A GROUNDED THEORY STUDY OF THE EDUCATIONAL PROCESSES IMPLEMENTED BY PARENTS HOMESCHOOLING GIFTED OR TWICE-EXCEPTIONAL CHILDREN

by

Bridgette Whitlow-Spurlock

Liberty University

A Dissertation Presented in Partial Fulfillment

Of the Requirements for the Degree

Doctor of Education

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ABSTRACT

The purpose of this systematic, grounded theory study was to explain the educational processes used by homeschooling families of gifted and twice-exceptional children. For this study, educational processes were defined as instructional methods, curriculum, and structure used by homeschooling parents in the academic development of their gifted and twice-exceptional child. The conceptual framework guiding this study was choice theory developed by William Glasser with the influences of Robert Sternberg's theory of successful intelligence and Kurt Fischer's dynamic skills theory as these theories explain how choices are influenced by parents' understanding of their children's cognitive development, giftedness, and twice-exceptionality within a cultural context. This study sought to answer the question: What are the educational processes that families implement within the homeschool environment in educating their gifted and twice-exceptional children? This systematic grounded theory study was conducted using 14 individual homeschooling parents and one father-mother couple. Participants were recruited through a combination of convenience, snowball, and web-based respondent driven sampling. Data was collected using a demographic questionnaire, interviews, a letter of advice, journaling, and memoing. The data was analyzed using open, axial, and theoretical coding procedures. This study resulted in the development of four process models: (a) the process of choosing to homeschool, (b) the process of choosing curriculum, (c) the process of choosing instructional methods, and (d) the process of choosing structure. Additionally, the conceptual framework led to an amalgamation of the theories to develop a new theory: personalized education theory of gifted and twice-exceptional homeschooling.

Keywords: homeschool, gifted education, twice-exceptional, grounded theory

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Dedication

I would like to dedicate this work to my family, members of the homeschooling community, and all educators. To Dad, you gave me a home that cultivated a can-do attitude and pushed me to achieve my dreams. To Mom, who showed me that a mom can achieve all her dreams of an education while raising a family. You pushed me to succeed no matter what and have been my biggest inspiration for continuing on the hard days. To Granny, you have shown me that age is just a number and that hard work and determination will get a person through any situation. To Mary, my sister (in-law), thank you for being my comic relief, supplier of coffee, and closest sister. To the best brothers, Bob, Britt, and Blake, for being there to help when needed and always supporting me. God has blessed me with the most supportive and helpful brothers. To my husband, Matthew, you are my hero and my rock. You have been everything I need throughout this process. I could not have done this without your loving support and encouragement. I love you no matter what. To my children, Matthias-Matthew, Halle, and Malachi, you are God's gift to me and my motivation to pursue degrees in education. Thank you for working as a team throughout this process and being there to support me. I love you always.

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List of Abbreviations

National Center for Education Statistics (NCES)

Individuals with Disabilities Education Improvement Act (IDEA)

National Association for Gifted Children (NAGC)

Response to Intervention (RtI)

Attention Deficit Hyperactivity Disorder (ADHD)

Every Student Succeeds Act (ESSA)

Council for Exceptional Children (CEC)

Homeschool Legal Defense Association (HSLDA)

Respondent Driven Sampling (RDS)

Web-based Respondent Driven Sampling (WebRDS)

Institutional Review Board (IRB)

American Academy of Pediatrics (AAP)

Individualized Education Plan (IEP)

Oppositional Defiance Disorder (ODD)

Massive Open Online Course (MOOC)

CHAPTER ONE: INTRODUCTION

Overview

Homeschooling is an education option that allows parents to create an educational experience that is customizable. One subpopulation within the homeschooling community is families of gifted children and twice-exceptional children (Jolly, Matthews, & Nester, 2012). Twice-exceptional children are those who are gifted as well as having a disability (Prior, 2013). Twice-exceptional children were included in this study due to the identification as gifted as part of their educational abilities. The exclusion of these children based on identification as gifted with a disability would have had the potential to ignore vital data from these unique children.

Based on concerns with traditional education settings, families are opting to homeschool their children to provide an education that focuses on their child's strengths, gifts, and talents (Jolly et al., 2012; Jolly & Matthews, 2017; Winstanley, 2009). The scholarly literature concerning homeschooling the gifted is limited. There is no research explaining the educational processes implemented by parents who homeschool gifted and twice-exceptional children. The purpose of this systematic, grounded theory study was to develop a theory or model that would resolve this inadequacy by examining and explaining how parents provide an education for their children with unique needs in the home.

Chapter One introduces the topic of this research study and provides an overall framework that were implemented. The following subsection provides a historical background of gifted education and homeschooling, explains the societal background of homeschooling, and examines the theoretical concepts that frame the proposed research. The motivation behind and my relationship to the research topic are addressed in the Situation to Self section. Next, the

problem statement, purpose statement, and the significance of the study are identified. Finally, the research questions that guided the study and important definitions conclude this chapter.

Background

This section provides a historical background for gifted education and homeschooling, followed by an explanation of the social aspects of homeschooling. Finally, the theoretical frameworks that guided this research study are outlined.

Historical Context for the Study

As previously mentioned, there is limited research regarding the homeschooling of gifted and twice-exceptional children. Homeschooling gifted and twice exceptional children is an integration of two forms of education: gifted education and homeschooling. Therefore, it is important to understand the historical backgrounds of the two forms of education that were integral to this research.

Gifted education. The recognized need for education of gifted children in the United States has existed for over 100 years, as evidenced by special schools for gifted individuals (Plucker & Callahan, 2014). Historically, gifted education occurred intermittently for millennia, dating back to ancient Athens, with cultures recognizing the need to provide education to the culturally perceived most abled students (Davis, Rimm, & Siegle, 2011; Plucker & Callahan, 2014; Tannenbaum, 2000). Despite the long-term acknowledgment of individuals with abilities above their peers, gifted education still has critics worldwide (Jewell, 2005; Sak, Ayas, Sezerel, Öpengin, Özdemir, & Gürbüz, 2015; Yeung, 2012).

The United States federal government first acknowledged the needs of gifted individuals in 1931, but federal funding did not become available until 1950 with the enactment of the National Science Foundation Act (Jolly & Robins, 2016). Federal funding of gifted education

has been inconsistent throughout history (Jolly & Robins, 2016; Plucker & Callahan, 2014). Clark (2013) noted that gifted programs are one of the first programs to be removed during national and school budget crises. Currently, gifted advocacy groups, such as the National Association for Gifted Children (NAGC), are concerned about the removal of funding for gifted education (NAGC, personal communication, March 24, 2017). The lack of appropriate education for gifted children has led parents to homeschool their gifted and twice-exceptional children (Jolly & Matthews, 2012; Jolly et al., 2012).

Homeschooling. Modern homeschooling began in the 1960s and 1970s as a rebellion led by individuals from the political left (Jolly et al., 2012). During the late 1960s and 1970s, individuals from the countercultural left created smaller communities, many of which did not survive through the 1980s, to escape the current culture and live a more autonomous lifestyle (Gaither, 2008). Many of the smaller communities rejected monogamous relationships, practiced home birth, revitalized the movement in breastfeeding, promoted self-sustainment from the land, and openly used drugs (Gaither, 2008). Parents in these communities chose to homeschool or develop their own schools that reflected the values of the micro-society (Gaither, 2008).

During the 1980s, homeschooling became predominately known as a Christian movement due to the large population of Christians using homeschooling as an education option to provide their children with an environment that aligned with their religious and philosophical beliefs (Jolly et al., 2012; Murphy, 2013). According to Gaither (2008), the Supreme Court rulings of the 1960s, which removed prayer and school-led Bible reading, propelled Christians to develop their own schools. Parents who could not afford tuition, were in disagreement with the values or religious ideology of the local Christian school, or did not have access to these schools chose to homeschool their children (Gaither, 2008). The Christian school movement and

Christian homeschool movement allowed parents to give their children an education that reflected their values (Gaither, 2008).

Despite having different foundational principles and ways of operating, both the countercultural left and right began homeschooling for the same primary principles of "local community and self-determination" (Gaither, 2008, p. 226). Today, homeschooling is highly diverse with families from varying religious, political, and socioeconomic backgrounds choosing to homeschool for a myriad of reasons (Kunzman & Gaither, 2013; Murphy, 2013). According to the 2016 National Center for Education Statistics (NCES) report, 34% of parents reported that concerns of school environment was the most important reason for homeschooling, 17% reported concerns with academic instruction as the most important reason for homeschooling, and 16% reported the ability to provide religious instruction as the most important reason for homeschooling (Redford, Battle, & Bielick, 2017).

