6-19-2011

A Study of the Perceptions of Pre-service and In-service Educators on Best Practices for Gifted Students

Stacie Hoffer Nowikowski
Indiana University of Pennsylvania

A STUDY OF THE PERCEPTIONS OF PRE-SERVICE AND IN-SERVICE EDUCATORS ON BEST PRACTICES FOR GIFTED STUDENTS

A Dissertation

Submitted to the School of Graduate Studies and Research

In Partial Fulfillment of the

Requirements for the Degree

Doctor of Education

Stacie Hoffer Nowikowski

Indiana University of Pennsylvania

May 2011

Indiana University of Pennsylvania
The School of Graduate Studies and Research
Department of Professional Studies in Education

We hereby approve the dissertation of

Stacie Hoffer Nowikowski

Candidate for the degree of Doctor of Education

_____ _____
Dr. Mary Renck Jalongo,
Professor of Education

_____ _____
Dr. Monte Tidwell,
Assoc. Professor of Education

_____ _____
Dr. Kelli Paquette,
Professor of Education

_____ _____
Dr. James Hooks,
Librarian

ACCEPTED

_____ _____
Timothy P. Mack, Ph. D.
Dean
The School of Graduate Studies and Research

Title: A Study of the Perceptions of Pre-service and In-service Educators on Best Practices for Gifted Students

Author: Stacie Hoffer Nowikowski

Dissertation Chair: Dr. Mary Renck Jalongo

Dissertation Committee Members: Dr. Monte Tidwell
Dr. Kelli Paquette
Dr. James Hooks

A significant issue in gifted education is the possible need for mandatory pre-service programs or certifications for educators who work with students who are gifted and talented. It was the primary purpose of this dissertation study to examine the perceptions of three groups of participants (pre-service educators, in-service educators in regular classroom environments, and in-service educators in classrooms for gifted students) to discern if misconceptions exist among the groups about the best practices for identifying and educating students who are gifted. Qualitative methodology was used to collect data via focus group interviews, email interviews, and document analysis. Data were analyzed for emerging trends and common themes in participants' perceptions of best practices for identifying and educating students who are gifted.

The results of this study yielded several recommendations, including: (1)the need for more cohesive

philosophies of gifted education and in-service training programs at the district level, (2) better defined gifted certification and/or pre-service teacher education program elements for gifted education, and (3) assistance for school districts from gifted education professional organizations or universities with strong backgrounds in gifted education programming to provide quality gifted professional development. The results support further research regarding pre-service education components and best practices in the education of students who are gifted.

ACKNOWLEDGMENTS

This entire endeavor of my doctoral degree would not have been possible without the support of my family. I would especially like to thank my mother, father, husband, and brother for their support, patience, and understanding during the time it took to complete my coursework and dissertation. To my mother, thank you for being my best friend and my motivation. Without your dedication and encouragement, I would not have achieved my academic goals. It is because of you that I made it this far. To my father, I thank you for your hard work and countless hours put in, without complaint, so that I could choose to educate and better myself. Mom and Dad, without both of your contributions, I would not have had the opportunity for this journey. I would also like to thank my husband, Joe. You always believe that I can accomplish anything I choose, and you convince me I can, even when I doubt myself. It truly shows love for another person when you are able to put your own dreams on hold so that your wife may complete hers.

My deepest thanks are also given to my dissertation committee. My dissertation chair, Dr. Mary Jalongo, who is the most talented writer I have ever met, you provided me with knowledge, guidance, and support. Also, to the rest

of my committee, Dr. James Hooks, Dr. Kelli Paquette, and Dr. Monte Tidwell, your knowledge and expertise helped me to write a dissertation of which I am truly proud.

This dissertation is also dedicated to the memory of my grandfather, Louis John Hoffer, Jr., and my great-grandmother, Mary Ann Hoffer, whose love, resilience, and generosity will always influence me as a person and as a professional.

TABLE OF CONTENTS

LIST OF TABLES

Table Page

List of Figures

Figures Page

CHAPTER I

INTRODUCTION

Gifted education often incurs opposition from critics who consider it to be a means of perpetuating an elitist education system, yet the importance of fostering the gifts and talents of children is vital for the continued academic accomplishment of society (Shavinina & Ferrari, 2004). As a nation, Americans have struggled with concepts of fairness, excellence, and equality. It has been difficult to understand how to celebrate student excellence and at the same time provide equality in education. Cooper (2009) contends that, even though equality in education has been synonymous with "fairness" in the past, there is still inequality in education. The inequality lies in the idea that it is "unfair" to teach all children of varying abilities in the same manner (Cooper, 2009). Davidson & Davidson (2004) contend that the United States shows evidence of becoming a nation that is negating the development of its most gifted and talented individuals by failing to provide a free appropriate education matched to learners' strengths. According to the National Association for Gifted Children (2008), giftedness is defined as "a person who shows, or has the potential for showing, an exceptional level of performance in one or more areas of

expression" (unpaged). This widely accepted, yet general, definition is a rudimentary guideline for giftedness. This definition, or one similar to it, often is the criterion that state departments of education use to determine student eligibility for programs that serve children who are gifted. Students usually are identified as in need of gifted support services because of extremely high aptitude in one or more academic or creative areas. "Aptitude" is defined as a tendency to excel in a certain skill (NAGC, 2008). According to the National Association for Gifted Children (NAGC, 2008), federal presence and policy in gifted education is minimal, and each state is responsible for interpreting the definition of giftedness. Even at the state level, mandates that interpret the definition of giftedness and describe the requirements a student must meet in order to be identified as a student eligible for gifted services do not necessarily exist. At the state government level, 28 states mandate that gifted students be identified (NAGC, 2008). There is also variance among states' policies on mandating programming and providing funding for those programs. Thus, identification systems and programming are constructed within each school system according to the state's guidelines, if they exist (NAGC, 2008). Since school resources may not be equivalent,

inequities exist among programs. The table below is derived from a gifted education database web site (Davidson Institute for Talent Development, 2011). This table explains the number of states that mandate funding and/or programming, but it should be noted that programming and identification systems are designed per state or even per school district so, if programming is mandated, there is still no guarantee that the program design is aligned with best practices or not.

Just as the definition of giftedness is left to the interpretation of the individual state, it is also the responsibility of each state department of education to define which of its teachers is eligible for instructing its students with gifts and talents. Since the districts are in charge of delegating who will educate their populations of students who are gifted, the equality of gifted programs may be negatively impacted depending on the experience of the teacher selected. Certifications and competencies in gifted and talented education are not the nationwide norm, but, in many states, gifted education certification programs are emerging as part of programs for educators or in-service teachers seeking a second certification. According to the Davison Institute for Talent Development (2010), there are only 10 states that

currently report mandated certifications in gifted and talented education through state legislation. Other states may possess certifications in gifted education, but they are not currently mandated. Thus, the qualifications of a teacher of the gifted will vary, per state and per district. See Table 1, *State Programming/ Funding Mandates*, for more specific mandate information. In the states that have more stringent guidelines, certain requirements are expected of an individual before that person can apply for a position as a teacher of gifted education. For example, in the state of New York, an individual interested in becoming an instructor of the gifted must first possess a permanent teacher certification before pursuing a graduate program that provides gifted education certification New York Department of Education, 2004). This post-undergraduate extension program is extensive and must be, according to New York policy, completed at one of the eight state-approved universities. Following the successful completion of one of these state-approved programs, the teacher interested in working with students who are gifted must complete a licensing test based on the current best practices of gifted education. It is unclear in the research why more states do not follow the example of creating more rigorous programs to help decide which

Table 1

State Programming/Funding Mandates

State Requirements for Gifted Education	Number of States
1. Programming mandated; fully funded by the state (AZ, GA, IA, MS, NC, OK)	6
2. Programming mandated and partially funded by the state (AK, AR, CO, FL, ID, IN, KS, KY, LA, ME, MN, MT, NE, NM, OH, SC, TN, TX, VA, WA, WI, WV)	22
3. Programming is mandated and no funding is available (AL, HI, MD, OR, NJ, PA)	6
4. Programming is not mandated; funding for gifted education is available (CA, MI, ND, NV, UT)	5
5. Programming is not mandated; Funding is not available (CT, DE, IL, MA, MO, NH, NY, RI, SD, VT, WY)	11

educators can become teachers of students identified as gifted and talented. Without more stringent mandates of teacher certification and preparation, no national cohesiveness can be achieved within the field of gifted education.

In the Commonwealth of Pennsylvania, no additional credits are required and no special licensure is needed to become an instructor of students enrolled in gifted education programs. Many professional educators invested in the cause of gifted and talented education perceive a need for more strict guidelines regarding which professionals will educate the populations of student who are gifted in the Pennsylvania school system in regular education and gifted education classroom environments (National Association for Gifted Children, 1997).

The issue of improving the preparation of professionals who work with gifted learners is also a concern especially when exploring the perceptions of educators hired to teach diverse populations of gifted learners. Giftedness often can manifest in non-typical ways in diverse populations. For example, a student could be passed over for gifted support services because he or she is nonconforming or challenges authority in the regular classroom environment. According to Jalongo & Hirsh

(2010), adults tend to prefer a child that is "compliant, quiet, neat, and polite" (p. 15). Sak (2004) explains that "students displaying creative behaviors tend to be unappealing to teachers…When teachers do not know what creativity is, how it manifests, and how it is important they may ignore teaching for creativity" (p. 216). Unique manifestations and classroom behaviors often are overlooked by those not adequately trained to educate both typically and non-typically gifted learners.

This dissertation is intended to help determine whether or not misconceptions about the best practices for the identification and education of students who are gifted exist within groups of pre-service educators and in-service educators in both regular and gifted education environments. Understanding the misconceptions about best practices can help further gifted research and help to address any existing educational malpractices, replacing them with practices that are the most beneficial to students who are gifted and talented.

Four Persistent Misconceptions in Gifted Education

Many misconceptions persist among educators inadequately trained to work with learners who are gifted. These misconceptions are even more prominent when

inadequately trained professionals are assigned to work with students who manifest their giftedness in non-typical ways (Begoray & Slovinsky, 1997). These misconceptions often lead to the utilization of educational malpractices with students who are gifted and talented. There are four main types of educational malpractice that frequently occur when educators are not trained to work with students who are gifted and talented and educators fail to make accommodations for student with gifts and talents. They include the following:

1) Misuse of the regular curriculum when modifying assignments. For example, a student is offered additional assignments from the current grade level curriculum instead of above level, enrichment activities (Delisle, 2002; Tomlinson, 2004).

2) Rejection of appropriate accommodations. For example, a student is asked to tutor struggling students in cooperative learning situations instead of being permitted to pursue independent interests or pursue an accelerated curriculum matched to the learners' capabilities (Delisle, 2002; Robinson, Shore, & Enersen, 2007).

3) Cultural or personal biases toward behaviors associated with giftedness. For example, a student is passed over for gifted support because he or she acts out in the regular classroom environment (Moon & Brighton, 2008).

4) Inaccurate assumptions about giftedness in special populations. For example, a child with an identified learning disability in reading is denied gifted support despite high ability another subject (Olenchak, & Reis, 2002).

Collectively, these inappropriate practices can lead to students being passed over for gifted services during biased identification procedures, or they can also lead to students being denied appropriate best-practice accommodations in regular and gifted education environments. Jalongo and Isenberg (2004; 2010) state that creativity in diverse populations of students needs to be treated as a valuable human resource. The ability to be creative and to think creatively can be a characteristic present in a student who is gifted and talented. Thus, bias and misinterpretation of creativity could prevent a diverse student with gifted abilities from achieving his or her optimal educational success.

The first persistent educational malpractice that exists among those untrained in gifted and talented education is that the regular curriculum could be considered sufficient for the gifted learner (Delisle, 2002). In some educational models, it is assumed that the gifted and talented should be able to challenge themselves within this setting. Tomlinson (2004) describes this same phenomenon and criticizes those teachers that assume students should be able to be their own curriculum advocates. This particular educational malpractice often indicates an unfortunate situation where the students who are gifted and talented are not being treated as gifted individuals in their regular classroom environment. Tomlinson (2009) advocates that differentiation within the regular education environment should be the central element of a student's gifted education experience. In the regular classroom environment, differentiations may occur in several forms such as enrichment, curriculum compacting, or flexible groupings. Enrichment can be defined as any activity or task that is more complex than the regular curriculum or is outside the regular classroom curriculum (NAGC, 2008). Curriculum Compacting in the classroom can be defined as an accommodation that allows students, when mastery is displayed in a given area, to proceed forward

from additional instruction time to additional learning experiences (NAGC, 2008). Flexible Groupings allow students of varying abilities to be transient in groups based on interest or skill area (NAGC, 2008). These strategies allow students who are gifted to be engaged in the regular classroom environment.

Davison (1996) describes the current education system as one that meets minimum standards for educating pre-service teachers to work with students who are gifted in a regular classroom environment. In *Gifted Child Today*, a 7,000 person survey noted that the differentiation practices of 3rd and 4th grade elementary teachers have not changed significantly in the past ten years ("*Differentiation in the Regular Classroom*", 2004). Many of the teachers examined in this study had no gifted education coursework at the college level. There was a more common occurrence of differentiated practices in the regular education environment with the teacher participants who had formal degrees or certifications in gifted and talented education. Delisle (2002) writes that, to be successful at regular education, the differentiation that teachers must employ requires passion and commitment to working with students who are gifted and talented. The teacher responsible for the regular classroom learning of

those students who are gifted must possess the understanding that regular classroom practices can be a waste of time when they are far below a student's capabilities. Davison (1996) notes that teachers who are untrained in pedagogy for the gifted display more negative attitudes toward students who are gifted. To be successful, these teachers must have a deep pedagogical understanding of what each individual with gifted abilities requires in the everyday classroom environment, and they must be able to set high expectations for the gifted student that are outside the realm of grade point averages and class ranks. Delisle (2002) refers to these measures as "artificial" and recommends validation where a student's strengths lie as more powerful expectations than those that can be recorded. Coming to understand the nature of gifted children through in-service or pre-service programs may help in-service and pre-service teachers better understand the best practices for educating populations of gifted and talented students (Karnes & Whorton, 1996; Karnes, Stephens, & Whorton, 2000). If the principles of diversity, anti-bias, and inclusion are to be fully realized, educators must advocate for the educational needs of students with gifts and talents just as ardently as they advocate for the educational needs of students with

disabilities.

The second form of educational malpractice affecting students with gifts and talents involves denying the use of some accommodations such as acceleration or "grade skipping." Despite the massive amount of research that exists to support acceleration options offered to the gifted student, teachers inexperienced and untrained in the pedagogy of gifted and talented education continue to resist the use of these options (Bower, 1990; Home & Dupuy, 1981; Kulik, 1992; Lubinski, Webb, Morelock, & Benbow, 2001; Neihart, 2007; Rodgers, 2002; Swiatek, 2002; Thomas, 1980; VanTassel-Baska, 1992). According to Neihart (2007), teachers reject acceleration practices out of misguided assumptions that social or emotional harm will come to the student who is accelerated. According to the trends documented in educational research, when many factors are considered in the acceleration process, many students will achieve academically along with their higher-aged peers and "fit in" with them socially as well. In a 2007 study published in *Gifted Education International*, Tsai recommends acceleration in grade level and course work, curriculum compacting, and early admission as appropriate accommodations for students who are gifted. In this study, acceleration of curriculum and grade skipping practices

increased the accelerated students' learning abilities, motivation, and self-confidence. These types of modifications to the curriculum are not only used in the United States, but also in other countries throughout the world. A lack of knowledge of the positive nature of acceleration practices could lead educators within school systems to deny students the opportunity to reach their fullest educational potential.

The third type of educational malpractice related to gifted and talented education involves teachers' responses to students with gifts and talents who are nonconformist or are displaying behaviors that could be perceived as disruptive in the classroom. Generally speaking, students of racially diverse and low socioeconomic backgrounds are less likely to be identified as gifted compared to their majority peers (Slocumb & Payne, 2000). It is also well documented in educational research that students from racial minorities and backgrounds are traditionally underrepresented in those programs that provide academic rigor within school districts (Ford, 2006). Davis and Rimm (2004) contend that children of poverty often manifest giftedness in ways that may not be recognized or valued by their regular education teachers. A gifted and talented student may manifest his or her giftedness in several "non-

typical" ways including: showing impatience, displaying rebellion, deciding to not follow directions in creative ways, appearing unmotivated or absent minded, seeming overactive (both physically and mentally), and demonstrating an intense sense of fairness and justice that can be misconstrued as being argumentative or disrespectful. It should be noted that these mentioned characteristics can be perceived negatively by educators of children in majority groups also. Because of biases that often exist in educational systems regarding minority groups, these traits could cause teachers to overlook diverse students for gifted recommendation more often than children from the majority groups (Slocumb & Payne, 2000).

In a study by Moon and Brighton (2008), early childhood educators were more likely to equate high socioeconomic status activities, such as family trips and extensive home libraries, with giftedness. Conversely, if a student appeared to be unmotivated to complete some required activities or used non-standard English, teachers tended to assume that these learners were not gifted, yet both of these characteristics could be indicative of a student with gifted abilities. In the book *Genius Denied,* Davidson and Davison (2004) state that the diverse populations in lower socioeconomic status areas often are

not held accountable for high expectations. Also, the opportunities in higher socioeconomic status schools often are not available to students from schools that are struggling to make Annual Yearly Progress under the No Child Left Behind initiative which can lead to the suppression of the educational potential of students who are gifted and from diverse populations.

The final form of educational malpractice often reported in research is assumption by educators that students who display giftedness cannot at the same time have another developmental, physical, emotional, or cognitive disability (Olenchak & Reis, 2002). *Twice exceptional* is a term that is used to describe a student who possesses gifts and talents and, at the same time, has some other diagnosed physical or emotional disability (NAGC, 2008). A study of twice-exceptional students by Weinfeld, Barnes-Robinson, Jeweler, and Shevitz (2005) indicates a gap in the thinking of regular educators and special educators toward students who are twice exceptional. Often regular educators struggle in selecting the accommodations and adaptations that are the most appropriate for this group of students.

Educators must be well trained in helping to recognize students who do not achieve on standardized measures of

assessment, yet display gifted and talented abilities in their area(s) of strength (Morrison & Rizza, 2007). These four misguided assumptions, (1) the misuse of curriculum, (2) the rejection of appropriate accommodations, (3) the misinterpretation of gifted and talented behaviors, and (4) the mistaken belief that children cannot be gifted at the same time that they have a disability can be perpetuated by educators who lack the proper level of training for working with the diversity of populations of students who are gifted. These practices may impede the educational progress being made by each student who is gifted and talented and may prevent that individual from reaching his or her full potential in school and in society.

Statement of the Problem

The management of educational programs for students with gifts and talents is complex and requires a specific and intricate set of skills. It is the responsibility of the individual state governments to determine who, within its public education system, will educate its students who are gifted and talented, not only in regular education environments but also in special programs. Often these individuals lack the education and experiences necessary in the gifted education field to achieve the highest level of

success with this diverse group of students. The primary purpose of this study is to examine the perceptions of three groups of participants to discern if misconceptions or educational malpractices exist within the groups about which identifying behaviors are indicative of giftedness, and what accommodations are considered to be best practices for educating students who are identified as gifted and talented, both in the regular classroom and in programs specifically designed for this population.

The first group of participants consisted of undergraduate education students who were currently attending a rural, Pennsylvania state-sponsored university. The second group of participants consisted of in-service educators who worked with gifted students in the regular education environment and also attended a Master's program at the same rural, Pennsylvania state-sponsored university. Finally, a group of in-service educators who worked with students in gifted education environments and belonged to one of the several gifted consortiums that exist in the surrounding areas of Pittsburgh, Pennsylvania were also interviewed. They were interviewed about the process of how each individual became an educator of the gifted, as well as their individual practices to best identify and serve his or her students identified as gifted.

By understanding the history of gifted education and the identification and pedagogical best practices associated with gifted and talented education programs, this research can be conducted to help determine if differences exist among groups of teachers who work with, or will work with, students who are gifted. Acknowledging this specific body of knowledge and skills may aid the primary researcher in supporting the theory that professional pre-service programs or competencies in gifted and talented education pedagogy may be needed in Pennsylvania before a teacher can design instruction for and help to identify those students who are gifted and talented.

Providing certification and training for these individuals may help students currently enrolled in gifted education programs to receive more effective and specialized instruction. Also, this information may help support the contention that with additional certification and training in gifted and talented education pedagogy, those professionals entrusted to educate students who are gifted and talented will become more adept at identifying and educating diverse populations so often excluded from special services on the basis of standardized test scores alone.

Questions to be Researched

Because the nature of this study involves three groups of participants with distinctive educational backgrounds, the research questions should be considered as general inquiries. In the interview process, many sub-parts to these general questions will be discussed so that a sufficient level of detail will be reached. Detailed data will be needed so that themes and patterns may be derived from these particular topics of discussion. There are varying levels of education and experiences between the pre-service and in-service participant groups. Because the participant groups have varying levels of experience, the focus group interview questions will be worded differently for each group. In spite of the differences of the interview questions, the research will remain focused on the research questions. Because the pre-service educators are not yet licensed teachers, the research questions for the pre-service group of teachers were based on their individual beliefs about future practices when he or she becomes a licensed educator.

1. What differences, if any, exist among pre-service educators' and in-service educators' (in both gifted and regular education

environments) criteria for the identification of students for gifted education programs?

2. What differences exist, if any, among pre-service educators' and in-service educators' (in both gifted and regular education environments) perceptions of the best practices for educating students who are gifted in regular education settings?

3. What differences exist, if any, among pre-service educators' and in-service educators' (in both gifted and regular education environments) perceptions of educating students that manifest their giftedness in non-typical ways?

Definition of Terms

Aptitude: A tendency to excel in a certain skill (National Association for Gifted Children, 2008).

Diverse Gifted Students: Those gifted students whose economic, physical, emotional, or academic needs serve as an obstacle to talent recognition or development (NAGC, 2008).

Asynchrony: A word that describes the often uneven social, physical, and emotional development of gifted students.

Alternative Assessments: The use of assessment strategies that diverge from traditional standardized testing methods, such as performance based tasks, constructed responses, authentic assessments, and portfolio use (Brandt & McBrien, 1997).

Cooperative Learning: An instructional method that allows for students to work together on an assigned task inside and/or outside of the classroom environment. These groups often involve students of mixed interests and/or abilities (NAGC, 2008).

Curriculum Compacting: An accommodation for gifted students in the regular classroom environment. It allows students, following a display of mastery in a given skill area, to proceed from unnecessary additional instructional time to other learning experiences (NAGC, 2008).

Enrichment: An activity or task that addresses skills that are more complex than the regular curriculum, or covers areas outside of the regular classroom curriculum (NAGC, 2008).

Flexible Grouping: A type of educational grouping often based on ability or a particular skill or interest. These groups permit students to be transient between groups. This strategy is different from more traditional ability

groups where students do not have an opportunity to switch groups.

Gifted and Talented: "Students who give evidence of high achievement capability in areas such as intellectual, creative, artistic, or leadership capacity, and who need services and activities not ordinarily provided by the school in order to fully develop those capabilities" (NAGC, 2008).

Independent Study: An accommodation for gifted students where the teacher is a facilitator of student research, and the student manages the content and structure of his or her own learning (NAGC, 2008).

Manifestation of Giftedness: An observable behavior, either typical or non-typical, that demonstrates evidence that a student could be gifted and/or talented.

Pull-out Program: This model of gifted education involves a student being removed from his or her regular education environment to participate in special gifted and talented program activities (NAGC, 2008).

Twice Exceptional: This term is used to describe students who are a gifted student, and at the same time, have some other diagnosed physical or emotional disability. Usually this term is used interchangeably with the term Dually Diagnosed (NAGC, 2008).

Underachieving: A term that describes when there is a discrepancy between a student's documented academic potential and his or her potential performance within the academic environment (NAGC, 2008).

Acceleration: An accommodation where a student is given the opportunity to take one or more courses that are typically offered at a grade level higher than his or her own (e.g. a fifth grade math student being allowed to travel to the middle school to take a 6th grade pre-algebra course). Two additional specific types of acceleration are:

Grade-Skipping: Common at the elementary level, this accommodation is an advanced placement in which a student "skips" or moves ahead one or more chronological grade levels in order to be placed in a higher academic environment.

Early Admission: A term used to describe an academic placement when a student is granted permission to attend kindergarten despite the fact that he or she does not meet the school district's age requirements for admission.

Summary

A significant issue in education is the need for pre-service preparation of those teachers who will be working with gifted and talented populations of students. This

study focuses on the perceptions of three different groups of participants; pre-service educators, in-service regular educators, and current educators of the gifted. This study documents the differences among the perceived best practices of each of these groups when discussing the identification and accommodations to be used with students who are gifted in regular or gifted educational environments.

In Chapter II, a theoretical framework for this study is presented. Then, a review of the literature is presented to explore the origins of gifted education, identification practices, the diversity of gifted education students, the best practices in pedagogy and accommodations in gifted education, as well as how well educators are prepared to work with students who are gifted and talented. The literature is synthesized to provide a perspective on the best practices in contemporary gifted education.

