state of North Carolina, which has been developed to apply to gifted programs in the state according to Article 9B (NC General Statutes 115C-150.5).

Adolescent Development

Understanding adolescent development is an important component in grasping the needs of gifted middle school learners. From ages 10 to 14, adolescents experience rapid physical, intellectual, and emotional growth. Early adolescence can be a time of turmoil but also a time of resilience, productivity, cognitive growth, generosity, and increasing involvement (San Antonio, 2006). Middle school students tend to come into contact with peers who differ from them. Often moving to large schools where students come from multiple neighborhoods with diverse racial, ethnic, religious, social class, and national backgrounds, students become more aware of social status and their position in the social hierarchy (San Antonio, 2006).

Physical characteristics. Adolescents experience a time of rapid physical development; and for the young adolescent, such as the middle school student, that growth can be particularly accelerated and irregular (Caskey & Anfara, 2007; Kellough & Kellough, 2008). Young adolescents may experience significant physical changes in height and weight, and with these changes may come feelings of anxiety about differences in appearance from same age peers (Dahl, 2004; Simmons & Blyth, 1987).

Also during this time period, the young adolescent experiences remarkable changes in terms of brain development (Blakemore & Chadboury, 2006; Dahl, 2004). Researchers have also observed that the prefrontal cortex is not yet fully developed, yet

the production of gray matter increases (Caskey & Ruben, 2007). These rapid changes in the brain may cause adolescents to struggle with reasoning, organization, and using sound judgment (Blakemore & Chadboury, 2006).

Intellectual characteristics. While not as visible as physical development, early adolescence is also a time of rapid intellectual development in which young adolescents enjoy learning about topics of their own choosing, with many enjoy working in cooperative groups as opposed to independently (Kellough & Kellough, 2008). This is also a period in which the young adolescent brain develops the ability for abstract thought and begins to think about topics of deeper complexity and reflection (Manning, 2002; Piaget, 1952). As learners, young adolescents also build upon prior knowledge and experiences to make sense of their world (Piaget, 1960).

Emotional and psychological characteristics. In addition to physical and intellectual growth, young adolescents also experience emotional and psychological changes. Due to hormonal changes, young adolescents may experience mood swings, restlessness, and feelings of both superiority and inferiority (Kellough & Kellough, 2008). During this time, young adolescents are searching for their own sense of identity but also wish to gain peer and adult acceptance (Kellough & Kellough, 2008; Knowles & Brown, 2000). Middle school students are searching for a sense of adult identity; but they often still look like and behave as children, depending on their individual growth patterns (Maday, 2008). As a part of this period of emotional and psychological change, teachers find that students can be more concerned about the acceptance of their peers than their schoolwork (Maday, 2008).

Middle school is often a time when young adolescents are searching for a sense of adult identity but in many ways are still behaving like children (Maday, 2008). During

this time, social interaction is of the greatest importance, with peer acceptance controlling student views of their academic achievement or lack thereof (Maday, 2008).

Social and developmental characteristics. During this period, the young adolescent craves more mature interactions with period groups and finding peer approval more important than adult approval (Caskey & Ruben, 2007; Kellough & Kellough, 2008). During the middle school years, cliques are established and social dynamics develop which cause students to experience feelings of rejection as they try to find their place within social classes and peer groups (Closson, 2009). While adolescents are finding their place within social groups, they are also searching for independence from adults. Even though they are seeking autonomy, the family is still an important component in the lives of a middle school students as they begin making their own decisions (Cumsille, Darling, Flaherty, & Loreto Martinez, 2009). While they may emulate peers and prefer to make their own choices, the family is still of the utmost importance in the life a young adolescent's decision-making (Kellough & Kellough, 2008).

Gifted Adolescents

During this period of transitions, gifted adolescents are as different from one another as they are from the regular education students (Delisle, 1984; Edwards & Kleine, 1986; Hollingworth, 1942). While gifted adolescents exhibit behaviors normal for this period of development, researchers have found that some of their behaviors may be considered different than what is typical for this period of life (Edwards & Kleine, 1986; Greene, 2006). Delisle (1992) pointed out that gifted adolescents may find it challenging to find and fit into a peer group. The desire to belong may cause gifted

adolescents to mask their abilities in order to find their place in a peer group, as the intellectual and cognitive development of gifted and talented children often progresses more rapidly than that of many of their chronological peers (Silverman, 2002; Webb, Gore, Amend, & DeVries, 2007). Furthermore, gifted adolescents may feel caught between the recognition by family members and teachers due to their giftedness and may develop negative feelings toward being different from their nongifted peers (Buescher, 1987; Delisle & Galbraith, 2002). They may also rebel against their parents as they feel torn between the expectations of their parents and their own needs (Buescher, 1984).

Perfectionism

A quality of gifted students at any age is perfectionism, and they may feel the pressure to do everything flawlessly (Buescher & Higham, 1990; Clark, 1997). Perfectionism may intensify a gifted student's desire for recognition and acceptance but can also cause students to feel alienated academically because learning may not be as easy as it was at the elementary level (Buescher, 1991). These feelings may cause gifted students to take fewer academic risks if they do not feel they will experience success (Buescher & Higham, 1990). In a study by Schuler (2000), it was found that 88% of the 112 gifted seventh and eighth graders surveyed were perfectionists. Fifty-eight percent were in the healthy range of perfectionism and nearly 30% were in the neurotic range, with neurotic perfectionists feeling anxiety due to their fixation on making and avoiding mistakes. Gifted students experiencing unhealthy levels of perfectionism often have high levels of anxiety, are highly concerned about making mistakes, and perceive pressures from others to achieve perfection (Schuler, 2000).

Teacher Perceptions of Gifted Students

According to VanTassel-Baska and Stambaugh (2005), many educators

acknowledge that students bring different interests, learning needs, experiences, and exposure to various environments with them into the heterogeneous classroom. Generally, teachers agree that gifted students should experience challenging and engaging instruction that meets their needs (Brighton & Hertberg, 1999; Davies, 2000). With the increasing diversity of the student population in classrooms in North America, along with accountability systems such as end-of-year testing, educators may face barriers providing appropriate challenges and talent development for gifted students. Classroom teachers may find limited success in differentiating classroom practices for gifted students (VanTassel-Baska & Stambaugh, 2005).

Teachers may also have limited knowledge on identification of gifted students and a resistance toward differentiation strategies for the gifted due to lack of training and inexperience with their usage (Hall, 2002; Hodge & Kemp, 2006; Moon & Brighton, 2008); however, studies have reported that little differentiation of classroom practices is provided for gifted learners in regular education classrooms even with professional development in this area (VanTassel-Baska & Stambaugh, 2005; Westberg et al., 1993; Westberg & Daoust, 2004). There is evidence to support teacher training in gifted education is positively related to teacher attitudes toward giftedness (Darling-Hammond, 2000; Hansen & Feldhusen, 1994; Karnes & Wharton, 1996). Teachers' choice not to differentiate classroom practices for gifted learners may be related to psychological barriers and apathy toward the needs of gifted students (VanTassel-Baska & Stambaugh, 2005). Gifted students are often viewed by teachers as not needing special support services because they will flourish under all circumstances (Chamberlin & Moon, 2005). Teachers tend to also view giftedness as achievement rather than potential (Freedman, 1997; Lee, 1999).

Language issues, including lack of fluency in English, are often inaccurately equated with lack of ability in critical-thinking skills (Shaklee & Hansford, 1992). Students whose language skills differ from those tested by state and national assessments may be regarded as not able to handle academic challenges (Gallagher & Gallagher, 1994). Teachers may be unable to recognize high ability and critical-thinking skills in English language learners since only 30% of public school teachers who instruct ELL have received training for teaching students not fluent in English (National Center for Educational Statistics, 1997, 2003).

Teacher Perceptions of Differentiation of Classroom Practices

General education teachers must know how to teach higher-order thinking, use inquiry-based instruction, manage project-based learning, and differentiate instruction and classroom practices for a variety of learning needs and styles (Folsom, 2006; Tieso, 2003). In an interview with Joseph Renzulli, Knobel and Shaughnessy (2002) asked about regular classroom teachers guiding enrichment models for gifted students. Renzulli responded that regular classroom teachers can learn to utilize enrichment models for gifted students in the regular education classroom, but the demands due to such a broad range for students in the classroom make it very difficult for them to facilitate activities and lessons geared specifically for gifted students.

Generally, teachers agree that curriculum and practices for gifted students should be differentiated, including recognizing diverse learning needs should be met in engaging and meaningful ways (Brighton & Hertberg, 1999; Davies, 2000). While teachers may wish to differentiate for gifted students, they face the demands of accountability in a high-stakes testing environment (Brighton & Hertberg, 1999; Davies, 2000; Tomlinson et al., 1994).

Differentiation of Instruction and Practices

According to Renzulli (Knobel & Shaughnessy, 2002), there is no single approach for specializing services for gifted learners, but it is to be acknowledged that simply providing additional assignments does not equate to meeting gifted student learning needs. VanTassel-Baska and Stambaugh (2005) advocated for the differentiation of the regular education curriculum in order to provide the needs of gifted students. Benefits of differentiation through acceleration include but are not limited to increased motivation, advanced learning opportunity based on student readiness, and a possible reduction in the cost and time students spend earning a future degree (Swiatek, 1993).

Differentiation Options for Gifted Learners

Acceleration. Acceleration is a form of differentiation in which students of the same age may require curriculum delivery beyond grade level (VanTassel-Baska, 2005). Some acceleration options for gifted students might involve early admission to school, grade skipping, and early admission to college (Benbow, Argo, & Glass, 1992). VanTassel-Baska (1989) asserted that acceleration is the intervention best supported by research on the grounds of increased motivation, confidence, and academic growth. In a meta-analysis of 23 studies comparing the academic achievement of same-age students sharing the same intellectual ability in accelerated versus nonaccelerated classes, all 23 studies showed that students in accelerated classes performed better academically than those in nonaccelerated classes (Kulik, 2004). In a second meta-analysis of 25 studies, students in accelerated classes gained a grade equivalent of 1.4 years more than those in nonaccelerated classes.

Curriculum compacting. According to Reis, Burns, and Renzulli (1992), the

most important needs of gifted students can include having regular opportunities to demonstrate what they already know, receive full credit for content mastered, and spend time working on challenging activities that accelerate and enrich the regular curriculum. It is likely that within any group of students, some students already know what will be taught or could learn the information more quickly than the normal pace of the class which is permitted by curriculum compacting in which students may have their work modified or eliminated based on assessing prior knowledge (Reis & Purcell, 1993; Schack, 1996). Curriculum compacting first requires the teacher to administer a pretest based on specified objectives to determine mastery of those objectives (Reis et al., 1992). Following the pretest, for students demonstrating mastery of the objectives, the curriculum can be modified or compacted for learners requiring acceleration beyond the needs of their classmates (Troxclair, 2000; Willard-Holt, 2003). It is to be noted that some gifted students may not demonstrate mastery on a pretest but may still have the ability to master content quickly and demonstrate that mastery on the posttest (Willard-Holt, 2003). One form of acceleration used to meet the needs of gifted students is offering independent projects (Troxclair, 2000).

Product choices and independent study. Brown and Gilligan (1993) suggested providing gifted students choices in their learning and then allowing them to take responsibility for them. According to Kanevsky and Keighly (2003), when gifted students lack challenge in the classroom, they become bored, lack motivation, and may develop low self-image; however, when gifted students are permitted to enjoy choice in their learning, educational opportunities become more meaningful with an improvement in academic performance and motivation (Betts, 2004; Gentry & Springer, 2002; Pintrich & DeGroot, 1990).