Homeschool Milieu

Homeschooling has become a more acceptable form of education (Jamaludin, Alias, & DeWitt, 2015; Kunzman & Gaither, 2013; Murphy, 2014; Ray, 2015). In the United States, the growth rate, estimated at 2% to 12% each year, provides evidence that parents are accepting of this education option (Kunzman & Gaither, 2013; Murphy, 2013; Ray 2016). Other countries are also experiencing the naissance or growth of homeschooling (Kunzman & Gaither, 2013). Countries such as Australia, Britain, Canada, Israel, New Zealand, Norway, South Africa, and Taiwan have statutes making homeschooling a legal education option or have expanded homeschooling rights (Chansaengsee, Peungposop, & Junprasert, 2017; de Waal & Theron, 2003; Lagos, 2012; Liberto, 2016; Neuman & Guterman, 2016b; Winstanley, 2009).

The appeal of homeschooling is that it provides potentially interminable options for the customization of an education program for each individual (Ray, 2002). This customization extends to variations in curriculum, instructional methods, and environmental structure (Anthony & Burroughs, 2012; Bell, Kaplan, & Thurman, 2016; Carpenter & Gann, 2016; Liberto, 2016; Mazama, 2015; Neuman & Guterman 2016a; Thomas, 2016a, 2016b). Furthermore, these variations create an educational environment that allows for differentiation based on the child's interests and needs. Parents have the ability to design education plans, environments, and activities that are unique for each child (Carpenter & Gann, 2016; Pannone, 2014; Thomas 2016a).

The educational freedom that homeschooling offers has captured the attention of parents whose children's needs are not met in the traditional education setting. Parents of gifted and twice-exceptional children have had to advocate for accommodations for their children (Leggett, Shea, & Wilson, 2010; Ritchotte & Matthews, 2012; Wiskow, Fowler, & Christopher, 2011). When the proper accommodations for their children were not being provided in the traditional education setting, parents turned to homeschooling (Jolly & Matthews, 2012; Jolly et al., 2012).

Despite research, which has demonstrated that homeschooled children achieve academically, have strong emotional and social skills, and become competent members of society (Kunzman & Gaither, 2013; Medlin, 2013; Murphy, 2014; Ray, 2013), homeschooling has its critics. Homeschool critics argue that homeschooling is not in the best interest of the child, and the state has a stake in a child's education (Kunzman & Gaither, 2013; Murphy, 2013; Ray, 2013). The critics base their arguments on philosophical concerns; however, there is a lack of empirical evidence to support these arguments (Ray, 2013; Reich, 2008).

Theoretical

The conceptual framework guiding this grounded theory study was an amalgamation of three theories that focus on different aspects of the study. The lack of a theory that explains the educational processes implemented by parents who homeschool gifted and twice-exceptional children created the need for a theory or model that fully describes this process. As such, the varying aspects of this process was examined through choice theory (Glasser, 1985, 1997, 1998), the theory of successful intelligence (Sternberg, 1988, 2004, 2012), and dynamic skill theory (Fischer, 1980, 2008).

Choice theory (Glasser, 1985, 1997, 1998) provided the framework for examining how individuals make choices to have one of their basic five needs met. This study examined how parents make choices to meet their children's basic needs using this framework. The research questions focused on the choices parents made in the process of choosing to homeschool and the educational and environmental aspects of homeschooling gifted and twice-exceptional children.

The theory of successful intelligence (Sternberg, 1988, 2004, 2012) established that intelligence and behavior are culturally bound. Intelligence and giftedness cannot be defined or understood without first examining these concepts within a culture because different cultures assign different meanings to these terms (Sternberg, 2004). The research sought to examine homeschooling of the gifted on an international level. Therefore, the concepts giftedness and intelligence must be considered within the context of an individual's culture. Additionally, Sternberg explained that individuals choose their environments to meet their needs (Miller, 2011; Sternberg, 1988). Parents of gifted children choose to homeschool their gifted or twice-exceptional children when schools are unable to meet their children's needs (Delisle, 2006; Jolly & Matthews, 2012; Jolly et al., 2012).

Finally, dynamic skill theory (Fischer, 1980, 2008) demonstrated that cognitive development does not occur in stages, but through a continuum that fluctuates with highs and lows. Fluctuations in development that is common among gifted and twice exceptional children is referred to as asynchronous development (Clark, 2013; Jolly et al., 2012; Peterson, 2009; Silverman, 1997). Asynchronous development is the uneven differences among an individual's psychomotor, affective, and intellectual development (Colangelo & Wood, 2015; Peterson, 2009; Silverman, 1997). Dynamic skill theory provided a framework for explaining the fluctuations in the developmental processes of an individual.

The purpose of this study was to explain the educational processes used by homeschooling families of gifted and twice-exceptional children. The theories assisted in developing a theory and models to examine the choices parents made to provide an education for these children at home with respect to understanding intelligence within a cultural context and the cognitive development of gifted and twice-exceptional children. This research also expanded the current literature pertaining to homeschooling and homeschooling the gifted or twice-exceptional and offered a deeper insight into how parents provided an education for their children within the home environment.

Situation to Self

The motivation for exploring the educational processes implemented by families who are homeschooling their gifted and twice-exceptional children was based on (a) my experience as a parent homeschooling with gifted and twice-exceptional children, (b) my involvement in the homeschool community, and (c) my education background in gifted education. My husband and I chose to homeschool our children (see Appendix A). I am a tutor with a national homeschool cooperative, a board member of a national military homeschool association, and an advocate

with a state organization. Additionally, I have written a lifestyle blog that includes posts about homeschooling, as well as maintaining a social media presence with accounts relating to homeschooling.

Despite my active involvement with homeschooling, I am not against other methods of education. During my primary and secondary years, I attended public school. I worked in a private preschool and school as a teacher's assistant. My collegiate education includes a Bachelor of Science in elementary education, a Master of Education in general education with a graduate certificate in gifted education, and an Education Specialist degree. My certifications include a professional level elementary teacher certificate from the Association of Christian Schools International and an in-state private school teaching license from the State of Pennsylvania. Additionally, I hold an associate educational therapist license from the Association of Educational Therapists.

My view of education is pragmatic in which education choice is relevant to the child's needs and the parent's ability. There is no perfect education setting that meets the needs of all children. Education choice should be a decision that parents consider carefully and evaluate annually to ensure the choice is the best option for the child.

The beliefs a person possesses will have a direct influence upon one's actions (Etzel & Gutierrez, 2012). Therefore, I must acknowledge my philosophical assumptions and paradigm that will guide this study. The philosophical assumptions that I bring to this study are ontological, epistemological, and axiological in nature. Ontology is the study of reality and how one defines reality (Creswell, 2013). The international context of this study created the opportunity to interact with multiple families who would have had a different view of reality. Throughout the study, I took the multiple views into consideration without judgment.

Epistemology seeks to understand what is knowledge and how it is known which is directly related to the relationship between the researcher and the participants (Creswell, 2013). Throughout this study, I strived to understand the participants' perspectives and used quotes gathered from the data to reflect these perspectives.

Axiology questions the function of values in a study (Creswell, 2013). As demonstrated in this section and the paragraph below, I have values, beliefs, and biases that are intertwined with who I am. Qualitative researchers emphasize that qualitative research is not purely objective, but the level of objectivity and subjectivity is subjugated by the methodology that has been chosen (Creswell, 2013). Despite the values that I hold, this study focused on the experiences, knowledge, and words shared by the participants.

My paradigm is an amalgamation of constructivist, pragmatic, and Biblical worldviews. From the constructivist view, I sought to develop a theory from the data while focusing on the processes of the phenomenon being studied (Creswell, 2013). From the pragmatic paradigm, I agree with the concepts of "what works" (Creswell, 2013, p. 28) as it relates to personal choices and needs, freedom of choice, and that research is contextually based. However, I disagree with the pragmatic view's lack of truth or unity. Through my faith and Biblical worldview, I perceive how the Biblical worldview can encompass aspects of both paradigms. Joshua emphasized the freedom to make choices in his address to Israel:

> And if it is evil in your eyes to serve the LORD, choose this day whom you will serve, whether the gods your fathers served in the region beyond the River, or the gods of the Amorites in whose land you dwell. But as for me and my house, we will serve the LORD. (Joshua 24:15, English Standard Version)

Galatians 3:28 (Amplified Version Classic Edition) states, “There is [now no distinction] neither Jew nor Greek, there is neither slave nor free, there is not male and female; for you are all one in Christ Jesus.” This demonstrates that there is a cultural difference among different ethnicities, but Christians are unified through faith in Christ while maintaining their cultural identity (Buell & Hodge, 2004). I do believe there are multiple ways of viewing the world and doing research. The seeming lack of unity is a unity when the multiple perspectives used are purposely trying to understand one phenomenon.