CHAPTER II

REVIEW OF THE LITERATURE

The primary focus of the conceptual and theoretical framework of this literature review is to more specifically document the complex skill set that enables educators to successfully identify and educate all groups of students who are identified as gifted and talented. The first part of this review offers a brief history of gifted education, while the second portion explores contemporary definitions of gifted and talented combined with research on student identification procedures. Next, the origin and content of gifted standards composed by the National Association of Gifted Children will be covered. Finally, a synthesis of research studies regarding the best practices for teaching students who are gifted and talented and the current conditions of various states' gifted policies are discussed. The review concludes with information about the diverse populations of gifted learners that may be encountered in an elementary school setting.

A Brief History of Gifted Education

Historically, giftedness was defined by the traits that an individual's culture deemed "valuable" or "desirable" (Davis & Rimm, 2004). Out of a population of

people, those who were considered to have "gifts" varied throughout history depending on the mores of each era.

To display this variability of giftedness, Davis and Rimm (2004) first looked at an ancient society. In the Greek city state of Sparta, giftedness was defined by military skills which were most valued by the culture, whereas, in cultures in China during the Tang Dynasty during the year 618 A.D., artistic and musically talented children were the ones selected to live at the imperial court where their gifts could be acknowledged and cultivated.

After these examples, there is very little evidence of the specific cultivation of gifts and talents until the period of the Renaissance when there is evidence that the government often sponsored youths who displayed talent in art, literature, and/or architecture (Coangelo & Davis, 1997). Coangelo and Davis (1997) also describe the contributions of Sir Francis Galton (1822-1911), who first studied the possibility that mental abilities could be inherited through heredity. Recognition of these characteristics helped influence a need for special educational opportunities for individuals with gifts and talents.

Development of the Concept of Modern Giftedness

Although there has been evidence of this cultivation of talent among several cultures throughout the history of modern civilization, the United States' acknowledgement of the gifts and talents of its students in early history was not strongly structured. Leta Hollingworth was instrumental in the development of modern gifted and talented education programs (Davis & Rimm, 2004; Shavinina & Ferrari, 2004). Her studies found that children with intelligence quotients (IQs) of 140 wasted approximately half of their school day in instructional situations in which they had already mastered the skills, and that students with IQs of 170 wasted virtually all of their instructional time during the day in settings that did not challenge them intellectually (Hollingworth, 1939, 1942). Her theories were a main foundation for specialized instruction and gifted education for children who displayed high aptitude on standardized measures of intelligence.

By the 1950s, J. P. Guilford (1950) had published work on his theory and book of the same title called, *The Structure of Intellect* (See Figure 1). This model of intelligence involved crossing five kinds of operations (cognition, memory, divergent production, convergent production, and evaluation) with six kinds of products

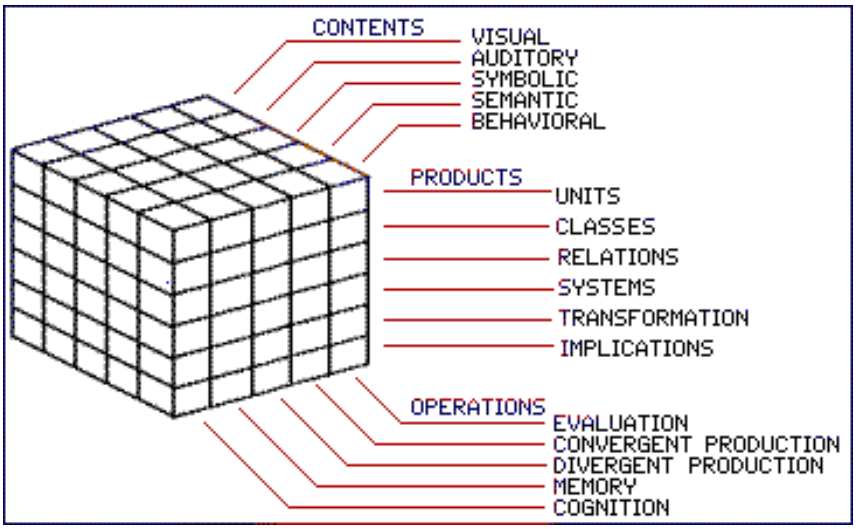

Figure 1. Guilford's Structure of Intellect.

(units, classes, relations, systems, transformations, and implications) and five kinds of contents (visual, auditory, symbolic, semantic, and behavioral) to develop a possible 150 components of intelligence. With so many possible combinations, this model of the structure of human intelligence defined the extreme complexity of intelligence that could possibly be displayed by individuals. Guilford (1950) was the first educational researcher to propose the concept of divergent thinking. The introduction of this concept led to more detailed theories of non-traditional and diverse giftedness.

In the 1970s, Joseph S. Renzulli began to further delineate the function of gifted programs in schools. Renzulli's Enrichment Triad Model (1977) gave a more specific structure for educating the gifted and talented. This model was derived from Renzulli's empirical research. The model included three tiers of intervention using exploratory activities, group training activities, and individual and group problem solving activities in real world situations, and was heavily associated with ensuring quality processes and products for learning in gifted education programs. During this time period, Renzulli (1977) contended that many gifted education programs had become superficial and had diverged from meaningful

instruction to become a set of games and activities that were used to "entertain" the bright students of this era instead of engaging them in high quality learning experiences.

Beyond Academic Achievement

Renzulli (1977) was one of the first researchers to advocate using multiple criteria to identify students rather than relying solely on traditional cognitive measures such as IQ tests and achievement tests. At this time, his theories of using multiple criteria for gifted identification were very liberal and many traditionalists were not in agreement with the idea that identification procedures could be based on characteristics outside the realm of standardized measurements of cognitive abilities. Renzulli continues to be an advocate of the diversity of gifted students. His more recent studies have examined a variety of topics including the diversity of gifted populations, the use of enrichment in a school-wide approach, and specialized cluster groupings interventions for students who are gifted (Renzulli, 1995, 1999, 2002; Reis & Renzulli, 2009).

In 1983, Howard Gardner released his book on Multiple Intelligence Theory. It was in this book that Gardner defined the following intelligences:

1) Linguistic (verbal)
2) Logical-mathematical (inductive and deductive reasoning)
3) Spatial (capacity to manipulate configurations)
4) Musical (pitch discrimination, rhythm, and composition)
5) Bodily-kinesthetic (ability to use one's body to perform an athletic or artistic task)
6) Interpersonal (understanding the actions or motivations of people)
7) Intrapersonal (understanding one's own cognition)

These specific intelligences were considered a "passing fad" of learning during the 1980s by Gardner's critics but, in fact, his theories helped to further the concept of asynchrony which is the idea that a student could be intelligent in one or several specific areas but could be average or underdeveloped in other areas. Gardner (1999) later added an additional intelligence to his list of multiple intelligences. The eighth intelligence, environmental intelligence, is characteristic of a person who is concerned with preserving the planet and its

resources for future generations (Nolen, 2003). An additional idea for an existential intelligence was also considered (Gardner, 1999). This ninth intelligence encompasses those who are spiritually aware and able to deal with abstract concepts such as religion, significance of life, and the meaning of death (Gardner, 2005).

The verbal and logical-mathematical intelligences were the ones traditionally measured by standardized assessment. Although Gardner's (1999) additional intelligences are outside the realm of standardized assessment, they are well defined. According to Gardner (1999), individuals who possess these intelligences often develop into successful and influential members of society. Later, Gardner's theories helped to shape future ideas of instruction differentiated by ability and learning style within the regular education classroom.

In the mid-1980s, Sternberg presented his Triarchic Theory of Intelligence which complemented Gardner's theory of the existence of multiple intelligences. In this theory, Sternberg (1985) presented the idea that there exists three components of human intelligence. First, there is the analytical facet of intelligence. This facet of human intelligence is related to problem solving ability and is also related to traditional measures of intelligence

such as IQ tests and achievement tests. The second facet of Sternberg's theory (1985) is the creative facet of intelligence. This intelligence is recognizable as the ability to think in a creative manner and to adjust to new situations and stimuli accordingly. The third facet of intelligence Sternberg (1985) discussed in his theories is the idea of the practical facet of intelligence. This facet of intelligence explains an individual's ability to respond appropriately to the environment as the ability to complete everyday tasks. Sternberg (1985) also discussed the idea that cultural interpretation of intelligence is what causes a school or society to revere one type of intelligence over another. The intelligence theories of Sternberg (2003) later evolved into theories of successful intelligence and wisdom. According to Sternberg (2003), successful intelligence is defined by the ability to:

1) Achieve goals in individual sociocultural contexts.
2) Utilize strengths and self-identify weaknesses and compensate for them.
3) Respond actively to contexts and environments
4) Possess a combination of analytical, creative, and practical skills.

Creativity and Giftedness

Guilford, Renzulli, and Gardner brought to educational research a more concrete understanding of creativity and its value to the field of gifted education, but it was Feldhusen (1995) who defined creativity as both a cognitive (thinking) and affective (feeling) process. There have been several historical theories that have helped to contribute to current ideals of creativity and how it affects gifted behaviors. The following historical theories can be applied to this research study. First, there is the theory that creativity is innate to young children's development. Rodgers (1961) posited that a young child has a natural curiosity and passion for learning. This creativity needs to be appropriately cultivated. If not nurtured properly, the child's creativity can often be negatively impacted by adults. Also pertinent to this study is the theory that creative children are self-actualized. Maslow (1970) believed that children make choices and are drawn to explore interesting tasks and problem solving situations. Children who are given more stringent guidelines often "learn" to be less creative (Maslow, 1970). Therefore, it again becomes important that the adults working with creative children

are trained in creative teaching techniques as to not impede the innate creativity of the child.

With the contributions of researchers such as Gardner and Guilford came the idea that creativity is a valuable facet of intelligence that gifted students may possess. Many creative people are also intelligent, but "intelligence and creativity are not mutually exclusive" (Kim, 2008, p. 234). Although many definitions of giftedness report the presence of creativity or divergent thinking, there is still room for improvement for understanding creativity as it pertains to human intelligence. There is inconsistency to the way that creativity is valued by educators in the classroom. Often creative, gifted learners can prefer learning situations that do not necessarily require a teacher present to succeed (Hoffman, 1995). Sometimes this inconsistency leads professionals to not recognize creative thinkers as gifted.

Another issue of creativity as it relates to the education of the gifted is the fact that, despite best intentions to include creativity in placement decisions, many professionals struggle with how to use creativity as an indicator of giftedness (Treffinger, 2009). Treffinger (2009) clarifies that "there are not 'good' tests to

measure creativity" (p. 245). He believes that it is unrealistic to expect a standardized measure of assessment to be reliably able to measure something as abstract as creativity. Although there is not one concrete way to measure creativity, multiple options to assess creativity do exist if a district is dedicated enough to challenge a matching assessment to the creative learner (Treffinger, 2009).

The Case for National Excellence

Gifted education slowly gained more prominence until the 1990s. By this time, many states had created legislation regarding the education of its students who were gifted and talented and, in the year 1993, a U. S. Department of Education report was issued called *National Excellence: A Case for Developing America's Talent.* Two of the highlights of this report included:

- Schools in the United States often overlook their students who are gifted and talented as a valuable resource.
- Teachers make few, if any, accommodations to the regular curriculum to address learning needs of the students who are gifted and talented. This means that 35-50 percent of the curriculum is already

mastered by the students who are gifted and talented before the school year has even begun.

Several recommendations originated from this report which are key to this study, including:

- There is a need to increase opportunities for disadvantaged and/or minority students with gifts in various subjects to be included in district gifted and talented education programs (Ford, 1998; Ford & Grantham, 2003; McBee, 2006).
- Teachers must receive more, and possibly better, training so that they are better able to provide the quality of instruction that children who are gifted and talented need to reach their full potential (Karnes, Stephens, & Whorton, 2000).

These key points implicate a need for improvements in the quality of accommodations that students who are gifted receive in the regular classroom environment (Gentry, 2006; Mendoza, 2006).

Definitions in the Field of Gifted Education

Despite the fact that there have been various definitions of giftedness in the United States over several decades, there continues to be ambiguity concerning who should, and who should not, be offered gifted and talented

educational services. A traditional definition by Marland (1972, unpaged) states that gifted and talented children are "those identified by professionally qualified persons who, by virtue of outstanding abilities, are capable of high performance (Section 806)." He also outlined six characteristics of gifted children that can be seen in isolation or combination.

(1) general intellectual ability

(2) specific academic aptitude

(3) creative or productive thinking

(4) leadership ability

(5) visual and performing arts abilities

(6) psychomotor ability

Unfortunately, instead of allowing for specificity, this attempt at trying to define gifted and talented left many gifted advocates dissatisfied with the limitations of this definition (Coleman, 2004). Coleman (2004) calls for a more narrow definition that enhances educationally relevant differentiation, but cautions that a definition that is too specific in nature could alienate additional students that possess the potential of utilizing gifted and talented education services in current public educational settings.

Because of the multi-faceted nature of human intelligence, a specific definition for identification of giftedness has not yet been achieved in the field. Although multiple criteria theories from Gardner (1983; 1999; 2005) and Sternberg (1985; 2003) have been in existence for several years, the field of gifted education still struggles with identifying and categorizing giftedness that cannot be measured by standardized measures of assessment. The multi-faceted nature of human intelligence not only makes defining giftedness difficult, it also makes the construction of quality gifted education programs that address multiple learning styles extremely challenging.

National Standards for Gifted and Talented Education

In 1998, the National Association for Gifted Children (NAGC), developed standards for gifted educational programming. These standards were never meant to dictate exact gifted and talented education practices for every state; rather, their purpose was to suggest guidelines and offer examples that would enable school officials to model gifted programs into more ideal representations of the standards. The standards were revised in 2010. They offer guiding principles for curriculum and instruction, program

administration and management, program design, program evaluation, socio-emotional guidance and counseling, professional development, and student identification (NAGC, 2010). A copy of these standards is available for review at www.nagc.org. This document gives examples for outcomes and evidence based practices in six standard categories. These standards will be used as criteria for a document analysis when evaluating the perceptions of each of the participant groups. The standards will be further discussed in the data collection section of this research.

Gifted Identification

Identification procedures are not standard nationwide and vary among states and even differ among individual districts within a state. Despite the long history of intelligence and creativity theory and the evidence provided for more dynamic measures and procedures for identification of students who are gifted and talented (Guilford, 1950; Renzulli, 1977; Gardner, 1983), often states and their school districts continue to use standardized measures alone to identify who to include in gifted and talented programs (Friedman-Nimz, 2009; Worrell, 2009).

Assessment and Nomination Methods

Several methods for gifted identification are available, but often intelligence tests and norm referenced achievement tests are chosen over abstract measures of creativity that are less defensible when controversies about identification arise (Davis & Rimm, 2004). Political and personal influences affect identification of gifted students nationwide and continue to be a controversial part of gifted education (Boreland, 2009; Friedman-Nimz, 2009; Treffinger, 2009; Worrell, 2009).

Students can be nominated for identification in many different ways. Identification procedures can begin with nominations by one or several individuals. Parents, teachers, peers, self, or talent searches are some of the most common sources of nominations when a student is being considered for gifted and talented education programming (Davis & Rimm, 2004). Renzulli (1986) suggested a talent pool approach to gifted identification where up to 15-20 percent of a school's population could be considered for gifted and talented accommodations instead of a more stringent three to five percent associated with more traditional cognitive measures.

Once nominated, various identification procedures are available and can be used. By looking at multiple

researchers' work, several recommendations are made for the successful implementation of identification procedures.

1) Identification should acknowledge the multifaceted nature of human intelligence (Gardner, 1983, 1999, 2005).
2) Multiple criteria and assessments for identifying giftedness should be utilized during identification procedures (Baldwin, 2002; Frasier, 1997).
3) Multiple criteria should be defensible and screening for gifted potential should be logical and guide the curriculum of the gifted program (Burney & Beilke, 2008; Frasier, 1997).
4) Multiple criteria for identification are also desirable because more formal measures of identification, such as IQ and achievement tests, may exclude diverse populations of students from gifted and talented education programs (Burney & Beilke, 2008; Grantham, Frasier, Roberts, & Bridges, 2005; McBee, 2006).

Intelligence tests and achievement tests provide inarguable guidelines for gifted identification, but they are not always accurate and should not be used in isolation to determine giftedness. According to Ruf (2005), the use of IQ tests will generally underestimate the number of

students with the highest levels of giftedness. She cites that these tests, "fail to recognize the great range of abilities that exist within children who score in the upper two percent" (Ruf, 2005, p. 48). This underestimation of excellence in the United States goes against our national ethos to believe that excellence will be rewarded if effort and/or talent are present.

The Pedagogy of Gifted and Talented Education

The professional pedagogy that should be used with students who are gifted in the regular education setting is a complex set of skills that must be used simultaneously with other lesson plans that address the needs of all the regular education and special education students within the same classrooms during the same instructional time period (Hertberg-Davis, 2009; Robinson, Shore, & Enersen, 2007; Sisk, 2009). The ability to employ several plans while managing the learning of diverse populations of included students requires much talent, preparation, and training on the part of the teacher. Hansen and Feldhusen (1994) found that teachers with three to five graduate courses in gifted education were significantly more effective in providing effective instruction than those with little to no coursework in gifted education.

The Influence of No Child Left Behind

There has been much concern in the field of gifted education since the enactment of the No Child Left Behind Act (NCLB). A shift toward closing educational gaps between groups of children has led education in a direction that delivers a program that is often directed more toward average to low achieving students (Gentry, 2006). According to the National Center of Statistics, there were 13 specific traits in a school that were considered to be indicators of overall school success (Mayer, Mullens, & Moore, 2000). There were several traits present in these schools which include:

1) Teachers possessed a high level of academic skill.
2) Teachers were assigned to a field of education for which they were trained.
3) Teachers had more than a few years of experience.
4) Teachers participated in high quality professional development.
5) The course content was well organized and understood.
6) Pedagogy was designed with the learners' comprehension in mind.
7) Technology was accessible and usable.
8) Class size was small.

9) School leadership was competent and provided guidance and support.

10) The school possessed a shared set of ideals or goals.

11) Faculty and staff acted as a professional learning community with shared ideals and goals.

12) Environment of the school was orderly and the discipline climate was positive.

13) The environment of the school was academic and curriculum was both challenging and appropriate.

None of the specific traits mentioned in this study dealt with test scores. This fact provides evidence that education systems that teach to the average to below average student to ensure high test scores is not the most ideal program for high performing students in regular education settings or students who are categorized as gifted and talented. Therefore, research indicates that the No Child Left Behind Act (NCLB) could negatively influence the quality of programming that students who are gifted receive in public education settings.

Models of Giftedness

The changing paradigms in the professional field of gifted education offer new program models of gifted

education. Contemporary research notes that cognitive facets exist outside the traditional models of giftedness, characteristics such as curiosity, task persistence, work ethic, and emotional resilience in the face of failure. (Shavinina & Ferrari, 2004). Research on the subject of these facets has altered models of giftedness to include variable development across curricular areas and also includes talents in sports, music, art, and creativity as recognizable factors of high achievement.

A 2005 book by Maker and Schiever gave an intricate description of several models of gifted education that have been developed. These teaching and learning models have helped to shape current gifted programs within the United States. The authors discuss multiple models that can be used with students who are gifted. These complex models have been developed by various researchers. The details of the models taken from this source have been analyzed for elements of structure, implementation, as well as strengths and weaknesses. An overview of these models is included in Appendix A.

Matthews and Foster (2006) offer a new mastery model of gifted education that explores gifted tendencies as variable between different curricula and not necessarily present across all academic or talent areas. Also, in this

model, gifted and talented students are offered various subject specific placements that are integrated into their normal everyday class placements instead of segregating the given gifted services into a separate class or "pullout" program. This individualistic matching of curricula to each high ability student can be a daunting task for those educators not trained in these methods.

Governor's school model. Several pedagogical examples have been studied and deemed successful in educating those students with gifted and talented abilities. One such example that continues to receive positive feedback from parents and students alike is the governor's school model. Although offered exclusively as a summer residential program for older students in the gifted and talented education system, this type of program provides an accelerated and enrichment curriculum in an environment that is uncompetitive for students. According to McHugh (2006), the interaction between similarly gifted peers is both emotionally and academically beneficial to the students who participate. If the rigor and emotionally beneficial characteristics of this intervention could be replicated in the regular classroom situation using flexible groupings, subject specific content, and groups of similarly gifted peers, the positive effects of the

interactions during governor's schools could also benefit those students in the elementary school setting.

Giftedness in the regular education classroom. Other articles in the area of pedagogy used with gifted and talented education students do not have the same positive outlook associated with the governor's school model. A study by VanTassel-Baska and Stambaugh (2005) examined the five challenges that exist when accommodating for gifted learners in the regular education classroom. First, the authors cite a lack of sufficient subject knowledge as a major challenge of regular educators with students who are gifted in their classes. If teachers do not have extensive knowledge in the subject that is an area of strength for a particular student, it can be difficult to manage the depth of the inquiry learning and special projects that gifted and talented students will need to undertake to foster the full potential of their growth.

The second major challenge that VanTassel-Baska and Stambaugh (2005) and VanTassel-Baska, MacFarlane, and Feng (2008) discuss is the possibility that educators who work with the gifted and talented could have limited classroom management skills. Ideally, in an inclusive classroom that consists of heterogeneous ability levels, educators must be comfortable allowing students to participate in varying

tasks, assignments, and particular levels of curriculum while managing other levels of groups at the same time. The assessment, data-collection, data interpretation, and progress monitoring of each student is necessary for any instructional accommodations to be successful in the regular education classroom.

The third major challenge from this study involves the teacher's ability to modify the curriculum for multiple ability levels of students (Sisk, 2009; VanTassel-Baska & Stambaugh, 2005). Ability to modify curricula is defined as a challenge because the regular educator that works with a student who is gifted in his or her classroom must possess a thorough knowledge of his or her state's standards of learning that are both above and below the current grade level of the teaching assignment (VanTassel-Baska & Stambaugh, 2005). The complexity of knowing the requirements of students several levels above (and several levels below) a student's current level can be an overwhelming amount of content for a regular educator. Too often there is a tacit assumption that students with gifts and talents can "figure it out for themselves" as evidenced by the findings. Frequently, teachers do not include students who are gifted in the populations of those

students most in need of differentiation (Hertberg-Davis, 2009).

The fourth major challenge that regular educators face as discussed by VanTassel-Baska and Stambaugh (2005), Begoray & Slovinsky (1997), and Ford & Grantham (2003) is the ability to respond to diverse populations. Not only does the field of gifted education encompass what may be considered those with typical giftedness, but it also encompasses those that are twice-exceptional, those students including racially and socio-economically diverse populations, and those students that manifest their giftedness in ways that may not be valued by their current educational contexts.

The fifth challenge, a lack of relevant pedagogical skills, is another area that is a challenge for educators implementing curriculum for students who are gifted in the regular education classroom (VanTassel-Baska & Stambaugh, 2005). Often the teachers in charge of students who are gifted have not had the training necessary, and the strategies that they choose to utilize may not be appropriate for the gifted and talented (Hansen & Feldhusen, 1994; Robinson, Shore, & Enersen, 2007; VanTassel-Baska & Stambaugh, 2005). There are other challenges described by VanTassel-Baska and Stambaugh

(2005), but they are not necessarily ones affected by the regular educators' preparation and pedagogical skill. These other challenges described by VanTassel-Baska and Stambaugh (2005) included the difficulty in finding resources, a lack of planning time, and a lack of administrative support for differentiation. These challenges also have an effect on the ability to provide for gifted learners in the regular education classroom but are not necessarily a reflection of a regular educator's pedagogical skills.

The research by VanTassel-Baska and Stambaugh (2005) helped to shape future research on the need for additional models to train teachers about how to appropriately address the needs of students who are gifted and talented within regular education environments. Latz, Spiers-Neumeister, Adams, and Pierce (2009) completed a study on the effect that mentoring and peer coaching has on the quality of instruction students who are gifted receive in the regular classroom environment. In this study, multiple observations occurred during each term during the study and the teacher-mentors who participated offered suggestions to their less experienced counterparts for appropriate differentiation when working with students with gifts and talents. Initially, data corroborated with educational

research in that there was a lack of differentiated practice present ("*Differentiation in the Regular Classroom"*, 2004). Despite time constraints and communication difficulties during the study, the authors concluded that mentoring helped to improve the differentiation practices of teachers assigned to work with students who are gifted in the regular education environment (Latz, et al., 2009).

Effective Teachers of the Gifted

The skill of a teacher who works with the gifted and talented must engage those students in learning strategies that are valuable for their development. An article by VanTassel-Baska, Quek, and Feng (2007) was written following a research study on the behaviors of teachers toward gifted and talented learners in the regular education classroom. Six specific categories and evidence of their implementation were outlined in the observation scale constructed through this study.