Goree (1996) suggested that independent study is a viable option in differentiating for gifted students in the regular education classroom. Independent study allows gifted students to apply their areas of interest to the products they create as a result of inquiries. These products will demonstrate what students have learned at advanced levels and should move beyond typical research activities to the development of student talents and interests, with students presenting their findings and finished products to appropriate audiences (Winebrenner, 2000). Independent study has been regarded as the highest level of learning because thinking skills such as inquiry, problem-solving, and reflection are viewed as essential to gifted education (Betts, 2004; Pugh, 1999).

Cluster grouping. Another form of differentiation within the general education classroom is cluster grouping. Cluster grouping involves purposefully placing approximately five gifted students together within the heterogeneous classroom (Fielder, Lange, & Winebrenner, 2002; Winebrenner, 2000). In the case of cluster grouping, teachers require professional training on differentiation for gifted students, particularly those who require acceleration. Winebrenner and Devlin (1996) suggested that when teachers receive the proper training, they may realistically provide a differentiated curriculum for several gifted students clustered within the heterogeneous classroom. Feldhusen and Saylor (1990) stated that gifted students benefit from cluster grouping within the heterogeneous classroom because there are other gifted students in the classroom who better understand and accept their learning differences.

Kulik and Kulik (1990) stated that one advantage of clustering gifted students is that they achieve at significantly higher levels than equally gifted learners when they are cluster grouped rather than remaining in the heterogeneous classroom. Other advantages include cluster grouping as a cost-effective option for facilitating programming for gifted

students, particularly for school districts encompassing large areas in which magnet schools are not available or in situations in which there are not enough gifted middle and high school students to create an advanced program in a specific subject area (Hoover, Sayler, & Feldhusen, 1993; Winebrenner & Devlin, 1996). Cluster grouping may also reduce the restraint on learning by gifted students by allowing them to learn at their own pace and develop to their full potential (Schiever, 1994). Gifted students who were interviewed about their participation in a cluster classroom noted that they felt being smart was more acceptable than in the heterogeneous classroom and felt more motivated to participate when there was no pressure to raise a hand (Rogers, 1991). Some disadvantages of clustering gifted students may include that students will not have the opportunity to work with learners of all cognitive levels (Walker & Seymour, 2002). There is also the issue of students moving in from other schools after a cluster class has already been established and that classroom limit has been reached. In that case, there may be no room for new students in that class (Winebrenner & Devlin, 1996).

Teacher Preparedness

When examining the various methods of differentiation to serve gifted learners, it is also worth looking at teacher preparedness for delivering the various forms of differentiation. Not all teachers have had professional development in supporting the needs of gifted students (Westberg & Daoust, 2004). Douglas (2004) confirmed that more and more teachers are becoming proficient in differentiating instruction, but many teachers struggle with identifying when and how individual students require differentiation. For teachers of the gifted, sustained professional development is a necessity in ensuring significant academic growth for gifted learners (VanTassel-Baska, 2005). Despite this research and the professional development that does exist, adequate

differentiation is still not being provided (Westberg & Daoust, 2004). Teachers may find

differentiation easier to provide if they are given appropriate instructional planning time,

adequate advanced resources, and supportive administrative leadership (DuFour & Eaker,

1998; VanTassel-Baska & Stambaugh, 2005).

Issues with Lack of Differentiation for Gifted Students

   Students who top out on tests. High-stakes testing has caused teachers to feel

tremendous pressure to ensure students master standards set by the state as well as the

district (Brighton, 2002; Brighton et al., 2005; Tomlinson, 2001). Teachers perceive that

they have little time to think of the purpose of the standards and do not have time to plan

engaging and meaningful instruction to respond to student diverse learning needs (Burns

& Purcell, 2001; Tomlinson, 2001). Often, teachers feel there is a conflict between

attending to student differences through appropriate and varying instruction and ensuring

that every student demonstrates the required competencies on state tests (Brighton, 2002;

Gould, 2000).

   Students who fail to meet state testing standards often receive additional

educational services; but gifted students often score high on assessments, leading teachers

to the erroneous assumption that if students score well on assignments, they must be

learning. Many gifted students could take assessments normally administered at the end

of the school year and still score at or above the 95th percentile (Winebrenner, 2000).

Just because a gifted student has scored well on tests does not guarantee the student has

had sufficient time engaging in learning activities and creating products which match

their learning needs (Tomlinson, 2001). Academically gifted students often get high

scores on tests with little or no effort which results in hesitation when faced with more

challenging tasks that demand harder work (Alvoid, 2002). Shore, Cornell, Robinson,

and Ward (1991) suggested that only testing instruments with high ceilings allows for distinction among gifted children. Gallagher (1998) explained that many gifted students score at the top level of tests often before instruction begins, which does not inform the teacher as to the upper limits of student knowledge. Researchers recommend teachers use a variety of assessments for measuring learning outcomes rather than relying on only standardized tests to measure learning outcomes (Marzano & Kendall, 1998; Moon, Callahan, & Tomlinson, 2002; Tomlinson, 2001). Burns and Purcell (2001) asserted that teachers should reshape the curriculum based on standards and vary from the curriculum in the heterogeneous classroom in order to truly differentiate for academically gifted students.

      Underachievement. Underachievement has been referred to as a serious discrepancy between potential achievement and actual achievement (Dowdall & Colangelo, 1982; Rimm, 1997). Research on gifted underachievement has suggested that academic vulnerability is most prevalent in middle to high school years (Peterson & Colangelo, 1996), but it is possible to see the signs of underachievement in gifted students as early as middle school (Gowan, 1957; Reis, Colbert, & Hebert, 2005). It is estimated that up to 50% of gifted students are not performing at grade levels that match their potential (National Commission on Excellence in Education, 1983; Peterson & Colangelo, 1996). Rimm (2008) noted four common pressure areas experienced by gifted underachievers that include the pressure to be the brightest, unique, popular, and loyal to peer groups. Often gifted students are praised for their above-average academic performance; but when they are faced with challenging tasks, they may adjust their study and work habits to better handle the challenge or retreat from the task. Gifted students also experience pressure to stand out academically among their peers or try to hide their

intelligence as they try to fit in with popular students or attempt to stay loyal to home environments where little value is placed on education (Rimm, 2008).

When teachers are not exposed to the professional development required to serve gifted learners or simply choose not to differentiate for gifted learners, research has shown that the issue of underachievement among gifted students has been a problem for some time (Marland, 1972; Reis & McCoach, 2000; Rimm & Lowe, 1988; Whitmore, 1980). According to Winebrenner (2000), the students who are the greatest risk of underachievement are students who exhibit the highest levels of academic ability. Rimm (1990) stated that a sense of confidence comes primarily from being successful at something perceived to be difficult. When gifted students are not adequately challenged, they may lose confidence in their ability to achieve in the face of even more rigorous tasks later on. Rather than challenging themselves academically in the future, these students instead underachieve (Rimm, 1990; Schmitz & Galbraith, 1985).

Heterogeneous Grouping vs. Homogeneous Grouping

Renzulli and Reis (2014) expressed that it is difficult to speed up the pace of instruction for rapid learning students within the heterogeneous classroom. There is research to support grouping students homogeneously so they may receive the benefits of learning alongside students with similar academic strengths (Hoover et al., 1993; Kulik & Kulik, 1990; Rogers, 1993). According to Winebrenner and Devlin (1996), teachers have an easier time differentiating when gifted students are grouped together in the same class rather than trying to meet the needs of a large group of academically diverse students. Thus, many researchers in the field of gifted education endorse the use of ability grouping as a form of differentiation, while still others advocate for heterogeneous learning (Feldhusen & Moon, 1992; Jones, 1990). These issues may then be translated to

a question of whether gifted students should be grouped homogeneously or heterogeneously with learners of various ability levels.

According to Huss (2006), advocates of the heterogeneous classroom assert it is necessary for students of all backgrounds and experiences to learn together in order to interact with diverse perspectives, abilities, and ethnicities. The perceived downside of heterogeneous groupings is that teachers may utilize gifted students to teach their peers within heterogeneous learning groups. If gifted students are continually explaining the curriculum to other students, they may become bored, frustrated, or upset if they feel their grades are suffering as a side effect of helping students who do not share their same high academic abilities (Coleman & Gallagher, 1995).

Teacher Perceptions of Student Groupings

Students were first ability grouped in the United States in 1867 and this has been debated ever since without resolution (Shields, 2002). In the 1990s, one of the major reform movements was to move away from tracking and ability grouping (Renzulli & Reis, 1991). Research related to grouping students for academics is positional with one position supporting homogeneous grouping for the gifted learner while the other position supports heterogeneous grouping for all students (Kulik & Kulik, 1982; Rogers, 1991; Johnson & Johnson, 1990). In recent years, trends in education have shifted from separate programs for students identified as requiring differentiated programs to inclusive classrooms where students with diverse abilities receive instruction together across all grade levels (Ehlers & Montgomery, 1999; Huss, 2006).

In a study by Ehlers and Montgomery (1999), teacher perceptions toward curriculum modification for students who are gifted were studied using a Q-sort, with sample questions originating from literature relating to differentiation methods for gifted

students. The study was based around gifted students whose education is differentiated in the heterogeneous classroom. Seventeen educators participated in the study, including five general education teachers, 10 teachers who spend more than 75% of their time in gifted education, and two administrators. Results showed three significant findings. The first finding was that participants highly value differentiating curriculum according to student needs. The second finding revealed that participants should be designing teaching practices that specifically meet the needs of gifted students; and the third finding indicated that students should be able to make choices concerning the content they study.

Summary

Research indicates the needs of gifted students may not be met by the general education curriculum (Archambault et al., 1993; Westberg et al., 1993). Historically, differentiation has been regarded as crucial for meeting the educational, social, and emotional needs of gifted students (Green & Hong, 2001; Marland, 1972; Ward, 1961). While some differentiation is being provided, it is unclear how teacher perceptions of gifted students are impacting their education within the regular education classroom.

For much of its history, middle school has neglected the issues of appropriate curricula and groupings for advanced learners and how teachers perceive groupings of gifted students (Beane, 1990; Tomlinson, 1995). Though studies have combined the topics of gifted education and middle school education, many researchers have concluded that literature concerning perceptions of teachers toward differentiation and ability of middle school gifted students is both sparse and inconclusive as to which methods work best to serve the specific needs of this group of young adolescents (Snyder, Barger, Wormington, Schwartz-Bloom, & Linnenbrink-Garcia, 2013; Swan et al., 2015; Tomlinson, 1995). This study sought to examine the perceptions of middle grades

teachers toward their own differentiation practices and examined their views of how gifted students are grouped both homogeneously and heterogeneously, thus filling a gap in the current literature of these perceptions. Chapter 3 provides information about the research design and methods used to provide information to educators and educational leaders on the current state of perceptions of the differentiated practices in the middle school classroom.

Chapter 3: Methodology

Introduction

The purpose of this mixed-methods study was to examine the perceptions held by middle school general education teachers and their perceptions of differentiated classroom practices and homogenous and heterogeneous groupings. Data from surveys and focus group interviews were used to collect participant perceptions and answer the research questions.

Research Questions

The research questions guiding this research were

1. How do middle school teachers perceive the way they differentiate the curriculum for gifted students?

2. What are middle school teacher perceptions regarding the groupings of AIG students?

Research Design

This study employed a sequential mixed-methods design consisting of first collecting quantitative data and then collecting qualitative data to extend and explain the quantitative results. The quantitative results provided general picture of the research problem, and the qualitative data extended and explained the general picture (Creswell, 2012). Because this study sought to explore middle school teacher perceptions toward homogeneous and heterogeneous groupings with regard to AIG students and the way they differentiate classroom practices for AIG students, an exclusively quantitative or qualitative design would have been less effective than a mixed-methods design. A quantitative design would have only provided statistical descriptions of participant

perceptions but may not have reflected participant perceptions and personal experiences (Creswell, 2012; Johnson & Onwuegbuzie, 2004). Rubin and Rubin (2006) asserted, "Statistical summaries may not communicate, because numbers do not tell a story people easily understand" (p. 2). By also utilizing qualitative data such as the open-ended focus group interviews within this study, the words of people in the study and their perspectives provided a more complex picture of the situation (Creswell, 2012). Mixed-methods studies can also provide stronger evidence through a corroboration of findings and can "produce more complete knowledge necessary to inform theory and practice" (Johnson & Onwuegbuzie, 2004, p. 21). According to Miles and Huberman (1994), when research combines quantitative and qualitative data, "we have a very powerful mix" (p. 42).