Problem Statement

Homeschooling has been referred to as the most customizable form of education (Murphy, 2014). It allows parents to construct the educational environment to meet their child’s individual needs (Carpenter & Gann, 2016; Neuman & Guterman, 2016a; Thomas 2016b). Parents are also able to promote autonomy, interest-led learning, and individualized instruction in the homeschool environment (Bell et al., 2016; Thomas, 2016a). Homeschooling provides an educational setting in which gifted children can have their educational and emotional needs met which were not being, or are unable to be, met in a traditional education environment (Jolly & Matthews, 2017). Jolly et al. (2012) confirmed, “The eventual decision to homeschool only occurred after these families worked with public and/or private schools in an attempt to have their child’s academic and social needs met” (p. 126). Parents withdrawing their gifted children from traditional school settings in order to homeschool has been documented for over 25 years. Kearney (1992) found that parents were choosing to homeschool their gifted children based on dissatisfaction with public schools while noting how homeschooling allows for an education that is customizable to each child’s needs.

Even though homeschooling is a growing education option, the research is limited concerning the homeschooling population (Murphy, 2014). The lack of research is greater in areas of more specialized research focusing on the varying homeschool subpopulations, specifically homeschooling gifted and twice-exceptional children. The focus of gifted homeschooling research "is still in the early stages of development" (Jolly & Matthews, 2017, p. 112). The available literature regarding homeschooling gifted and twice-exceptional children are mostly anecdotal pieces with limited empirical research (Hanna, 2012; Jolly et al., 2012). Jamaludin et al. (2015) found only two studies that focus on homeschooling gifted and twice-exceptional children. The lack of empirical studies might be attributed to a concern of anti-homeschool bias by researchers, which causes homeschooling families to become skeptical of researchers. In one study, homeschool families were hesitant to participate until the researcher disclosed that she was once a homeschooled student (Rockholt, 2013). The establishment of trust is vital to research and creates more conducive research conditions (Gall, Gall, & Borg, 2007).

While homeschooling has been empirically established as an effective method of education (Murphy, 2014), the limited research did not provide an explanation as to how parents are able to educate their gifted and twice-exceptional children in the home. The lack of literature also demonstrated that there was no theory that explained the educational processes homeschooling parents utilize to provide a customized education for their gifted and twice-exceptional children. This study expanded the knowledge base for education researchers with a focus on homeschooling gifted and twice-exceptional children.

Purpose Statement

The purpose of this systematic, grounded theory study was to explain the educational processes implemented by homeschooling families of gifted and twice-exceptional children. For this study, educational processes were defined as instructional methods, curriculum, and structure used by homeschooling parents in the academic development of their gifted child (Anthony & Burroughs, 2012; Carpenter & Gann, 2016; Christian, 2003; Kunzman & Gaither, 2013). The conceptual framework guiding this study was choice theory developed by William Glasser (1985, 1997, 1998), with the influences of Robert Sternberg's (1988, 2004, 2012) theory of successful intelligence, and Kurt Fischer's (1980, 2008) dynamic skill theory; as these theories explained how choices are influenced by parents' understanding of their children's cognitive development, giftedness, and twice-exceptionality within a cultural context.

Significance of the Study

The research study expanded the literature on homeschooling and resulted in a theory and models to explain the educational processes used by parents who homeschool gifted and twice-exceptional children. As mentioned previously, the literature in homeschooling research is limited. This study adds to the general literature of homeschooling. More specifically, it adds to the highly limited empirical research on homeschooling gifted and twice-exceptional children. As noted by Hanna (2012) and Jolly et al. (2012), most of the articles found in journals are anecdotal. This study broadens the literature by providing an in-depth, data-rich study, and theory and models of the educational processes used by parents in homeschooling gifted and twice-exceptional children.

The results of this study may be used by stakeholders in the homeschool community for consultation and to advocate for homeschooling policies. As noted by Jolly and Matthews

(2017), homeschooling parents actively seek out others for advice in homeschooling gifted children. Homeschool consultants and education experts may use the theory and models to consult with parents who are considering homeschooling their gifted or twice-exceptional child. Additionally, the theory and models could be used by homeschooling parents during the decision-making process in exploring curriculum and educational environments for their gifted and twice-exceptional children.

The need for gifted education has been demonstrated in research (Dimitriadis, 2016; Ieridou, 2013; Jolly, 2015; Jolly & Robins, 2016; Plucker & Callahan, 2014). Stakeholders in traditional education settings such as public, private, and charter schools could use the resultant theory and models to develop gifted education programs to meet the needs of gifted and twice-exceptional students. The research presented may be used to demonstrate the growing need for education policies and budgets to provide an appropriate education for gifted children within traditional education settings.

The study sought to examine homeschooling gifted and twice-exceptional students at the international level to develop an overall understanding of the educational processes implemented by parents across varied cultural contexts. As noted by Sternberg (2004, 2012) and Ieridou (2013), culture and giftedness are intertwined. This study may assist in understanding and addressing gifted children's needs within, and outside of, cultural bounds and how parents are meeting these needs. The resultant theory may provide assistance to international gifted advocacy groups in working with national education departments to ensure that policies meet the needs of gifted education and homeschool education.

Research Questions

There was one central question that was the focus of this study. There were five subquestions that provided support for understanding giftedness within a cultural context, explored why parents chose to homeschool their gifted and twice-exceptional children, and examined the three aspects of educational processes within the homeschool environment.

Central Question

What are the educational processes that families implement within the homeschool environment in educating their gifted and twice-exceptional children?

The educational processes for the homeschool environment were defined as the curriculum, instructional methods, and structure used by parents in the academic development of their gifted child (Anthony & Burroughs, 2012; Carpenter & Gann, 2016; Christian, 2003; Kunzman & Gaither, 2013). When parents choose to homeschool, they become responsible for providing all aspects of education for their children (Jolly et al., 2012; Kunzman & Gaither, 2013; Ray, n.d.). This requires parents to purchase and plan curriculum, implement instructional methods, and develop a structure for the homeschool environment (Anthony & Burroughs, 2012; Carpenter & Gann, 2016; Kunzman & Gaither, 2013; Jolly et al., 2012). Homeschooling provides greater flexibility in scheduling, which allows parents to provide a customized education for each child within a family (Jolly et al., 2012; Kunzman & Gaither, 2013; Ray, 2002). The central question seeks to understand how homeschooling parents create a learning environment that provides a more than adequate education (Bannier, 2007; Howell, 2013) for the needs of their gifted and twice-exceptional children.

Subquestions

1. How are giftedness and intelligence defined within the families' cultural and/or national context?

Sternberg (1988, 2004, 2012) emphasized that intelligence must be examined through an individual's culture in order to be properly understood. Sternberg (2004) admonished that to ignore culture would invalidate any definition of intelligence. The rationale for understanding how a culture defines giftedness and intelligence was based on the premise set by Sternberg's (1988, 2004, 2012) research in which he noted that the definition and value placed upon intelligence varies greatly among differing cultures. By understanding the cultural definition of giftedness and intelligence, the concept of homeschooling to meet a child's gifted needs would be best understood.

2. What is the process implemented by parents choosing to homeschool their gifted and twice-exceptional children?

Parents choose to homeschool for a variety of reasons (Kunzman and Gaither, 2013). Some parents choose to homeschool prior to starting traditional school (Haugh, 2014). However, some parents chose to homeschool after traditional schools are unable or unwilling to meet the needs of their gifted children (Jolly et al., 2012; Winstanley, 2009). This question sought to determine how parents chose to homeschool. Additionally, this question was used to examine if the identification as gifted or twice-exceptional was an influential factor in choosing to homeschool.

3. What is the process parents employ when choosing a curriculum?

Parents are responsible for providing the curriculum for their child's learning needs (Jolly et al., 2012). Families may choose a curriculum based on religious affiliation, the child's

interest, or parental goals (Anthony & Burroughs, 2012; Hanna, 2012; Kunzman & Gaither, 2013; Pannone, 2014; Thomas, 2016a). Researchers noted that parents may choose a complete prepackaged curriculum or parents may choose an eclectic approach (Hanna, 2012; Pannone, 2014). Additionally, researchers ascertained that families change and adjust their curriculum as their homeschooling experience increases (Kunzman & Gaither, 2013; Pannone, 2014). The purpose of this question was to understand how parents of gifted and twice-exceptional children choose curriculum to provide an appropriate education for their children's unique learning needs.

4. What is the process parents undergo when choosing instructional methods for differing academic disciplines?

Homeschool families have the freedom and flexibility to incorporate multiple modalities of instructional methods (Carpenter & Gann, 2016). Families can develop learning plans for children based on their interests and needs which allows for customized learning. When parents are unable to meet their child's needs, then they can utilize cooperatives, online classes, and community resources (Anthony & Burroughs, 2012; Carpenter & Gann, 2016; Hanna, 2012; Kunzman & Gaither, 2013; Mazama, 2015; Thomas, 2016a, 2016b). This question explored what were the instructional methods used by parents and how parents choose these instructional methods to meet the learning needs of their gifted and twice-exceptional children.

5. What is the process parents undertake when determining the structure of the environmental setting based on the development of the child?