(1) Curriculum planning and delivery

(2) The used of individual accommodations based on the heterogeneous nature of gifted students

(3) Problem solving/problem finding

(4) Critical thinking strategies such as making generalizations and synthesis

(5) Creative thinking strategies

(6) Research strategies

In the resulting tool for this detailed research, several behaviors, when displayed by the participants being studied, were considered to be ideal in each behavior category (VanTassel-Baska, Quek, & Feng, 2007). In the curriculum planning and delivery stage, high expectations, integrated activities, students engaged in planning and preparation, student self reflection, and student expression were found to be the desirable practices of teachers that experienced the most success when working with students who are gifted in regular education classrooms (Robinson, Shore, & Enersen, 2007). In category two, accommodations of individual differences, behaviors such as providing alternative learning groups, providing opportunities for individual learning differentiation, and allowing for discovery learning were necessary for success (VanTassel-Baska, Quek, & Feng, 2007). Evidence for the use of differentiated groupings and curriculum materials is also supported well in the research (Gibson & Effinger, 2001; Gentry, 2006; Hertberg-Davis, 2009; Renzulli, 1986; 1999; Tomlinson, 2004, 2005). The regular education

teachers adept in working with students who are gifted within their classrooms showed evidence of brainstorming techniques, identifying problems and their solutions, and involving students in generating solutions (VanTassel-Baska, Quek, & Feng, 2007).

In category three of this study, critical thinking strategies, the authors found that regular education teachers who were identified as effective when working with students who are gifted in the regular education classroom showed evidence of encouraging judgments, comparing and contrasting ideas, offering opportunities for generalizing, and synthesizing/summarizing ideas with their students. In the category of creative thinking, effective teachers tended to solicit diverse thoughts about issues, engaged students in exploring diverse points of view, encouraged open-mindedness, and provided opportunities for elaboration and development (Ford, Moore, & Harmon, 2005; VanTassel-Baska, Quek, & Feng, 2007).

Effective regular education teachers of the gifted showed evidence of fostering research strategies through requiring multiple sources, providing opportunities to analyze data, assisting in making data driven inferences, encouraging students to derive research implications, and providing students time to communicate their research

findings to relevant audiences in formal settings (VanTassel-Baska, Quek, & Feng, 2007). These complex techniques, when used, can make available the high quality of education that students who are gifted and talented need within regular education assignments to make curriculum meaningful and accommodations relevant so that each student may reach his or her fullest potential.

The success of a teacher committed to providing quality curriculum for students with gifts and talents is rooted in being able to discern a point of genesis for the gifted learner from which to expand, enrich, and enlarge (Tomlinson, 2005). Insightful educators of students who are gifted and talented recognize that instruction for this diverse group of individuals cannot be formulaic in nature (Cooper, 2009). The diversity of the group and the individuality necessary among the pacing and ability levels should allow students with gifts and talents to be engaged in deep thinking about the curriculum. Although this idea of expanded, insightful, and deep curriculum tiered to a student's capacity for learning seems ideal for learners with gifts and talents, it lacks the explicit standardization usually associated with today's public education system which is consumed by concrete evidence and data-driven decisions for instructional practices. Thus,

teachers accustomed to working with a packaged textbook series could struggle with deviating from that curricular delivery system.

A study by Cukierkorn, Karnes, Manning, Houston and Besnoy (2007) identified three elements that must be in place for gifted curriculum to be effective. Those elements involve integrated curriculum that is based on student interest, ongoing evaluation of the program, and parent involvement. Tieso (2003) also described effective gifted curriculum reporting that it was not likely for a strategy to be effective in isolation. She advocated that multiple interventions be employed by school personnel investigating the combined results of grouping practices paired with differentiated curriculum. Gentry and Keilty (2004) also described that, to effectively use curriculum strategies such as cluster grouping, there must be long-term applications of strategies and there must be connections from the gifted program to the general education program. Tomlinson (2005) best summarizes effective curriculum for students who are gifted.

> There is no single formula or template for curriculum and instruction that will serve all of them well. In general, however, good curriculum and instruction for gifted learners begins with good

> curriculum and instruction—that is, curriculum and instruction that is meaning-making, rich, and high level. From that starting point, appropriate modifications for highly able learners typically involve adaptive pacing, determining an appropriate degree of challenge, and providing supported opportunities to develop interests. Effective curriculum and instruction for gifted learners will respond to their individual readiness levels, interests, and modes of learning (Tomlinson, 2005, p. 160).

Diversity in Gifted Education

Ensuring that students from diverse populations are identified and sufficiently represented in gifted education programs has been a challenge encountered in public education over several decades and, because of this issue, "gifted education faces critical challenges as the nation becomes increasingly diverse" (Ford, Moore, & Harmon, 2005, p. 125). Diverse gifted learners are difficult to categorize. Therefore, referrals for gifted and talented education services that are often initiated by the educator in a regular classroom environment can marginalize students from these populations of people. If the behaviors of the

student are manifested in ways that are not valued by the referring educator, those students are less likely to be recommended for gifted and talented education services. Ford and Grantham (2003) argue that researchers and practitioners have been continually concerned regarding "the underrepresentation of Black students in gifted programs, namely those with high intelligence test scores who were not formally identified as gifted" (p. 217).

Racial Bias in Gifted Education

Teachers without specialized training in working with students who are gifted are more likely to identify and value giftedness in cultures that are similar to their own rather than a culture different from their own (Ford, Moore, & Milner, 2005; Ford & Grantham, 2003). Educators not accustomed to gifted education teaching assignments are often prone to using a deficit model of thinking in these instances. A majority of school districts often base their decisions for gifted and talented educational services on test scores and standardized measures of assessments alone (Ford & Grantham, 2003; Coangelo & Davis, 1997). Colangelo & Davis (1997) discovered that approximately ninety percent of the school districts they examined used standardized testing measures to determine who should receive gifted

support services in the district. This type of procedure is often put into place to standardize the criteria for identifying students who are gifted. These concrete procedures prevent ambiguity and thwart disputes about gifted identification. For racially diverse students and students of a low socioeconomic status, the chances of being placed in gifted and talented education programs are not easily overcome with the use of biased standardized testing (Gallagher, 2005).

In 2006, Hodgkinson studied groups of students identified as gifted and talented categorized by their socioeconomic status. In this study, the lowest socioeconomic status group only accounted for nine percent of students identified as gifted and talented. The highest socioeconomic status group accounted for 47% of the students identified as gifted and talented (Hodgkinson, 2006). The majority of students identified as gifted and talented continues to be predominantly white and from middle to upper socioeconomic class groups (Ford, 2006). The underrepresentation of racially diverse students in gifted and talented education programs can be explained by looking at biased standardized testing and negative influences of teachers who have little to no training in gifted and talented education (Ford, Harris, Tyson, &

Troutman, 2002). With these unfair procedures in place, school districts continue to operate a system that inappropriately denies students from minority groups gifted education services. These procedures indicate that the education system continues to be racially biased and is in need of improvement when identifying students with gifts and talents (Burney & Beilke, 2008; Gallagher, 2005). This system also seems to perpetuate the idea that students from low socioeconomic backgrounds have deficient backgrounds or "culturally deprived" ways of thinking (Ford, 2006; Ford, Harris, Tyson, & Troutman, 2002; Ford, Moore, & Milner, 2005).

Teachers with insufficient training in manifestations of giftedness may be reverting to biases and stereotypes when making gifted and talented accommodations and recommendations (Begoray & Slovinsky, 1997; Ford & Grantham, 2003). For example, a student who has excellent language expression but lacks the grammatical ability to put his or her expressions onto paper may be passed over due to his or her deficit of writing skills instead of focusing on the elaborate expressions of which he or she is actually capable. Ford, Moore, and Milner (2005) note that non-typical manifestations of gifted behaviors are often not recognized by the untrained regular education teacher.

Many educators inexperienced in gifted pedagogy value traditional manifestations of giftedness, such as compliance, high achievement, and a good work ethic. The authors suggest that regular educators need to recognize that a trait valued by a minority culture may, in fact, be considered not desirable by another culture. Therefore, the educator will have to acknowledge his or her own biases and alter his or her gifted paradigm to better define which students from poverty and diverse backgrounds are displaying strengths that may indicate a need for gifted and talented services (Baldwin 2002; Ford, Moore, & Milner, 2005).

Cultural Influences on Gifted Programs

Another challenge that is imposed upon diverse populations in gifted and talented education is that often students of diverse backgrounds will actually negate their own achievement due to low self-efficacy beliefs or due to negative peer pressures. These negated behaviors occur because some minority peer groups associate high achievement with behaviors that are more common and accepted in the white, middle class majority (Fordham & Ogbu, 1986). It becomes the responsibility of school counselors, educators in regular education placements, and

educators in gifted education placements to recognize this difficulty that students of a minority race experience and provide for assistance and support through it. Student mentoring is one strategy that has experienced effectiveness in this type of situation. Originally developed by Hirsh (1979) for secondary students, mentoring involves pairing a student with an older or adult person who the student could connect with cognitively and culturally. This person works with the student to help achieve his or her career/education goals. Often these mentors help provide hands on learning, build interpersonal relationships, build advanced knowledge, and engage in personal involvement with the student's continued success (Torrance & Sisk, 1997).

Even if students from minority backgrounds can overcome the deficit thinking model often employed by school districts with white, middle-classed values, additional challenges arrive when they enter gifted education programs. Many minority students decide not to continue with gifted and talented education because of the same pervasive white, middle classed value system that permeates the gifted identification system. Introducing transformational multicultural education and social justice multicultural education into the gifted and differentiated

regular education curriculum is a recommended way to help better educate diverse populations of the gifted and talented (Ford, More, & Harmon, 2005).

Although negative peer interactions can have a detrimental effect on minorities' experiences in gifted and talented education programs, not all minority students have a negative experience in gifted and talented educational programming. Grantham (2004) completed a case study on a 9th grade African American male from a semi-rural Virginia High School who was the only African American male of his school district to participate in gifted education services. Despite the possibility of feelings of isolation from others of his racial group, the student in this study continued to do well within his gifted program and regular education coursework. In this example, there was an implication that teachers used positive feedback and built positive relationships with the student so that everyone was able to understand the cultural differences that existed among peers of different races (Grantham, 2004). Also in this case, the author noted a positive outcome because teachers did not assume being categorized as a gifted student was synonymous with flawless performance in all areas. The intervening characteristics that were positive during this study were the teachers' high

expectations for the student's work, as well as recognition by the regular education teachers that the student in the study lacked organization skills. The teachers were willing to take the time to work with the student on those particular skills in which he was lacking and this, apparently, supported his future success.

James Gallagher (2005) recommends four important practices to help ensure that racial minorities are identified and properly educated in gifted and talented educational programs.

(1) Talent should be identified early.

(2) Instruction should be organized to recognize cultural differences.

(3) The intellectual performance of minority children should be honored and modeled by other adult figures who have also shown evidence of intellectual performance.

(4) Perseverance through difficult tasks should also be modeled.

According to Gallagher (2005), it is the school's responsibility to support all students in discovering and developing the talents that they possess.

Students who are Twice Exceptional

Diversity in gifted education also encompasses those that are twice exceptional, which are those students who could be considered gifted or talented in one area but have a disability in a separate area (National Association for Gifted Children, 2008). Dr. Temple Grandin (2010) has written extensively and spoken publicly about her experiences as a person with impressive professional achievements who was also labeled as autistic when she was a child. She has earned a doctorate in animal science and is an active writer and faculty member at Colorado State University. Grandin (2010) argues that too much emphasis is placed on what students with autism spectrum disorders (ASD) "can't do," and continues to advocate for the cultivation of the gifts of students who are twice exceptional.

Teachers not trained in educating students who are twice exceptional often perpetuate deficit views of these students. Neu (2003) describes that teachers often desire to foster improvement in the area of the student's disability and to ignore the giftedness until more progress is made. The disability often is camouflaging the gifts that the student possesses. Neu (2003) recommends alternative testing procedures, instruction that caters to

the student's gifts as well as his or her needs, and explicit instruction so that each individual may become an expert in his or her gifted area. Minner (1990) states that educators can often have difficulty defining students who are twice-exceptional; therefore there should be individuals that are exclusively trained for this specific task.

Conflicting Gifted Policies at the State Level

Despite the well documented evidence of diverse populations and a need for well-trained individuals, major discrepancies still exist among gifted education programs due to the ill-defined policies set by state governments and local education association programs. There is great variability between states that advocate for high quality, standards-based gifted education programs and those that have less stringent guidelines. Students who are gifted and have similar abilities may receive programming that is dramatically different largely as a result of which state or area of the country in which they live. This biased practice is not acceptable for a democratic society.

Quality gifted education is difficult to identify by state or by local education agency. The Davidson Institute for Talent Development (2011) is an organization that

attempts to examine several characteristics of gifted and talented policy in each state. The requirements per state are often disjointed as in the case of New York. The New York State Department of Education (2009) defines laws on screening and identification procedures, teacher certification, and appropriate curricula to use with students who are gifted and talented across many subject specific areas, but never actually mandates gifted programming within its laws. Because New York requires teacher certification at an approved university program, the state government has control over approving the types of curricula being taught in those institutions, but does not guarantee that those students must be legally served. Despite this fact, the New York education system displays evidence of a conscientious concern for gifted education with recommendations for appropriate curriculum. Gifted curriculum is diversified enough in New York that the state information about gifted programs encourages the development of talents not only in academic subjects but also in the arts and even physical education (New York State Department of Education, 2009). Ten other states currently mandate through legislation that teachers have training in gifted education (Davidson Institute for Talent Development, 2011). Unfortunately, these certification

requirements for professionals who want to work with students who are gifted vary greatly. Some states require as little as six credit hours (South Carolina and Arizona) while other have programs that require up to 24 credit hours (Colorado). Washington is a state that takes teacher certification for gifted education one step further by mandating that all teachers (in both regular education or gifted education positions) who work with students who are gifted and talented be certified in gifted and talented education (Superintendent of Public Instruction: Washington State, 2009).

As another example of discrepancies between and among the states, California's requirements are not well defined. The California Department of Education (2009) does not require gifted education programming but possesses a gifted definition and allocations for the "highly gifted" student. A "highly gifted" student in this state policy is a student with an IQ greater than 150 (California Department of Education, 2009). This standard will eliminate many more people than the traditional estimates of 3-5% of the population usually associated with cognitive measures (Renzulli, 1986). The law offers suggestions for possible appropriate programming such as cluster grouping and acceleration, and the funding for gifted education is

dispersed only if the district's plan for gifted education is approved by the state department of education. The California Department of Education (2009) requires that a qualified person be appointed as the program developer for gifted education, but never distinguishes a certification that must be possessed by the individual that occupies that position. On the Department of Education website for California (2009) it is stated that there are approximately 800 districts in the 58 counties of California that have gifted education programs. According to the most recent statistical data available on the California's Department of Education Website (2005), there are approximately 1,054 districts in the state of California. These statistics would indicate that approximately 200 school districts in the state do not have a state approved and recognized gifted and talented education program.

According to the Davidson Institute for Talent Development (2011) there are only 6 states where programming is mandated and gifted education is fully funded by the state. These states are Arizona, Iowa, Mississippi, Oklahoma, North Carolina and Georgia.

Comparing the quality of gifted programming is virtually impossible because of the disjointed nature of program requirements. States are constantly adjusting

funding levels and levels of mandate. Depending on the mandates of the state, the programming a child receives could differ depending on the educational beliefs of policy makers of the state, district, school, grade level, and individualized program.

Certification and Pennsylvania Mandates for Gifted and Talented Education

In the educational literature of gifted and talented education, there is a consistent theme throughout that calls for specific federal mandates to consolidate the policies regarding the certification of teachers who work with this specialized group of students (Brown, Avery, VanTassel-Baska, Worley II, & Stambaugh, 2006; Davison, 1996; Karnes & Whorton, 1996; Karnes & Marquardt, 1995).

A lack of consistency exists among states throughout the country which has led to several lawsuits involving teachers of the gifted and talented. Several of these court cases have occurred in Pennsylvania because Pennsylvania has no specific licensure required (Karnes & Whorton, 1996). Pennsylvania is one of 40 states that do not currently have a legislative mandate that requires a teacher to be certified in gifted and talented education

before they work with students who are gifted and talented (Davidson Institute for Talent Development, 2011).

Davison (1996) discovered that often colleges may require certification or specialization at the college level but the programs and courses are not ones that are required for graduation from that school's education certification programs. The courses and instructional time offered were often minimal, and the universities studied were barely meeting state mandates for gifted education preparation. Pre-service educator curricula did not address the preparation of regular education teachers to educate the students who are gifted in regular education settings.

One complex study by Brown, Avery, VanTassel-Baska, Worley, and Stambaugh (2006) more closely examined the state policies concerning gifted and talented programs. Five states--Indiana, North Carolina, Pennsylvania, South Carolina, and Virginia-were selected because they met the following criteria.

1) A full-time state director of gifted education

2) A state mandate for gifted education in at least one area

3) A funding threshold above five million dollars

4) Similarity of demographics to the state of Ohio with which each of the states was being compared.

According to Brown et al., (2006) Pennsylvania possesses mandates which are in place to identify and serve its gifted students from kindergarten to 12th grade. In Pennsylvania, the law that governs the gifted laws implemented in the public school system is often more informally known as "Chapter 16." Identification policies are described in this document, but the identification policies seem to have loopholes since the IQ level is set at 130, but students below that particular IQ level can be accepted for gifted services due to other characteristics, such as curriculum level, acquisition and retention level, performance in academics, early measured thinking skills, and several others. In the same ambiguous fashion, a student with an IQ of 130 must also show evidence of giftedness in one of these other factors, opening up the possibility for a child with an IQ of 130 to possibly be excluded from participation in gifted services. Again, there is a high level of ambiguity because it is up to the individual school district to design how it will assess the giftedness of its pupils within these guidelines.

Another highlight of Pennsylvania State policy on gifted education is that there is not a requirement for the

certification of professionals working with gifted and talented students. Brown et al. (2006) note that there is an anomaly between the general mandates that regard those who are qualified to teach as a Pennsylvania instructor of the gifted, and the highly specific skills required to be an instructor of the gifted.

In Pennsylvania, Gifted Individualized Education Plans (GIEPs) are similar to those used in special education since procedures for students who are gifted and talented are first introduced under special education law Chapter 14 (Pennsylvania Department of Education, 2009). Gifted education procedures are then more distinctively defined under the state's Chapter 16 laws for gifted education (Pennsylvania Department of Education, 2009). Specifically in the Brown et al. (2006) study, it was noted that, despite the fact that Pennsylvania was more advanced than other states with identification definitions of the gifted and talented, those identification procedures did not guarantee that identified students would receive quality instruction from their gifted educators or regular classroom teachers. Additional recommendations for state policy are made in the report regarding different pedagogical strategies that are and are not appropriate.

State policies in gifted education have

> never been a cohesive, comprehensive, or consensual enterprise because, fundamentally, their development is nested within each state's governance. Coupled with the fact that, since the field of gifted education has no federal mandate, the structure that holds gifted programs together rests in the policies that individual states have enacted. Additionally, gifted education, like other fields of education, has not been exempt from the wide-spreading political and popular pressures on the ways in which curriculum, assessment, teacher preparation, finance, and governance of school programs are interpreted and ultimately, implemented. As a result, the local administration of gifted programs becomes increasingly diffuse and idiosyncratic. (Brown et al., 2006, p. 1)

Summary

The educational research in gifted education is complex and indicates a need for professionals to be properly trained in a set of specialized skills to ensure proper gifted program implementation (Begoray & Slovinsky, 1997; Karnes, Stephens, & Whorton, 2000; Karnes & Whorton,

1996; VanTassel-Baska & Stambaugh, 2005). When quality identification procedures and appropriate accommodations and pedagogy are not provided for students who are gifted and talented in regular educational settings and gifted educational settings, students are not supported by their school system in reaching their fullest educational potential. This study is intended to contribute to the literature in gifted education by reinforcing the complex knowledge and pedagogy needed to work with gifted individuals. The social constructivist perspective shapes this qualitative research. Creswell (1994; 2003) explains that "individuals seek understanding of the world in which they live and work" (p.9). Creswell further explains through the use of the idea of perspective:

> The researcher is concerned with constructing meaning from the participant views and how they relate to the situation that is being studied. The researcher's intent, then is to make sense of (or interpret) the meanings others have about the world (Creswell, 2003, p. 9).

Therefore, Chapter Three will contain a discussion of the focus group interviews, document analysis, and standards/program comparison that will be used in this study. These methodologies will help to assist in further

understanding the perceptions of the in-service and pre-service educators that currently work with, or will work with the populations of students who are gifted and talented in public school systems.

CHAPTER III

METHODOLOGY

When pre-service and in-service educators are trained and/or certified in quality pedagogy for working with diverse populations of gifted and talented students and apply this training appropriately, the quality of education that gifted students receive will influence each student working to his or her highest potential (VanTassel-Baska & Stambaugh, 2005). The purpose of this study was to develop an understanding of the perceptions of in-service and pre-service educators regarding what they consider to be the best practices to support populations of students in regular education and gifted education settings. This chapter provides background and rationale for the qualitative design and the methods of research that were utilized to gather the data.

This chapter begins with a rationale for its qualitative design followed by the strategy for identifying participants for the interviews. Interviews were conducted and data were collected from three groups of participants: (1) a group of pre-service educators, (2) a group of in-service educators who work in a regular education environment, and (3) a group of in-service educators who work in programs specifically designed for students who are

gifted and talented. Next, the limitations of the study are discussed. Procedures that were used to analyze the collected data are also described.

Artifact analysis was another aspect of the qualitative study. The collection of documents from the university research site on any gifted programming requirements in their educational curriculum are described and analyzed. This documentation was used to search for gifted and talented education components to derive how familiar the participant may or may not be with the best practices of gifted and talented education. Document analysis was also used for collecting program materials from the third participant group. This group was comprised of teachers who work in gifted education environments. These documents were collected to examine the components of their districts' gifted and talented education programs. Finally, all of the perceptions and collected documents were compared against the national standards for gifted education programs outlined by the National Association for Gifted Children.

Rationale for the Design

According to Creswell (2003), qualitative research is a method that is ideal for understanding social or human

problems in natural settings. Qualitative research relies on rich description from participants to help create an "emic" or insider's perspective on the phenomenon under study. Since the purpose of this research is to describe a complex process and the differences that exist between multiple participant groups in different educational settings, the qualitative design was most appropriate.

The primary research methods selected were focus group interviews and email interviewing. Focus group interviews rely on the interaction between the participants using their multiple and varied perspectives (Bloomberg & Volpe, 2008). It is then the researcher's goal to record, transcribe, and identify patterns and categories from these data to derive theories to extend educational research and make implications for further educational research. Since using focus group interviewing was not a possibility for the third participant group, email interviewing was used to replace focus group interviewing. This method was the most effective alternative because participants could not be observed and interviewed directly (Creswell, 2003).

The grounded theory approach was selected as the main qualitative method for this study. Grounded theory attempts to generate theories or patterns of data from categories that emerge during data collection (Bloomberg &

Volpe, 2008). The data are usually collected from several participant groups from different backgrounds. Bloomberg and Volpe (2008) explain that often interviews and focus group interviews are the main approaches for data collection. From the comparison of these data and groups, categories emerge. Comparison of data between and among the groups allows the researcher to describe patterns in the participants' perceptions; it also allows the researcher to use the findings from these data to extend current educational theory as it relates to the research topic (Bloomberg & Volpe, 2008).

The goal of the study was to generate theories and identify patterns about how pre-service and in-service educators acquire and utilize knowledge about identifying and educating students that are gifted and talented in regular and gifted educational settings. Using the grounded theory approach involved studying the perceptions of participants. It also involved identifying differences in perceptions between the participant groups to maximize the ability to compare the data collected from each of the participant groups. The ultimate goal of deriving theories from the data is to help contribute to the body of knowledge that exists on the preparation and best teaching practices of educators who work with students that are

gifted and talented. Implications for future pre-service teacher preparation, gifted certification, and teacher in-service programs were derived by extracting categories and patterns from the focus group interviews and interview data from each group of participants and comparing the patterns to the national standards. How the individual perceives and implements the best practices for his or her students who are gifted results in the quality of education that a gifted student receives from that individual. The focus of the data was to gain a more in-depth knowledge of those individuals who currently are educating or will educate gifted and talented children in regular or gifted education settings. The main concentration of this study is the examination of participants' pre-service and in-service experiences with gifted education so that it can be observed how those experiences have impacted professional practices.

Selection of Participants

Three distinct groups were selected for this study. The first group consisted of pre-service educators currently enrolled in an elementary teacher education program in a rural, state sponsored university. The second group consisted of participants in a master's program at

the same rural, state sponsored university. The third group of participants consisted of in-service gifted and talented education teachers. Pennsylvania has no mandated certification program; therefore, many of the universities in the Pennsylvania State System of Higher Education often have little to no gifted education preparation. The third group of participants, the in-service teachers of the gifted, could not be taken from the same rural, state sponsored university in Pennsylvania because there was no gifted certification program from which to derive a participant group. If the Pennsylvania state-sponsored university used for the first two levels of participant groups had possessed a degree program or certification program in gifted and talented education, the population of in-service gifted education teachers would have been contacted through the university instead. Because a program is not offered at the university used for this study, an alternative group of gifted and talented educators was contacted from a different county. The gifted educators chosen were selected because they were a convenient, well organized group made up of gifted education teachers that are currently teaching in Pennsylvania schools.