Population and Sample

Participants in this study were regular education classroom teachers at five middle schools serving seventh and eighth grades in western North Carolina with the potential for up to 130 responses to the survey. Any classroom teacher who teaches gifted students for even part of the day has had at least some training in gifted education provided by the central office or will have this training provided as soon as there is space available in these classes which are offered yearly. The researcher applied to her district to gain permission from the superintendent to allow teacher participation in this study. Upon the committee's approval for the research to be conducted, an invitation to complete the survey was sent via email to all middle school classroom teachers in the five participating schools within the district utilizing a single-stage sampling procedure. The email included a link in which participants completed the survey online using Survey Monkey. The email included instructions for completion of the survey instrument. The analysis of these data was completed prior to the next phase of the study. At the end of the

questionnaire, each participant was asked to indicate whether he/she was willing to
participate in the interviews conducted by the researcher. Participants were provided
with an external link in order to provide contact information so their survey information
remained confidential. For the second, qualitative phase of the study, semi-structured
focus group interviews used open-ended questions allowing participants to openly
express their feelings about their perceptions of differentiating for students in the mixed-
ability classroom. Participants were selected from within the sample of teachers
completing the survey using a purposeful sampling procedure. An audio recording
device was used to ensure the responses in the interviews were accurately transcribed.

Table 1

Methods Grid

Research Question	Instrument	Data Collected	Data Analysis
1.What are middle school teacher perceptions regarding the groupings of AIG students?	Classroom Practices Teacher Questionnaire Focus Group Interview	Classroom Practices Questionnaire Section 4, Items 12-45 Focus Group Interview Items 1-3, 7	Descriptive statistics utilizing frequency distributions Thematic coding
2. How do middle school teachers perceive the way they differentiate classroom practices for gifted students?	Classroom Practices Teacher Questionnaire Focus Group Interview	Classroom Practices Questionnaire Section 5, Items 46-55 Focus Group Interview Items 4-6, 7	Descriptive statistics utilizing frequency distributions Thematic coding

Quantitative Methodology

The quantitative instrument used in this study was an online survey. There are several advantages to utilizing online questionnaires. According to Creswell (2013) and Cox, Murray, and Warm (2003), the advantages of online questionnaires are that they can gather extensive data quickly and easily, there are high levels of anonymity, and there is access to large and diverse populations or populations normally difficult to access.

The adapted research tool used in this study was the Classroom Practices Teacher Survey (CPTS), which was adapted by the researcher. The CPTS was developed at the National Research Center on the Gifted and Talented at the University of Connecticut and has been in large-scale studies with teachers in Grades 2, 3, 4, 7, and 8 to indicate practices used with gifted students and nongifted students (Archambault et al., 1993; Robinson, 1998; Westberg & Daoust, 2003; Whitton, 1997). Initial survey research gathered data from a sample of more than 7,000 third- and fourth-grade teachers around the U.S. The CPTS (see Appendix A) consists of six sections. Section one requests teacher information. School and district information is requested in section two, and classroom issues are addressed in section three. Section four concerns participant perceptions of gifted students which was adapted from a 2011 study by Tonner. Section five concerns classroom practices with 39 instructional strategies and approaches listed with teachers asked to indicate the frequency of use with regular education and gifted students. Teachers were asked to indicate their use of each practice on a 6-point scale: 0 = never; 1 = once a month or less frequently; 2 = a few times a month; 3 = a few times a week; 4 = daily; and 5 = more than once a day.

Section six concerns teacher perceptions of ability grouping with a response scale of strongly disagree, disagree, no opinion, agree, and strongly agree. The researcher used

all six sections of this instrument with most questions included in sections four, five, and six of the CPTS for this study as they are most applicable in addressing the research questions. These sections of the instrument allowed the researcher to make judgments concerning the frequency with which teachers perceive they differentiate classroom practices for AIG learners and their perceptions of ability groupings.

Validity

The CPTS was developed for a study conducted by Archambault et al. (1993) at the University of Connecticut to survey third- and fourth-grade teachers across the United States about their use of classroom practices for regular education and gifted students. Teachers responded to a 6-point frequency format (never, once a month, a few times a month, a few times a week, daily, and more than once a day). Archambault et al. described the content validity and reliability as used with the national sample of 3,880 classroom teachers, and construct validity was estimated through factor analysis. Six factors were used including questioning and thinking, providing challenges and choices, reading and writing, curricular modifications, enrichment centers, and seat work. Validity for the CPTS was established using principal factor analysis, and alpha reliabilities were .83, .79, .77, .72, and .53 (Archambault et al., 1993). The CPTS was piloted with a small group of teachers from Connecticut to increase content validity (Archambault et al., 1993).

Qualitative Measures

The purpose of this phase of the study was to examine and build upon significant quantitative results from the survey portion of this study. Because a purely quantitative survey design would have only provided statistical descriptions of participant perspectives regarding differentiation and mixed-ability groupings, a mixed-methods

approach with the inclusion of interviews in the form of focus groups permitted the researcher to collect, analyze, and describe data based on "an understanding of people's personal experiences" (Johnson & Onwuegbuzie, 2004, p. 14). Focus groups are often used in conjunction with survey research to gain additional details and supplement information gained by quantitative measures (Vogt, Gardner, & Haeffele, 2012). According to Creswell (2012), another advantage of focus groups is when interviewees are similar to and cooperative with each other; and in this case, the focus groups were comprised of middle school teachers from the same school system. The reason the researcher chose to conduct focus groups as opposed to individual interviews is that there was a greater possibility for generalizability in comparison to individual interviews (Creswell, 2009; Vogt et al., 2012). Participants may also feel more comfortable giving introspective responses and expressing opinions that may contradict the researcher's expectations when being interviewed in a group setting (Hatch, 2002).

Prior to contacting survey participants to invite them to participate in a focus group, the researcher contacted the district office for permission to conduct the focus groups and included copies of the consent for participation form, the online survey, the contact sheet for future focus group participation, the focus group protocol, the consent to participate in the focus group, and the contact information of the researcher. The survey participants who were willing to participate in a focus group were contacted by email or telephone to schedule the focus groups.

Participants were invited to attend a focus group in one of the conference rooms at the researcher's school which was large enough to comfortably accommodate the group and had room for recording equipment. The researcher utilized a pattern recommended by Krueger and Casey (2000) for creating a thoughtful atmosphere and setting the tone of

the discussion. The researcher took notes as the participants responded to questions (see Appendix B). The recording was transcribed as soon as possible following the focus groups in order for coding to take place. Also, in order to organize central ideas for data analysis, the researcher summarized key ideas, considered the choice and meaning of words used by participants, considered the context of the situation in terms of the responses being given not within individual interviews but within the context of a focus group, and examined the consistency of responses (Brodigan, 1992). Following professional transcription, data were coded for emergent themes.

Limitations

This study was limited by the number of responses to the CPTS and also by the number of participants who chose to provide contact information to later participate in subsequent focus groups. Also, due to the sampling method, selection bias was considered as the researcher did not know which teachers would choose to participate in the study (Vogt, 2011). In the original study using the CPTS, Archambault et al. (1993) used the survey to determine instructional practices used with AIG students in third- and fourth-grade classrooms. This study may be limited by the use of the CPTS in middle school classrooms limiting the generalizability of the study outside of the middle school setting.

Delimitations

A delimitation of the study is that the population sampled was middle schools only, and the study was conducted within a single school district. It was also delimited by the scope of inquiry and its focus on the perceptions of regular education teachers toward differentiation and ability groupings with regard to AIG students.

Summary

This chapter described the research methodology that was used in this study. The study utilized a mixed-methods approach. The study sample was identified, data collection procedures for both the quantitative and qualitative phases were detailed, and a description of the research instrument was included. The purpose of this two-phase, sequential mixed-methods design was to examine perceptions of regular education middle school teachers toward differentiation and ability groupings with regard to AIG students.

Chapter 4: Results

Introduction

The purpose of this research study was to expand the understanding of middle school teacher perceptions of the ways in which they differentiate for AIG students. This study also sought to examine middle school teacher perceptions of homogeneous and heterogeneous groupings of AIG students.

In order to investigate the perceptions of middle school teachers toward groupings of AIG students and their differentiation instruction for gifted students, a sequential mixed-methods design was employed. In the first phase of the study, quantitative data were collected from the participants utilizing an online survey. In the second phase, focus groups were used to collect information regarding participant perceptions and personal experiences teaching and differentiating for AIG students in the heterogeneous and homogeneous classroom settings.

The research questions to be answered in this study were

1. How do middle school teachers perceive the way they differentiate their classroom practices for gifted students?

2. What are middle school teacher perceptions regarding the groupings of AIG students?

Quantitative Data

Quantitative data were collected via the CPTS (Archambault et al., 1993). This adapted research tool consists of six sections. Section one requests teacher information. School and district information is requested in section two, and classroom issues are addressed in section three. Section four concerns perceptions of gifted students. Teachers are asked to indicate their perceptions of working with gifted students using a 5-

point scale, with 1 being strongly disagree and 5 being strongly agree. Section five

concerns classroom practices. Thirty-nine instructional strategies and approaches are

listed, and teachers are asked to indicate the frequency of use with both regular education

and AIG students. Teachers were asked to indicate their use of each practice on a 6-point

scale: o (never); 1 (once a month or less frequently); 2 (a few times a month); 3 (a few

times a week); 4 (daily); 5 (more than once a day). Section six concerned ability

grouping practices with a response scale of 1 (strongly disagree), 2 (disagree), 3 (no

opinion), 4 (agree), and 5 (strongly agree). SurveyMonkey was utilized to electronically

distribute the surveys and collect the quantitative data to obtain descriptive statistics.

Survey Results

The target population for this study included 125 general education middle school

teachers from five seventh through eighth grade middle schools in one western North

Carolina school district. The CPTS (Archambault et al., 1993) was sent via an email link

to the teachers, resulting in a 43.2% response rate with 36 complete responses and 18

partial responses. The data were analyzed in SPSS (version 24). With only 36 functional

cases, a regression model was not possible. Likert scale scores were treated as interval

measures in the analysis. The significance level was set at *a*=.05 for all analysis.

Pairwise deletion technique was used to handle missing data. Due to only 36 functional

cases, the survey had a confidence level of 95% and a confidence interval of 13.84%.

Teacher Information

The first section of the CPTS asked participants for information concerning their

gender, years of teaching experience, degree level obtained, source of gifted education

training, and grade level taught (see Table 2). Survey respondents reported having taught

anywhere from 1-30 years, with most having more than 16 years of experience. Nineteen

respondents had a BA/BS degree, and 17 respondents had a master's degree. Forty-four percent had AIG certification; 11.1% took AIG courses at a university or college; 19.4% took AIG classes offered by the school district; and 2.8% participated in workshops outside the district. Eight participants had no AIG training, and none of the respondents held an educational degree in AIG. Respondents teaching seventh grade equaled 48.6%, and 51.4% teach eighth grade.