The environmental structure of the homeschool environment varies between families and can change as parents become more accustomed to homeschooling (Jones, 2013; Kunzman & Gaither, 2013; Neuman & Guterman, 2016a). Some researchers delineate two forms of homeschool structure: unstructured and structured (Anthony & Burroughs, 2012; de Waal &

Theron, 2003; Carpenter & Gann, 2016). Others noted that this should be seen as a spectrum between the two forms (Jones, 2013; Neuman & Guterman, 2016a). This question examined how parents chose and developed the structure within the homeschool environment to meet their children's individual needs.

Definitions

The following are important terms used throughout this study:

1. *Homeschooling*, also referred to as *homeschool* and *home education*, is the education method that is parent-directed, parent-funded, and parents are responsible for providing, planning, and implementing the education plan for a child (Jolly et al., 2012; Ray, 2013).
2. *Educational processes* are the instructional methods, curriculum, and structure used by homeschooling parents in the academic development of their children (Anthony & Burroughs, 2012; Carpenter & Gann, 2016; Christian, 2003; Kunzman & Gaither, 2013).
3. *Instructional methods* are the differing methods by which families provide varied instruction and learning opportunities inside and outside the home (Anthony & Burroughs, 2012; Carpenter & Gann, 2016; Pannone, 2014; Thomas 2016a).
4. *Curriculum, or curricula,* is the materials used to provide instruction for an individual over a specific period of time or course of learning (Hanna, 2012; Mazama, 2015; Pannone, 2014; Thomas, 2016a)
5. *Structure* is defined as the process implemented by parents to provide educational content through scheduling, autonomy, and adherence to a curriculum (Carpenter & Gann, 2016; Jones, 2013; Neuman & Guterman, 2016a).

6. *Giftedness* is defined as having one or more abilities that surpass the abilities of one's peers; this includes academic and non-academic abilities; giftedness is also bounded within participants' respective cultures (Sternberg, 2004).
7. *Twice-exceptional* children are individuals who are identified as gifted, as well as having a type of disability (Prior, 2013).
8. *Asynchronous development* is the uneven development between a child's "…intellectual, psychomotor, and affective development…" (Colangelo & Wood, 2015, p. 134).

Summary

Modern homeschooling, which began in the 1960s and 1970s, has become an accepted and legal education method in many countries. Parents in the United States choose to homeschool for a myriad of reasons ranging from personal convictions to concerns about the public school system. One subpopulation within the homeschooling population is gifted and twice-exceptional children whose parents choose to provide a more individualized instruction at home. There exists a paucity in current literature which explains the educational processes that parents implement to provide these children a home-based education. Due to this paucity, the educational decision-making processes were examined through a conceptual framework that integrates choice theory (Glasser, 1985, 1997, 1998) with the influences of theory of successful intelligence (Sternberg, 1988, 2004, 2012) and dynamic skill theory (Fischer, 1980, 2008). These theories explain how choices are influenced by parents' understanding of their children's cognitive development, giftedness, and twice-exceptionality within a cultural context.

The purpose of this study was to explain the educational processes implemented by homeschooling families of gifted and twice-exceptional children. The resultant theory and models may be used by stakeholders, parents, and advocates of homeschooling and traditional

educational environments to meet the needs of gifted and twice-exceptional. Additionally, this study sought to provide an understanding of the needs of gifted and twice-exceptional children at an international level; thus, providing a basis for advocates worldwide to develop policies to ensure these children have access to an educational environment that best fits their unique needs.

CHAPTER TWO: LITERATURE REVIEW

Overview

This literature review provides an examination of the related literature and the conceptual framework for this study. The themes that emerged from the literature are reviewed beginning with an explanation of who are gifted and twice-exceptional children and implications of gifted education policy. Next, a brief history of homeschooling is explained along with homeschooling demographics. The literature reveals homeschooling is also a recognized education option internationally. The related literature section concludes with a review of homeschooling educational processes which include the homeschooling curriculum, instructional methods, and structure. The chapter concludes with a review of the conceptual framework, which integrates aspects of choice theory by William Glasser (1985, 1997, 1998), theory of successful intelligence by Robert Sternberg (1988, 2004, 2012), and dynamic skill theory by Kurt Fischer (1980, 2008).

Related Literature

The literature related to homeschooling gifted or twice-exceptional children is limited (Hanna, 2012; Jolly et al., 2012). This section provides an examination of who are gifted and twice-exceptional students. Then a review of the implications that education policies have on gifted education is presented. This provides a direct link between gifted education and homeschooling. The history of homeschooling, homeschooling demographics, homeschooling methods, and international homeschooling is explained. Finally, a review of the literature examines homeschool educational processes found in the literature. These processes include homeschool curriculum, homeschool instructional methods, and homeschool structure.

Gifted and Twice-exceptional Children

The interest in children with gifts, or above average abilities, has fascinated civilizations for thousands of years (Tannenbaum, 2000). The intrigue at measuring intelligence began in 1869 when Francis Galton created the first intelligence test (Clark, 2013). Since that time, there have been many different definitions and debates about the varying theories of intelligence and giftedness (Clark, 2013; Davis et al., 2011). The common factor that is present in all theories is that the gifted excel above their peers. These are individuals who excel in academic and non-academic areas as related to their respective cultures (Sternberg, 2004).

The identification of gifted individuals can be challenging because not all gifted individuals present their giftedness in an identical way (Clark, 2013). Numerous methods have been developed since the first intelligence test to identify gifted individuals; each method can correspond with different gifted programs or philosophies of giftedness (Clark, 2013; Davis et al., 2011; Richert, 2003). The traditional method of identifying gifted individuals is through standardized tests such as the Stanford-Binet Intelligence Scale or the Cognitive Abilities Test (Clark, 2013). Traditionally, the top 3% to 5% of individuals who are identified as potentially gifted or nominated for placement in gifted programs are selected (Davis et al., 2011). However, these traditional methods may unintentionally exclude individuals from diverse cultures (Callahan, 2009; Davis et al., 2011; Plucker & Callahan, 2014; Richert, 2003; Siegle et al., 2016). Proponents of gifted education advocate for a robust method of identification which takes into account academic and non-academic abilities such as, but not limited to, creativity, leadership, and visual and performing arts (Clark, 2013; Davis et al., 2011; Plucker & Callahan, 2014; Richert, 2003; Siegle et al., 2016).

The types of gifted education programs implemented can vary between schools. The programs include part-time heterogenous grouping, full-time heterogenous grouping, and full-time homogenous grouping (Clark, 2013; Davis et al., 2011). In the part-time heterogenous grouping, students receive special instruction based on the gifted identification through pullout programs, resource programs, enrichment clusters, special interest groups and clubs, and part-time classes (Clark, 2013; Davis et al., 2011; Kulik, 2003). Full-time heterogenous grouping integrates gifted individuals within the general classroom, but the students receive individualized instruction based on his or her specific needs (Clark, 2013; Davis et al., 2011; Kulik, 2003). This grouping incorporates cluster groups of gifted students within the general classroom and individualizing in heterogeneous classes. The full-time homogenous grouping comprises of gifted students being grouped together for the school program (Clark, 2013; Davis et al., 2011). This category of grouping includes special schools designed for gifted, talented, and high achieving individuals. Such schools include magnet schools, private schools, school-within-a-school, and full-time special classes (Davis et al., 2011). These varying programs can be integrated with the different gifted education models such as the school-wide enrichment model by Joseph Renzulli, the creative problem solving model by Donald Treffinger, the differentiated model of giftedness and talent by Françoy Gagné, the autonomous learner model by George Betts, or the widely used acceleration model implemented by Lewis Terman in 1947 (Clark, 2013).

Within the gifted population is a subpopulation of individuals who are gifted but also possess a disability of some form. James Gallagher first used the term twice-exceptional in 1975 to describe people with this dichotomous blend of exceptionalities (Leggett et al., 2010; Prior, 2013). The earliest documentation of twice-exceptional individuals dates back to 1923 by Leta

Hollingworth who referred to them as possessing "special talents with defects" (Prior, 2013, p. 20). In 1971, June Maker referred to twice-exceptional individuals as gifted handicapped (Prior, 2013). Erin Fetzer used the term dual exceptional in 2000; the terms twice-exceptional and dual exceptional have been used interchangeably with the acronym 2E, or 2e (Prior, 2013). Siegle et al. (2016) explained, "Twice-exceptional students are those who demonstrate potential for high achievement or creativity in one or more domains and one or more disabilities as defined by federal or state criteria" (p. 105).

Detecting individuals who are twice-exceptional imposes a perplexing task for educators due to two significant factors: teacher training and masking effects. General education teachers and special education teachers do not receive adequate training to become familiar with the dichotomous nature of twice-exceptional students which would result in the proper recommendations for additional testing and services (Bianco & Leech, 2010; Foley-Nicpon, Assouline, & Colangelo, 2013).

There are three groups of twice-exceptional individuals (Baum, 1990). The first group are individuals identified as gifted, but their disability is unrecognizable (Baum, 1990; Bisland, 2004; Little 2001). The second, and most difficult to identify, are individuals who have a pronounced masking effect (Baum, 1990; Bisland, 2004; Little, 2001). The masking effect is a phenomenon in which the giftedness or a disability characteristic is masked, or obscured, by the other characteristic (Prior, 2013; Trail, 2011). The third group are individuals who have a learning disability and are gifted; however, these individuals are predominately known for their disability rather than giftedness (Baum, 1990; Bisland, 2004; Little, 2001).