For the first participant group of pre-service educators at the rural state sponsored university, the chairperson of education was approached to gain site permission to contact professors who work with undergraduate students in elementary education. The goal was to identify faculty who would be interested in having their class participate in a study related to the knowledge and pedagogy of gifted and talented education. The professor that was chosen had to have classes available that did not coincide with the teaching responsibilities of the researcher. The students in the class were all education majors of two different undergraduate years at the rural, state sponsored university. Students were given a form highlighting the main questions to be used during the interview (Appendix B) and an informed consent form; they signed if they would like to participate (Appendix C). An ungraded, alternative classroom discussion activity was set in place for those students who chose not to participate. Those who chose to participate in the study were reassured that their earned grade in class was not related to participation or non-participation and that their instructor would not know who did and did not agree to participate in the study.

The second group of participants was chosen in the same manner as the first. The chairperson of the education department was contacted to gain permission to contact the elementary education teaching staff that instructs master's level students from the elementary level to see who was interested in participating in a study based on the knowledge and pedagogy of educating the gifted and talented. A volunteer was identified and a group was formed. Students at this level were also offered a form that highlighted the questions for discussion of the study (Appendix D). They were given a consent form (Appendix E) inviting them to participate. An activity that was not graded was offered as an alternative to the non-participants. Participants and non-participants were both reassured via the permission forms and in person, that each person's choice to participate or not participate would have no adverse effects on the outcome of his or her grade in the course and their decision would not be shared with the course instructor.

The final participant group was one that was very specific. Because educators of the gifted are scattered throughout the state, an organization that brings educators of the gifted together from the elementary level had to be approached. The researcher gained permission from a group

spokesperson to attend a consortium meeting and presented the consortium with the possibility of participating in a study about their individual experiences and perceptions of gifted education. There are only one or two educators in each school district at this particular level, and procedures had to be carefully set into place to protect the identities of these individuals. Because of this fact, any identifying demographic information about which school district each individual works for was not included with this study. The participants' districts vary from rural to urban, and from little diversity in their student populations to high amounts of diversity. Disclosing these demographic factors such as specific district program policies or even partial geographic locations would have made it possible to match comments to participants. To ensure confidentiality of the identities of the participants, very little identifying information regarding this participant group was requested. They were chosen because they were a well-organized and convenient sample of educators employed to work with gifted students in Pennsylvania schools.

The primary researcher attended one of the group's quarterly meetings and discussed the minimal risks and possible benefits associated with participating in the

study. Interested participants were given a consent form (See Appendix F) and signed to indicate a desire to participate. On the consent form, individuals who were interested in participating provided contact information. Several individuals expressed a desire to be contacted at home due to school district monitoring of district provided personal emails. All individuals who signed the consent form were sent a survey form (See Appendix G) via the email or mailing address that they provided as their desired form of initial contact.

Individual and Focus Group Interviews

Focus group interviews were the main instrument for collecting data for this study. For groups one (the pre-service teachers) and two (the in-service educators in regular education environments), interviews were conducted at the rural university setting in participants' normal educational environment in an available room in the building where the majority of the students' undergraduate and master's degree coursework took place during semester. Measures were taken to ensure that all group members were able to be given a chance to respond. All participants in these two groups completed a general interview form listing the open-ended questions that would be discussed so that

each individual was able to organize his or her thoughts before the focus group session began. All interview forms were collected following the session so that the researcher could corroborate the data from the interview forms with what was recorded on audio recorder during the sessions. See Appendix H for the script used during focus group interviews.

The third group of participants, the in-service educators in gifted education positions, was presented with an interview form via email or postal mail. The group of individuals schedules meetings during the academic year, but from talking with the group spokesperson, it was discovered that often these meetings were not well attended. Members often missed meetings due to academic events in individual school districts, a lack of permission to travel to the meeting from their administrations, or inclement weather. Because of widespread geography of the group, the spokesperson encouraged that communication with the group members would be more successful through e-mail. She suggested that more individuals from the group would be willing to participate and contribute their perspectives if interviews could be given via email or postal mail and then discussed over the phone or through further email communication.

Sites for Research

There was one main site for research used in this study. Participants from the pre-service group and the in-service regular educator group were interviewed at a rural, state-sponsored university in Pennsylvania. The interview sessions took place in the building where the state sponsored university classes took place in an available classroom/meeting space.

The rural, state sponsored university where the research took place is one of the fourteen universities statewide that are part of the Pennsylvania State System of Higher Education (PASSHE). The site is a mid-size university and offers several different types of elementary education degrees including specialized certifications in early childhood education and special education.

Because of the third group's (the in-service educators in teaching with gifted programs) widespread geographic locations, it was more convenient for them to complete the interviews, via email or postal mail, with follow up by the primary researcher, via an additional email or telephone call. Site permission to approach the group members was received from the group of individuals through a spokesperson from the group. After obtaining permission, the primary researcher attended one of their quarterly

meetings to explain the research, distribute consent forms, and obtain email addresses from willing participants. Members of the group that were willing to participate, but were unable to attend the meeting that the primary researcher attended, were sent the consent forms and appropriate materials to return them through the United States Postal Service at the cost of the primary researcher. The research focused on the experiences, programs, and perceptions of the individual participants. The decision was made by the primary researcher not to place judgment on any district or collegiate policies, only to report what existed and to look at what each individual district or college currently had in place.

Limitations of the Study

There are three main limitations that could exist in this study. First, as with all self-reported data, the researcher needs to be wary of participants answering in a manner that is socially acceptable to the group instead of offering more candid responses. Often what participants say during an interview is inconsistent with their professional practices. Having participants complete interview forms before the conversation began, and not allowing additional markings on the interview forms

following the beginning of the focus group interview helped to eliminate some of the social desirability influence that may have led participants to answer in a certain manner. Collection of these forms also allowed the primary researcher to compare focus group interview themes with written response themes.

Second, using focus groups and interviews as part of the research design may lead to a limitation at the level of the integrity of the researcher. To ensure that the integrity of the data collected was maintained, several steps were taken to ensure accuracy of the data. During the interview of the first two groups of participants--the pre-service teachers and in-service regular education teachers--respondents were first asked to complete general interview questionnaire forms (see guided interview procedures) related to the research questions before the focus interviews began. This process was done to reduce possible anxiety among the participants because it enabled them to gather their thoughts before being asked to verbalize their perceptions and points of view in a group. This method helped to build trust between researcher and participants so there was not added anxiety, pressure, or stress on the participants to answer in a certain manner. Following the focus group interviews, forms were collected

from each individual to corroborate accuracy of data. Outlined discussion notes were also utilized during the sessions, and two recordings were made of the interview sessions so that the researcher could review the data at a later time, transcribe it, and have two sources to maintain the accuracy of what occurred at the interview sessions. All identities of participants were kept confidential to protect the participants and prevent the possibility that participants would feel that they had to answer in a certain manner.

A third limitation arose when interviews were conducted with the third participant group of in-service gifted educators. These educators currently in charge of gifted and talented education programs usually are the only one or two individuals at the elementary level an employment position. To put together a participant group involved encompassing school districts over several miles. This group of participants schedules a meeting once every quarter of the school year. These meetings are in place so that gifted educators at the elementary level have a peer group with whom they can plan competitions and academic events. Unfortunately, not all school districts were accommodating in allowing these educators to leave their teaching assignments to attend the meetings that occur

during the school/work day. The interview questions were submitted via email or postal mail to the participants who responded to them in an individualized interview format. Since the preferred and most often used form of communication among group members is email, the participants in this focus group returned their interview information via email or, if necessary, postal mail. Each participant selected their preferred method of follow up communication and, if necessary, were contacted once following the return of the interview form via phone or email so that the primary researcher could be certain of the accurate interpretation of the responses. Collecting interview information via the Internet allowed for a slightly larger data source to be collected.

Reliability Issues

To ensure the reliability of this study, four measures were taken. First, the participants, rationale, and theory supporting this study were described so that the synthesis of the data by the author could be viewed as dependable. Second, multiple data sources were obtained at several different levels. Collecting programs of study from the university and doing a thorough analysis of the interviews and programs of study at the research site, as well as at

the school districts of the third participant group, allowed for a deeper understanding of how individuals' experiences led them to adopt particular points of view and practices. Third, the reliability in this study can also be determined from the specificity with which the researcher described the data collection procedures and data analysis procedures that are discussed later in this chapter. Fourth, because the surveys were not able to be piloted due of the limited availability of the third participant group, constructed survey instruments were reviewed by experienced professionals in the field of education and gifted education to ensure their reliability.

Internal Validity Issues

To ensure that the data that were being collected were accurate perceptions of reality, several different strategies were used. First, internal validity was established with the methodologies by utilizing several data sources (interviews at several different levels, document analysis, standard/perception comparison) to triangulate the data that were collected during this research. Second, validity was established by the data recording strategies employed in this methodology of the focus group interviews with participant groups one and two.

Specifically, data regarding the perceptions of participants were recorded in writing before the discussions to establish comfort, trust, and a written record of participants' thoughts. Then, two separate devises recorded focus group sessions so that the data could be reviewed and transcribed into scripts which were then analyzed and categorized into themes. Validity was established during interviews with the third participant group when the researcher followed up with participants after receiving the interview data to ensure that interpretation of participant responses was accurate.

External Validity Issues

Generalization is not the same in qualitative research as it is for quantitative research. Because this is a study in which very specific populations are interviewed, there was no expectation of generalizing from the sample to the entire population. The purpose of this study, by its nature, was descriptive and exploratory. Its goal was to learn about the perceptions and abilities of in-service and pre-service regular educators when educating students with gifts and talents, as well as to analyze the perceptions of educators of the gifted in their current educational placements.

From this gathering of information, data will be examined for a working hypothesis identifying whether additional training, programs of study, or certifications should be considered necessary in Pennsylvania to help create a more comprehensive knowledge base of how to identify and educate students with typical and non-typical giftedness in the regular education settings and gifted education settings. This additional knowledge will help to describe, from pre-service and in-service teachers' perspectives, if the current experiences already in place in pre-service teaching programs in Pennsylvania are sufficient to provide the training for future instructional experiences with typically gifted and non-typically gifted students in public and private education placements. Thus, rich description will further be provided so that anyone who has interest in pursuing this topic of study will have this grounded theory study as a preliminary point of departure.

Data Collection

Data were collected by several methods including the audio recording of focus group interviews, the collection of focus group interview documents, the collection of individual interview forms, the document analysis of the

gifted curriculum at the university site for research, the document analysis of gifted programs from the third group of participants' current in-service settings, and the document analysis of the standards composed by the National Association for Gifted Children. The data collection procedures of this study consisted of focus group and email interviewing using loosely structured interview questions to collect the perceptions of participants. Collection of data on school districts' gifted education programs helped further formulate the structure of gifted education programs associated with the third group of participants. Data were also collected from the university on any gifted programming required as a part of the undergraduate program to determine a base line idea of what curriculum and pedagogy students may have been exposed to as pre-service and in-service teachers. Multiple data sources were necessary to help examine the full implications of the participants' perceptions.

Interviews and Focus Group Interviews

The main instrument used in this study was interviewing using focus groups and, in the case of the third group, email. Both focus group interviews and email interviews possessed open-ended interview questions used to

explore the research questions. The semi-structured interview questions varied depending on which participant group was being interviewed during that time (Appendix B & D). The interviews for each participant group at the state sponsored university took place during a one hour to one hour and 30 minute long session in an available classroom in the building rural, state-sponsored university's classes met. The last participant group of in-service gifted and talented educators was interviewed on a one-on-one basis via email or postal mail to overcome difficulties of geographic location and administrative support to attend meetings. The email interviews of the group of educators of the gifted and talented were followed up with a phone call or email, if necessary, depending on the participant's preference.

All participants were given paper copies of the interview questions at the beginning of their focus interviews/interview sessions as well as the proper consent forms (Appendix C & E). The function of this method was to alleviate any anxiety or pressure to answer in a certain way. The students were given time to review the questions and compose notes and responses regarding the interview questions. Then, individuals were able to outline the key points they wanted to contribute to the interview

discussion. If one of the individuals was not a highly verbal participant in the discussion/interview process, his or her form was able to be collected and his or her responses still considered to be a part of the interview and data collection processes. All in-person interview sessions were recorded using two devices, and the recordings were transcribed by the primary researcher following each interview session. As interviews were conducted, member checks were utilized during interview sessions to clarify data.

In the case of the gifted and talented educator participant group, the primary researcher attended one of their quarterly meetings to discuss the study and hand out consent forms (Appendix F). All interview questions were submitted via email or postal mail (Appendix G) and any necessary clarification of responses were completed following the interview form's return via an email or phone call to the individual who participated.

Document Analysis

Several documents were collected to analyze the programs of study at the rural university that was the main site for research. The types of programs that this university offers were also discussed with personnel at the

research site to ensure accuracy of the documents obtained. The reason for this particular decision was to help understand the level of preparation that the participants should have related to gifted education given what programming is required from the curriculum of the university. These documents gave specific requirements for the elementary education programs at this university. The documents verified if programs or courses in gifted and talented education existed at the university. The analysis helped to confirm the programming deemed necessary by the university to prepare undergraduate participants for working with the gifted and talented and assisted in understanding the perceptions of in-service regular educators as they work with students who are gifted and talented.

The documents collected from the group of in-service educators of the gifted were copies of the district program policies or brochures, or if no brochures or written program maps existed, a self-drawn diagram or explanation of each individual's gifted and talented program that he or she implements in his or her current teaching assignment was accepted. Several participants referred the primary researcher to a school-sponsored website for further information on the programming options facilitated by each

individual. Often, as mentioned in the literature review, Pennsylvania policies sometimes are ambiguous regarding gifted programming, and often it has been left to the individual in the gifted and talented teaching position to construct a program for the students who are gifted and talented in the district. Having a map or documentation of each individual's program helped the researcher to further understand each participant's philosophy and perceptions toward students who are gifted and talented. This documentation also gave a more complete picture of the educational experiences the students are given in each district to help them reach their full academic potential. These artifacts would not necessarily be valuable in isolation, but when used in conjunction with the interview data, they further deepen the understanding of the individuals' perceptions.

A copy of the most current standards for the National Association for Gifted Children (2010) was obtained at www.nagc.org. These standards, along with the professional literature that included observation tools and gifted models, provided a representation of what are considered to be "best practices" by the most respected professionals and organizations in the field of gifted and talented education. During data analysis, these documents were

compared/contrasted with each participant group's perceptions as well as the program mappings for key elements in providing gifted and talented education options to students of both typical and non-typical giftedness.

Data Analysis

The organization of this data was quite complex due to the length of the transcribed and recorded interviews, as well as the length of notes from the collected interviews. After the data were transcribed for each participant group and the program and standard documentation were secured, the data were first read through and analyzed within each participant group. Several sets of the transcriptions were printed and copies of the interview forms were made and critically analyzed for evidence of key trends and common themes. If data were determined to pertain to the research questions, then that important information was highlighted with a specific color. For example, if a participant discussed or wrote on his or her interview form or commented during discussion about appropriate pedagogy he or she would use as a regular classroom intervention for gifted and talented learners, it was highlighted in an orange color. Each new category or theme related to the research questions that emerged from the interview forms

and transcriptions were assigned their own color (identification criteria, blue; best practices, orange; and non-typical manifestations; pink).

After the first read through and analysis were classified into color-coded categories, the researcher took three additional copies (one for each research question category that emerged from the first analysis) of the data from each group, and this time only highlighted the quotes and information that pertained to one theme or category at a time. For example, the researcher took the copies of the interview forms from each of the three groups (group 1, 12 forms; group 2, 11 forms; group 3, 7 forms) and this time only highlighted the information that she had categorized as orange and pertaining to the interventions used with gifted students. Then, she took all of data she had color-coded as orange for the first participant group and analyzed it for key trends pertaining to this category of in this participant group. This process of isolating one type of data at a time was repeated for each of the additional colors found in the first participant group. After the first participant group had a set of scripts and interview forms color-coded with only one color of information on each copy, the process of was repeated for participant groups two and three.

Patterning the Data

In qualitative research based in grounded theory it is essential to break apart participant data and reconstruct it into key themes and categories so that it can be viewed as a whole and then situated within the current educational theory that exists (Creswell, 2003). The extensive process of classifying, color coding, and re-grouping the data according to its pertinent categories allowed the researcher to categorize the interview into separate groups that addressed recurring themes. The themes were then related to the research questions. This method for patterning data forced all similar information into one grouping. It allowed the researcher to take all of the comments pertaining to one research question and rebuild them into the perceptions and trends that a participant group had on one color coded category. The researcher then took each separate category of responses and analyzed them for similarities and differences between each participant group. For example, the researcher noted if there were any interventions used with children who are gifted (color-coded orange) that were common in more than one group. The idea behind this was to see if the trends were consistent between all participant groups used during this study. If trends between groups differed, the goal was then to

examine what outside influences might have led to the differences in perceptions between groups (i.e. experiences, levels of education, types of training). Finally, all data trends that emerged from the participant perception data regarding gifted best practices, including all documents, were compared with the standards for gifted and talented education programs composed by the National Association for Gifted Children (2000) to see how well the perceptions, key trends, and themes of the collected data corresponded with the system set by this key national organization for gifted programming.

Synthesis of Data Across Groups

The data were compared both within groups and between groups so that sense could be made of what perceptions were shared and experienced. The research questions were kept in mind as each group's responses were synthesized and the documents were analyzed for the influence on the individual's responses. The synthesis of the data occurred during the coding, during within group trend emergence, during the between group trend comparison as well as during the comparison of all the data with the National Standards for Gifted Programs from the National Association for Gifted Children. The semi-structured interview questions

and the research questions were used as a guide to formulate the findings of this study.

Summary

Specific procedures in focus group interviews and discussions, as well as considerations of different programming artifacts and standard analysis, helped to formulate the methodology of this study. Chapter Four will report the data collected from following this particular methodology and research design.

CHAPTER IV

DATA ANALYSIS

This chapter contains an analysis of all data collected during this research study. First, data from conducted focus group interviews with pre-service educators (participant group 1) and in-service regular educators (participant group 2) and conducted email interviews with in-service gifted educators (participant group 3) were gathered by the researcher to derive information about the perspectives of individuals who work with, or will work with, students who are gifted and talented in regular and gifted educational settings. Second, curriculum documents about best practices for gifted education were collected from the university research site to establish the experience of the first two participant groups. Documentation data of gifted curricula from other state sponsored universities were also collected to compare whether or not the amount of gifted education curriculum in the programming of the university research site was similar to other state sponsored universities. Third, data were reviewed for common trends and patterns of best practices as related to the research questions restated below:

4. What differences, if any, existed among pre-service educators' and in-service educators'

(in both gifted and regular education environments) criteria for the identification of students for gifted education programs?

5. What differences existed, if any, among pre-service educators' and in-service educators' (in both gifted and regular education environments) perceptions of the best practices for educating students who are gifted in regular education settings?

6. What differences existed, if any, between pre-service educators' and in-service educators' (in both gifted and regular education environments) perceptions of educating students that manifest their giftedness in non-typical ways?

The common themes within each participant group were identified and then compared among participant groups to explore any similarities or differences that may have existed between the groups of participants. The perceptions of the individuals in each of the groups were also compared with the standards that were created by the National Association for Gifted Children to understand if any misconceptions existed among the participant groups.

Perceptions of Pre-service Teacher Participants

The first participant group consisted of 12 pre-service teachers from the rural, state-sponsored university research site. These students were part of a course that requires pre-service teachers to work in a public education setting so that they begin to acquire field experience before an actual student teaching placement occurs. The course chosen cannot be taken until during or after the third year of study at the university research site. The 12 individuals who chose to participate were either elementary education majors or had a dual major in elementary education and special education.

As part of the focus group interviews, students were asked to recollect any experiences with gifted education that may have come before their college education. This question was explored to find out the level of experience that the undergraduate group may have had with students in gifted education programs prior to the interview session. It could be inferred that a student who participated in a gifted program as a child or fraternized with peers who were classified as gifted may have had more experiences and knowledge regarding the best practices for students who are gifted than those individuals not in the mentioned situations. Four of the participants reported that they

had not had experiences with gifted education before college (Participants 1, 5, 7, & 12). Four additional participants recalled students who were gifted being in the regular education environment, but those participants only recalled the students being pulled out of class to work with a special teacher (Participants 3, 9, 10, & 11). Three individuals recalled being in accelerated placement classes with gifted students but were not classified as a student with gifted abilities (Participants 2, 4, & 8). The final individual (Participant 6) reported that she was classified as a student with gifted abilities and was identified and placed in a gifted education program in fifth grade.

The participants were also asked to report on what experiences they had gained during their college years to date that pertained to the education of individuals who are gifted. Eight of the individuals in the focus group reported that they had not had any experience with gifted education during college (Participants 1, 2, 3, 4, 5, 7, 8, & 9). The remaining four individuals reported that there was an introductory course in special education where students who are gifted were mentioned as being a special population of students (Participants 6, 10, 11, & 12). During the focus group interview it was reported that

during this course the discussion on individuals who are gifted was very brief and not much information was recalled on the material taught. Participant ten stated "I remember there being information in the text book on gifted individuals, but we didn't stay on that chapter very long." Another individual (Participant 12) mentioned that the course was taken online and it covered all branches of special education including students with visual impairment, hearing impairment, behavioral disorders, and autism.

Group One Identification Criteria

The first focus group, which was made up of pre-service teachers, was also asked to identify which criteria each individual would use to identify a student with gifted abilities in his or her future classroom. The following table (Table 2, *Identification Criteria of Pre-Service Teacher Participants)* shows the characteristics that were reported during the focus group interviews and states the number of individuals who reported each characteristic. Several individuals listed more than one characteristic to look for when identifying students who are gifted. It should also be noted that the three individuals who

Table 2

Identification Criteria of Pre-Service Teacher Participants

Characteristic	No. of Individuals
High achievement	6
(Participants 1, 6, 7, 8, 11, 12)	
High test scores	4
(Participants 1, 5, 7, 8)	
Boredom in class	3
(Participant 6, 9, 11)	
Good behavior	3
(Participants 5, 8, 10)	
Unsure of characteristic	3
(Participants 2, 3, 4)	
Finishing work early	1
(Participant 1)	
Creativity	1
(Participant 10)	
Effective Communication Skills	1
(Participant 1)	

reported they were unsure what they should be looking for did not list any other criteria.

The participants had several different comments during the focus group interviews. In the most popular response category, half of the participants felt that a student who is gifted should be showing high achievement in class. Participant one reported that she would look for high achievement, but also would look into the achievement in prior years to check for consistency in performance. Another (Participant 7) said that she would look for high achievement but, as a new teacher, would most likely consult the principal or guidance counselor to find out what enrichment or program placement would be most beneficial for the high achieving student. That particular participant reported that she was not comfortable with making a judgment on a child's giftedness without help from more experienced professionals in the district.

The second most popular response category reported as indicative of giftedness was high test scores. Students did not list specific assessments that should be used, but discussed that in an assessment course that many of the students were taught that high achievement on tests was considered to be "two standard deviations above the mean." When it came to discussion about behavior, there was

dissent in the group about whether positive or negative behaviors were more typical in gifted students. Three individuals believed that good behavior was an indicator of giftedness whereas three other individuals felt that less desirable behavior was an indicator that a student could be gifted.

Behavior was also the trait reported by the majority of the group as one that could be missed by other professionals when identifying students with gifted abilities. One individual (Participant 7) described this as "a child who answers frequently and wants to be called on repeatedly may become annoying to a teacher because that student isn't giving others a chance." Another (Participant 6) believed that a child not being challenged and becoming bored was what would indicate a less than desirable behavior pattern. "If a child is getting bored with what is going on in the classroom, behavior could even lead to failing grades and bad test scores. The child would be unmotivated to even try because they already know the material."

Group One Best Practices

As a second portion of the focus group interview session, participants were asked to describe activities or

accommodations that they planned on using in their classrooms with students who are gifted and talented. The most popular response that students reported was the use of enrichment materials that were challenging to the students. One participant (Participant 1) described that she would search through resources and find challenging materials that seemed to coordinate with her student's interests. Participant 11 also stressed the importance of having extension activities that are both deeper in content and more difficult for the student. "It's important for that child to know how to do a project as well as why they are doing that project." Yet another participant (Participant 4) described a scenario during a volunteer experience in the classroom. "I remember when I was observing in a 5th grade classroom. The teacher was allowing a student to go back to a computer when he was finished. When I asked the student about what he was working on, he explained that he was creating his own society as a project for his gifted program." This participant believed that this higher level and engaging project was a good accommodation for a gifted student in the regular education classroom. Several other accommodations and activities were mentioned during the focus group interview. Because the responses were so

Table 3

Best Practices of Pre-Service Teacher Participants

Best Practice	No. Of Participants
Enrichment Materials	6
(Participants 1, 2, 4, 7, 8, 11)	
Traditional Pullout Program	2
(Participants 3, 5)	
Use of Higher Level Questioning	2
(Participants 3, 4)	
Unsure of Best Practice	2
(Participants 6, 12)	
Small Group Instruction	2
(Participants 3, 11)	
Differentiated Instruction	2
(Participants 9, 10)	
One-on-One Instruction	1
(Participant 4)	
Acceleration	1
(Participant 2)	

varied they are organized as Table 3, *Best Practices of Pre-Service Teacher Participants*.