Table 2

Teacher Information

Question	Total of Responses	Percentage of Responses
Gender		
Male	10	27.8
Female	26	72.2
Years of Teaching Experience		
1-5	4	11.1
6-10	10	27.8
11-15	4	11.1
16-20	9	25.0
21-25	4	11.1
26-30	5	13.9
Degree Level		
BA/BS	19	52.8
MA/MS	17	47.2
Training in Gifted Education		
None	8	22.2
AIG Certification	16	44.4
Courses at University/College	4	11.1
District Inservice	7	19.4
Workshop outside of district	1	2.8
Grade Taught		
7	17	47.2
8	18	50.5
Missing	1	2.8

School Context

The second section of the CPTS (see Table 3) asks participants their

understanding of their school's policy of identifying AIG students, if their school asks

them to identify gifted students, how many students they have identified as being gifted,

and which services are available for gifted students at their school. The majority of

participants (63.9%) claimed to fully understand the school policy for identifying gifted

students. Most participants (66.7%) reported that their school does not ask them to

identify AIG students. The most common service (51.4%) in place within the schools

was special accommodations within the regular classroom.

Table 3

School Context

Question	Total of Responses	Percentage of Responses
Policy Understanding		
No	6	16.7
Minimally	4	11.1
Yes	23	63.9
Not Aware	3	8.3
No Policy	0	0
School Asking Teachers to Identify Gifted Students		
No	24	66.7
Yes	11	30.6
Don´t Know	1	2.8
Services for AIG Students		
No Accommodations	6	17.1
Special Accommodations in Reg. Classroom	18	51.4
Subject Level Acceleration	11	31.4
Grade Skipping	0	0.0
Part Time Gifted Program	0	0.0
Full Time Gifted Program	0	0.0
Missing Data	1	2.8

Classroom Issues

In section three of the CPTS (see Table 4), participants identified the type of

classes they teach, which subject they teach, and the number of formally identified AIG

students in their classrooms and were asked about heterogeneous groupings in academic

classes. Most respondents (83.3%) reported teaching in a departmentalized arrangement,

with the two largest subject area respondents being science and language arts teachers.

Table 4

Classroom Issues

Question	Total of Responses	Percentage of Responses
Type of Class Taught		
Self-contained	6	16.7
Depart. arrangement	30	83.3
Subject Taught		
Science	9	26.5
Math	8	23.5
Social Studies	4	11.8
Language Arts	9	26.5
Other	4	11.8
Missing	2	5.6

Perceptions of Gifted Students

In section four of the CPTS (see Table 5), respondents provided data concerning

their perceptions of gifted students in questions 15-24. The data in Table 5 represent

respondents' average scores on the 1-5 Likert scale. Respondents were first asked if

working with gifted children gave them greater opportunities for positive feedback and

feeling that they had accomplished something in their teaching. The highest area

(40.48%) was a 3 on the 1-5 scale, indicating teachers neither strongly agreed nor

disagreed. In response to having all the necessary tools and training to accurately

identify gifted students in their classrooms, again respondents most often answered 3 on

the 1-5 scale, neither strongly agreeing nor disagreeing. It was followed closely by

28.57% (agreeing) being a 2 on the scale. In response to finding more comfort working

with students who are "average" than those who are gifted or have special talents, the

majority of respondents (35.71%) again responded with a 3 on the 1-5 scale. Most

respondents either strongly agreed (42.86%) or agreed (33.33%) that gifted children have

special educational needs, with none strongly disagreeing nor disagreeing. In response to

the item concerning teachers altering lesson plans to meet individual educational needs of every student in their classroom, most teachers (36.59%) agreed, but one (2.44%) strongly disagreed. The next item asked respondents if gifted children are more of a challenge to discipline in the classroom than average ability students. Most teachers (40.48%) responded with a 3, neither agreeing nor disagreeing. Again, the majority (42.86%) of teachers responded with a 3, with gifted children often having more psychological and emotional issues than average ability students, with the next highest response at 30.95% disagreeing with this statement. When asked to respond to gifted children being no different than average ability students when it comes to focusing in the classroom, most respondents (34.15%) responded with a 3, followed by 26.83% agreeing with this statement. When teachers were asked if they felt more of an obligation to help students who are less successful at meeting state standards than those who are successful at meeting those standards, 39.02% responded with a 3, followed by 21.95% strongly disagreeing with this statement. For the final item in this section, most respondents agreed with the statement that their school provides all the services necessary for meeting gifted students' educational needs at 35.71%, with the next highest percentage being 33.33% neither agreeing nor disagreeing with this statement.

Table 5

Perceptions of Gifted Students

Excerpt from Survey Question	1 % n	2 % n	3 % n	4 % n	5 % n
Opportunities for positive feedback and feelings of accomplishment?	2.38 1	7.14 3	40.48 17	35.71 15	14.29 6
Necessary tools and training for ID of gifted students?	9.52 4	19.05 8	30.95 13	28.57 12	11.90 5
More comfortable working with average students?	26.19 11	19.05 8	35.71 15	16.67 7	2.38 1
Gifted students have special educational needs?	0.0 0	0.0 0	23.81 10	33.33 14	42.86 18
Teachers should alter lesson plans?	2.44 1	7.32 3	26.83 11	36.59 15	26.83 11
Challenge to discipline?	26.19 11	19.05 8	40.48 17	9.52 4	4.76 2
Psych./emotional issues?	9.52 4	30.95 13	42.86 18	14.29 6	2.38 1
Focusing?	19.51 8	12.20 5	34.15 14	26.83 11	7.32 3
Obligation to help less successful students?	21.95 9	14.63 6	39.02 16	14.63 6	9.76 4

As shown in the Table 5, the majority of survey participants responded with a 3 to most questions, neither agreeing nor disagreeing with the statements.

Classroom Practices Results

In section five of the CPTS, participants provided data about their classroom practices by identifying strategies they utilize in order to differentiate for AIG students with respect to Research Question 1, "How do middle school teachers perceive the way

they differentiate their classroom practices for gifted students?" The participants

responded to 29 items by indicating the frequency with which they incorporated each of

the strategies into their classroom instruction using the following scale: 0 (never), 1 (once

a month or less frequently), 2 (a few times a month), 3 (a few times a week), 4 (daily), 5

(more than once a day). Results for mode (bolded) and frequency of ratings of classroom

practices usage can be found in Table 6.

Table 6

Frequency of Classroom Practices Usage

Item	Classroom Practice	0		1		2		3		4		5	
		n	%	n	%	n	%	n	%	n	%	n	%
25	Basic Worksheets	2	5.6	10	27.8	**19**	**52.8**	4	11.1	1	2.8		
26	Enrich. Worksheets	3	8.3	6	16.7	**17**	**47.2**	9	25.0	1	2.8		
27	Advanced Reading	6	16.7	6	16.7	**13**	**36.1**	11	30.6				
28	Reports	9	25	**21**	**58.3**	5	13.8	1	2.8				
29	Projects	3	8.6	**17**	**48.6**	11	31.4			3	8.6	1	2.9
30	Puzzles	13	36.1	**16**	**44.4**	7	19.4						
31	Writing (T)	10	27.8	**14**	**38.9**	10	28.8			2	5.6		
32	Writing (S)	13	36.1	**20**	**55.6**	3	8.3						
33	Interests	10	27.8	**17**	**47.2**	9	25						
34	Pretests	2	5.6	14	38.9	**18**	**50**	2	5.6	1	2.8		
35	Eliminate Material	4	11.1	13	36.1	**15**	**41.7**	3	8.3				
36	Repeat Instruction			5	14.3	8	22.9	10	28.6	**11**	**31.4**	1	2.9
37	Sub. Assign.	2	5.6	10	27.8	**14**	**38.9**	10	27.8				
38	Modify	2	5.6	6	16.7	**18**	**50**	7	19.4	2	5.6	1	2.8
39	Movement			9	25	**14**	**38.9**	9	25	3	8.3	1	2.8
40	Leave Class	1	27.8	**12**	**33.3**	7	19.4	7	19.4				
41	Centers	11	32.3	**16**	**47.1**	5	14.7	2	5.9				
42	Enrichment	13	37.1	**15**	**42.9**	5	14.3	2	5.7				
43	Think.Skills			3	8.6	**15**	**42.7**	7	20	9	25.7	1	2.9
44	Crit. Think.	**10**	**27.8**	9	25	8	22.2	8	22.2	1	2.8		
45	Programs	**18**	**50**	9	25	7	19.4	2	5.6				
46	Contracts	**16**	**45.7**	12	34.3	5	14.3	2	5.7				
47	Ind. Study	10	27.8	**16**	**44.4**	7	19.4	3	8.3				

Item	Classroom Practice	0		1		2		3		4		5	
		n	%	n	%	n	%	n	%	n	%	n	%
48	Units	3	8.3	**17**	**47.2**	12	33.3	2	5.6	2	5.6		
49	Higher Gr.	**28**	**82.3**	3	8.8	1	2.9			2	5.6		
50	Schedule	8	22.2	**16**	**44.4**	6	16.7	5	13.9	1	2.8		
51	Provide Questions	1	2.8	5	13.9	14	38.9	**15**	**41.7**	1	2.8		
52	Open-ended Questions					3	8.3	14	38.9	**17**	**47.2**	2	5.6
53	High-level Questions					1	2.8	12	33.3	**21**	**58.3**	2	5.6
54	Discussions							8	22.2	**21**	**58.3**	7	19.4

The results of section five (Table 6) revealed that teachers perceived that they most often use puzzles and worksheets, assign reports, encourage class discussions, and encourage asking higher level questions. The practices used to differentiate least often were sending students to a higher grade level for instruction, permitting student selected writing assignments, contracts for independent projects, programs inside and outside of regular instruction, and the use of enrichment centers.

Table 7 shows the correlation between the participants' highest degree earned and their usage of classroom practices. There was no statistically significant difference between BA/BS degree holders and MA/MS degree holders in terms of their perception of gifted students (items 15-24) and their use of classroom practices (items 25-54).

Table 7

Degree Holders and their Perceptions of Gifted Students and Classroom Practices

	Highest Degree Earned	N	Mean	SD
Mean Perception	1	19	3.33468	.37099
	2	17	3.33294	.32742
Mean Behavior	1	19	3.0018	.38688
	2	17	2.9767	.25379

Results for the correlation between perceptions of gifted students and classroom practices can be found in Table 8. The bivariate Pearson correlation among section four (perceptions of gifted students; items 15-24) and section five (classroom practices; items 25-54) were calculated and showed a statistically significant moderately positive correlation indicating the participants with positive perceptions of gifted students provided more differentiated classroom practices for gifted students such as encouraging asking higher level questions (4.67) and encouraging class discussion (4.97).

Table 8

Correlation Between Perceptions of Gifted Students and Classroom Practices

Mean Perception	Pearson Corr.	1	.353
(Items 15-24)	Sig. (2-tailed)		.035
	N	36	36
Mean Behavior	Pearson Corr.	.353	1
(Items 25-54)	Sig. (2-tailed)	.035	
	N	36	36

Perceptions of Ability Grouping

Section six of the CPTS (items 55-64) provided data concerning teacher perceptions of ability grouping (Table 9) which helped to answer Research Question 2, "What are middle school teacher perceptions regarding the groupings of AIG students?" Teachers responded with an answer of strongly agree (5), agree (4), no opinion (3), disagree (2), or strongly disagree (1).