Each group experiences a form of masking effect, which can vary in the degree of intensity. Some individuals may appear to be average due to the comorbid characteristics of

giftedness and a disability, which can result in these individuals not receiving any services for either need (Trail, 2011). Without proper services, these individual's achievements may decline resulting in underachievement, loss of motivation, or negative labels, such as lazy, being assigned to them by educators (Trail, 2011).

Even though there are concerns about teacher training and detecting the unique needs of twice-exceptional individuals, there are methods available to identify these unique individuals. The two most common methods that have been used to identify twice-exceptional individuals are the discrepancy model and the Response to Intervention model (RtI; McCallum, Bell, Coles, Miller, Hopkins, & Hilton-Prillhart, 2013). Prior to the enactment of Individuals with Disabilities Education Improvement Act (IDEA) in 2004, the discrepancy model was utilized. In this model, an individual's scores on intelligence subtests is compared to their academic achievement scores (Fuchs & Fuchs, 2006; Nielson & Higgins, 2005; Trail, 2011). This method has been referred to as a wait-to-fail method before meeting an individual's needs (McCallum et al., 2013). Trail (2011) noted that students typically have to be two grade levels behind before services are provided. Unfortunately, the discrepancy model does not have a consistency of implementation, definition, and assessment across the United States (Fuchs & Fuchs, 2006). The variations in the discrepancy model results in the misidentification or failure to identify students who need intervention (Fuchs & Fuchs, 2006). IDEA (2004) emphasized, "Schools must not require a substantial score discrepancy" (Postma, Peters, Gilman, & Kearney, 2011, p. 19). Some states removed the use of the discrepancy model and moved to RtI; whereas, other states allow both or either method (Postma et al., 2011).

Response to Intervention was permitted after the enactment of IDEA 2004 (Fuchs & Fuchs, 2006). RtI has been used to assess student abilities in the general education classroom

(Jeweler, Barnes-Robinson, Shevitz, & Weinfeld, 2008; McCallum et al., 2013; Trail, 2011). This method has been used in identifying and assisting twice-exceptional students (McCallum et al., 2013; Trail, 2011). While it does not identify all aspects of giftedness with disabilities (Berninger & Abbott, 2013), it does increase the response time in which students receive interventions (Trail, 2011).

Despite the increase in response time, RtI has drawbacks. Twice-exceptional children can go unidentified due to masking effects, which causes their work appear average even though there exists a discrepancy between their ability level and performance level (Crepeau-Hobson & Bianco, 2011; Postma et al., 2011). Thus, RtI, which was designed for identifying struggling learners, would not be effective in identifying these students because of their perceived average performance (Crepeau-Hobson & Bianco, 2011; Postma et al., 2011). Advocates of RtI, who also acknowledge the drawbacks, recommend using RtI in combination with other models such as the discrepancy model, even though this method also has its critics, (Postma et al., 2011; Restori, Gresham, & Cook, 2008) or with a comprehensive multidisciplinary evaluation (Crepeau-Hobson & Bianco, 2011).

Implications of Gifted Education Policies

The recognized need for providing education to gifted individuals within a culture dates back to the times of ancient Athens and ancient Sparta (Davis et al., 2011; Plucker & Callahan, 2014; Tannenbaum, 2000). In 1931, the United States federal government acknowledged the needs of gifted individuals (Jolly & Robins, 2016). In 1950, the federal government first provided a form of gifted funding through the National Science Foundation Act (Jolly & Robins, 2016). The Jacob K. Javits Gifted and Talented Students Education Act (P.L. 100-297) was passed in 1988 to provide funding for the National Research Center on Gifted and Talented and

education programs throughout the United States (Davis et al., 2011). However, federal funding for gifted education has been inconsistent (Clark, 2013; Jolly & Robins, 2016; Plucker & Callahan, 2014). Erratic federal and state funding leads to inconsistent availability of gifted education programs in public schools (Young & Balli, 2014). The inconsistent availability of gifted education programs is also related to the requirements for gifted education in individual states (Clark, 2013), and the location of the schools (Kettler, Russell, & Puryear, 2015).

During national, state, and local budget crises, gifted programs are one of the first programs to be considered for reductions or closures (Clark, 2013). According to the National Center for Education Statistics (2016), there were over 3.1 million students enrolled in gifted and talented education programs in the United States. Gifted education programs should provide a safe environment for gifted and twice-exceptional students to study and interact with their intellectual peers. A meta-analysis of 26 studies revealed that gifted students benefited from gifted education programs both academically and socioemotionally (Kim, 2016). Concerns about budget cuts have risen again as a new education budget is being considered. Gifted advocacy groups are concerned about the removal of gifted education funding within the United States (NAGC, personal communication, March 24, 2017). Advocacy groups have been working to ensure that gifted programs are provided in public schools (Leggett et al., 2010).

Twice-exceptional students present a concern for educators. Due to their dual-exceptionalities, these students' giftedness or disability may be masked by the other exceptionalities (Prior, 2013). Wood (2012) noted that twice-exceptional students could be misidentified as having a behavioral disorder such as Attention Deficit Hyperactivity Disorder (ADHD). Twice-exceptional students need unique instructional methods and aids within the classroom due to their unique abilities, which may or may not be identified (Siegle et al., 2016).

Advocacy efforts are being made to ensure that state and federal policies are enacted to provide services to these students (Leggett et al., 2010; Roberts, Pereira, & Knotts, 2015).

Gifted education is not an aspect of special education per IDEA (2004). There has been no federal mandate to identify and provide education for gifted individuals (Zirkel, 2016). The Jacob K. Javits Gifted and Talented Students Education Act (2011) has been the federal funding for gifted education but there have been irregularities in its implementation and funding (Sternberg, 1996; Zirkel, 2016). The Every Student Succeeds Act (ESSA, 2015) incorporated the Javits Act into federal funding for gifted programs (Zirkel, 2016). IDEA (2004) provides federal mandates to identify and provide education for twice-exceptional children (Zirkel, 2016). However, IDEA (2004) does make grant funds available for projects relating to gifted individuals (Individuals with Disabilities Education Act, 2004). Further, special education advocacy groups, such as the Council for Exceptional Children (CEC), advocate for the needs of gifted and twice-exceptional students (Council for Exceptional Children, 2017)

Despite the long-term acknowledgement of individuals with abilities above their peers, gifted education still has critics worldwide (Jewell, 2005; Sak, Ayas, Sezerel, Öpengin, Özdemir, & Gürbüz, 2015; Yeung, 2012). Gifted education in Turkey faces criticism and opposition (Sak et al., 2015). In Australia, critics have called gifted education undemocratic, inequitable, and eugenic (Jewell, 2005). The critics of Australia's gifted education policies are group- and division-based rather than individual based in which they argue that it is undemocratic to create policies based on groups of individuals (Jewell, 2005). The belief that gifted education is inequitable derives from the idea that gifted individuals are already advantaged over others and educational programs should be identical for all students (Jewell, 2005). The idea that gifted education is a eugenic ploy is highly improbable based on the suppositions of gifted education

(Jewell, 2005). Experts in the field do not have a consensus as to the cause of giftedness and the debate between nature and nurture remains a topic among researchers (Jewell, 2005).

In the United States, gifted education has been referred to as being inequitable and a sign of inequality (Yeung, 2012). Equity concerns from critics demand that all students be educated in the same manner; however, proponents of gifted education note that equity is not about providing identical educational programs but programs that meet the needs of the individuals (Clark, 2013; Dai, 2013; Gallagher, 2003). When school districts removed gifted education programs based on equity concerns, parents who had financial means removed their children from public education to enroll them in private education (Cross, 2013). Cross (2013) argued that gifted education is unequal because of the socioeconomic divisions among school districts and that the traditional identification methods do not allow for difference among cultures preventing many minorities from being properly identified as gifted. The concern about access to gifted education programs due to variations in funding has been supported in recent research (Kettler et al., 2015; Yeung, 2012; Young & Balli, 2014).

The lack of access has caused parents to take proactive action. Parents have been compelled to advocate for the needs of their gifted and twice-exceptional children (Jolly et al., 2012; Leggett et al., 2010). If the parents are not able to obtain the appropriate level of accommodation for their children, they either remain in an unsatisfying situation (Roberts et al., 2015) or they will choose an alternative education plan. Researchers (Delisle, 2006; Jolly & Matthews, 2012; Jolly et al., 2012) have noted parents are choosing to homeschool their gifted or twice-exceptional children when schools are unable or unwilling to meet their child's needs.