As for which of these practices were believed to be the most valuable for gifted learners in regular classroom environments, providing challenging materials and utilizing higher levels of questioning were the two accommodations that were discussed most often. These types of inclusion were reported by several individuals. One specific individual (Participant 10) believed that the regular classroom environment was the best environment for students who are gifted and talented as long as they displayed personal motivation for their own learning.

Group One Non-Typical Giftedness

The final portion of the focus group interview concentrated on participants' perceptions of students that may be manifesting their gifted abilities in ways that are atypical. The first part of the discussion concentrated on a child that is displaying high potential, as well as negative behaviors in the classroom. The participants were asked if they would recommend a student such as the one described for gifted programming. If they recommended that child for gifted programming, the participants were asked to elaborate and describe how they would accommodate that

child in the regular classroom environment. The second portion of the discussion concentrated on a child with autism who is displaying high potential in only one subject area. The participants were again asked to decide if they would recommend this student for gifted programming. If they chose to recommend the student for additional testing or programming, they were asked to elaborate on how they would accommodate this child in the regular classroom environment.

For the child that was displaying both negative behaviors and high potential, nine of the participants believed that they would recommend this particular student for gifted education programming. Two participants (Participant 1 & 4) believed they would not recommend this student and one participant (Participant 5) explained, based on her experiences, that she was unsure if a recommendation should be made for this student. Many of the participants who stated that they would recommend this student believed that the behaviors of the possibly gifted student may have been in direct relationship to not feeling challenged or engaged in their learning due to boredom or frustration with the curriculum. All those in favor of recommending the student for gifted services recommended the use of higher level curriculum and interventions to see

if behavior improved when the student was engaged in academic activities. Several other individuals (Participants 2, 9, & 11) suggested consulting the special education teacher or behavior specialist to discuss behavior programs to help keep the student on task. Of the participants who said they would not recommend this student for gifted programming, one individual (Participant 1) believed that the student's lack of maturity would mean that he or she would not find success in gifted programming. Participant 4, who also stated that she would not recommend this student for gifted services on her focus group interview sheet, believed that the student's negative behaviors needed to be addressed and controlled before a gifted placement or acceleration placement was recommended. "This child would be disruptive, especially if that person was put into an accelerated environment. It's not fair that the older learners are hindered with disruption because of one student's behavior issues. I think the behavioral issues need to be worked out before that child would be sent to a more advanced classroom environment."

Results were similar when participants were asked if they would recommend a student with autism for gifted services if they showed high aptitude in one subject area but lagged behind in another subject area. Ten individuals

(Participants 1, 2, 3, 6, 7, 8, 9, 10, 11, & 12) believed that, as teachers, they would recommend a student with autism and high aptitude in one subject area for gifted programming. Many of these participants described the belief that the student has a right to develop his or her strengths while simultaneously receiving intervention for any learning disabilities. Participant nine stated, "If a student is excited about a strength area, and that area is ignored, the student may begin to hate the class of their talent area because they are never learning anything new in that area. It's a student's right to grow in their talent area." Another participant (Participant 1) recommended finding the student's interest and using it to engage them in the area where they struggle. All of the participants who said they would recommend the student for gifted programming believed that they would use higher level content in the student's specific talent area as an accommodation for the student in the classroom.

One individual stated that he would not recommend a student with autism and high aptitude for gifted services. Participant four felt that, as the work became more challenging, the subject areas would become more integrated and this eventually would frustrate the student with special strengths in one subject area. The final

individual (Participant 5) was not sure if a gifted recommendation would be beneficial and believed she would seek additional assistance before making this decision.

Perceptions of In-Service Participants in Regular Education Assignments

The second participant group was composed of in-service educators in regular education positions; all were enrolled in a Master's degree program at the state-sponsored university site. Eleven individuals elected to participate in the focus group interviews. The master's degree students varied in the grade levels taught, as well as years of classroom teaching experience. There were three individuals who taught in primary settings (pre-k-2). Five individuals taught exclusively in a grade that was of an intermediate elementary level (3-6). The remaining three participants taught multiple elementary grades due to being in positions that were departmentalized into subject specific content areas, such as math or language.

In terms of the years taught by the individuals in this participant group, nine of the participants had been teaching fewer than one to five years, one participant had been teaching for six years, and the remaining participant had been in the classroom for 13 years. Thus, the majority

of participants could be categorized as beginning teachers, using the criterion of years of experience. The reason for the large number of beginning teachers could be explained by the Level II certification requirements in Pennsylvania. Pennsylvania law requires that, in order to earn a Level II certification within the state, teachers who earned a valid Instructional I certification through a 4-year teacher preparation program must earn 24 credits or their equivalent beyond their undergraduate degree within 5 years and teach successfully for three years before advancing to Instructional II (Pennsylvania Department of Education, 2010). Therefore, many of the students in the class were seeking to complete the requirement for Pennsylvania Instructional II.

During the focus group interview and the survey form analysis there were several threads and patterns of data that emerged from these participants. The research was again organized into data categories of perceptions that pertained to identification criteria, best classroom practices, and best practices for students with atypical manifestations of giftedness.

Group Two Identification Criteria

As part of the focus group interview questions, participants were asked to identify which criteria indicated that a gifted education placement or recommendation for evaluation was necessary for a student in his or her classroom. The first criterion that was common between several participants within the in-service regular education focus group was the criterion of high achievement. Six of the participants (2, 4, 5, 6, 7, 8) reported that they would make gifted recommendations based on criteria classified as high achievement. Participant eight described her high achievement criteria as "the student working above my classroom curriculum." Another participant (Participant 9) reported that she "actively looks for students that may be in need of enrichment activities." Two other participants (Participants 2 & 4) said that they would both consider making gifted recommendations if the student was "doing really well in the regular classroom environment."

The second criterion that was common and evident among several members of this participant group could be classified as high test scores. Four of the participants (1, 2, 9, & 10) described making recommendations based on the results of standardized measures of achievement. Those

four participants mentioned varied standardized assessments utilized to make the recommendations. One teacher (Participant 9) mentioned that she would utilize the Pennsylvania State System of Assessment (PSSA) for classifying students as in need of gifted education services. The remaining individuals (Participants 1, 2, & 10) mentioned that the Dynamic Indicators of Early Basic Literacy Skills (DIBELS) tests and achievement tests were part of the criteria that they would use to recommend a student for gifted services within their districts.

Other criteria for gifted identification recommendation were reported by participants but only one individual mentioned them and therefore they cannot be considered as a pattern or common research thread for the group. Many of these criteria were not reported during focus group interview time, but were taken from the writing surveys. These forms were utilized to help each of the participants collect his or her thoughts before recording began. Although the criteria were not shared during the actual recorded conversation, they are still considered to be data since they were collected from the survey question forms turned in by the individuals who elected to

Table 4

Identification Criteria of In-Service Participants in Regular Education Assignments

Characteristic	No. of Participants
High Achievement (Participants 2, 4, 5, 6, 7, 8)	6
High Test Scores (Participants 1, 2, 9, 10)	4
Strong Comprehension (Participant 6)	1
Poor Organizational Skills (Participant 3)	1
Behavior Issues (Participant 11)	1
Emotional Issues (Participant 11)	1
Leadership (Participant 10)	1

participate. One individual (Participant 6) said she would make a gifted recommendation if the student in her class had "good comprehension" and was a motivated learner. Another participant (Participant 10) mentioned good leadership as an indicator of giftedness. It should be noted that this participant also mentioned high test scores as part of her criteria. One participant also mentioned lack of organization (Participant 3), behavioral issues (Participant 11), and emotional issues (Participant 11) as possible indicators of giftedness. The identification criteria of this participant group are organized in the preceding table (Table 4, *Identification Criteria of In-Service Participants in Regular Education Assignments).*

There were additional threads of data that came from this group that fall under the category of identification criteria. Despite reporting on the criteria they would use to make a recommendation for gifted services, it was reported via survey and focus group data that five of the eleven focus group participants have never made a recommendation for gifted education placement. One participant (Participant 1) felt that gifted recommendations could only be made by the guidance and gifted departments in her district. "Where I work, there is a calculation that is done. The administration or

psychologists look at achievement test scores and hand out teacher checklists for us to fill out. I also believe they consider IQ scores in the calculation, but I've actually never have had to work with a referral yet."

Another participant (Participant 7) who worked at the primary level felt that because she was a primary teacher that a recommendation could not be made because her students were still "too young" for gifted classification. Another primary leveled participant (Participant 6) agreed that her students could be considered too young for gifted classification and described a school-wide enrichment movement that is being currently implemented in her district. She believed that because the school-wide enrichment was designed to reach all learners that the practice of identifying students as gifted was happening less frequently.

The remaining two participants taught in the upper elementary grades; they reported that they had not made a gifted placement recommendation previously. These two individuals agreed that identifying children for gifted education was not a current priority at their grade level. Both participants believed that their district did a good job of classifying children as gifted in the younger grades. Both individuals stated that, by the time that the

student was in their particular grade level, the teachers of the primary grades would have already classified the student as gifted. Therefore, they both believed there was no need to recommend a student for gifted education services.

Group Two Best Practices

Through the focus group interview questions, the participants were asked to elaborate on the types of activities or accommodations that they believed to be best practices for working with students who are gifted in regular classroom settings. There were four main accommodations that were recognized by the majority (6 or more) of the participants as best practices for the students identified as gifted in the regular education setting. The main four accommodations that could be considered a pattern for this focus group included the following:

1) The utilization of differentiated instruction to provide group and independent enrichment experiences.
2) The implementation of higher expectations for products and benchmarks.

3) The practice of using flexible groupings to introduce and reinforce advanced concepts.
4) The use of higher order questioning to delve deeper into comprehension and concept understanding.

The perception of differentiated instruction, as a best practice to be utilized with students classified as gifted, was a belief that was reported by all 11 participants on their focus group interview survey.

Although all eleven participants cited that using differentiation was a best practice for students who are gifted in regular education classrooms, how the practice of differentiation was utilized was expressed differently per participant. Participant eleven stated that she usually alters assignments for students who are gifted to reflect an area of talent. This participant stated "They (gifted students) need to be challenged with hands on enrichment activities that require them to really use their brains. The activities would usually be used at a higher grade level."

One individual (Participant 3) described how she extended a project her students were completing on Greek Mythology. She explained that, while students who are not classified as gifted completed the standard lesson plan of learning information and history on Greek gods and

goddesses, her students who were gifted were researching mythological figures independently and creating a museum exhibit dedicated to the Greek mythological character of their choice. Other enrichment suggestions similar to this one recommended that enrichment was improved when individuals could work as similar ability or interest groups. Still others (participants 1, 4, & 5) suggested that enrichments for students who are gifted should be designed to reach students' strengths. One participant (Participant 8) stated that she often chooses enrichment assignments that she believes will further the curiosity and potential of the student. Another participant (Participant 2) recommended that the enrichment be an activity that the student has had some choice into picking or planning.

The second accommodation reported as a best practice by a majority of the focus group participants was the use of higher expectations for students who are gifted. Participant 10 described how she enacts higher standards within her language arts writing rubrics. "I typically have a rubric in my class that is labeled for gifted students. The requirements for that assignment are at a higher level than what the regular student is expected to do." Another participant (Participant 8) discussed that

she never wants her class to be boring for the students who are gifted. She reported raising expectations so that the students were not doing work that was too easy for them.

The third accommodation in best practices utilized with students who are gifted in regular classroom environments by a majority of the focus group members was the practice of using flexible groups by interest and ability to introduce and enhance concepts from class. One participant (Participant 11) described that she often pulls her students into small groups at the back of the classroom and introduces concepts at a higher grade level that relate to the standard that is being reinforced in class.

This participant described her gifted students as in need of these groupings to receive an appropriate level of challenge to their work. "I often do a lot of groupings and pull students aside because I have many students who could easily go to the next grade up on class concepts." Another participant (Participant 5) believed that putting students in groups with other students who are high achieving or gifted "allowed them to learn to work with others like themselves to figure out the answer to challenging problems." This same participant believed that activities where students can work with other students to talk about what they are working on were one of the most

beneficial best practices. She believed that being able to interact with enrichment was the key to student success.

The final accommodation that was reported as a best practice by a majority of the participants (six participants) was the use of higher order questioning to enhance the level of difficulty of classroom material. Several participants (Participants 3, 5, 10, & 11) believed that the more abstract questions allowed students who are gifted to think more deeply about classroom material. Another participant, participant 5, reported that using deeper questions allowed her students to think about more advanced problems and helped further the amount of knowledge learned from instruction. This participant also reported allowing students to take on leadership roles and facilitate some of the higher order discussions among peers. These best practice accommodations are organized into Table 5, *Best Practices of In-Service Participants in Regular Education Assignments*.

Although it does not help explore the research question of in class accommodations for students who are gifted, it is pertinent to mention that, during the focus group interviews, several of the participants mentioned that many of the accommodations for students who are gifted

Table 5

Best Practices of In-Service Participants in Regular Education Assignments

Best Practice	No. of Participants
Differentiated instruction (All Eleven Participants)	11
Higher expectations (Participants 1, 2, 5, 6, 7, 10, 11)	7
Flexible groupings (Participants 5, 6, 8, 9, 10, 11)	6
Higher curriculum difficulty (Participants 3, 5, 6, 7, 10, 11)	6
Pull-out gifted program (Participants 1, 3, 8)	3
Independent projects (Participants 4, 8)	2
School-wide enrichment program (Participant 7)	1

were provided by the teacher specifically assigned to facilitate the learning of students who are gifted. Several participants described a pull out program in which students were pulled from the regular classroom curriculum to complete exclusively gifted education activities. "The way that our gifted program works is that the students are pulled out two or three times per week. They complete curriculum that are aligned with what we are already doing in class." Two participants discussed that their students classified as gifted often completed independent projects that they had created with their gifted education teacher. "My students in the gifted program get most of their accommodated assignments from their gifted education teacher. Usually she will design a project for them that connects to my class somehow. Sometimes I will get involved and help with the design, but most of the time she (the gifted education teacher) does it." Another participant (participant 7) from a primary grade level described an enrichment program that was designed to improve achievement at the school wide level. "Our school has introduced a school-wide enrichment program for the children in my (early childhood) grade. Since they are so young they don't label them (as gifted) right away." She indicated that students were expected to do well in that

particular program and then, following continued success, would be considered for a full gifted program later in the identification process.

Group Two Non-Typical Giftedness

As a portion of the focus group interview, participants were asked about two types of students who could be considered gifted in ways that are not typical. The first set of questions dealt with a student who may be gifted but was also perceived as having a behavior management issue. The second student described was a student with autism who displayed high potential in one subject area but demonstrated a deficiency in a separate subject area. The participants were asked if they believed they would recommend a student for gifted education services with a type of non-typical giftedness and if they responded yes to the recommendation, they were asked to elaborate on how they would accommodate this student's high potential. These questions were asked to understand how teachers react to students who manifest their giftedness in ways that could be considered non-typical.

For the first scenario of a student that is displaying high potential but also is displaying negative classroom behaviors, all eleven participants believed that a gifted

evaluation recommendation was necessary for this student. All eleven participants reported that the student displaying negative behavior may have been acting out due to a lack of engagement, boredom, and a frustration of not being able to do work that was a challenge for them. Every participant utilized terminology such as "bored", "frustrated", or "acting out" because of not being challenged as possible reasons for the negative behaviors in the regular classroom environment. One participant (Participant 9) noted that, despite the overall positive consensus of the focus group toward students with non-typical manifestations of giftedness, many of the participants had received negative criticism in their home districts for having a positive view of this type of student. "I would absolutely recommend this student for evaluation. I find the student that I assume will get a gifted placement differs from the mainstream student intellectually, emotionally, and socially. Sometimes people around me will criticize and ask why I recommended them for something extra when that student can't even behave in a regular classroom. I just like to think that maybe they need to think on a different level. They need to be able to learn from their intellectual peers. In that program they will have an opportunity to do that."

When discussing the second scenario of the student diagnosed with autism that was only displaying high potential in one area, there was a larger assortment of beliefs among the participants. The opinions varied from participants who believed that a gifted recommendation was necessary for a twice exceptional student (Participants 5, 6, 7, 8, 9, 10, & 11) to participants who reported they did not believe a placement was necessary for a child with autism and gifts and talents in a particular subject area.

Among the participants, there were those who felt a placement was possibly not needed (Participants 1 & 2). There were also those participants who were confused about whether a placement for a twice-exceptional student was even permitted or possible (3 & 4).

One participant (Participant 5) felt that it was beneficial for the student to be identified as gifted, despite the fact that the child had difficulties in another subject area. "You can absolutely be gifted in one subject area. I currently work with a student who is diagnosed with Asperger's Syndrome. He has a regular Individualized Education Plan for growth in the areas he struggles with, and his Gifted Individualized Education Plan addresses his strength subject area of social studies." Another individual (Participant 11) agreed that a gifted placement

would be beneficial for a child that displayed giftedness as well as an area of needed improvement. "I would recommend this student. I would provide an atmosphere that allows for differentiated instruction in that talent area but consistency in activities/social interaction to serve the child with special need." Yet another participant (Participant 10) reported that she would recommend a child that displayed high potential as well as difficulty in another subject area because the student would need to be challenged to keep engaged. "If they don't (get challenged) they might get frustrated with school altogether and misbehave." Yet another participant (Participant 8) believed that differentiation for areas of talent and area of struggle should be expected. "To best serve this student you should implement activities and assignments that challenge his strength. This way he can excel and feel success in that area."

Four other participants were not in complete agreement that a gifted education placement would be the best for a child that had gifted abilities in one area and deficits in another. One individual (Participant 4) wasn't sure if having a dual diagnosis was permitted. Another (Participant 3) reported that she was not sure if a placement would benefit this type of student. "I'm

concerned that some of the social difficulties that can sometimes occur along with an autistic diagnosis would keep that student from truly benefiting from a placement in gifted education." Another participant (Participant 1) believed that a student with autism would not qualify for gifted services under their district's current identification system. "In our school, I believe we rate the overall learner in all subjects, not just one." The remaining participant (Participant 2) believed that the need for a gifted placement depended on the disability of the twice-exceptional student. "I have a student who is very smart in my classes, but that student is also in learning support. My student really needs the supportive pacing of a learning support placement. I would only make a recommendation if the student's disability didn't get in the way of his high achievement."

Perceptions of In-Service Educators of the Gifted

The third participant group consisted exclusively of educators who work with gifted education students and are also managers of the gifted individualized education plans of their assigned students. These educators who are involved in making gifted education placements for students were asked several questions about their criteria for

identifying giftedness in students, perceived best practices for students who are gifted, and their perceptions about students who are twice exceptional or manifest giftedness in non-typical ways. Seven individuals were willing to complete surveys for the study. Four of the participants have been in gifted education from 1-5 years. Two individuals had been in gifted education from 6-10 years and one person had been in gifted education for 12 years. All participants had at least 5 years of teaching experience prior to taking on their gifted education position.

Since there is not a certificate specifically for gifted education in the state of Pennsylvania, the primary certifications of the participants varied. The exact certification combination of each person will not be disclosed to protect the identities of the participants, but all of the participants held a certificate in elementary education and all the participants had at least one additional certification or master's degree in their post-graduate specialty area(s). These areas of certification included secondary social studies, special education, administration and educational leadership, elementary mathematics, middle school mathematics, secondary science, early childhood education, physical

education, music education, and library/information science.

Group Three Identification Criteria

The participants were asked to report what criteria they believe indicated a need for a gifted recommendation. The most popular criterion to identify students in need of gifted education was categorized as high achievement. Participant 1 described the testing matrix used in his home school district which involved the use of parent rating, PSSA scores, classroom achievement, teacher rating scales, achievement tests and intelligence testing. "The matrix has several different levels to measure achievement which lead up to the IQ test and achievement test given by a licensed psychologist." Another participant (Participant 4) described that she looks for passion to achieve in a certain area. "I look for students who are driven to achieve. If they won't give up until they have a quality project or an answer to their question, I usually think they are gifted or talented in an area."

The second category of identification criteria was evidence of boredom with the regular curriculum. Participants 3, 4, 5, and 7 believed that boredom with the current curriculum indicates a possible need for gifted

placement. According to Participant 4, "most of my current students were originally bored with the curriculum, so as I meet new students, I look for boredom with their courses."

The third category that was reported by a majority of the participants was evidence of extreme behaviors such as hyperactivity and emotional sensitivity. Participant 3 explained: "A lot of my students are extreme in their behaviors. Some are neat in their work, others extremely careless. Some of my students are very organized and others are not." Participant 5 explained that a large population of her students was emotionally sensitive. "Several of my students are very sensitive, getting a less than desirable grade can make them act hysterical. They want to be perfect."

The list of qualities of giftedness was lengthier than in other groups. The list of traits is organized into Table 6, *Identification Criteria of In-Service Participants in Gifted Education Assignments,* by the characteristic name and the number of individuals who reported the characteristic. This participant groups' list of criteria involved many more specific behaviors for gifted placements that were not reported in the other participant groups. Several of these teachers involved in programs for the

Table 6

Identification Criteria of In-Service Participants in Gifted Education Assignments

Characteristic	No. of Participants
High achievement (All Participants)	7
High test scores (Participants 1, 2, 4, 5, 6, & 7)	6
Boredom in regular education (Participants 3, 4, 5, & 7)	4
Extreme behaviors (Hyperactivity, Emotional) (Participants 2, 3, 4, & 5)	4
Curiosity/inquisitiveness (Participants 2, 3, & 5)	3
Creativity/Artistic Ability (Participants 3, 4, & 5)	3
Advanced sense of humor (sarcasm, irony) (Participants 2, 3, 4)	3
Prefers adult company over peers (Participants 5, 6, & 7)	3
Social issues (trouble fitting in) (Participants 2, 3, & 5)	3
Creative problem solver (Participants (3 & 6)	2
Advanced leadership skills (Participants 5 & 7)	2
Perfectionism (Participants 3 & 5)	2
Strong Reading Fluency (Participant 3)	1

gifted believed that some of these behaviors could be overlooked by other educators. One participant reported that "sometimes classroom teachers seem to overlook students who are not compliant." Another participant reported that "sometimes it seems that a teacher will not recommend a student for gifted education evaluation unless they are over achievers who have no social or emotional issues going on." Other participants cited that negative behaviors (e.g. boredom, messiness, and lack of organization) were the traits often not viewed as appropriate for students who were being recommended for gifted education.

Group Three Best Practices

The participants in the third group, those responsible for gifted education in their schools, were also asked to describe the accommodations that are best practices for students who are identified as gifted in regular classroom environments. Participants' replies are organized in Table 7, *Best Practices Reported by In-Service Participants in Gifted Education Assignments,* by accommodation listed as a best practice by each participant and the number of participants who listed it.

Table 7

Best Practices Reported by In-Service Participants in Gifted Education Assignments

Best Practice	No. of Participants
Specialized groupings (Participants 1, 2, 3, & 5)	4
Compacting of curriculum (Participants 2, 4, 5, & 7)	4
Independent (enrichment) projects (Participants 1, 2, 3, & 5)	4
Acceleration (Participants 2, 5, & 7)	3
Co-teaching between gifted and regular education teacher (Participants 3 & 4)	2

The first major accommodation utilized by the majority of participants was specialized groupings for high ability students. Participant 2 talked extensively on her interview form about the importance of allowing students to interact with similarly gifted peers. She believed that allowing the students to work with peers who are mentally similar provided students with opportunities for social interaction at their level, especially within a smaller school where there may only be a few students identified per grade level. Participant 7 reported: "The students need common time to relate to their similarly gifted peers. It helps the student to know they are not isolated, that there are other children similar to them." Another participant (Participant 3) believed that the key to making the above accommodations work is finding a common planning time for the gifted education teacher and the regular homeroom or classroom teacher. She believed "that common plan time facilitates rigorous curriculum throughout the school week instead of during a separate pullout time." Participant 5 also discussed that it was important to relate any curriculum and grouping accommodations to the students' futures. "Curriculum and adaptations should be based on the students' interests and future goals. If the

student can see how everything connects to his or her future, it makes the task at hand more worthwhile."

As a part of the focus group that consisted of educators responsible for gifted programs, the participants shared a description of their school's gifted and talented education program. Every participant reported that his or her district offers enrichment opportunity in the regular classroom environment. Outside of the regular classroom environment, there were two main elements that were common to the gifted and talented education programs of the gifted program coordinators in the group. These elements included a weekly pull-out program that facilitates special projects, competitions, and events with a central intermediate unit or consortium, and fieldtrips that included workshops designed to facilitate interest and new experiences for the students. There were three other elements mentioned on the surveys but they were not common to the majority. These elements included job shadowing, full grade or subject specific acceleration, and counseling services. Participant 6 discussed how she helps her students find job shadowing opportunities. "Often my students are interested in a certain field; I will try to match them up with a professional in the field. If safety and schedule permit, the student will be able to join that

professional for the day. My students are able to make decisions about what they want to achieve." Participants 2, 5, and 7 all listed acceleration as one of the most valued accommodations for students who are gifted. Participant 5 reported, "I received much resistance when we first began accelerating students. Many teachers were doubtful about students fitting into a higher grade. It was difficult convincing them to give the new program a try, but it definitely benefits the students, the teacher, and the school. The students are finally challenged, the teachers do not have to spend extra planning time inventing enrichment projects, and the school is finding it is relatively inexpensive to allow the student to take the more difficult class." The final element that was not common to all programs was the utilization of counseling services. Participant 2 described that her district had started using more counseling services when they noticed a high prevalence of perfectionism in her students. "I did not feel well-trained enough to provide emotional support on this gifted characteristic. Our counselors help provide support for our students who feel anxiety and a need to be perfect."