Table 9

Perceptions of Ability Grouping

Item	Perception of Ability Grouping	1/2		3		4/5	
		n	%	n	%	n	%
55	No effect/achievement	**28**	**77.7**	4	11.1	4	11.1
56	Hetero./beneficial	**17**	**48.5**	8	22.9	10	28.6
57	Homo./better	5	14.3	3	8.6	**27**	**77.1**
58	Homo./motivation	4	11.7	8	23.5	**22**	**64.7**
59	Hetero./unfair	8	23.5	**10**	**29.4**	16	47
60	Both/beneficial	4	12.2	8	24.2	**17**	**51.5**
61	No benefits/homo.	**23**	**65.7**	10	28.6	2	5.7
62	Hetero./intellectual	4	11.4	7	20	**24**	**68.5**
63	Gifted/unfairly labeled	11	31.5	10	28.6	**14**	**40**

Results for mode (bolded) and frequency of ratings on perceptions of ability groupings indicated that teachers believed that homogeneous grouping is better for AIG learning needs, but both heterogeneous and homogeneous group can be beneficial to AIG students; however teachers also indicated that homogeneous grouping would increase AIG motivation and that heterogeneous grouping may not provide the intellectual stimulation for AIG students. Data indicated that overall, teachers perceive that ability grouping does have an effect on achievement and that homogeneous grouping is more beneficial than heterogeneous grouping for AIG students.

Analysis of Teacher Focus Groups

Coding of themes. Following the survey, two focus groups were held to gather perceptions of the differentiation offered to AIG students and how the participants perceived AIG groupings. After the audio recordings of the focus groups were professionally transcribed, multiple themes emerged as the data were analyzed. The researcher completed what was referred to by Creswell (2012) as a hand analysis, meaning the researcher read the transcribed data, marked it by hand, and divided it into

parts. The researcher then utilized a coding process in which she divided the text, labeled

the segments with codes, and coded the segments into broad themes.

The following section contains data concerning teacher training with regard to

AIG students, whether their classroom groupings are homogeneous or heterogeneous,

perceptions of AIG students, differentiation, and ability groupings. The specific themes

which emerged from the focus group are detailed with frequency distribution tables in

order to graphically represent the specific themes. The number and percentage of

participants in each of the two focus groups who provided their perceptions regarding the

theme are included in each table.

Teacher Training

Question one asked participants to describe any training they had received with

regard to AIG. Six of the seven participants had received training in AIG services, with

five participants having received training through the school district in which they teach

and one having received graduate-level training.

Table 10

Frequency Distribution for Teacher Training in the Area of AIG Students

Teacher Training	Teacher Focus Group 1 (n)	Teacher Focus Group 1 %	Teacher Focus Group 2 (n)	Teacher Focus Group 2 %
	2	66%	4	100%

Focus Group 2 expressed frustration concerning a lack of follow-up training

following the training provided by the county. One teacher stated,

I think the county does a great job as far as getting new lessons on a county level,

but there is no follow up at all. It seems like if there was periodical professional

development that was offered, it's a way for us to enhance our toolbox to meet the

need of those learners rather than, you take these three classes however long ago

and it's never discussed again. It might be inputted in here and there in

professional development but there is no professional development that is devoted

to it. (Teacher D, Focus Group 2, 2018)

Homogeneous and Heterogenous Groupings

Table 11 provides information concerning which focus group members teach

students in homogeneous or heterogeneous groupings, with five teachers teaching

heterogeneous groups of students and two teachers teaching homogeneous groups of

students.

Table 11

Frequency Distribution for Homogeneous and Heterogeneous Groupings

Grouping	Teacher Focus Group 1 (n)	Teacher Focus Group 1 %	Teacher Focus Group 2 (n)	Teacher Focus Group 2 %
Heterogeneous	3	100%	2	50%
Homogeneous	0	0%	2	50%

Gifted Learners in the Classroom

Services. Table 12 reflects the perceptions of focus group participants with

regard to whether they believe they provide specialized services to AIG students in their

classrooms.

Table 12

Frequency Distribution for Services

Theme	Teacher Focus Group 1 (n)	Teacher Focus Group 1 %	Teacher Focus Group 2 (n)	Teacher Focus Group 2 %
Services	2	66%	4	100%

Differentiation. With regard to the theme of differentiation, five of the seven

teachers who participated in the focus groups stated they do differentiate for the AIG

students in their classes, but they find it difficult to differentiate for AIG students

regardless of groupings. Some indicated it was difficult to differentiate for AIG students

due to the mix of high and low learning levels, and others indicated that it was difficult to

differentiate even in classes in which gifted students are homogeneously grouped due to

the varying ability levels which exist among AIG students. Some teacher comments

included the following.

Table 13

Theme: Differentiation

Teacher	Focus Group	Comment
A	1	I don't use them [differentiation strategies] a lot just because once again, I have so many different levels. However, I whenever I give them a project, some might be using slides, but maybe those students [AIG students] will be using other technology. I make sure that there's an extra step for those that are finished.
B	1	I give everybody options again because I have the whole range in the classroom. There's a lot of choice boards and things where people can gravitate towards what they need to do.
D	2	You can't teach to those AIG kids or you leave everybody else behind. You have to either make two different lesson plans, and let them work individually or you leave them (non-AIG students) behind, but they (AIG) are very helpful to the kids that need help.
A	2	The gifted students tend to get their work done; they can do the enrichment which helps them.

It was clear during the focus groups that teachers recognized the need to provide

differentiated services for AIG students; however, teachers recognized that due to the

varying needs of all students, not just AIG students, they struggled to provide for the

needs of gifted students beyond providing choices and options particularly when AIG students finish their work early.

One theme that all seven focus group participants discussed was having AIG students tutor or help struggling students when they were finished with their work for the class at some point in their teaching careers.

Table 14

Frequency Distribution for Student Tutors

Theme	Teacher Focus Group 1 (n)	Teacher Focus Group 1 %	Teacher Focus Group 2 (n)	Teacher Focus Group 2 %
Tutors	3	100%	4	100%

Table 15

Theme: Student Tutors

Teacher	Focus Group	Comment
A	1	I always give the them the option if they're done and if they would like to help somebody else. I have found that even though we're not supposed to group them by learning levels, sometimes it doesn't work.
B	1	My children complain about that [tutoring] all the time. Also [I] try really hard not to make them little baby teachers.
C	1	I think I use my advanced kids as helpers because I have such a wide range within which to teach. Of the seven periods, I teach five and I have up to like 35 in on class. They're a pretty wide range not only academically but also social behaviors. So I feel like it's [the class] is not turning out well, I've got to give the advanced students the chance to actually help me. It's not that we [teachers] take advantage of that.
B	2	Your higher kids, if they are helping the lower kids, they are growing because they have to look at in a different way to be able to explain it to somebody else. I did a research study on it that says it's terrible, but I like it that way.

All teachers in the focus groups admitted to having AIG students tutor struggling students at some point in their careers, with only one having put a recent stop to the practice. They all expressed that they felt that it was a neglectful (to AIG students) but necessary practice in order to meet the needs of as many students as possible.

Cooperative learning groups. While having AIG students tutor struggling students was a concern for all seven focus group participants, six of these seven teachers also expressed concerns about cooperative learning groups. The following table and excerpts are all from conversations that came up naturally during the course of focus groups.

Table 16

Frequency Distribution for Cooperative Learning Groups

Theme	Teacher Focus Group 1 (n)	Teacher Focus Group 1 %	Teacher Focus Group 2 (n)	Teacher Focus Group 2 %
Groups	3	100%	3	75%

The following is a conversation between two participants excerpted from Focus Group 1 concerning cooperative groups. Participants expressed concern about creating cooperative groups in heterogeneous classrooms and how difficult it can be to create those groups and work with struggling students.

Table 17

Conversation Concerning Cooperative Groups

Teacher	Focus Group	Comments
A	1	Just for the sake of experiment, I sometimes group them [students] homogenously and heterogeneously. Then, the good thing about that is if you put the kids who can write a sentence or read together, you give them an assign-ment [to work on independently]. You can then go around help group 1's and 2's [struggling students] as much as you need to help them, and the other kids can just work independently. I think we all know what happens when you mix them [higher and lower ability students] and again, that's forcing the higher kids to be teaching in terms of it always not seeming fair or the other kids [struggling learners] sit there. It depends on personalities, but if the kids will work in groups like that [mixed abilities], I let them. But if we have 2-3 people who are too low, then I just group the lower kids [together]. I let the other kids [AIG] go and work independently, and I help the lower kids.
B	1	I agree with you that personality is a big part of it [forming cooperative groups]. I normally only have like one Spanish II class a year, but I have had more this year. My first group of Spanish II students doesn't function or produce anything like my second group. My second group is mostly AIGs and the effort between those classes is completely different. The second group work super well with each other, and I don't know if its's because they are the same level and they just understand each other easier.

The following is a conversation between two participants excerpted from Focus Group 2, also concerning cooperative groups. Participants also expressed concerns about creating cooperative groups in heterogeneous classrooms.

Table 18

Conversation Concerning Cooperative Learning Groups

Teacher	Focus Group	Comments
D	2	The advantage would be that it is easier I think for the teacher to plan because there wouldn't be excessive differentiation occurring. There would still be some, but it wouldn't be like a mixed group where there are 10 different lesson plans going on at a one time. That would definitely be an advantage for the teacher.
B	2	The advantage for the student is that they are with similar learners, people that usually have the same work ethic they do. I think sometimes they [AIG] are more serious about learning.
A	2	You can make it kind of like high school. You have AP history, and then you have just regular US history. There is not that much of a huge difference, but it allows you to go further with one class and not have to do multiple groups within the same hour doing things.
B	2	I think a disadvantage [to homogenous cooperative learning groups] would the lower kids don't have the higher kids to pull from and you [the AIG students] learn about teaching. So your higher kids, if they are helping the lower kids, are growing because they have to look at in a different way to be able to explain it to somebody else. So, you would lose that.

With regard to both heterogeneous and homogenous classes, teachers acknowledged that they often group students even within these groupings according to learning level. Teachers often group academically struggling students together and higher achieving students together. While the higher achieving students worked together in cooperative groups, the teacher would work with struggling students. Teachers also acknowledged once again to having AIG students explain material to struggling students because it is so challenging to be able assist all students who require academic help all within the same class period.

Student Groupings

Homogeneous and heterogeneous groupings came up as a regular topic and sometimes as a complaint during the course of the focus group discussions. These comments helped to provide part of the response to Research Question 2, "What are middle school teacher perceptions regarding the groupings of AIG students?" All teachers in both focus groups expressed negative feelings concerning heterogenous groupings of students, especially with regard to having AIG students in classes with struggling students. Concerns mostly stemmed from not being able to use strategies to specifically differentiate for AIG students in a heterogeneous classroom. Also, teachers expressed difficulty creating equitable learning opportunities for all learners when there is such a wide range of learning abilities in one classroom. Teacher comments regarding heterogeneity included comments such as

It's easier to have them separated [students grouped homogeneously]. For my classroom, I learned some strategies also in the [district AIG] training. I don't use them [differentiation strategies] a lot just because once again, I have so many different levels, so I can't. I have found that even though we're not supposed to group them by learning levels, sometimes it doesn't work just because maybe the personalities are not the same even though they're intellectually the same they crash. Later on they might be like, "Well, you put me to work with this person but I didn't really like it." So, I just kind of still give them the option, and they might be working with somebody else that is not at their level. But I make sure that I monitor what they're doing so that other person is not doing all the work. Sometimes I will kind of choose their partners knowing what their level is depending on the assignment that they are doing. But I do have to be careful with

that once again, because some of them just chose somebody else just to do the work, and that's not what I want. What I have been doing lately, they have to show me what they did, even if it's a low level with a high level they have to show me what they did. (Teacher A, Focus Group 1, 2018)

Growing AIG Students Academically

The final theme that emerged from the focus groups was the challenge in growing AIG students academically. Many teachers expressed concern in either not providing enough appropriate levels of rigor for AIG students or feeling that they are not able to challenge AIG students because their attention is so focused on providing learning opportunities to meet the needs of struggling learners.

Table 19

Frequency Distribution for Academic Growth

Theme	Teacher Focus Group 1 (n)	Teacher Focus Group 1 %	Teacher Focus Group 2 (n)	Teacher Focus Group 2 %
Growth	1	33%	3	75%

Samples from the focus groups included the following statements.