Brief History of Homeschooling

The beginning of homeschooling has been debated. Some believe it began centuries ago, while others believe that homeschooling is a modern phenomenon. "The homeschooling movement is about as recent an invention as oxygen; it has been around, informally or formally, since parents and children began" (Delisle, 2006, pp. 272-273). Prior to compulsory education, children were taught domestic skills, business practices, trades, and crafts by their parents (Hanna, 2012; Jolly et al., 2012; Murphy, 2013). The modern form of homeschooling began as a rebellion led by the political left during the 1960s and 1970s (Jolly et al., 2012). In the 1980s, Christians became the dominant population of the homeschooling movement due to widespread concerns about providing an education that centered on Christian values and the lack of accessible options for many families (Gaither, 2008; Jolly et al., 2012; Murphy, 2013). Today, homeschooling is a more heterogeneous population, in which there is a growth in minorities and families from differing religious or non-religious backgrounds choosing to homeschool their children (Kunzman & Gaither, 2013; Rothermel, 2003). Homeschooling has continuously grown in the United States and has become a popular education option for many parents looking to educate their children in a safe environment, provide religious instruction, or offer an education that best meets the needs of their children (Kunzman & Gaither, 2013). Homeschooled children excel academically, have strong socioemotional skills, and develop into competent members of society (Kunzman & Gaither, 2013; Medlin, 2013; Murphy, 2014; Ray, 2013).

Despite the growth and interest in homeschooling, critics argue that homeschooling is not in the best interest of the child, nor is it in the best interest of the state (Kunzman & Gaither, 2013; Murphy, 2013; Ray, 2013). "Neither parents, nor the state, nor the child ought to be permitted to exercise sole authority over the education of children" (Reich, 2008, p. 17). Many

critics of homeschool believe that homeschooling should be regulated by the state and parents should be certified teachers (Kunzman & Gaither, 2013). Some believe that the religious aspect of homeschool is a threat to the common good and children must be exposed to other ideologies beyond the scope of their familial beliefs (Kunzman & Gaither, 2013). Ray (2013) stated that these arguments lack empirical evidence and are presented based on philosophical concerns. Reich (2008) also acknowledged the assumption that differing views of homeschooling are philosophical in nature.

Homeschooling is legal in all 50 states. However, the legal requirements to homeschool within the United States varies greatly. Parents are required to provide annual notification in 29 states and Washington D.C.; one-time notification in 10 states; and 11 states require no notification, as seen in Table 1 below (Coalition for Responsible Home Education, 2017a; Homeschool Legal Defense Association, 2017a; Karinen, 2016).

Table 1

Homeschool Notification

Annual Notification	One-time Notification	No Notification
Arkansas	Alabama	Alaska
California	Arizona	Connecticut
Colorado	Florida	Idaho
Delaware	Hawaii	Illinois
Georgia	Kansas	Indiana
Kentucky	Maine	Iowa
Louisiana	North Carolina	Michigan
Maryland	Nevada	Missouri

Massachusetts	Oregon	New Jersey
Minnesota	Utah	Oklahoma
Mississippi		Texas
Montana		
Nebraska		
New Hampshire		
New Mexico		
New York		
North Dakota		
Ohio		
Pennsylvania		
Rhoda Island		
South Carolina		
South Dakota		
Tennessee		
Vermont		
Virginia		
Washington		
West Virginia		
Wisconsin		
Wyoming		

The parental educational requirement for parents to homeschool in each state also varies. Parents are not required to have a minimum educational requirement in 39 states, as seen in Table 2 below. Of these, only California, Kansas, and New York require the parents to be competent and able to teach (Coalition for Responsible Home Education, 2017b; Karinen, 2016). Parental requirements in 10 states (see Table 2) and Washington D.C. require a high school diploma or GED (Coalition for Responsible Home Education, 2017b; Karinen, 2016). Washington state requires parents to have some college education or complete a course pertaining to home-based study (Coalition for Responsible Home Education, 2017b; Karinen, 2016).

Table 2

Parent Education Requirements

No Education Requirements	High School Diploma or GED Required
Alabama	Georgia
Alaska	New Mexico
Arizona	North Carolina
Arkansas	North Dakota
California	Ohio
Colorado	Pennsylvania
Connecticut	South Carolina
Delaware	Tennessee
Florida	Virginia
Hawaii	West Virginia
Idaho	

Indiana

Illinois

Iowa

Kansas

Kentucky

Louisiana

Maine

Maryland

Massachusetts

Michigan

Minnesota

Mississippi

Missouri

Montana

Nebraska

Nevada

New Hampshire

New Jersey

New York

Oklahoma

Oregon

Rhode Island

South Dakota

Texas

Utah

Vermont

Wisconsin

Wyoming

Demographics. The current population of homeschooling families around the world demonstrates homeschoolers are a highly diverse population with individuals representing different religious, political, ideological, and socioeconomic backgrounds (Kunzman & Gaither, 2013; Murphy, 2013; Rothermel, 2003). In 2012, there were over two million homeschooled children in the United States (Ray, 2016). A survey conducted by the National Center for Education Statistics in 2012 found that 3% of respondents were homeschooled (Redford, Battle, & Bielick, 2017). Of the respondents, 83% were Caucasian, 7% were is Hispanic, 5% were Black, and 2% were Pacific Islander or Asian (Redford et al., 2017). The percentage of Black families choosing to homeschool has approximately doubled between 1999 and 2012 (Ray, 2015).

Redford et al. (2017) found that the majority (41%) of homeschooling families were located in rural areas, followed by suburban areas (28%), cities (21%), and towns (10%). The education levels of parents demonstrated that 32% had vocational training or some college education, 26% had a bachelor's degree, 23% of homeschooling parents had at least a high school degree, 18% possessed a graduate degree, and only 2% had less than a high school education (Redford et al., 2017). This data demonstrated the majority of homeschooling parents have had some form of post-secondary education.

While the origins of modern homeschooling began with political and religious motivations, parents are increasingly choosing to homeschool for other reasons. Redford et al. (2017) noted that 91% of survey respondents stated they chose to homeschool due to environmental concerns within schools, such as access to drugs, safety concerns, and negative peer pressure. Families from ethnic, racial, and religious minorities chose to homeschool due to dissatisfaction with public schools (Kunzman & Gaither, 2013). In a study of the motivations of African American parents who chose homeschooling as the education option for their children, it was found that the majority (96.3%) of families chose to homeschool based on religious or moral instruction (Ray, 2015).

Research indicates that parents have a strong sense of self-efficacy for homeschooling their children (Bell et al., 2016; Green & Hoover-Dempsey, 2007; Ice & Hoover-Dempsey, 2010). Parents' self-efficacy for helping children learn is stronger in homeschooling parents than public school parents (Green & Hoover-Dempsey, 2007; Ice & Hoover-Dempsey, 2010). Homeschooling parents believe they are capable of teaching and finding the necessary resources for educating their children (Bell et al., 2016; Green & Hoover-Dempsey, 2007; Ice & Hoover-Dempsey, 2010). Parents of gifted children also expressed that they knew what is best for their child's educational needs (Jolly et al., 2012).

Homeschooling methods. Homeschooling methods, also known as a homeschooling style or approach, vary greatly among homeschoolers; often the method is connected with curricula and instructional methods (Carpenter & Gann, 2016; Duffy, 2012; Rivero, 2007). The various methods outlined here are not comprehensive, but provides an overview of the most common types of homeschooling methods found in literature for the potential homeschooler (Duffy, 2012; Suarez & Suarez, 2006). The most common forms of homeschooling methods are

traditional, classical, Charlotte Mason, unit-study, unschooling, independent study, eclectic, and umbrella programs (Davis, 2011; Duff, 2012; Ripperger-Suhler, 2016; Suarez & Suarez, 2006).

The traditional method of homeschooling resembles traditional education classrooms which centers on a structured schedule for subjects (Duffy, 2012; Igarashi & Allen, 2006). This has been referred to as school-at-home (Duffy, 2012; Levison, 2006; Ripperger-Suhler, 2016). Each subject is distinct from another subject with its own textbook and/or workbook (Duff, 2012; Ripperger-Suhler, 2016). Duffy (2012) explained that this method of homeschooling provides parents with a "sense of security while helping establish routines and teaching methods" (p. 12).

The classical method of homeschooling uses a structure that is based on education derived from ancient Greek and Roman educational methods and was utilized during the Middle Ages (Bauer & Wise, 2016; Duffy, 2012; Rivero, 2007). The foundation of the classical method is the trivium (Bauer & Wise, 2016; Duffy, 2012; Miller, 2006; Rivero, 2007). The trivium is comprised of three stages of learning: grammar, the basic structure and knowledge of a subject; logic, also known as dialectic, which focuses on analyzing information; and rhetoric, during which individuals assimilate knowledge and present it through written or verbal expression with advanced skill (Bauer & Wise, 2016; Duffy, 2012; Miller, 2006; Rivero, 2007; Sherfinski, 2014). The classical method incorporates the reading and discussion of literature for Socratic discussion (Bauer & Wise, 2016; Duffy, 2012). The study of Latin and Greek can also be found within the classical education method (Bauer & Wise, 2016; Duffy, 2012; Hahn, 2012; Rivero, 2007).