Next, this group's survey dealt with the accommodations believed to be best practice for students

who are gifted. It was on this final topic of discussion that the quoted data exhibited several differences in beliefs among the participants. Three participants believed that the most effective accommodations for students who are gifted are jointly planned lessons and enrichment experiences executed during co-teaching with the regular education teacher. The individuals who reported this accommodation as most valuable believed it was important for the students to feel a personal connection to the regular classroom environment.

Two other participants felt that acceleration opportunities were the most valuable experiences for students. Participant 5 stated, "I have found that my students succeed best when they are allowed to either compact curriculum or take classes that are at a higher grade level than their current age level of classroom. My district seems to like that it is an economical accommodation, and my students have enjoyed being challenged daily instead of once a week during a pullout class. There are still weekly meetings and special events, but the acceleration definitely enhanced the quality of our program."

The final participant believed that the pullout time was the most valuable accommodation for her students. She

reported that the social interactions between similarly gifted peers provided the most valuable experiences for students who are gifted.

Group Three Non-Typical Giftedness

The final portion of the participant group survey again addressed how to accommodate those students who manifest their giftedness in non-typical ways or are twice-exceptional. When discussing best practices for students who display their giftedness in non-typical ways, many strategies were suggested to help them succeed in gifted and talented educational placements. Two participants (Participants 1 & 3) suggested that creating a specialized behavior plan or 504 plan with the parent, teacher, and behavior specialist or guidance involvement would help a child succeed with gifted education. Another participant (Participant 4) suggested that merely altering curriculum could help. "Perhaps the student is frustrated and is acting out because of classroom events." Another participant (Participant 2) recommended pulling the student frequently to stay informed on whether the child was feeling challenged and supported in his or her regular classroom environment. All participants possessed prior

experience with students displaying negative behaviors in environments where they were not being challenged.

When asked about accommodations for students who are twice-exceptional, the majority of the group (participants 1, 2, 3, 4, & 5) believed that communication and team planning were the keys to successful accommodation of this type of student. One individual (Participant 5) discussed how she meets with the special education teacher frequently and relies on that person's expertise to help make challenging assignments meet needs without providing further frustration. "One of my current students has a great talent for science, but he struggles with writing. His special education teacher helps me design assignments that interest him without overwhelming him." Participant 2 reported: "I meet frequently with our school's special education teacher. Collaborating with her benefits my twice-exceptional students." All participants reported having prior experiences with twice exceptional students in their gifted programs and all reported that their districts recognize and accommodate for twice exceptional students.

Between Group Analysis

A between group analysis was completed as a part of this research to provide more intense description of the

patterns and themes that emerged among the participant groups (Bloomberg & Volpe, 2008). Many similarities and differences exist between the three participant groups in this study. By examining the focus group interview data from all three groups, trends among the three groups emerged. The data are patterned after the three specific research questions. Each section will address similarities and differences between the groups for each research question.

Identification Criteria

Two main similarities existed between the data from all three participant groups. In all three participant groups' responses, high achievement was the most often reported criterion that they reported using to recommend a student for gifted education programming. Many of the participants talked of students seeming to "need more" in the regular education environment as a sign that a student may be in need of gifted education programming.

The second similarity in identification criteria was that the second most popular criterion participants reported using to identify a student with gifted abilities was high test scores. The definition of what constitutes high test scores was more specific with in-service

teachers. The two in-service participant groups named standardized assessments given in their current teaching placements whereas the pre-service participant group was more general when discussing high test scores.

One main difference emerged among the three groups of participants in this category. The group of pre-service teachers and in-service educators in regular education assignments described less specific identification criteria than those in-service teachers responsible for gifted education programs. This difference could be explained by the years spent in-service, but it is likely that the in-service teachers of the gifted listed a larger quantity of criteria, as well as more specific criteria, based on the fact that several members of this group discussed that they attended yearly trainings on gifted education at their intermediate unit. These individuals also attended quarterly consortium meetings to discuss best practices for gifted education. In addition, all of them belonged to professional organizations in their geographical areas that are dedicated to the education of children with giftedness. The pre-service participant group was the only group in which members reported being unsure about sure about proper criteria for the identification of students who are gifted. The majority of that particular participant group stated

that they had little to no prior experience with gifted education in their program. One participant from the pre-service group indicated that everything that she had learned about gifted education had come from observing during volunteer experiences in a public school setting. If we compare that to the data from the second participant group of in-service regular education teachers, the majority of this group believed they did not have prior educational experiences with gifted education from their teacher preparation programs either. All of the participants in this group also reported that they did not have any in-service training specifically on gifted education. The evidence implies that, in the absence of training, teachers may assimilate their beliefs about giftedness from the culture of their school or colleagues or may rely solely on their own beliefs and values concerning giftedness to choose who is and who is not gifted. For example, a new teacher may adopt the practices of an assigned mentor teacher during his or her first year of public school teaching.

Best Practices

All three groups of participants recommended enrichment materials and specialized groupings as

accommodations to be used with students who are gifted. All groups had perceptions that dealt with the need for students of higher ability to be given challenging materials so that they may work to their fullest potential in the regular classroom environment. The second common strategy utilized among all groups of participants was the use of some type of specialized groupings to allow similarly gifted or high ability peers to work together on an assignment in class.

Again, there were notable differences among the three participant groups' perceptions concerning best practices for students who are gifted. The first notable difference between the groups was the use of specialized vocabulary to describe the accommodations needed. The third participant group of in-service educators of the gifted often used more specialized vocabulary from the field of gifted education. They were also more in favor of enrichments such as acceleration (full grade and subject specific acceleration), co-teaching, and curriculum compacting. Curriculum compacting can be defined as eliminating previously mastered curriculum so that the student can use the time gained on challenging learning opportunities (NAGC, 2008). The first participant group of pre-service education teachers was again the only group to have

participants that were unsure of what accommodations would be best for students who are gifted and talented in a regular classroom environment.

Non-Typical Giftedness

All three participant groups had a majority of participants that stated that they would recommend both scenarios of non-typically gifted students for gifted education services. In the scenario of the high potential student who displayed negative behaviors in the classroom, a majority of the participants believed that the behavior issues may start to rectify themselves if the student was given engaging and challenging work. Likewise, a majority of the participants agreed that a student demonstrating high potential in one area but deficiencies in another should still be recommended for gifted programming.

The pre-service teacher participant group was the only group to have data that suggested that a student with negative behaviors and high potential not be recommended for gifted programming. The participants who stated this perception all believed that behavioral issues needed to be taken care of before a recommendation could be made.

The in-service teacher participant group (Group 2) was the one that possessed the most participants who were not

in favor of a twice exceptional recommendation for the student with high potential in one subject and a deficit in another. The participants in this group who stated this perception were unsure if a recommendation was appropriate while others believed that having a disability at the same time as high potential would not be enough to qualify that student for gifted programming in their current school district.

Another difference among the groups was that gifted education teachers provided the most detail on how to accommodate students with non-typical giftedness. All of the teachers responsible for gifted education reported that they had worked with both special education teachers and regular education teachers in the past for twice-exceptional students. All of the participants in the gifted education teacher group also had worked with twice-exceptional students in the past. The first two participant groups (the pre-service and in-service regular education groups) were more likely to be unsure of which accommodations to utilize with twice exceptional students. They also were more likely to recommend accommodations typically used with those students who were more traditionally gifted (e.g., enrichment projects and higher level curriculum). The gifted education participant group

was the one that suggested interventions that could be considered as more specialized for twice exceptional populations (e.g., curriculum compacting in talent area, co-teaching with other education professionals).

Comparison between National Standards and Participants' Responses

The National Association for Gifted Children (NAGC, 2010) published national standards that provide guiding principles for gifted education in the United States. Several of their standards pertain to the results of the study. These documents were analyzed for content that applies to the research questions of this study to compare whether or not perceptions of the participants correlated with the recommendations and standards of one of the leading national research organization for gifted children.

The first set of standards that applied to this study falls under the NAGC category of Programming. In this group of standards it is recommended that there not be a single gifted option in a school district. NAGC (2010) instructs that there be a multitude of services offered to students who are gifted. NAGC's (2010) programming recommends accommodations such as differentiated programming, cluster grouping, acceleration, curriculum

compacting, online courses, and adapted curriculum that are rigorous as some of the most appropriate interventions to use with learners who are gifted. The data supports that the teachers responsible for gifted education programs provided the best practices that were most consistent with the recommended practices.

The most recent version of the national standards for gifted education discusses the importance of gifted programming options (acceleration, curriculum compacting, differentiation) as an integral part of the regular education classroom (NAGC, 2010). The standards also endorse the use of flexible or cluster groupings as an evidence-based best practice for the student who is gifted. The focus group data from this study correlated with these guiding principles well since all three groups reported regular classroom enrichment and specialized small groupings as two of the most often reported accommodations.

The second category of guiding standards falls under the category of Learning Environments. The standards in this category that apply to this study are the ideas that gifted students need to achieve personal, social, cultural, and communicative competencies. These standards describe the need for interventions that assist diverse learners with non-typical manifestation of giftedness (e.g.,

behavioral issues, lack of motivation, or a second exceptionality). These diverse practices should be utilized, rather than omitted, from differentiated services of a gifted education program (NAGC, 2010). Most participants reported that they believed twice exceptional and non-typically gifted students should be included with specialized programming, but there was a small percentage that believed these students should not be included. This small percentage could indicate that there are cases that exist where students could be passed over for services because they are not gifted in a more traditional way.

The next category of principles that applied to this study pertained to the assessments used to identify students who are gifted. In this category, NAGC (2010) calls for a cohesive, comprehensive, and on-going assessment of gifted students that acknowledges the diversity of gifted learners. This standard specifically mentions that traditional measures of assessment and test scores alone are not satisfactory as identification systems. Both quantitative and qualitative measures of assessment are desirable for identification to meet the national standard. In the data from the three groups of participants, the most popular answers for identification criteria were high achievement and standardized test

scores, both of which are more traditional measures of assessment. The group of in-service educators in gifted positions described more non-traditional characteristics of giftedness than the pre-service and in-service educators without responsibility for a gifted education program.

The next category of standards that applied to this study is categorized under Curriculum Planning and Instruction. The standard states that differentiated curriculum and accelerated learning opportunities for the gifted learner should be in all grades from kindergarten to 12th grade. When examining the data, many of the in-service regular education teachers seemed to be responsible for their own differentiation strategies. If the adaptations are left with the regular education teacher, there is a danger that the teacher will become overwhelmed with the amount of accommodations that need to occur for varying ability levels in the classroom. Therefore, it is the tendency for educators to exclude gifted students in the group of students that need differentiation and few accommodations for these students occur (Hertberg-Davis, 2009; Westberg, Archambault, Dobyns, & Salvin, 1993).

The guiding standard of Curriculum Planning and Instruction is also applicable to this research because it recommends the adaptation, modification, or replacement of

the regular core curriculum. All three participant groups recommended some form of differentiation, enrichment, or acceleration activity to keep students engaged.

NAGC (2010) advocates that the instructional pace of curriculum must be flexible to allow for accelerated learning options such as grade or subject acceleration or curriculum compacting. These methods of intervention were mentioned less with the first two participant groups. This may indicate that a flexible instructional pace may not be used as frequently as enrichment and small groupings. This standard also calls for subject and grade skipping to be curriculum choices for learners who are gifted. Grade skipping was one of the least mentioned accommodations listed as best practice by all three participant groups. This again supports the idea that grade skipping and acceleration may not be accommodations in frequent use.

The last standard that applies to this study is under the category of Professional Development. This standard recommends that systematic staff development be provided for all professionals that are involved in the education of gifted learners. This principle is implemented as a portion of Pennsylvania Chapter 16 regulations for gifted learners where the law calls for all districts to provide in-service training for all gifted and regular education

teachers on gifted education policies and best practices (Pennsylvania Department of Education, 2009). All of the participants for the in-service group of regular education teachers did not feel that they had any professional development in the area of gifted education. Given many participants' multiple years of experience in public education settings, it could be inferred that many districts may not be fulfilling their yearly gifted professional development obligations with respect to in-service teacher training to work with student identified as gifted and talented.

College Programming Document Analysis

College curriculum materials were collected from the university research site. Additional curriculum materials were also collected from the six closest state-sponsored universities so that there would be other university programs to compare to the research site's program. Information about the classes offered by the universities is organized into Table 8, *Document Analysis of Seven Universities' Gifted Curricula*. The university research site's requirement of a general exceptionalities course which included content about giftedness was similar to three other universities in the region. Four of the

universities (including the research site) offered one general introduction class on high frequency exceptionalities as a required course in their undergraduate education programs. These four universities' courses included content on gifted education as an exceptionality that occurs frequently in educational settings. The descriptions and goals of the courses were guided toward providing introductory information on the characteristics, behavioral patterns, and accommodations of gifted individuals. These courses also addressed other high frequency exceptionalities such as specific learning disabilities, autism, and/or physical disabilities. Another of the sites had a required elective in giftedness for its special education majors only. The final two universities offered at least one elective course that was geared solely to the needs of gifted learners. These courses indicated that were designed to introduce the history/ theory of gifted education, the identification of giftedness, and the accommodations often used with students who are gifted. When examining the coursework offered at the Master's level, three of the seven universities examined offered one or more graduate courses that exclusively covered concepts of gifted education. These

Table 8

Document Analysis of Seven Universities' Gifted Curricula

Description	Number of Universities
Undergraduate curriculum	
General exceptionalities course	4
One required elective course	1
(special education majors only)	
One elective, not mandatory	2
Graduate Curriculum	
Graduate electives in gifted education	3

courses included instruction on content such as the predispositions of effective gifted education teachers, methods for successful gifted accommodations/ differentiation, and specific strategies for working with diverse gifted learners.

Summary

This chapter presented the data collected through the focus group interviews of two participant groups and the interview of one participant group. Patterns were described both within and between participant groups. In this chapter the data collected from the comparison of participant perceptions to national gifted programming standards were discussed. Information on the college curriculum of the research site and other nearby state sponsored universities was also discussed. The next chapter will provide a summary of the research, discuss the findings of this study, and offer recommendations for further research.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

This chapter begins with a short overview of past chapters. The overview includes a description of the research study which is followed by a brief summary of the literature review, and the methodology. Then, conclusions based on the data from Chapter IV and organized by the research questions that framed this investigation are discussed. The chapter concludes with recommendations for future research.

The focus of this study was to examine perceptions of three distinct groups of participants (pre-service teachers, in-service teachers in regular education placements, and in-service teachers responsible for gifted programs). Understanding the perceptions of these groups of individuals helped to make conclusions and recommendations for research on the best practices for selecting gifted identification criteria and the best practices when educating learners who are gifted. Several authors explain that there are many misconceptions that exist about gifted education. These include the misuse of curriculum, the rejecting of appropriate accommodations, the misinterpretation of gifted and talented behaviors, and the belief that children cannot be gifted at the same time

that they have another disability. All of these misconceptions can be perpetuated by educators who lack the proper level of training for working with the diversity of populations of students who are gifted (Bangel, Moon, & Capobianco, 2010; Hertberg-Davis, 2009; Tomlinson, 2009; Moon, 2009; Sisk, 2009; Morrison & Rizza; 2007).

Antiquated beliefs about best practices in gifted education can impede the educational progress being made by each student who is gifted and talented. This may prevent that individual from reaching his or her full potential (Reis & Renzulli, 2009; Sisk, 2009; U. S. Department of Education, 1993). Understanding more about how educators are prepared to work with students who are gifted will add to the research about gifted education. This understanding will help indicate future course for pre-service and in-service teacher education as well as specific criteria or certifications for educators who work with gifted individuals.

A review of the related literature was presented in Chapter 2. First, a brief review and explanation of the history of gifted education was discussed to establish how the field of gifted education came into existence. The second section of the literature review explored the existing definitions of gifted and talented to help set a

standard for which students should be recommended for gifted education programming. Next, research on student identification procedures was provided to help explore research trends in identification procedures that are currently being used to recommended students. The origin of national gifted programming standards was also provided to explain guiding principles for building and implementing quality gifted education programs. An examination of different types of gifted pedagogy and policies were also addressed to help the reader understand what should be considered as current best practices in the field of gifted education. Finally, additional information was provided about the diverse populations of gifted learners that may be encountered in an elementary school (Callahan, 2009; Gardner, 1999; Gardner, 2005; Reis & Renzulli, 2009). The literature helped to establish that the field of gifted education is a complex and specialized field which requires professionals who are both well-educated and highly trained on the best accommodations, interventions, and practices to use when working with the students who are identified as gifted (Gentry, 2009; Kaplan, 2009; VanTassel-Baska, 2009; Reis & Renzulli, 2009; VanTassel-Baska, Quek, & Feng, 2007).

The qualitative methodology of this research was discussed in Chapter 3. Data were collected for this grounded theory research from multiple data sources. Data were taken from focus group interview sessions, focus group and interview survey forms, and analyzed copies of the National Association for Gifted Children's Standards for gifted programming. There was also a document analysis completed on the pre-service and master's programming of the rural, Pennsylvania state-sponsored university research site. A document analysis was completed on six other nearby, state-sponsored universities to compare programming levels between similar universities.

The focus group interviews were conducted with participant group one (pre-service educators from the university site) and participant group two (in-service educators in regular education positions). Interview data were also collected from participant group three (the in-service educators in gifted education positions) at one of their quarterly consortium meetings. In participant group three (the group of teachers responsible for gifted education programs), some individuals returned their survey forms that day, while others returned the forms by postal mail or email. The National Association for Gifted Children's program standards were analyzed for comparison

to the interview and focus group interview data collected. Also, collection and analysis of documents that pertained to the college programming of the university research site were then examined to establish standards for college programming on gifted education in the geographical area of the university research site. These data were coded so that existing patterns and themes in the data could be revealed. Those data were presented in Chapter IV of this dissertation research.

The patterns and themes of the research that were uncovered in the data are summarized in this chapter. The themes and patterns will be discussed in accordance with the original research questions that framed the investigation. The chapter concludes with recommendations and suggestions for further research as related to the findings of this study.

Findings and Conclusions

The findings and conclusions of this research are based on the narrative data from the interviews from all three participant groups, the document analysis of college programming, and the comparison of national standards for gifted education to the data collected. The themes and patterns discovered in the data are discussed in three

sections that correspond to the initial research questions (identification criteria, best practices for accommodations, best practices for non-typical giftedness).

Differences Among Participant Groups' Identification Criteria

There was one main difference that emerged among the three groups of participants during data analysis that dealt with the identification criteria teachers use when choosing students to recommend for gifted education. Although all three groups listed high achievement and test scores as indicators of giftedness most often, the participant groups of pre-service teachers (Group 1) and in-service educators in regular education assignments (Group 2) described fewer and more traditional identification criteria than those in-service teachers of the gifted. Many educational systems rely on formal measures of assessment such as achievement and high test scores because they are quantifiable (Borland, 2009). Individuals who do not have adequate training in gifted education best practices may be more likely to identify traditional behaviors of giftedness such as high achievement and high test scores (Baldwin, 2002; Davis & Rimm, 2004; Fraser, 1997; Gardner, 2005; Renzulli, 1986;

Ruf, 2005). Specifically, this correlates with a study by Grantham, Fraser, Roberts, and Bridges (2005) which discussed the need for teachers to work in conjunction with parent representatives to help prevent the exclusion of students with less traditional manifestations of giftedness from gifted education. These findings support the research of Borland (2009) who also discussed that the pervasive myth that giftedness is identified by mainly traditional measures is still present in the public education school system today.

The in-service educators of the gifted (Group 3) identified criteria that were more varied and specific for indicating giftedness in students. It is pertinent to mention that this group of participants discussed many more trainings and workshops that they had attended through their respective intermediate units. These individuals also discussed attendance of quarterly consortium meetings to discuss best practices for gifted education and participation in professional organizations dedicated to the education of children who are gifted. Both the pre-service and in-service regular education teachers reported by majority that they had received little to no training in best practices for students who are gifted. Since these individuals perceived they were untrained, the pre-service

teachers and in-service regular education teachers may take their beliefs and practices about giftedness from their own values. Others may even assimilate their beliefs and practices from the culture of their school. This correlates with the research of Ford, Moore, and Milner (2005) and Ford & Grantham (2003) who note that teachers are most likely to identify with students who display behaviors that are valued in their own culture. A study by Ford, Moore, and Milner (2005) found that many teachers view more non-traditional manifestations of giftedness as a deficit. These deficits often kept students from being identified as gifted. Through multicultural and gifted training teachers were better able to identify gifted characteristics.

Another piece of data emerged during the focus group interview session of the participant group of in-service educators in regular education assignments (Group 2). Two participants from this group reported believing their students were "not old enough" to be identified as gifted and talented. Two other participants in the same participant group (Group 2) stated that they had never made a gifted recommendation in the intermediate elementary grades because they both believed that their districts should have identified the students before they reached an

upper elementary grade. These data are pertinent because it indicates, that in some districts, teachers may be passing off the responsibility of gifted identification to other grade levels that may not be identifying for giftedness either. This assertion links with the research of Moon and Brighton (2008) who estimated that half of primary teachers believe that students who are gifted should not be identified until intermediate elementary grades. If the intermediate elementary grades mistakenly believe students are being identified as gifted in primary grades and continue to not identify students, it may contribute to the problem of underrepresentation of students who are gifted. Moon and Brighton (2008) recommend continued professional development in quality gifted identification practices to address teacher bias and antiquated identification practices.

Differences Among Participant Groups' Perceptions of Best Practices

All three groups of participants recommended the use of enrichment materials and specialized groupings as accommodations to be used with students who are gifted. Enrichment and specialized groupings are important but they are minimal compared to the continuum of educational

services recommended by researchers (Kaplan, 2009; VanTassel-Baska, 2009; VanTassel-Baska, Quek, & Feng, 2007). These results also agrees with the research of Gentry (2009) who noted that traditional gifted programs need to be altered so that they better provide the continuum of flexible services. She advocates for allowing more students to experience basic accommodations to see if they are in need of even more intensive services. Gentry (2009) argues against more traditional programs that are still popular in public education. Despite the fact that all groups had perceptions that dealt with the need for students of higher ability to be given challenging materials, specialized groupings, and differentiation of curriculum in the regular class environment, there were differences among the three participant groups with the types of interventions and accommodations chosen.

The first recognizable difference among the groups was the choice of accommodations and the nature of the specialized vocabulary to describe the accommodations needed. The third participant group of in-service educators of the gifted more frequently used specialized vocabulary from the field of gifted education. This again correlates with the additional training the group possessed mentioned previously. These participants were also in

favor of more specialized enrichments such as acceleration (full grade and subject specific acceleration, co-teaching, and curriculum compacting) which are associated with more complete services as gifted education accommodations (Kaplan, 2009). The first and second participant groups were more likely to choose accommodations that may be classified as current trends or "buzz words" in educational practice. Words such as differentiated instruction and enrichment are words that are currently used with all students and not just individuals who are gifted.

Differences Among Participant Groups' Perceptions of Best Practices for Students with Non-Typical Giftedness

According to the collected data, all three participant groups had a majority of participants that reported they would recommend both scenarios of non-typically gifted students from the focus group interview survey for gifted education services. In the scenario of the high potential student who displayed negative behaviors in the classroom, a majority of the participant believed that the behavior issues may start to rectify themselves if the student was given challenging work in which they could feel engaged. Likewise, a majority of the participants agreed that a student that showed high potential in one area but was

deficient in another area should still be recommended with gifted programming.

The pre-service teacher participant group was the only group to have data that suggested that a student with negative behaviors and high potential not be recommended for gifted programming. The number of these individuals was minimal, but it still offers evidence that not all pre-service teachers are being trained in non-typical manifestations of giftedness as part of the teacher certification programs.

As mentioned in Chapter IV, the group of in-service educators in regular education assignments was the one that possessed the most participants who were not in favor of a twice-exceptional recommendation for the student with high potential in one subject and a deficit in another. The participants who reported they would not recommend the student explained that they had uncertainties about whether or not recommendations were appropriate or if that student's talent in one subject would not be enough to qualify that student for gifted programming in their current school district. According to state law, Pennsylvania Department of Education (2009) acknowledges that a student can be twice-exceptional and that every

identification system must have a plan for identifying and educating twice-exceptional individuals.