Table 20

Comments Concerning Academic Growth

Teacher	Focus Group	Comment
C	1	I assume that I do have some AIG students, and unfortunately, I don't have the opportunity to focus in on the AIG students with more challenging assignments.
B	1	They [the AIG students] challenge the teachers more, they bring more things. Like I had this great question today from one. She asked, "If you had $100,000 in the bank, and you put in $100,000 in another bank, would it still be insured by the FDIC?"
B	1	My biggest strength is to grow my kids, but it's not always pretty sight. What it takes to grow higher kids, pushes the lower people over the edge in my opinion. So, they kind of have to be alone so that you can push them as hard as they need to be pushed to grow. Because if you don't push them, they don't grow. My high kids last year grew 5.2
A	2	I have used the LDC [Literacy Design Collaborative which are courses required by the district in an effort to create lessons which encourage critical thinking], which I have been required to use. Those strategies are helpful for all learners not just AIG. I feel like it adds the rigor.
B	2	If we really want them to grow, we need to group them and push them.
C	2	They are critical thinkers; they need to push others of the same ability.
D	2	Some of them [AIG] are already competitive, some are self-motivated, some of course, have problems but as a whole they do like to compete with one another.
B	2	I feel like they need to be pulled out, just like you pull your EC kids out. I felt they needed to be pulled out and worked with and have that differentiated time to do their classwork where you can push them and give them something extra.

The teacher discussion about growing AIG students academically focused on the teachers acknowledging that they wanted to grow and push the AIG students to reach their academic potential. Some teachers felt they did not have the time to focus on the academic growth of AIG students, while others enjoyed the challenge that teaching AIG students brings and specifically differentiated for those students. Many teachers acknowledged that they had the training that would be beneficial for challenging AIG students. They also mentioned they felt AIG students should be permitted to work together during the school day, whether they should be pulled out of their regular classes for specialized instruction or receive rigorous differentiation within their classes.

Summary

The CPTS (Archambault et al., 1993) was sent to 125 teachers in the five participating middle schools in this study. Seven teachers who participated in the survey elected to participate in focus groups held after regular school hours at a site convenient for everyone. Results from the survey and focus groups were used to answer the two research questions concerning teacher perceptions of their differentiation practices for AIG students and their perceptions regarding heterogeneous and homogeneous groupings.

Survey results revealed that teachers perceived that gifted children have special educational needs, with the majority of respondents altering lesson plans to meet their educational needs. Survey results also indicated the strategies teachers use most often are puzzles and worksheets, reports, class discussions, and asking higher level questions. The strategies least often used were sending students to a higher grade level for instruction, self-selected writing assignments, independent projects, programs inside and outside of regular instruction, and enrichment centers.

The following themes emerged from the two focus groups: teacher training, services provided to AIG students, differentiation, using AIG students as tutors for struggling students, the wide range of learners and abilities even among AIG students, and cooperative learning groups. Though all but one teacher had some training with regard to AIG students, many expressed they felt there was no follow-up training after attending county-provided courses, expressing the desire for additional training. All teachers expressed concern about both homogeneous and heterogeneous groupings, stating that it was difficult to meet such a wide variety of needs in the heterogeneous classrooms. Teachers went on to say that while they preferred to teach AIG students in homogeneous groups, struggling students did not have anyone to "pull them up" (Teacher B, Focus Group 2, 2018). Participants were very vocal that they did not feel AIG students were served due to heterogeneous grouping methods and lack of follow-up teacher training. With regard to cooperative learning groups, teachers admitted to often pairing AIG students with struggling students and having AIG students tutor those students. One teacher stated that rather than having AIG students help struggling students, she often grouped AIG students separately so that she could work with struggling students herself (Teacher B, Focus Group 1, 2018). The most discussed theme was the variety of learning and ability ranges in both the heterogeneous and homogeneous classroom. One teacher said that it was possible to differentiate for everyone in her classroom with creating "10 different lesson plans" and that she simply did not have to do that (Teacher D, Focus Group 2, 2018). Chapter 5 focuses on a discussion of the findings and recommendations for future research.

Chapter 5: Conclusions

Introduction

The purpose of this mixed-methods study was to gain insight into the perceptions of middle school teachers toward the differentiation strategies they use when teaching AIG students and their perceptions toward heterogeneous and homogeneous groupings of AIG students. Perceptions were investigated employing a sequential mixed-methods design. The first phase of the study utilized a self-administered online survey for the collection of quantitative data. The second phase included two focus groups to collect information regarding participant perceptions and personal experiences differentiating for AIG students and how their students were grouped within their classrooms.

The CPTS (Archambault et al., 1993) was used to collect quantitative data. This adapted research tool consists of six sections. The first section requests teacher information. Section two asks participants about their understanding of school policy identifying gifted students and the services available at their schools, while section three addresses classroom issues. Section four concerns perceptions of gifted students with teachers asked to indicate their perceptions of gifted students and working with gifted students on a 5-point scale, with 1 being strongly disagree and 5 being strongly agree. Section five concerns classroom practices addressing 39 instructional strategies and approaches listed with teachers asked to indicate the frequency with which they use those strategies and approaches with regular education and AIG students. Teachers indicated their usage of those strategies and approaches on a 6-point scale: 0=never, 1 = once a month or less frequently; 2 = a few times a month; 3 = a few times a week; 4 = daily; 5 = more than once a day. Section six concerned ability grouping practices with a response scale of strongly disagree, disagree, no opinion, agree, and strongly agree.

SurveyMonkey electronically distributed the surveys and collected them, and the researcher analyzed the quantitative data to obtain descriptive statistics.

Limitations

This study was limited by the number of responses to the CPTS and also by the number of participants who chose to provide contact information to later participate in subsequent focus groups. There were only 36 usable cases from the survey, and two small focus groups of only three and four participants each. There is the concern that the length of the survey was a limitation to this study. With 64 questions, only 36 participants completed the survey. Eighteen participants answered some questions before abandoning the survey. The length of the survey may have contributed to the low number of responses and possibly a diminished quality to the responses (Lavrakas, 2008).

Also due to the sampling method, selection bias was considered as the researcher did not know which teachers would choose to participate in the study (Vogt, 2011). Of those teachers who did choose to participate in study, the researcher knew six of the seven participants prior to the focus group taking place. Due to the participants being familiar and comfortable talking to the researcher, participant answers may have been shaped by knowing the researcher. There is also the possibility that responses may have been shaped by participants knowing that the researcher has been the AIG coordinator for one of the middle schools participating in the study for the past 12 years with participants offering responses they believe the researcher wanted to hear (Creswell, 2012).

Also, in the original study using the CPTS, Archambault et al. (1993) used the survey to determine instructional practices used with AIG students in third- and fourth-grade classrooms. This study may be limited by the use of the CPTS in middle school classrooms limiting the generalizability of the study outside of the middle school setting.

Findings

The target population for this study was 125 seventh and eighth grade middle school teachers from five middle schools in one school district in western North Carolina. The CPTS (Archambault et al., 1993) was sent via email link to the teachers with a 43.2% response rate with 36 complete responses and 18 partial responses. Data were analyzed in SPSS (version 24). With only 36 functional cases, a regression model was not possible. Likert scale scores were treated as interval measures in the analysis and the significance level set at $a=.05$ for all analysis. Due to missing data, pairwise deletion technique was utilized.

In questions 1-14, participants provided data concerning teacher information and their understanding of their school's policy of identifying and serving gifted students. Of the 36 functional cases, 10 participants were male and 26 were female. Seventeen participants taught seventh grade, 18 taught eighth grade, and one participant did not report. Nineteen participants had a BA/BS degree, and 17 had a MA/MS degree. Years of teaching experience ranged from 1-5 years to 26-30 years, with most participants having taught for 6-10 years. Eight participants reported having no training in teaching AIG students with most (16) reporting having been locally certified in AIG. The majority of participants at 63.9% reported fully understanding their school's policy for identifying AIG students but not actually being requested to identify gifted students for testing (66.7%). The most common service provided to gifted students was special accommodations in the regular education classroom at 51.4%. Most teachers reported teaching in a departmentalized or team arrangement at (83.3%), with only 16.7% reporting teaching the same students all day. Most teachers (86.1%) indicated they have at least some knowledge or training in ability grouping of students, with only 13.9%

stating they did not have any training or background knowledge in this area. The next question concerning ability grouping asked teachers if their classes were heterogeneously grouped: 25% reported homogenously grouped students; 66.7% reported heterogeneously grouped students for at least a portion of the day; and 8.3% reported that they did not know if their classes were ability grouped or not.

Section four addressed teacher perceptions of gifted students and working with gifted students. In this section of the survey, participants most often reported a 3, neither agreeing nor disagreeing with the statements. The statements which most often received a 3 rating concerned perceptions toward feeling more comfortable working with average ability students; issues with emotions, discipline, and focusing in class; and feeling obligated to help less successful students. Of those statements in which participants did not respond with a 3, data revealed that AIG students have special educational needs and that teachers should alter lesson plans to meet their needs. A high number also reported that working with gifted students offered them opportunities for positive feedback.

Research Questions

This section answers the following two research questions.

1. How do middle school teachers perceive the way they differentiate their classroom practices for gifted students?

2. What are middle school teacher perceptions regarding the groupings of AIG students?

Research Question 1. Research Question 1 of this study investigated middle school teacher perceptions toward their differentiation practices for AIG students. In section five of the CPTS, participants provided data about their classroom practices by identifying the differentiation strategies they most utilize. Puzzles, worksheets, and

assigning reports were shown as being used most often which are not considered curriculum modifications for AIG students (VanTassel-Baska & Stambaugh, 2005). The strategies used least often were sending students to a higher grade level for instruction, allowing student choice, and providing programs inside and outside of regular instruction. There is significant research to suggest that the instructional approaches teachers use significantly affect the degree to which students learn (VanTassel-Baska, 2012). The use of key differentiation practices which include critical thinking and metacognition may help students make positive gains, particularly in math and science in the middle school levels (Wenglinsky, 2000).

In the qualitative phase of the study, focus group questions 1, 2, 3, and 7 asked participants for their perceptions concerning differentiation. A number of themes emerged from participant responses including teacher training, serving AIG students, and helping AIG students make academic gains. Concerning teacher training, all but one focus group member had at least some training in AIG; but at least half expressed concern about the lack of follow-up training from any AIG professional development provided by the district. One teacher said, "there is no follow-up at all" (Teacher D, Focus Group 2, 2018).

Professional development geared specifically toward AIG students is often available for teachers, but differentiation may not be occurring (VanTassel-Baska & Stambaugh, 2005). Five of seven focus group members discussed that they provide differentiated services for gifted students, but they found it challenging to deliver these services regardless of ability grouping. Both sets of teachers participating in the focus groups stated that they offer differentiation but not consistently, and sometimes they fail to offer it specifically to AIG students due to time constraints. While many educators

may be out of their comfort zone when asked to modify the curriculum for gifted students, lack of time makes it challenging to create multiple lessons (VanTassel-Baska & Little, 2003). Some teachers stated that rather than offering differentiation specifically to gifted students, they simply offer choices in assignments to students of all abilities or they add an extra step to assignments for students who finish early. A teacher stated, "I give everybody options again because I have the whole range in the classroom" (Teacher B, Focus Group 1, 2018).

Research Question 2. Section six of the survey addressed Research Question 2 which examined teacher perceptions of ability groupings for AIG students. Two of the focus group participants taught AIG students in a homogeneous setting, while the other five taught them grouped heterogeneously. The majority of teachers who took the survey strongly agreed that AIG students should be homogeneously grouped as it is better for their learning needs. Statistics revealed that teachers perceived homogeneous grouping for AIG students to have a strong positive effect on their achievement and that it was good for their learning motivation. They also strongly agreed that heterogenous grouping can be unfair for AIG students and may not provide the intellectual stimulation that AIG students require.