The Charlotte Mason method, derived from the name of the English educator who created the method, was developed in the late 1800s to early 1900s (Andreola, 1998; Duffy, 2012; Levison, 2006). This method focuses on developing a love of learning through the child's

natural curiosity and desire to learn, which is not to be confused with unschooling (Andreola, 1998; Duffy, 2012). Mason advocated for quality literature, shorter lessons, spending time in nature, narration, imagination, and self-discipline and good habits (Andreola, 1998; Duffy, 2012; Levison, 2006).

Unit studies blend one or multiple subjects under one thematic unit (Duffy, 2012; Hulcy, 2006; Rivero, 2007). The subject that is usually not included in unit studies is mathematics (Duffy, 2012). Those who promote unit studies as a homeschooling method believe that children are better able to understand the learning objectives better through subject integration (Duffy, 2012). Unit studies do not use textbooks, but use a variety of resources to provide a literature-based or multi-sensory approach to learning (Duffy, 2012; Rivero, 2007). The appeal of using a unit study is that it can be differentiated for differing ages or education levels within the homeschool setting and that it offers flexibility to work around a family's schedule (Duffy, 2012; Hulcy, 2006; Rivero, 2007).

Unschooling, a term developed by John Holt (Duffy, 2012; McMillin, 2012), occurs when children are given the opportunity to follow their interests as the primary method of education (Duffy, 2012; Griffith, 1998; McMillin, 2012; Ripperger-Suhler, 2016). According to Duffy (2012), "A true unschooler would allow a child to determine what, when, how, and even 'if' a child leans anything" (Duffy, 2012, p. 18). These individuals have been defined as radical unschoolers (Griffith, 1998). However, many unschoolers seek their child's opinions and interest for guiding their education; thus, allowing the child to direct the timing and depth of learning (Duffy, 2012). These families have been referred to as relaxed homeschooling rather than unschooling (Duffy, 2012).

Independent study, as defined by Duffy (2012), utilizes materials that would be considered more traditional but is formatted to be a self-paced program. In this method, the parent does little teaching and is best suited for self-directed learners (Duffy, 2012). This approach is infrequently used with elementary and middle school age students but works well with high school students (Carpenter & Gann, 2016; Duffy, 2012).

The eclectic method of homeschooling involves families combining different methods and philosophies of homeschooling to meet the needs of the family and children (Davis, 2011; Duffy, 2012). It is not uncommon for families to integrate philosophies that are in opposition to one another (Carpenter & Gann, 2016; Duffy, 2012). This method does place more responsibility on the parents in finding and choosing the appropriate curricula, instructional methods, and structure that best fits the needs of everyone involved (Duffy, 2012).

Umbrella programs are defined as "distant learning programs that have a preset curriculum with only a few possible options" (Duffy, 2012, p. 20). Students may enroll in these full-time, part-time, or only specific classes depending on the structure of the school (Potts & Potts, 2017). Online schools and classes are growing rapidly; many are catering to specific needs or interest (Potts & Potts, 2017; Rivero, 2007). These include online private, charter, and public school, computerized or CD-ROM based curriculum, courses offered by universities, or correspondence options (Davis, 2011; Duffy, 2012; Rivero, 2007). It should be noted that the Homeschool Legal Defense Association (HSLDA; Homeschool Legal Defense Association, 2017b), a homeschool advocacy group, does not recognize online public school as a homeschool method but rather a home-based method of public school. This stance is also supported by Ray (2013), who is a well-known homeschool researcher.

International Homeschooling

Homeschooling is not a phenomenon found only in the United States. Homeschooling is growing internationally (Kunzman & Gaither, 2013). In Canada, homeschooling has been legal for about 40 years (Lagos, 2012). Approximately 1% of school-age children are homeschooled in Canada (Davies & Aurini, 2003; Kunzman & Gaither, 2013). Australia's homeschool policy is regulated by the government and faces continual changes (Kunzman & Gaither, 2013; Liberto, 2016). Israel legalized homeschooling 20 years ago (Neuman & Guterman, 2016a). Today, there are approximately 400 families homeschooling in Israel (Neuman & Guterman, 2016a). South Africa has also experienced an increase in homeschooling interest (de Waal & Theron, 2003; Kunzman & Gaither, 2013).

The United Kingdom has limited regulation of homeschooling (Rothermel, 2003). Homeschooling is considered to be an alternative education option (Kraftl, 2013). The estimated number of homeschooling families in the United Kingdom has been debated. It has been estimated that there are between 50,000-150,000 homeschool families (Kraftl, 2013). Research estimates suggest that 1.5% of school-age children in the United Kingdom are homeschooled (Jones, 2013). Families of gifted children are choosing to homeschool based on the lack of educational supports within the government schools (Winstanley, 2009).

In Asia, homeschooling is also becoming a legal education option. In Thailand, homeschooling gained legal status in 2000 and is becoming an increasingly popular option (Chansaengsee et al., 2017). In Malaysia, homeschooling was unregulated until 2003 (Kim-Soon, Ahmad, Sulaiman, & Sirisa, 2015). Since the regulation, those who wish to homeschool must gain consent from the Ministry of Education; there are an estimated 5,000 homeschooling families in Malaysia (Kim-Soon et al., 2015). South Korea and Taiwan have witnessed an

increase in homeschooling families (Kunzman & Gaither, 2013). Families in multiple countries have indicated that homeschooling offers the flexibility in educating their children (Kunzman & Gaither, 2013).

Homeschool Education Processes

As previously mentioned, research established homeschooling as a viable education option (Murphy, 2013). Children who are homeschooled have high academic achievement (Ray, 2013). Reports also noted that homeschooled children outscore their traditionally schooled peers (Kunzman & Gaither, 2013; Ray, 2013). Medlin (2013) concluded that based on over 30 years of research homeschoolers do not suffer from adverse socialization factors. Rather, homeschoolers have outscored their traditionally schooled peers on social skills measures, have easier college adjustment rates, and are less likely to partake in anti-social behaviors (Drenovsky & Cohen, 2012; Medlin, 2013; Rothermel, 2012; Thomson & Jang, 2016). Researchers (Bannier, 2007; Howell, 2013) call for research to move away from studying the validity of the homeschooling to studying how homeschooling families have been successful in providing a more than adequate education for their children.

Homeschool families have stated that homeschooling allows for the customization of education for each child (Jolly et al., 2012; Ray, 2002). Customization has been recognized by researchers and federal policies, such as IDEA (2004), as essential to ensure that students receive an education plan that best fits their needs (Yell, 2017). This customization occurs in the homeschool setting through the curriculum and instructional methods implemented (Anthony & Burroughs, 2012; Bell et al., 2016; Carpenter & Gann, 2016; Jolly et al., 2012; Liberto, 2016; Mazama, 2015; Neuman & Guterman, 2016a; Pannone, 2014; Thomas, 2016a, 2016b). Additionally, the homeschool setting can vary in structure based on the specific needs of the

families and children and homeschooling method chosen (Anthony & Burroughs, 2012; Bell et al., 2016; Carpenter & Gann, 2016; Johnson, 2014; Jolly et al., 2012; Jones, 2013; Liberto, 2016; Mazama, 2015; Neuman & Guterman, 2016a; Thomas, 2016a).

Homeschool curriculum. Homeschool families must choose their own curriculum for educating their children. Homeschool laws in each state determine the subject requirements that must be taught. Fourteen states do not have any subject requirements (see Table 3; Coalition for Responsible Home Education, 2017c). Seven states require equivalent instruction to what is taught in public schools (Coalition for Responsible Home Education, 2017c). South Dakota only requires instruction in language arts and math (Coalition for Responsible Home Education, 2017c). The subject requirements of Kentucky, Rhode Island, and Texas consist of language arts, math, and social studies (Coalition for Responsible Home Education, 2017c). Ten states mandate instruction in language arts, math, social studies, and science (Coalition for Responsible Home Education, 2017c). The homeschool laws of Nebraska and Wisconsin require instruction in language arts, math, social studies, science, and physical education/health (Coalition for Responsible Home Education, 2017c). Seven states have subject requirements of language arts, math, social studies, science, physical education/health, and fine arts (Coalition for Responsible Home Education, 2017c). Washington state requires instruction in language arts, math, social studies, science, physical education/health, fine arts, and technology (Coalition for Responsible Home Education, 2017c). California, New York, and North Dakota have the most subject requirements of all 50 states by expanding the requirements of Washington state to include foreign language (Coalition for Responsible Home Education, 2017c). Washington D.C. requires instruction in language arts, mathematics, science, social studies, art, music, health, and physical education (Homeschool Legal Defense Association, 2017c).