Just as with the best practice perceptions, the gifted education teacher participant group was the group that reported the most detail on specialized interventions. All of the gifted education teachers reported past experiences with both twice exceptional students and those students who manifest their giftedness in non-typical ways. The gifted education participant group also was the group that suggested interventions which could be considered as more specialized for twice exceptional populations (curriculum compacting in talent level, co-teaching with other education professionals). The first two participant groups (the pre-service and in-service regular education groups) reported more uncertainty about what may be considered general accommodations that are commonly used with all students. They also were more likely to recommend accommodations more frequently used with those students who are more traditionally gifted. This conclusion correlates with research that some students with more diverse manifestations of giftedness or with two exceptionalities are sometimes passed over for gifted services because of more traditional measures of giftedness (Ford, Harris, Tyson, & Troutman, 2002; Ford, Moore, & Milner, 2005;

Gallagher, 2005; Hodgkinson, 2006; Neu, 2003; Ruf, 2005; Tsai, 2007)

Specifically, Ford and Grantham (2003) explained this phenomenon in their research of the prevalence of diverse students being educated as gifted. They believed that the lack of diverse students represented was due to untrained educators who viewed cultural differences as possible deficits. This dissertation research correlates with that conclusion in that the most trained group, the teachers in gifted education positions, were the participants who consistently acknowledged students who displayed their giftedness in non-typical ways and twice-exceptional students. Burney and Beilke (2008) also advocated for the identification and accommodation of diverse gifted learners. They described the need for teachers to have the skills to provide advanced opportunity paired with proper support for success. These conclusions are consistent through the research for twice-exceptional student identification. Morrison and Rizza (2007) describe the same issues with identification of twice-exceptional students. The twice-exceptional students are less likely to be identified due to bias of the recommending teacher who lacks the training to identify and educate the twice-exceptional student as gifted (Morrison & Rizza, 2007).

The third participant group of in-service educators in gifted education positions was also the one which was most consistent with current research when providing accommodations for non-typically gifted and twice exceptional students. Weinfeld, Barnes-Robinson, Jeweler, and Shevitz (2005) recommend continuing professional development for regular education teachers on non-typical manifestations of giftedness and best practice accommodations. They also support frequent collaboration between regular educators, gifted educators, and special educators to design quality educational experiences that both adapt for deficits and accommodate for gifts and talents (Weinfeld, Barnes-Robinson, Jeweler, & Shevitz, 2005).

Recommendations and Suggestions for Further Research

The results of this study indicated that that there are observable inconsistencies in the level of training individuals receive on working with gifted individuals before starting teaching assignments in public education. There were also inconsistencies in participants' perceptions of the professional development opportunities, or lack thereof, that should be provided yearly by school districts (Pennsylvania Department of Education, Chapter

16, Section 5). All of the participants in the second participant group believed that they had not received any professional development in the area of gifted education. Despite the fact that this was a small scale study that is not transferrable to larger populations, the unanimous nature of the responses related to training and past experiences calls for a second look at consistency in professional development procedures and university programming. In addition, there is a need for further research to help individuals who identify and provide educational accommodations for individuals who are gifted.

1) The results indicate that pre-service and in-service regular education teachers perceive that they have not been well trained in best practices for gifted education. Despite the fact that they may stumble onto some of the best practices through their own research or through interactions with more experienced colleagues, school districts may need to explore the consistency with which they provide the required professional development on gifted education. School districts producing a cohesive philosophy for gifted identification and programming, and then training teachers accordingly, could help teachers feel more supported in best

practices of gifted education (Robinson, Shore, & Enersen, 2007; Tomlinson, 2009).

2) There also was evidence that the participants from the rural university research site also perceived that they had received little to no training in gifted education best practices. It may benefit the university research site to address this issue through the addition of a dedicated class on gifted education best practices or the addition of student teaching competencies based on the best practice policies of gifted education.
3) If professional development in gifted education is not available in a teacher's home district, he or she may want to seek information from one of the many professional organizations dedicated to the education of gifted individuals. Coordinating with these groups may help individuals have a resource for providing best practices for the individuals who are gifted in their classrooms.
4) In addition to training on providing best practices for traditionally gifted students, the results indicate that school districts may need to seek partnerships with universities that are strong in gifted education training so that they may pursue

professional development opportunities in specialized training for individuals who identify and work with non-typically gifted students.

There are also several areas for further research. First, large-scale interview research regarding how undergraduate students acquire knowledge about students who are gifted could benefit universities trying to develop more comprehensive programs with gifted education components. Understanding how undergraduates acquire this knowledge may help universities understand if there is a need for further curricula or trainings that need to be added to the current teacher education certification programs. There also could be a need for additional descriptive research on the effective interventions and accommodations that current in-service professionals choose with gifted individuals. Understanding the best practice interventions commonly used in the regular education environment could help provide more research information on what practices professionals use the most often. This could help enhance the effectiveness of teachers that work with both typically and non-typically gifted students. Finally, comparative case study research could be completed between specific school districts. Understanding the differences between individual districts' gifted education

policies, programs, and professional development initiatives may help to improve the quality of interventions and educational services that students who are gifted need to be challenged in the regular and gifted classroom environments.

Continuing research in the field of gifted education will allow for continued improvements in pre-service programming. This continuing research will also allow for improvements in the quality of gifted education accommodations and interventions at the level of district policies and classroom implementations. Improving the learning experiences of students who are gifted allows them to receive a differentiated education that is both challenging and of good quality. A quote by Morreale (2000) helped support the need for more and better training for professionals who need to provide a quality education to students who are gifted in her fundamental belief that all students need to be fairly challenged. "Fair is when each student is struggling enough to learn something new. A fair fit for one student will be different from the fair fit of another…" (para. 11).

References

Baldwin, A. Y. (2002). Culturally diverse students who are gifted. *Exceptionality, 10*(2), 139-147.

Bangel, N. J., Moon, S. M., & Capobianco, B. M. (2010). Preservice teachers' perceptions and experiences in a gifted education training model. *Gifted Child Quarterly, 54*(3), 209-221.

Begoray, D., & Solvinsky, K. (1997). Pearls in shells: Preparing teachers to accommodate gifted low income populations. *Roeper Review, 20*(1), 45-49.

Bloomberg, L. D., & Volpe, M. (2008). *Completing your qualitative dissertation: A roadmap from beginning to end.* Thousand Oaks, CA: Sage Publications.

Borland, J. H. (2009). Myth 2: The gifted constitute 3% to 5% of the population. Moreover, giftedness equals high IQ which is a stable measure of aptitude. *Gifted Child Quarterly, 53*(4), 236-238.

Bower, B. (1990). Academic acceleration gets social lift. *Science News, 138*(14), 212.

Brandt, R., & McBrien, J. L. (2007). *A lexicon of learning: What educators mean when they say.* Retrieved October 17, 2007 from www.ascd.org/portal/site/ascd/menuitem.5a47c86b3b7b44128716b710e3108a0c/.

Brown, E., Avery, L., VanTassel-Baska, J., Worley II, B. B., & Stambaugh, T. (2006). Legislation and policies: Effects on the gifted. *Roeper Review, 29*(1), 11-23.

Burney, V. H., & Beilke, J. R. (2008). The constraints of poverty on high achievement. *Journal for the Education of the Gifted, 31*(3), 295-321.

California Department of Education. (n.d.). *Education code section 52200-52212.* Retrieved October 28, 2009 from http://www.leginfo.ca.gov/cgi-bin/displaycode?section=edc&group=52001-53000&file=52200-52212.

California Department of Education. (2005). *Public school summary statistics.* Retrieved October 28, 2009 from http://www.cde.ca.gov/ds/sd/cb/sums05.asp.

California Department of Education. (2009). *Program information.* Retrieved October 28, 2009 from http://www.cde.ca.gov/sp/gt/gt/.

Callahan, C. M. (2009). Myth 3: A family of identification myths. *Gifted Child Quarterly, 53*(4), 239-241.

Coangelo, N., & Davis, G. A. (1997). *Handbook of gifted education*. Boston, MA: Allyn and Bacon.

Coleman, L. J. (2004). Is consensus on a definition in the field possible, desirable, necessary? *Roeper Review, 27*(1), 10-11.

Cooper, C. R. (2009). Myth 18: It is fair to teach all children the same way?. *Gifted Child Quarterly, 53*(4), 283-285.

Creswell, J. W. (1994). *Research design: Qualitative and quantitative approaches.* Thousand Oaks, CA: Sage Publications.

Creswell, J. W. (2003). *Qualitative, quantitative, and mixed method approaches* (2nd ed.). Thousand Oaks, CA: Sage Publications.

Cukierkorn, J. R., Karnes, F. A., Manning, S. J., Houston H., & Besnoy, K. (2007). Serving the pre-school gifted child: Programming and resources. *Roeper Review, 29*(4), 271-276.

Davis, G. A., & Rimm, S. B. (2004). *Education of the gifted and talented* (5th ed.). Boston, MA: Pearson Education, Inc.

Davidson Inststitute for Talent Development. (2011). *Gifted education policies.* Retrieved January 30, 2011 from http://www.davidsongifted.org/db/StatePolicy.aspx.

Davison, J. (1996). Meeting state mandates for gifted and talented: Iowa teacher preparation programs. *Roeper Review, 19*(1), 41-43.

Davidson, J., & Davidson, B. (2004). *Genius denied: How to stop wasting our brightest young minds.* New York: Simon & Schuster Paperbacks.

Delisle, J. R. (2002). Differentiation requires HOPE. *Gifted Child Today, 25*(1), 56-57.

Differentiation in the General Education Classroom. (2004). *Gifted Child Today, 27*(3), 7.

Feldhusen, J. F. (1995). Creativity: Knowledge base, metacognitive skills, and personality factors. *Journal of Creative Behavior, 29*(4), 255-268.

Ford, D. Y. (1998). The underrepresentation of minority students in gifted education: Problems and promises in recruitment and retention. *Journal of Special Education, 32,* 4-14.

Ford, D. Y. (2006). Closing the achievement gap: How gifted education can help. *Gifted Child Today, 29*(4), 14-17.

Ford, D. Y., & Grantham, T.C. (2003). Providing access for culturally diverse gifted students: From deficit to dynamic thinking. *Theory Into Practice, 42*(3), 216-225.

Ford, D. Y., Harris, J. J., Tyson, C. A., & Troutman, M. F. (2002). Beyond deficit thinking. *Roeper Review, 24*(2), 52-58.

Ford, D. Y., Moore III, J. L., & Harmon, D. A. (2005). Integrating multicultural and gifted education: A curricular framework. *Theory Into Practice, 44*(2), 125-137.

Ford, D. Y., Moore III, J. L., & Milner, R. H. (2005). Beyond cultureblindness: A model of culture with implications for gifted education. *Roeper Review, 27*(2), 97-103.

Fordham, S., & Ogbu, J. (1986). Black students' school success: Coping with the "burden of 'acting white',". *The Urban Review, 18,* 176-203.

Fraser, M. M. (1997). Gifted minority students: Reframing approaches to their identification and education. in N. Colangelo & G. B. Davis (Eds.), *Handbook of gifted education.* Boston, MA: Allyn & Bacon.

Friedman-Nimz, R. (2009). Myth 6: Cosmetic use of multiple selection criteria. *Gifted Child Quarterly, 53*(4), 248-250.

Gallager, J. J. (2005). The role of race in gifted education. *Roeper Review, 27*(3), 135-135.

Gardner, H. (1983). *Frames of mind: The theory of multiple intelligences.* New York, NY: Basic Books.

Gardner, H. (1999). *Intelligences reframed: Multiple intelligences for the 21st century.* New York, NY: Basic Books.

Gardner, H. (2005). *Multiple lenses on the mind.* Paper presented at the meeting of the ExpoGensition Conference, Bogota, Columbia.

Gentry, M. (2006). No child left behind: Neglecting excellence. *Roeper Review, 29*(1), 24-27.

Gentry, M. (2009). Myth 11: A comprehensive continuum of gifted education and talent development services. *Gifted Child Quarterly, 53*(4), 262-265.

Gentry, M., & Keilty, B. (2004). Rural and suburban cluster grouping: Reflections on staff development as a component of program success. *Roeper Review, 26*(3), 147-155.

Gibson, S. & Efinger, J. (2001). Revisiting the schoolwide enrichment model- An approach to gifted programming. *Teaching Exceptional Children, 33*(4), 48-53.

Grandin, T. (2010). *Autism-The way I see it.* Retrieved September 20, 2010, from http://www.templegrandin.com/templegrandinart.html.

Grantham, T. C. (2004). Rocky Jones: Case study of a high-achieving black male's motivation to participate in gifted classes. *Roeper Review, 26*(4), 208-215.

Grantham, T. C., Frasier, M. M., Roberts, A. C., & Bridges, E. M. (2005). Parent advocacy for culturally diverse gifted students. *Theory Into Practice, 44*(2), 138-147.

Guilford, J. P. (1950). Creativity. *American Psychologist, 5,* 444-454.

Hansen, J. B., & Feldhusen, J. F. (1994). Comparison of trained and untrained teachers of gifted students. *Gifted Child Quarterly, 38*(3), 115-121.

Hertberg-Davis, H. (2009). Myth 7: Differentiation in the regular classroom is equivalent to gifted programs and is *sufficient*. *Gifted Child Quarterly, 53*(4), 251-253.

Hirsch, S. (1979). *Executive intern program.* Report to the Office of Gifted and Taltented. Washington, DC: U.S. Office of Education.

Hoffman, W. C. (1995). The dialectics of giftedness: Gifted intellect and creativity. *Roeper Review, 17*(3), 201-206.

Hodgkinson, H. L. (2006). *Leaving too many children behind:* Presentation at the William & Mary National Association For Gifted Children National Leadership Conference on Low Income Promising Learners, Washington, DC.

Hollingworth, L. S. (1939). What we know about the early selection and training of leaders. *Teachers College Record, 40,* 575-592.

Hollingworth, L. S. (1942). *Children above 180 IQ Stanford-Binet.* New York: World Book.

Home, D. L., & Dupuy, P. J. (1981). In favor of acceleration for gifted students. *Personal & Guidance Journal, 60*(2), 103-106.

Isenberg, J. P., & Jalongo, M. R. (2004). *Creative thinking and arts-based learning: Preschool through fourth grade. (4th* ed.*).* Upper Saddle River, NJ: Merrill Prentice Hall.

Isenberg, J. P., & Jalongo, M. R. (2010). *Creative thinking and arts-based learning: Preschool through fourth grade*. (5th ed.). Upper Saddle River, NJ: Merrill Prentice Hall.

Jalongo, M. R., & Hirsch, R. A. (2010). *Reconceptionalizing creative thought processes in young children: An integrative review of the research.* Manuscript submitted for publication.

Kaplan, S. N. (2009). Myth 9: There is a single gifted curriculum. *Gifted Child Quarterly, 53*(4), 257-258.

Karnes, F. A., & Marquardt, R. G. (1995). Gifted education and the courts: Teacher certification and employment decisions. *Roeper Review, 17*(4), 229-231.

Karnes, F. A., Stephens, K. R., & Whorton, J. E. (2000). Certification and specialized competencies for teachers in gifted education programs. *Roeper Review, 22*(3), 201-202.

Karnes, F. A., & Whorton, J. E. (1996). Teacher Certification and endorsement in gifted education: A critical need. *Roeper Review, 19*(1), 54-56.

Kim, K. H. (2008). Underachievment and creativity: Are gifted underachievers highly creative?. *Creativity Research Journal, 20*(2), 234-242.

Kulik, J. A. (1992). *An analysis of the research on ability grouping: Historical and contemporary perspectives.* Retrieved July 7, 2009 from www.gifted.uconn.edu/ nrcgt/kulik.html.

Latz, A. O., Spiers-Neumeister, K. L., Adams, C. M., & Pierce, R. L. (2009). Peer coaching to improve classroom differentiation: Perspectives from Project CLUE. *Roeper Review,* 31(1), 27-39.

Lubinski, D., Webb, R. M., Morelock, M. J., & Brenbow, C. (2001). Top 1 in 10,000: A 10-year follow-up of the profoundly gifted. *Journal of Applied Psychology, 86*(4), 720.

Maker, C. J., & Schiever, S. W. (Eds.). (2005). *Teaching models in education of the gifted (3rd ed.). Austin, TX:Pro-ED, Inc.*

Marland, S. P. (1972). *Education of the gifted and talented: Volume I. Report to the Congress of the United States by the U. S. Commissioner of Education.* Washington, DC: U.S. Governement Printing Office.

Matthews, D. J., & Foster, J. F. (2006). Mystery to mastery: Shifting paradigms in gifted education. *Roeper Review, 28*(2), 64-69.

Mayer, D. P., Mullens, J. E., & Moore, M. T. (2000). *Monitoring school quality: An indicators report.* Washington, DC: U.S. Department of Education, National Center for Education Statistics.

Mazlow, A. (1970). *Motivation and personality* (2nd ed.). New York, NY: Harper Row.

McBee, M. T. (2006). A descriptive analysis of referral sources for gifted identification screening by race and socioeconomic status. *The Journal of Secondary Gifted Education, 17*(2), 103-111.

McHugh, M. W. (2006). Governer's schools: Fostering the social and emotional well-being of gifted and talented students. *The Journal of Secondary Gifted Education, 17*(3), 50-58.

Mendoza, C. (2006). Inside today's classrooms: Teacher voices on No Child Left Behind and the education of the gifted. *Roeper Review, 29*(1), 28-31.

Minner, S. (1990). Teacher evaluations of case descriptions of LD gifted students. *Gifted Child Quarterly, 34,* 37-39.

Moon, S. M. (2009). Myth 15: High-ability students don't face problems and challenges. *Gifted Child Quarterly, 53*(4), 274-276.

Moon, T. R., & Brighton, C. M. (2008). Primary teachers' conceptions of giftedness. *Journal for the Education of the Gifted, 31*(4), 447-480.

Morreale, C. (2000, March). *Leadership for gifted education.* In an IAGC Graduate Course. Evanston, IL: Northwestern University.

Morrison W. F., & Rizza, M. G. (2007). Creating a toolkit for identifying twice-exceptional students. *Journal for the Education of the Gifted, 31*(1), 57-76.

National Association for Gifted Children. (1997). *Preservice gifted education programs.* Retrieved September 12, 2010, from http://www.nagc.org/uploaded Files/PDF/Position_statement_PDFs/pp_preservice_ Teacher_preparation.pdf.

National Association for Gifted Children. (2010). *Pre-K-grade 12 gifted program standards.* Retrieved October 1, 2010 from http://www.nagc.org/uploadedFiles/ Information_and_Resources/Gifted_Program_Standards /K-12%20programming%20standards.pdf.

National Association for Gifted Children. (2008a). *Current definitions.* Retrieved December, 28, 2008 from www.nagc.org/index.aspx?id=574.

National Association for Gifted Children. (2008b). *Common gifted education myths.* Retrieved December 30, 2008 from www.nagc.org/index.aspx?id=569.

National Association for Gifted Children. (2008c). *Frequently used terms in gifted education.* Retrieved December 30, 2008 from www.nagc.org/index.aspx? id=565.

National Association for Gifted children. (2008d). *Gifted education in the U. S.* Retrieved October 28’ 2009 from http://www.nagc.org/index2.aspx?id=532&terms=teacher+ certification.

Neihart, M. (2007). The socioaffective impact of acceleration and ability grouping: Recommendations for best practice. *Gifted Child Quartley, 51*(4), 330-341.

Neu, T. W. (2003). When the gifts are camouflaged by disabilities: Identifying and developing the talent in gifted students with disabilities. In Jaime A. Castellano (Ed.), *Special populations in gifted education: Working with diverse gifted learners* (pp. 151-162). Boston, MA: Allyn and Bacon.

New York State Department of Education. (2004). *Part 80 requirements for teachers' certificate and teaching practice.* Retrieved December 29, 2008 from www.emsc.nysed.gove/ciai/gt/certreg.html.

New York State Department of Education. (2009). *Gifted education.* Retrieved October 28, 2009 from http://www.emsc.nysed.gov/ciai/gt/gift/gift1.html.

Nolen, J. L. (2003). Multiple intelligences in the classroom. *Education, 124*(1), 115-119.

Olenchak, F. R., & Reis, S. M. (2002). Gifted students with learning disabilities. In M. Neihart, S. M. Reis, N. Robinson, and S. Moon (Eds.). *The social and emotional development of gifted children* (pp. 177-192). Waco, TX: Prufrock Press, Inc.

Pennsylvania Department of Education. (2009a). *Chapter 14: Special education services and procedures.* Retrieved September 20, 2010, from http://www.pacode.com/secure/data/022/chapter14/chap14toc.html.

Pennsylvania Department of Education. (2009b). *Chapter 16: Special education for gifted students.* Retrieved September 20, 2010, from http://www.pacode.com/secure/data/022/chapter16/chap16toc.html.

Reis, S. M., & Renzulli, J. S. (2009). Myth 1: The gifted and talented constitute one single homogenous group and giftedness is a way of being that stays in the person over time and experiences. *Gifted Child Quarterly, 53*(4), 233-235.

Renzulli, J. S. (1977). *The enrichment triad model: A guide for developing defensible programs for the gifted and talented.* Mansfield Center, CT: Creative Learning Press, Inc.

Renzulli, J. S. (1986). A three-ring conception of giftedness: A developmental model for creative productivity. In Sternberg, R. J. & Davison, J. (Eds.), *Conceptions of giftedness.* (pp. 53-92). New York, NY: Cambridge University Press.

Renzulli, J. S. (1995). Teachers as talent scouts. *Educational Leadership, 52*(4), 75-81.

Renzulli, J. S. (1999). *Enrichment clusters for gifted learning.* Retrieved September 20, 2010 from http:// www.aasa.org/SchoolAdministratorArticle.aspx?id=14960.

Renzulli, J. S. (2002). Emerging conceptions of giftedness: Building a bridge to the new century. *Exceptionality, 10*(2), 67-75.

Robinson, A., Shore, B. M., & Enersen, D. L. (2007). *Best practices in gifted education: An evidence based guide.* Waco, TX: Prufrock Press, Inc.

Rodgers, C. (1961). *On becoming a person.* Boston, MA: Houghton Mifflin.

Rogers, K. B. (2002). *Re-Forming gifted education: How parents and teachers can match the program to the child.* Scottsdale, AZ: Great Potential Press.

Ross, P. O. (1993). *National excellence: A case for developing America's talent.* Retrieved October 13, 2010, from www2.ed.gov/pubs/DevTalent/toc.html.

Ruf, D. L. (2005). *Losing our minds: Gifted children left behind.* Scottsdale, AZ: Great Potential Press.

Sak, U. (2004). About creativity, giftedness, and teaching the creatively gifted in the classroom. *Roeper Review, 26*(4), 216-222.

Shavinina, L. V., & Ferrari, M. (2004). Extracognitive facets of developing high ability: Introduction to some important issues. In Shavinina, L. V. & Ferrari, M. (Eds.), *Beyond knowledge: Extracognitive facets of developing high ability* (pp. 3-13). Mahwah, NJ: Lawrence Erlbaum Associates, Publishers.

Sisk, D. (2009). Myth 13: The regular classroom teacher can "go it alone." *Gifted Child Quarterly, 53*(4), 269-271.

Slocumb, P. D., & Payne, R. K. (2000). *Identifying and nurturing the gifted poor.* Retrieved May 28, 2010 from http://www.nagc.org/index.aspx?id=656.

Sternberg, R. J. (1985). *Beyond IQ: A triarchic theory of human intelligence.* New York, NY: Cambridge University Press.

Sternberg, R. J. (2003). WISC as a model of giftedness. *High Ability Studies, 14*(2), 111-137.

Superintendent of Public Instruction: State of Washington. (2008). *Gifted Education Specialty Endorsement.* Retrieved from http://www.k12.wa.us/certification/profed/2007Standards/GiftedEducation.pdf.

Swiatek, M. A. (2002). A decade of longitudinal research on academic acceleration through the study of mathematically precocious youth. *Roeper Review, 24*(3), 141-144.

Tieso, C. L. (2003). Ability grouping is not just tracking anymore. *Roeper Review, 26*(1), 29-36.

Thomas, T. A. (1980). *Acceleration for the academically talented.* ERIC Documents Reproduction Service (ED 307303).

Tomlinson, C. A. (2004). Sharing responsibility for differentiated instruction. *Roeper Review, 26*(4), 188-189.

Tomlinson, C. A. (2005). Quality curriculum and instruction for highly able students. *Theory Into Practice, 44*(2), 160-166.

Tomlinson, C. A. (2009). Myth 8: The "patch-on" approach to programming is effective. *Gifted Child Quarterly, 53(4),* 254-256.

Treffinger, D. J. (2009). Myth 5: Creativity is too difficult to measure. *Gifted Child Quarterly, 53*(4), 245-247.

Tsai, D. (2007). Differentiating curriculum for gifted students by providing accelerated options. *Gifted Education International, 23*, 88-97.

Torrance, E. P., & Sisk, D. A. (1997). *Gifted and talented children in the regular classroom.* Buffalo, NY: Creative Education Foundation Press.

Treffinger, D. J. (2009). Myth 5: Creativity is too difficult to measure. *Gifted Child Quarterly, 53*(4), 245-247.

VanTassel-Baska, J. (1992). Educational grouping decision making on acceleration and grouping. *Gifted Child Quarterly, 36*(2), 68-72.

VanTassel-Baska, J. (2009). Myth 12: Gifted programs should stick out like a sore thumb. *Gifted Child Quarterly, 53*(4), 266-268.

VanTassel-Baska, J., MacFarlane, B., & Feng, A. (2008). A cross-cultural study of exemplary teaching: What do Singapore and the United States secondary gifted class teachers say? *Gifted and Talented International, 21,* 38-47.