The themes which emerged from the focus groups regarding Research Question 2 were the range of learners within both heterogeneous and homogenous classrooms, AIG students being used as tutors for struggling students, cooperative learning groups, and helping AIG students make academic growth.

Five of the seven teachers in the focus groups expressed difficulty differentiating for AIG students regardless of whether they were grouped homogeneously or heterogeneously. Teachers stated there was such a wide range of learners in any

classroom that they found it frustrating to find the time to create multiple lesson plans. Within heterogeneous classrooms, there are mixes of high and low learning levels, and literature suggests that differentiated programs and services for AIG students are not necessarily provided or are limited (Westberg et al., 1993; Westberg & Daoust, 2003).

Within homogenous classrooms, with only AIG students or a mixture of AIG students and high-achieving students who are not identified as AIG, teachers stated that learning levels still varied so much among those students that they still found those classes required multiple lesson plans in order to properly differentiate for AIG students. One teacher said, "I have so many levels that I can't" (Teacher B, Focus Group 1, 2018). Another teacher said, "You have to either make two different lesson plans, and let them work individually" (Teacher D, Focus Group 2, 2018). A third teacher said, "It's easier to have them separated. For my classroom, I learned some strategies also in the training. I don't use them a lot just because once again, I have so many different levels, so I can't" (Teacher A, Focus Group 1, 2018). The majority of teachers in the focus groups clearly conveyed that while they had been trained in AIG services and knew how to differentiate, they found differentiation for gifted students challenging. There were also multiple contradictions in the focus groups that while teachers believed they were providing differentiation services for AIG students, they actually may not have been providing those services based on their comments. While at first the teachers said they had been trained and knew how to provide the services, they actually were not providing them due to varying learning needs among ability groups and the lack of time to create multiple lesson plans.

Teachers also spent significant time discussing asking AIG students to tutor less proficient students. A number of contradictions emerged from this conversation as well.

While almost all teachers agreed that encouraging, or even telling, AIG students to help struggling learners is something that teachers should not do, most admitted to implementing this practice. One teacher said, "I always give them the option if they're done and if they would like to help somebody else" (Teacher A, Focus Group 1, 2018). "I've got to give the advanced students the chance to actually help me" (Teacher C, Focus Group 1, 2018). Yet another teacher admitted knowing that it is not a research based best practice, but she said, "I did a research study on that and it says it's terrible, but I like that way" (Teacher B, Focus Group 2, 2018).

A theme which emerged from the conversations on the ranges of learners in the classroom and asking or even encouraging AIG students to help or tutor struggling students was the use of cooperative learning groups, particularly in heterogenous classes. Teachers expressed frustration at trying to group students in a way that was fair to all students and not putting an unfair workload on AIG students. Some teachers said they try to create small homogeneous groups of students so the workload does not fall entirely on AIG students, while others stated they group students heterogeneously if the students are a good personality match. A teacher stated, "I just group the lower kids. I let the other kids go and work independently and I help the lower kids" (Teacher A, Focus Group 1, 2018). Another elaborated on preferring to put AIG students together in cooperative groups by saying,

> The ones that had most of the AIGs, they are flying through the materials they
> understand. They work super well with each other, and I don't know if it's
> because they are at the same level and they just understand it easier. (Teacher A,
> Focus Group 1, 2018).

One teacher did point out that while it may benefit AIG students to work together, less

proficient students may struggle without AIG students to "pull them up" (Teacher B, Focus Group 2, 2018).

A final theme which emerged from focus groups was helping AIG students make academic growth and gains. Curriculum modification is viewed by many researchers as necessary for helping gifted students achieve academic growth (VanTassel-Baska & Little, 2003). Four of the seven teachers reported finding it difficult to help AIG students make significant gains despite their attempts at differentiating for these students. Many of their comments expressed concern toward lack of gains in reference to the first two themes which emerged in response to Research Question 1: lack of follow-up teacher training and time to serve AIG students. All teachers agreed that they had the desire to help AIG students grow academically, but they felt they lacked the necessary follow-up training or it was too time consuming to serve the needs of AIG students in order to help them show growth on state-mandated end-of-grade tests.

There was also the concern that they either could not provide the necessary rigor to challenge gifted students in order for them to grow academically or that AIG students refused to attempt or complete academically rigorous tasks due to being involved in a number of extracurricular activities. While all seven teachers agreed that AIG students need to be pushed academically, most stated it was more difficult to challenge them in heterogeneous classrooms. A teacher said, "I felt they need to be pulled out and worked with and have that differentiated time that they do their classwork, where you can push them and give them something extra" (Teacher B, Focus Group 2, 2018). Another summarized the themes of lack of rigor and services as they converged:

I feel like they don't get pushed academically, they achieve at very high levels easily, but I also do see a little bit of lack of motivation in some of the gifted

students. That may be because we are not serving them. (Teacher B, Focus

Group 1, 2018)

Recommendations from Findings

Multiple discussion points and themes emerged from both the quantitative and

qualitative data. First, however, the researcher would like to address the survey itself,

particularly section four (15-24) regarding perceptions of AIG students. Teachers rated

their perceptions of working with AIG students on a scale of 1 (strongly disagree), 2

(disagree), 3 (no opinion), 4 (agree), and 5 (strongly disagree). Teachers answered with a

3 (no opinion) the majority of the time on seven of nine questions. The researcher

recommends adjusting the 3 (no opinion) option to somewhat agree or somewhat disagree

as opposed to eliminating the option entirely and creating a forced choice with a 4-point

method. By removing a neutral response option, validity and reliability may be increased

(Edwards & Smith, 2011).

With regard to differentiation practices, teachers indicated that in their perception,

they do practice differentiation to meet individual learning needs. Teachers stated that

due to time, lack of training or follow-up training, and a wide range of students in both

homogenous and heterogeneous classes, issues arise in developing rigorous lessons for

AIG students; also, teachers often utilize AIG students as peer tutors. According to the

survey in the quantitative portion of this study, while teachers indicated they were

differentiating of gifted students, they were still using very basic learning strategies.

Each of the points and themes all intertwine in some way determining how teachers

perceive differentiation, their delivery of differentiation, and how their students are

grouped.

In 2003, Tomlinson stated that the integration of critical-thinking skills into daily

content was necessary to achieve rigor. In the quantitative portion of this study, the use of worksheets, puzzles, word searches, and written reports were cited as one of the most prevalent teaching techniques found in classrooms which are not considered differentiation practices for AIG students. Studies have reported that little differentiation is occurring for AIG students, and worksheets and puzzles are not considered as differentiation or curriculum modification (VanTassel-Baska & Stambaugh, 2005). The use of these techniques which are more often than not too easy for AIG students has been connected to a lack of planning time, lack of professional development or follow-up professional development, and the desire to increase student rigor. It has also been suggested that teachers of the same grade level can share the load of preparing differentiated assignments by using flexible grouping of students based on specific content areas. Flexible grouping means that a teacher will create temporary groups that may last an hour, a week, or a month, based on the activity. Teachers adjust these groups as student learning needs change (Cox, n.d.).

One of the most discussed points in the focus groups was offering a differentiated curriculum to gifted students but lacking the time to do so. Research points to strategies such as advanced graphic organizers, reasoning skills, problem-solving skills, and text analysis combined with creativity and projects as being only some of the curriculum modifications that can be utilized with AIG students (VanTassel-Baska & Little, 2003). One focus group participant praised the district for providing AIG differentiation courses but expressed frustration at the lack of follow-up. She stated,

> I think the county does a great job as far as getting new lessons on a county level, but there is no follow up at all. It seems like if there was periodical professional development that was offered, it's a way for us to enhance our toolbox to meet the

need of those learners rather than, you take these three classes however long ago

and it's never discussed again. It might be inputted in here and there in

professional development but there is no professional development that is devoted

to it. (Teacher D, Focus Group 2, 2018)

Increased planning time. To eliminate the use of techniques that do not

challenge AIG students and do allow teachers to plan effective differentiated daily and

weekly lesson plans, it is recommended that teachers need additional planning time to

meet with vertical and horizontal teams (VanTassel-Baska & Stambaugh, 2005). School

leadership needs to provide time during the school year for teachers to attend professional

development to gain new differentiation strategies and extend the skills they may have

already learned (VanTassel-Baska & Stambaugh, 2005). Research supports that AIG

students may experience significant growth when educators use advanced and content-

relevant models; but again, time must be made to allow planning for these models

(VanTassel-Baska, Bass, Reis, Poland, & Avery, 1998; VanTassel-Baska, Zuo, Avery,

Little, 2002). Allowing teachers more time for planning advanced lessons and

professional development to learn or refresh differentiation methods may aid in the

growth process for gifted learners.

Practice flexibility in grouping. In addition to needing extra time for planning

rigorous lessons, teachers also require flexibility and strategies for working with all

students. According to the data from the focus groups, teachers are faced with a wide

range of student learning needs. Gifted students have been grouped with less-abled peers

for at least 3 decades due to the thought there may be emotionally and academically

damaging effects on both AIG and regular education students if gifted students were

exclusively grouped together for the majority of the school day (VanTassel-Baska, 1991).

While teachers often do not get to choose if their classes are grouped heterogeneously or homogeneously, it is still necessary for teachers to use practices which support both cooperative grouping for regular instruction and grouping for acceleration (Rogers, 2002). In the area of professional development, it may also be necessary for teacher behaviors to be systematically monitored to ensure the differentiation tools they have learned are being put into place.

Specific professional development. In addition to the previous suggestions of providing teachers more time for planning and professional development, specific types of professional development should be offered to help teachers resolve the issues centering around the wide array of learners in each class. One suggestion teachers may find helpful is to experience training on how to implement cluster grouping within heterogenous classrooms or classrooms in which the learning needs of AIG students vary widely. This model provides teachers the option to spend proportionate amounts of time with students of all learning levels (Kulik & Kulik, 1990; Rogers, 2002). Also, within small groups, teachers can be trained to group students for the acceleration of the curriculum as those students progress through material (Rogers, 2002).

Avoid the consistent use of AIG students as peer tutors. How much should children help each other learn? There is still the theme of utilizing AIG students as peer tutors to address. While the research in the quantitative portion of this study revealed that teachers neither agreed nor disagreed that they felt obligated to help less successful students, all seven focus group members confessed to not feeling like they were serving AIG students in either heterogeneous or homogenous settings due to spending more time helping less successful students and not having the time to create lesson plans to meet the needs of all students. All but one participant also discussed asking higher level students

to help struggling students, especially when AIG students or high-level learners finish their work early. One focus group member said, "I think I use my advanced kids as helpers because I have such a wide range within which to teach" (Teacher C, Focus Group 1, 2018).

Gifted students who are served in heterogeneous classrooms often finish their work sooner than their regular education peers (Brown, 2015; VanTassel-Baska & Brown, 2007). When gifted students finish early, teachers often call upon them to help or tutor less-proficient peers. Just because a student is gifted does not necessarily mean he/she is qualified to tutor other children. Howell (1979) determined that in order for students to be good tutors, teachers need to first work with the students to be tutors and show them how to do the work well. This takes time teachers may feel they do not have to give, and Bailey (2017) asserted that a peer tutor will never be an adequate replacement for instruction by a teacher. On the other hand, Foot and Howe (1998) suggested that peer tutors can benefit not just the student being tutored but also the student doing the tutoring. They suggested that tutors benefit from repeated exposure to material and the use of higher order thinking skills as they teach other students.

Research shows that gifted students may or may not make good peer tutors, dependent upon circumstances; therefore, if teachers are going to call upon gifted students to help their peers, there are steps that can be taken to improve this practice. Before teachers ever ask gifted students to tutor others, they should make sure gifted students have class work that is demanding and content rich (VanTassel-Baska & Brown, 2007). Teachers may also consider grouping gifted students together and creating opportunities for them to work cooperatively. Again, comes the suggestion of professional development or follow-up professional development to give teachers the

opportunity to learn more about the needs of this special group of learners and how to best serve them. Also, with lack of time being an issue that was spoken of repeatedly, teachers may also consider creating research-based curriculum units. These long-term units may save teachers time in terms of not creating separate lessons for gifted learners on a daily basis (Brown, 2015).

Future Research

Based on the findings of this research, the researcher recommends that future research extend these findings. In both the quantitative and qualitative portions of this study, teachers acknowledged that AIG students have specialized learning needs. While teachers claimed to have had professional development opportunities in serving gifted students, many stated that lack of time and the wide range of learners, even in homogenous classrooms, lead to feelings of not properly serving gifted learner needs. Future research could include teacher perspectives on the type of professional development needed to meet the needs of AIG learners. Additional future research could also include interviews of AIG students, asking them about their experiences in both heterogeneous and homogeneous classrooms and their perspectives on if they feel their needs are being met.

Second, with so many teachers utilizing AIG students as peer tutors, future research may include both the perspectives of AIG students and regular education students toward peer tutoring. Research should also be conducted on how to effectively implement peer tutoring and alternatives to peer tutoring in situations in which it is not effective.

Conclusion

Upon reviewing the findings of this study, it is clear to the researcher that while

teachers recognize that gifted students require differentiated learning opportunities, not enough is being done to serve their needs. Time should be provided not only for professional development for teachers to learn more about serving the needs of gifted students, but follow-up training is necessary to help teachers continue their education about how to best differentiate learning for AIG students. Time should also be provided for teachers to develop differentiated lessons and plan long-term units, so they do not feel so overwhelmed by day-to-day lesson planning. There may also be the need to examine flexible grouping opportunities, so teachers can adjust student schedules in order to meet the needs of all students.

In conclusion, teachers should be provided the time and training in order to best support the learning of AIG students. When teachers are able to provide their students with the differentiated learning opportunities to meet their academic needs, AIG students will have the possibility to flourish in a productive learning environment designed to honor the needs of all students.

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Appendix A

Classroom Practices Teacher Survey

Classroom Practices Teacher Survey

Please check the box that best describes you.

1. Gender

Male

Female

Prefer Not to Say

Professional Diploma

Other

2. Years of Teaching Experience

3. Highest Degree Earned

BS/BA

MA/MS

Ph.D.

Ed.D.

Professional Diploma

Other

4. Training in teaching academically/intellectually gifted (Check all that apply)

None

AIG Certification

Courses at university/college

District Inservice

Educational degree in that area

Workshop outside of district

5. Grade level currently teaching

7

8

Please check the box that best answers the answers the questions regarding your school/district, or fill in the blank.

6. Do you fully understand your school's policy for identifying gifted students?

Yes

No

Minimally

There is no policy.

I am not aware of a school policy.

7. Does your school ask you to identify gifted students?

Yes

No

I don't know.

2. Years of teaching experience

3. Highest Degree Earned

BA/BS

MA/MS

Ph.D. or Ed.D.

8. If so, how many students have you identified in your years of teaching experience?

9. What services are in place for gifted students at your school?

No accommodations, taught in regular classroom

Special accommodations within regular classroom

Subject level acceleration (ie.: 7th grader in regular classroom taking 8th grade level math)

Grade skipping

Part-time separate gifted programming outside school

Full-time separate gifted programming outside classroom

Please answer the following questions regarding your classroom.

10. Which of the following best describes the type of class you teach?

Intact or self-contained (i.e. the same students all day)

Departmentalized arrangement (I.e. teach one or more subjects to different classes)

11. If you teach in a departmentalized arrangement, please select the subject area in which you teach and answer the remaining questions in this section based on that class. Please indicate the class you have selected.

Science

Math

Social Studies

Language Arts

Other (Specify:)

12. What is the number of formally identified gifted students in your classroom?

13. I have background knowledge and/or training concerning the concept of ability grouping.

Yes

No

14. Does your group use heterogeneous grouping (mixed abilities) in the academic courses (language arts, science, math, social studies)?

Yes

No

Other (please specify)

If yes, which of the following applies?

0

1-3

4-6

7-10

More than 10

I am unsure.

Answer the following questions on a scale of 1-5 (one being strongly disagree, five being strongly agree)

15. Working with gifted children gives me greater opportunities for positive feedback and feeling that I have accomplished something in my teaching.

1 2 3 4 5

16. I have all the necessary tools and training to accurately identify gifted students within my classroom.

1 2 3 4 5

17. I find I am more comfortable working with students who are "average" than those who are gifted or have special talents.

1 2 3 4 5

18. Gifted children have special educational needs.

1 2 3 4 5

19. Teachers should alter lesson plans to meet the individual educational needs of every student in their classroom.

1 2 3 4 5

20. Gifted children are more of a challenge to discipline in the classroom than average ability students.

1 2 3 4 5

21. Gifted children often have more psychological and emotional issues than average ability students.

1 2 3 4 5

22. Gifted children are no different than average ability students when it comes to focusing in the classroom.

1 2 3 4 5

23. I feel more of an obligation to help students who are less successful at meeting state standards than those who successfully meet the state standards.

1 2 3 4 5

24. My school provides all the services necessary for meeting gifted students educational needs.

1 2 3 4 5

Please respond to the following questions using the same content area that you selected previously. Please rate the following response scale to indicate what occurs in your classroom and select the most appropriate response.

Response Scale:

Never Once a month or less frequently A few times a month A few times a week Daily More than once a day

25. Use basic skills worksheets

Never

Never

Once a month or less

frequently A few times a month A few times a week Daily More than once a day

26. Use enrichment worksheets

Never

Once a month or less

frequently A few times a month A few times a week Daily More than once a day

27. Assign reading of more advanced level work

Never

Once a month or less

freqently A few times a month A few times a week Daily More than once a day

28. Assign reports

Never

Once a month or less

frequently A few times a month A few times a week Daily More than once a day

29. Assign projects or other work extended time for students to complete

Never

Once a month or less

frequently A few times a month A few times a week Daily More than once a day

30. Use activities such as puzzles or word searches

Never

Once a month or less

frequently A few times a month A few times a week Daily More than once a day

31. Give creative or expository writing assignments on topics selected by the teachers

Never

Once a month or less

frequently A few times a month A few time a week Daily More than once a day

32. Give creative or expository writing assignments on topics selected by the students

Once a month or less

frequently A few times a month A few times a week Daily More than once a day

33. Make time available for students to pursue self-selected interests

Never

34. Use pretests to determine if students have mastered material covered in a particular unit or content area

Never

Once a month or less

frequently A few times a month A few times a week Daily More than once a day

35. Eliminate curricular material that students have mastered

Never

Once a month or less

frequently A few times a month A few times a week Daily More than once a day

36. Repeat instruction on the coverage of more difficult concepts for some students.

Never

Once a month or less

frequently A few times a month A few times a week Daily More than once a day

37. Substitute different assignments for students who have mastered regular classroom work.

Never

Once a month or less

frequently A few times a month A few times a week Daily More than once a day

38. Modify the instructional format for students who learn better using an alternative approach.

Never

Once a month or less

frequently A few times a month A few times a week Daily More than once a day

39. Encourage students to move around the classroom to work in various locations.

Never

Once a month or less

frequently A few times a month A few times a week Daily More than once a day

40. Allow students to leave the classroom to work in another location, such as the media center or computer lab.

Never

Once a month or less

frequently A few times a month A few times a week Daily More than once a day

41. Use learning centers to reinforce basic skills.

Never

Once a month or less

frequently A few times a month A few times a week Daily More than once a day

42. Use enrichment centers

Once a month or less

frequently A few times a month A few times a week Daily More than once a day

Once a month or less

frequently A few times a month A few times a week Daily More than once a day

43. Teach thinking skills in the regular curriculum

Never

44. Teach a unit on critical thinking skills, such as critical thinking or creative problem solving

Never

Once a month or less

frequently A few times a month A few times a week Daily More than once a day

45. Participate in programs inside and outside of the regular instructional day, such as Odyssey of the Mind, Knowledge Masters, Math Fax, etc.

Never

Once a month or less

frequently A few times a month A few times a week Daily More than once day

46. Use contracts or management plans to help students organize their independent study projects

Never

Once a month or less

frequently A few times a month A few times a week Daily More than once a day

47. Provide time for students to work on independent study projects

Never

Once a month or less

frequently A few times a month A few times a week Daily More than once a day

48. Provide more advanced curriculum units

Never

Once a month or less

frequently A few times a month A few times a week Daily More than once a day

49. Send students to a higher grade level for instruction

Never

Once a month of less

frequently A few times a month A few times a week Daily More than once a day

50. Give assignments that encourage students to organize their own work schedule to complete a long range project

Never

Once a month or

less frequently A few times a month A few times a week Daily More than once a day

51. Provide questions that encourage reasoning and logical thinking

Never

Once a month of less

frequently A few times a month A few times a week Daily More than once a day

52. Ask open-ended questions

Never

Once a month or less

frequently A few times a month A few times a week Daily More than once a day

53. Encourage students to ask higher-level questions

Never

Once a month or less

frequently A few times a month A few times a week Daily More than once a day

54. Encourage students to participate in class discussions

Never

Once a month or less

frequently A few times a month A few times a week Daily More than once a day

Please answer the following questions regarding the ability grouping of gifted students in your classroom and school.

Response Scale:

Strongly Agree Agree No Opinion Disagree Strongly Disagree

55. Ability grouping for gifted students has little or no effect on achievement.

Strongly Agree Agree No Opinion Disagree Strongly Disagree

56. Heterogeneous grouping is academically and socially beneficial than homogeneous ability grouping.

Strongly Agree Agree No opinion Disagree Strongly Disagree

57. Homogeneous grouping of gifted students allows the teacher to better able meet the learning needs of gifted students.

Strongly Agree Agree No Opinion Disagree Strongly Disagree

58. Homogeneous grouping would increase the motivational level of gifted students.

Strongly Agree Agree No Opinion Disagree Strongly Disagree

59. Heterogeneous grouping is unfair to gifted students.

Strongly Agree Agree No Opinion Disagree Strongly Disagree

60. Both heterogeneous and homogeneous grouping can be beneficial to gifted students.

Strongly Agree Agree No Opinion Disagree Strongly Disagree

61. Homogeneous ability grouping for gifted students is not beneficial.

Strongly Agree Agree No Opinion Disagree Strongly Disagree

62. Heterogeneous classrooms may not provide intellectual stimulation to gifted students.

Strongly Agree Agree No Opinion Disagree Strongly Disagree

63. Gifted students may be unfairly labeled as better, smarter, etc. by being served in homogeneous classes.

Strongly Agree Agree No Opinion Disagree Strongly Disagree

64. If would be interested in participating in a one-time focus group concerning differentiating for and grouping AIG students, please provide your name and school email address in the comment box. You will be contacted with additional information. If you do not wish to be contacted, please type NONE in the box.

Appendix B

Focus Group Questions

Focus Group Questions

1. Do you feel that you differentiate the curriculum for gifted students in your classroom?

2. How do you decide which classroom practices to use with gifted students in your classroom?

3. How do you specifically differentiate your classroom practices for gifted students in your classroom?

4. How are the gifted students you teach grouped in your classroom?

5. What are the advantages and disadvantages of grouping students by their abilities in your classes?

6. Do you feel that there are specific subjects/courses in which students should or should not be grouped by ability?

7. Is there anything else you would like to add specifically concerning differentiating classroom practices or ability groupings for gifted students?