VanTassel-Baska, J., Quek, C., & Feng, A. (2007). The development and use of a structured teacher observation scale to assess differentiated best practice. *Roeper Review, 29*(2), 84-92.

VanTassel-Baska, J., & Stambaugh, T. (2005). Challenges and possibilities for serving gifted learners in the regular classroom. *Theory Into Practice, 44*(3), 211-217.

Weinfeld, R., Barnes-Robinson, L., Jeweler, S., & Shevitz, B.R. (2005). Enabling or empowering? Adaptations and accomodations for twice-exceptional students. *TEACHING Exceptional Children Plus, 2*(1), Article 6. Retrieved December 28, 2009 from http://escholarship.bc.edu/education/tecplus/vol2/iss1/art6/.

Westberg, , K. L., Archambault, F. X. Jr., Dobyns, S. M., & Slavin, T. J. (1993). An observational study of classroom practices used with third and fourth grade students. *Journal for the Education of the Gifted, 16,* 120-146.

Worrell, F. C. (2009). Myth 4: A single test score or indicator tells us all we need to know about giftedness. *Gifted Child Quarterly, 53*(4), 342-344.

Learning Models of Gifted Education

Model Name	Developers of Model	Significant Components of Learning Model	Modification to the Curriculum	Advantages of Model	Disadvantages of Model
The Basic Structure of a Discipline	Jerome Bruner	* Exposing children to the basic concepts of individual disciplines * structure generalizations of each discipline are key to comprehension of that discipline	* content modification based on scholarly opinion and inquiry in each discipline *process modification involves children acting as professionals in the discipline being studied. * focus on higher levels of thinking, discovery, and open-endedness.	*Learner centered and focused on activities geared toward real life situations. * prepare students for future professional roles they may one day assume.	* The role of the teacher is complex due to intense background knowledge of each discipline. * Often the selection of curriculum by discipline scholars is debated between colleagues
The Cognitive and Affective Taxonomies	Benjamin Bloom and David Krathwohl	*Use of hierarchical levels of criteria used to classify cognitive and affective objectives. * Use of affective domain to create improved learning environment	* content modifications encourage the content to move from general knowledge to greater abstractness and complexity. * gifted students should be able to sample systematically from a variety of knowledge and methods of inquiry. *the affective domain encourages a climate psychologically conducive to learning.	* Model is relatively simple to understand system of classification. * Allows for precise objectives. * Language used in model is common throughout the educational field and, therefore, often easy to communicate among professionals.	* lack of research on effectiveness. * Mainly involves varying content and process only and may have to be paired with other models and frameworks for better effectiveness.

The Discovering Intellectual Strength and Capabilities while Observing Varied Ethnic Responses (DISCOVER) Curriculum Model	C. June Maker and Shirley W. Schiever	* Ongoing researched program that encourages problem solving abilities. * Relies on a fundamental believe of multiple intelligences and an equal distribution of ability across all diverse populations.	* Curriculum is considered to be motivating because students are offered choice of product, tools, or group participation portion. * Interactions are real world aligned and problems in their continuum are from real life applications. * Themes are often cross curricular and address learner strengths using multiple intelligences.	*addresses variety of learners and their needs. * model builds child strengths and often strengthens weaknesses. *Learning is often conducive for student enjoyment. * allows student to incorporate their cultural backgrounds and personal interests.	* This model has assessment portion that is complex to implement that should be used in conjunction with the teaching strategies. * model is most successful when implemented school-wide and such revolutionary change often is met with resistance.
Creative Problem Solving	Sidney Parnes	* purpose of this learning model is to "provide a structured method for solving problems in an imaginative way" (Maker & Schiever, 2nd ed., p. 195). * Functions on the assumptions that creativity and other similar behaviors are not necessarily inherent and can be taught.	* Model itself is process modification. Therefore by teaching the model teachers are modifying the curriculum through modifying the way that students approach problem based situations. * Content is often based on interest and includes several steps that are based on both divergent and convergent thinking. * Products are encouraged to be tiered to real audiences, and audience response to solution is also considered important.	* Model is considered be versatile allowing for flexible success with multiple types of learners. * Model is also considered to be valid in the way that it teaches content and arrives at significant solutions.	* Models is not exclusive for gifted learners, when used alone, it often does not meet state requirements for level of differentiation between gifted and regular education programs. *creativity is often not addressed.

The Autonomous Learner Model	George T. Betts and Jolene K Kercher	*Elements of this model address different needs of gifted education by providing support for orienting and understanding giftedness in the community and district, offering opportunities for individual development, in-depth study, seminar introduction, and enrichment experiences.	* Implementation relies on a complex list of defining principles. * Content modifications are abstract, complex, have variety, and include the study of people. * modifications address the long term development of the individual learner.	* Model encourages essential cognitive, emotional, social, and organizational skills that can build and help sustain life-long successful learning. * Model was designed specifically for gifted education students. * Model can be adapted for individual school need and use.	* Model is complex to implement, lacks identification information. * Comprehensive staff support and development can be difficult to implement as well.
Problem Based Learning	n/a	* Based on model utilized in medical schools, this model involves an ill-structured problem, reality based content, self directed learning, and student apprenticeships. * Relies on effective learning that is hands on and content that is meaningful.	* Content presentation is much altered because students must search for needed information instead of information being presented by instruction * Content is then organized through the problem solving. * Process of the model is interdisciplinary, and offers advanced and complex kinds of reasoning.	* Educational experience is quite different from more traditional models and promotes students functioning in adult like situations.	*Cost of implementation is high. * School district systems often struggle with the change of philosophy in education needed with this model along with the lack of consistency and use of non-traditional strategies.

Group Investigations Model	Shlomo and Yael Sharan	* Student centered cooperative learning model based on Dewey's philosophies of active experience, reflective thinking, and inquiry in a social setting. * this model is designed to create active communities of learners.	* Traditional teacher led pedagogy is totally rejected. * Students select inquiry topics and through group collaboration plan learning and investigations. * Following collaboration and planning, each student may work on his/her own portion of the output or product. * Presentation and evaluation are valuable portions of the model also.	* This model contains most of the curriculum modifications that are recommended for gifted learners. * The model is complex and offers content that is both interesting and challenging for students because of the motivation of student-led learning.	* There is a lack of research of this given model. * If one student lacks responsible workmanship, the project can suffer. * Resources and materials can be difficult to obtain. * Since the model is student led, a lack of motivation by student workers could lead to a program that lacks rigor.
The Enrichment Triad Model (ETM) *The School Wide Enrichment Model (expansion of the ETM)	Joseph S. Renzulli * Joseph S. Renzulli & Sally M. Weis	* developed to provide differentiated instruction for gifted students. * The model is a three tiered philosophy that identifies a talent poll in the school district. * offers freedom of choice and lack of pressure. * The expanded version of the Enrichment Triad Model was a plan to promoted school reform, educational excellence, and the use of some strategies with all students but additional enrichment with gifted students. *This model promoted the use of curriculum compacting and the pursuit of curriculum and interest without limit to the level able to be reached.	Enrichment Triad Model: * Three tiers of enrichment activities: Type I: exploratory activities to introduce students to new and exciting topics. Type 2: lessons on strategies to develop higher level thinking skills. Type 3: Small groups investigations of real life problems. School Wide Enrichment Model: Also possess the three enrichment model types. Type I and II are offered to all students. Type III are formatted into enrichment clusters for the most talented students.	* Benefits programs that are based on school curriculum. * provides strong framework and recommended enrichment and assessment procedures for implementing educators. *An easily defensible model. * School wide enrichment model often benefits schools that have varying socioeconomic levels.	* Philosophical model is often not fully implemented by faculty members. * The model encourages the choosing of students who are most likely to succeed and often leaves out students who have styles of thinking that deviate from the mainstream norm. * Most of these disadvantages have been avoided in the Schoolwide model because the assessment of talent pool participants allows for student nomination and encourage working with student who are gifted in non-typical ways. * Still, student directed learning is often protested by faculty in situations where school accountability is a concern.

Chart adapted from:

Maker, C. J., & Schiever, S. W. (Eds.). (2005). *Teaching models in education of the gifted (3rd ed.). Austin, TX: Pro-ED, Inc.*

Appendix **B**

Focus Group Questions for Pre-Service Teachers

1) Prior to your college education, what experiences, if any, have you had with gifted education?

2) What educational experiences have you had as part of your undergraduate studies that pertained to gifted education?

3) How would you decide to recommend a student in your class for a gifted education support placement?

4) Of these characteristics, are there any that frequently could be overlooked by other educators?

5) What types of activities or accommodations do you believe are best practice for students who are gifted in a regular classroom setting?

6) Of these activities or accommodations, which ones do you believe will be the most valuable to your students?

7) If a child in your class seemed to display high academic potential but was struggling with managing his/her behavior in the classroom, do you believe you would recommend him/her for gifted evaluation? Please explain.

8) If you answered yes for question 6, what types of accommodations would you make for this student's high potential?

9) In your class, if a student diagnosed with autism showed high potential in one subject but was one or more years below grade level in another subject, do you believe you would refer him/her to be evaluated for gifted services? Please explain.

10) If you answered yes to question 8, what types of activities do you believe you would use to accommodate this child's high potential subject?

Dear Pre-Service Teacher:

You are invited to participate in a research study because you are a pre-service teacher who may one day work with children who are gifted and talented in the regular education environment. This study will analyze the perceptions of pre-service educators and in-service regular educators and gifted educators on the best practices for educating gifted students in regular and gifted classroom environments. The information in this consent form is intended to help you decide whether or not to participate in the study. If you decide to participate in the study, you will be participating in an audio-taped focus group interview. At the beginning of this interview you will be asked to record your thoughts and views in writing on an interview form and then discuss your answers in a group interview format.

Benefits and Risks: Contributing to this study through participation will not offer any monetary benefits. If you choose to participate in this audio-taped focus group interview, you will be contributing to the knowledge about the best practices for working with students identified as gifted. There is minimal risk associated with this study due to the fact that your identity will be kept confidential by the primary researcher if you choose to participate. Participation in this study is completely voluntary; you are free to decide to participate in this study or to choose to participate in the alternate activity without consequence. The professor of record for your course will not be present during the interview or alternate activity, and he or she will not be informed about your participation choice. No ramifications will come from choosing to not participate in this research. No course credit or penalty will be given for participating or not participating. Interview forms will be anonymous and the taped interviews will be kept confidential by the primary researcher. If at any time you feel more than minimal stress resulting from this study you may withdraw from the study by notifying the primary researcher via phone or email.

Voluntary Participation: Your participation is completely voluntary. You will not be penalized in any way should you decide not to participate. Your interview documents and recordings will be kept confidential following the focus group interview. Individual interview documents about best practice perceptions will only be shared with the researcher and faculty sponsor listed below. Results of the study will be published in the primary researcher's dissertation and possibly in a peer-reviewed journal. No information that could identify individual participant's identities will be published. Participants can receive a copy of the results of the study by contacting the primary researcher.

AUTHORIZATION: I have read and understood the nature of this study and I agree to participate. I understand that I have the right to refuse to participate and that my right to withdraw from participating in the study at anytime will be respected with no ramifications or prejudice. I also understand that once my completed interview is turned in that there is no possibility of withdrawing from the study.

Primary Researcher:
Mrs. Stacie Hoffer Nowikowski
Doctoral Student
Professional Studies in Education: Curriculum and Instruction
1308 Deerfield Lane
West Leechburg, PA 15656
Phone: 724-845-8238
Email: bqbl@iup.edu

Dissertation Chair:
Dr. Mary Renck Jalongo
Faculty Sponsor
Professional Studies in Education
Curriculum & Instruction Doctoral Coordinator
122 Davis Hall, Indiana University of Pennsylvania
Indiana, PA 15705
Phone: 724-357-2417

This project has been approved by the Indiana University of Pennsylvania Institutional Review Board for the Protection of Human Subjects (Phone: 724-357-7730).

VOLUNTARY CONSENT FORM:

I have read and understand the information on the form and I consent to volunteer to be a participant in this study. I understand that my responses will be audio recorded. I also understand that my individual responses are kept confidential, and I have the right to withdraw at any time by notifying the primary researcher via phone or email. I have received an unsigned copy of this informed consent form to keep in my possession.

Name (Last, First) PLEASE PRINT

Signature

Date

I certify that I have explained to the above individual the nature and purpose, the potential benefits, and possible risks associated with participating in this research study, have answered any questions that have been raised, and have witnessed the above signature.

Date **Investigator's Signature**

Appendix **D**

Focus Group Questions for In-Service Teachers in Regular Education

1) What grade(s) do you currently teach?

2) How long have you been a teacher?

3) What educational experiences have you had as part of your undergraduate program, graduate studies, or professional development training that pertained to gifted education?

4) How do you decide to recommend a student in your class for a gifted education support placement?

5) Of these characteristics, are there any that frequently are overlooked by other educators?

6) What types of activities or accommodations do you believe are best practice for students identified as gifted in your regular classroom setting?

7) Of these activities or accommodations, which ones do you believe to be the most valuable to your students who are gifted?

8) If a child in your class seemed to display high academic potential but was struggling with managing his/her behavior in the classroom, would you recommend him/her for gifted evaluation? Please explain.

9) If you answered yes for question 8, what types of class accommodations would you make for this student's high potential?

10) In your class, if a student diagnosed with autism showed high potential in one subject area, but was one or more years below grade level in another subject, would you refer him/her to be evaluated for gifted support services? Please explain.

11) If you answered yes to question 10, what types of activities might you use to accommodate this child's high potential?

Dear In-Service Educator:

You are invited to participate in a research study because you are an in-service teacher who may have worked with children who are gifted and talented in a regular education environment. This study will analyze the perceptions of pre-service educators and in-service regular educators and gifted educators on the best practices for educating gifted students in regular and gifted classroom environments. The information in this consent form is intended to help you decide whether or not to participate in the study. If you decide to participate in the study, you will be participating in an audio-taped focus group interview. At the beginning of this interview you will be asked to record your thoughts and views in writing on an interview form and then discuss your answers in a group interview format.

Benefits and Risks: Contributing to this study through participation will not offer any monetary benefits. If you choose to participate in this audio-taped focus group interview, you will be contributing to the knowledge about the best practices for working with students identified as gifted. There is minimal risk associated with this study due to the fact that your identity will be kept confidential by the primary researcher if you choose to participate. Participation in this study is completely voluntary; you are free to decide to participate in this study or to choose to participate in the alternate activity without consequence. The professor of record will not be present during the interview or alternate activity and he or she will not be informed about your participation choice. No ramifications will come from choosing to not participate in this research. No course credit or penalty will be given for participating or not participating. Interview forms will be anonymous and the taped interviews will be kept confidential by the primary researcher. If at any time you feel more than minimal stress resulting from this study you may withdraw from the study by notifying the primary researcher via phone or email.

Voluntary Participation: Your participation is completely voluntary. You will not be penalized in any way should you decide not to participate. Your interview documents and recordings will be kept confidential following the focus group interview. Individual interview documents about best practice perceptions will only be shared with the researcher and faculty sponsor listed below. Results of the study will be published in the primary researcher's dissertation and possibly in a peer-reviewed journal. No information that could identify individual participant's identities will be published. Participants can receive a copy of the results of the study by contacting the primary researcher.

AUTHORIZATION: I have read and understood the nature of this study and I agree to participate. I understand that I have the right to refuse to participate and that my right to withdraw from participating in the study at anytime will be respected with no ramifications or prejudice. I also understand that once my completed interview is turned in that there is no possibility of withdrawing from the study.

Primary Researcher:
Mrs. Stacie Hoffer Nowikowski
Doctoral Student
Professional Studies in Education: Curriculum and Instruction
1308 Deerfield Lane
West Leechburg, PA 15656
Phone: 724-845-8238
Email: bqbl@iup.edu

Dissertation Chair:
Dr. Mary Renck Jalongo
Faculty Sponsor
Professional Studies in Education
Curriculum & Instruction Doctoral Coordinator
122 Davis Hall, Indiana University of Pennsylvania
Indiana, PA 15705
Phone: 724-357-2417

This project has been approved by the Indiana University of Pennsylvania Institutional Review Board for the Protection of Human Subjects (Phone: 724-357-7730).

VOLUNTARY CONSENT FORM:

I have read and understand the information on the form and I consent to volunteer to be a subject in this study. I understand that my responses will be audio recorded. I also understand that my individual responses are kept confidential and that I have the right to withdraw at any time by notifying the primary researcher via phone or email. I have received an unsigned copy of this informed Consent Form to keep in my possession.

Name (Last, First) PLEASE PRINT

Signature

Date

I certify that I have explained to the above individual the nature and purpose, the potential benefits, and possible risks associated with participating in this research study, have answered any questions that have been raised, and have witnessed the above signature.

Date **Investigator's Signature**

Dear Educator of Students Identified as Gifted and Talented:

You are invited to participate in a research study because you are currently an educator that works with students who are identified as gifted and talented in gifted education environments. This study will analyze the perceptions of pre-service educators and in-service regular educators and gifted educators on the best practices for educating gifted students. The information in this consent form is intended to help you to decide whether or not to participate in the study. If you decide to participate in the study, you will be participating in an interview by email or postal mail. During the interview you will be asked to record in writing your beliefs about gifted education. The interview will be sent to an email or address of your choice and you can return it via email or via the address of the principal investigator listed below. You will be asked to pick a way in which the principal investigator can follow up with you one time following the interview (by either phone call or email).

Benefits and Risks: Contributing to this study through participation will not offer any monetary benefits. If you choose to participate in the interview, you will be contributing to the knowledge about the best practices for working with gifted education students. There is minimal risk associated with this study due to the fact that this interview is completely optional and no ramifications will come from choosing to not participate in this research. If at any time you feel more than minimal stress resulting from this study you may withdraw from the study by not completing the survey. Participation in this study is completely voluntary; you are free to decide not to participate in this study or to withdraw at any time without any consequence. If you choose to participate, your identity will be kept confidential by the primary researcher.

Voluntary Participation: Your participation is completely voluntary. You will not be penalized in any way should you decide not to participate. Your interview documents will be kept confidential by the primary researcher. Any contact information that you give to the primary researcher will be used only for follow up. Contact information will be kept confidential. Results of the study will be published in the primary researcher's dissertation and possibly in a peer-reviewed journal. No information that could identify an individual participant's identity will be published. Participants can receive a copy of the results of the study by contacting the primary researcher.

AUTHORIZATION: I have read and understood the nature of this study and I agree to participate. I understand that I have the right to refuse to participate and that my right to withdraw from participating in the study at anytime will be respected with no ramifications or prejudice. I also understand that once my interview and follow-up communication is completed that there is no possibility of withdrawing from the study.

Primary Researcher:
Mrs. Stacie Hoffer Nowikowski
Doctoral Student
Professional Studies in Education:
Curriculum and Instruction
1308 Deerfield Lane
West Leechburg, PA 15656
Phone: 724-845-8238

Dissertation Chair:
Dr. Mary Renck Jalongo
Faculty Sponsor
Professional Studies in Education
Curriculum & Instruction Doctoral Coordinator
122 Davis Hall, Indiana University of Pennsylvania
Indiana, PA 15705
Phone: 724-357-2417

This project has been approved by the Indiana University of Pennsylvania Institutional Review Board for the Protection of Human Subjects (Phone: 724-357-7730).

VOLUNTARY CONSENT FORM:

I have read and understand the information on the form and I consent to volunteer to be a participant in this study. I understand that my responses are completely confidential and that I have the right to withdraw at any time. I have received an unsigned copy of this informed consent form to keep in my possession.

Name (Last, First) PLEASE PRINT

Email or Postal Address to send survey to:

Signature

Date

Follow up contact information:
Please list phone or email (You will be contacted for follow-up on your interview one time via your preferred method of communication.) No contact information will be shared with a third party.

Email address or Phone Number

If you chose to be contacted via phone, what is the best time to contact you?

I certify that I have explained to the above individual the nature and purpose, the potential benefits, and possible risks associated with participating in this research study, have answered any questions that have been raised, and have witnessed the above signature.

Date **Investigator's Signature**

Appendix G

Interview Questions for Educators of Gifted and Talented Students

1) How long have you worked as a gifted support teacher?

2) Do you have any alternate teaching responsibilities in your district besides acting as the gifted support teacher?

3) Please briefly describe how you became a gifted education teacher in your district. (Have you always worked as an educator of the gifted? What area is your certification in?)

4) What characteristics indicate that a student may be in need of a gifted education support placement?

5) Of these characteristics, are there any that frequently are overlooked by other educators?

6) What types of activities and accommodations do you believe are best practice for students who are identified as gifted within the regular classroom setting?

7) What activities are offered your district's gifted and talented education program?

8) Of these activities, which ones have you found to be the most beneficial to your students?

9) If a student recommended for gifted education services also displayed difficulties with classroom behavior, what accommodations would you consider as best practice for working with that student?

10) Does your gifted education program recognize students who are twice-exceptional? If so, how do you accommodate the needs of students who are twice exceptional in your program?

Focus Group Interview Script

Welcome and Overview:

* Thank the group for choosing to participate in the focus group interview.
* Introduce yourself to the group.
* Explain to the group your background and education. Explain why obtaining data on gifted education is so important to this area of educational research.

e.g. By participating in this focus group interview you are helping to add to the knowledge base that exists on the best practices for identifying and working with students who are gifted. The information you give will help advance educational research so that professionals who identify and work with students who are gifted will be able to make more informed decisions about what accommodations and criteria to use.

* Explain the procedures for the interview forms.

e.g. At this time, I will be passing out an interview form that we will use to help guide our interview time together. I am going to give you time to fill the form out before our interview session begins so that you will have an opportunity to collect your thoughts and express them in writing before the actual session begins. I will be collecting the forms at the end of our time together so that I may use them as an additional data source. Please do not write any information on them except for the information you have been asked to share.

* Give at least 15 minutes to allow participants to fill out the interview forms. Do not rush participants to finish so that they may complete the survey.
* Explain recording procedures/ground rules.

e.g. Now that we have the focus group interview forms completed, we are going to be starting the actual focus group interview session shortly. Please remember that I will be doing an audio recording of our session together. (Show the recorders.) The recorder is very simple, the same type that you might use to record lectures in a college course. The sound is quite sensitive so if you use a normal speaking voice I will not have any trouble hearing you when I go back to review the recording. Once we begin the recording, I would also like to remind you to maintain professional confidentiality. Some of these questions may lead you to want to discuss a specific case or example that you have experienced. I ask that you please not use names when you are giving us your input. If you comment or build on another person's comments and inadvertently use their

given name, please know that I will maintain your confidentiality and will omit any identifying information about your class, college, or school district when I write my dissertation. As we go through the main issues of this focus group interview, please feel free to share your perspectives. You do not have to raise your hand to give an answer. Feel free to share as long as we allow everyone who wants to speak a chance to do so.
* Ask if there are any questions or if anyone needs clarification of any procedures.

Focus group interview session:
* Move students into a "U" or circular shape as the room allows so that participants have an easier time hearing other participant's perceptions.
* Explain that we will not discussing some of the questions such as how long you've been a teacher or what grades you specifically teach. Those specific pieces of information will be used for demographic information only.
Prior Experiences:
* Explain the first group of questions as questions being related to past experiences in gifted education.

e.g. The first topic that I want to find out more about is your personal prior experiences with gifted education. If you have had past courses as part of your undergraduate degree or in-service activities as part of your professional development, please feel free to share about those things. If you have not had any prior experiences with gifted education training, I encourage you to not feel embarrassed. That is an important piece of information as well. That will help further the research too.

-Be sure to not place judgment on participants' responses. Thank participants for their sharing. Give an opportunity for everyone who would like to share to do so. If there is a lull in conversation, encourage participants who have similar or different experiences to share based on the direction of the interview.
* After everyone has had an opportunity to share their previous experiences, move on to the next questions that could be categorized as pertaining to the identification criteria for students who are gifted. Ask participants to share which criteria they use (or will use) to identify students who are gifted. Once everyone has had an opportunity to share their criteria or piggyback on the criteria of others, ask the students to share if they feel if any of the criteria they listed can be overlooked by others.

-Again, be sure to not answer in a way that may place judgment on any responses. Allow each participant enough time to speak. Encourage other who may disagree to do so respectfully.

* Move on to the next section of question that pertains to the accommodations that educators use when working with students who are gifted.

e.g The next section of questions on your interview form deal with actual accommodations you currently use (or may use in your future classroom setting). I am interested in what activities or pedagogy you use with students who are identified as gifted in your classroom. If you have a certain model that you use, feel free to discuss it, but if you would rather give examples of activities you have done in the past, that would be wonderful as well.

* Have participants discuss the ones that they feel are most valuable for their students who are gifted.

* Following this section, introduce the last section of questions that pertain to perceptions participants have toward two scenarios that introduce students who could be considered as non-typically gifted. Introduce each scenario and allow each participant who wishes to speak have an opportunity to share whether they would recommended each student for gifted services and why. Following the discussion on whether each participant would identify the student as gifted and why, allow participants who reported that they would recommend the students for gifted students to share what types of accommodations they would use with these students.

Closing:

*Ask the students before closing the session if there are any final thoughts that anyone would like to add before the audio recorders are turned off.

*Turn the audio recorders off.

*Thank the students for participating before dismissing them. Encourage them to email with any questions or concerns.