Table 3

State Requirements

State	Language Arts	Math	Social Studies	Science	Physical Education Health	Fine Arts	Technology	Foreign Language
California	X	X	X	X	X	X	X	X
New York	X	X	X	X	X	X	X	X
North Dakota	X	X	X	X	X	X	X	X
Washington	X	X	X	X	X	X	X	
Illinois	X	X	X	X	X	X		
Maryland	X	X	X	X	X	X		
Minnesota	X	X	X	X	X	X		
New Hampshire	X	X	X	X	X	X		
Ohio	X	X	X	X	X	X		
Pennsylvania	X	X	X	X	X	X		
Vermont	X	X	X	X	X	X		
Nebraska	X	X	X	X	X			
Wisconsin	X	X	X	X	X			
Arizona	X	X	X	X				
Colorado	X	X	X	X				
Georgia	X	X	X	X				
Iowa	X	X	X	X				
Michigan	X	X	X	X				
Missouri	X	X	X	X				

Nevada	X	X	X	X
New Mexico	X	X	X	X
South Carolina	X	X	X	X
Wyoming	X	X	X	X
Kentucky	X	X	X	
Rhode Island	X	X	X	
Texas	X	X	X	
South Dakota	X	X		
Alabama				
Alaska				
Delaware				
Florida				
Idaho				
Indiana				
Kansas				
Louisiana				
Maine				
Massachusetts				
Mississippi				
Montana				
New Jersey				
North Carolina				

Oklahoma

Oregon

Tennessee

Utah

Virginia

West Virginia

Ray (n.d.) noted that homeschooling is not funded by the government within the United States. The financial burden to purchase curriculum becomes the responsibility of the parents (Jolly et al., 2012). Some states, such as Pennsylvania, school districts allow homeschoolers access to textbooks from local public schools (Hanna, 2012). This is not the case in many states. For the purposes of this study, online public and charter schools in the United States were excluded because they are publicly funded and staffed by state licensed educators.

Homeschooling families choose the curriculum based on several factors. Faith has been a motivator for choosing to homeschool for several decades. As such, faith and religious beliefs are a guiding factor in choosing homeschool curriculum (Anthony & Burroughs, 2012; Hanna, 2012; Kunzman & Gaither, 2013; Pannone, 2014; Thomas, 2016a, 2016b). Repeatedly, research has documented that the flexibility of homeschooling allows the curricula to reflect the interest of the child (Bell et al., 2016; Hanna, 2012; Jolly et al., 2012; Jones, 2013; Kunzman & Gaither, 2013; Liberto, 2016; Pannone, 2014). Research also demonstrates that parents choose curricula based on their goals for their children (Mazama, 2015; Pannone, 2014; Thomas, 2016a). Homeschool families may use a prepackaged homeschool curriculum in the beginning, but families choose a more eclectic method as they gain experience or the curriculum requires a change (Hanna, 2012; Kunzman & Gaither, 2013; Pannone, 2014).

Families also seek curricula based on the recommendations of others (Pannone, 2014) or based on involvement with a homeschool cooperative involvement (Anthony & Burroughs, 2012; Mazama, 2015; Pannone, 2014; Thomas, 2016a, 2016b). Homeschooling parents actively seek out others to gain recommendations through the use of the internet (Carpenter & Gann, 2016; Mazama, 2015; Jolly & Matthews, 2017). Homeschool cooperatives, which for the purposes of this study are classified as an instructional practice, may provide a suggested curriculum for all subjects or may be interest-based cooperatives (Anthony & Burroughs, 2012; Carpenter & Gann, 2016; Hanna, 2012; Kunzman & Gaither, 2013; Mazama, 2015). According to Anthony and Burroughs (2012), families may use the same curricula at the cooperative, but the way it is implemented, if at all, at home can vary greatly.

Homeschool instructional methods. Another aspect of the learning experience for homeschooling families includes the instructional methods that parents implement. Homeschool families integrate multiple modalities of instructional methods (Carpenter & Gann, 2016). These practices include the use of cooperatives, online classes, and community resources (Anthony & Burroughs, 2012; Carpenter & Gann, 2016; Hanna, 2012; Kunzman & Gaither, 2013; Mazama, 2015; Thomas, 2016a, 2016b).

Homeschool cooperatives are environments in which families come together for shared learning experiences and are usually taught by a parent (Carpenter & Gann, 2016; Kunzman & Gaither, 2013; Thomas, 2016a). These cooperatives may be informal with differing schedules and curriculum or they may be formal with a set curriculum and meeting schedule (Anthony & Burroughs, 2012; Carpenter & Gann, 2016). Cooperatives may be a location-specific group of individuals (Kunzman & Gaither, 2013) or cooperatives may be part of a larger network of homeschool cooperatives (Anthony & Burroughs, 2012).

Online classes, also known as virtual classes, have become a popular option among homeschooling families (Hanna, 2012). When parents are unable to teach a subject or they are having a challenging time with a child, online classes provide an alternative option (Pannone, 2014). Online classes are available for an entire school curriculum or for specialized subjects with the ability to work at one's own pace or with a set schedule for assignments (Carpenter & Gann, 2016). Online classes are offered in multiple formats such as a full-time virtual public school and virtual private school, part-time virtual private school, or individually paid virtual courses.

For the purpose of this study, homeschooling must have been parent-directed and parent-funded. In the full-time online public and private schools, the curriculum is predetermined by the school. Virtual public schools receive public funds (Connections Academy, 2017; K12, 2017). These virtual schools also employ state-licensed educators (Connections Academy, 2017; K12, 2017). However, in part-time virtual private school and individual virtual courses, homeschooling parents are able to choose what courses their child takes and when these courses are taken.

Researchers also report that homeschooling families use tutors for their children (Bell et al., 2016; Jolly et al., 2012; Mazama, 2015; Pannone, 2014; Thomas, 2016a, 2016b). Tutors have been used for core curricular courses such as advanced math (Carpenter & Gann, 2016; Thomas, 2016b). Some families hire tutors for foreign languages, such as Spanish or French, (Jolly et al., 2012; Thomas, 2016b) or ancient languages, such as Latin and Greek (Thomas, 2016a). Mazama (2015) found that homeschooling families use tutors for music and visual arts. Furthermore, families whose children had a specific learning need hired a tutor to meet those needs such as a tutor who specializes in dyslexia or a speech therapist (Thomas, 2016b).

Additionally, homeschool families have turned to community resources for additional homeschool learning experiences. Research demonstrates that families utilize local libraries to find books to use as part of the curriculum as well as participate in classes provided by the libraries (Hanna, 2012; Mazama, 2015; Pannone, 2014; Thomas, 2016a). Other community resources used by homeschooling families are museums, parks, and field trips (Hanna, 2012; Neuman & Guterman, 2016a; Thomas, 2016a, 2016b).

Homeschool structure. Many researchers stated that there are two types of homeschooling structure: structured and unstructured (Anthony & Burroughs, 2012; Carpenter & Gann, 2016; de Waal & Theron, 2003). The extreme form of structured homeschooling follows a school-at-home model in which a traditional school is modeled in the homeschool environment (Carpenter & Gann, 2016; Kunzman & Gaither, 2013). The extreme form of unstructured homeschooling is unschooling in which children do not have a set curriculum or set time to learn, but learning is child-led and based on the child's interest (Carpenter & Gann, 2016; Liberto, 2016). Studies suggested that when homeschooling families began using a more structured approach, over time they became less structured (Kunzman & Gaither, 2013).

Other researchers have argued that homeschooling structure can vary between structured and unstructured (Jones, 2013; Mazama, 2015; Neuman & Guterman, 2016a; Ray, 2015; Thomas, 2016b). The lines between formal and informal learning often become obscured (Jones, 2013). Jones (2013) suggested that learning structure falls upon a continuum that parents can choose the structure that best meets the needs of their families at that time. Neuman and Guterman (2016a) further corroborated Jones's idea by suggesting that homeschool structure and content are on axes that intersect. Both the structure and the content have the capabilities to be structured, unstructured, or varied (Neuman & Guterman, 2016a).

The flexibility of homeschooling structure allows parents to offer their children choices in their education. Research suggests parents promote an autonomous environment (Bell et al., 2016; Carpenter & Gann, 2016; Jones, 2013). Jones (2013) noted that children ages 7 to 14 had a healthy balance between educational choices and choices made by the parents concerning their child's education. Parents of high schoolers allowed their children the opportunity to set their own schedules and be more self-directed while the parents operated as managers and directors (Carpenter & Gann, 2016). Homeschooled gifted children were not hindered by a set curriculum as found in a traditional school, but the children had the ability to pursue their interest and develop their gifts (Jolly et al., 2012).

The unique nature of homeschooling allows parents the opportunity to create an environment that engages and nurtures the educational experiences of their children. Parents explore and try different methodologies, curriculum, structures, and instructional methods to find the right fit for their children's need (Anthony & Burroughs, 2012; Hanna, 2012; Kunzman & Gaither, 2013; Jolly et al., 2012; Pannone, 2014). Homeschooling has been recognized by researchers as providing an educational experience in which the academic and socioemotional outcomes are equal to or higher than traditionally schooled children (Kunzman & Gaither, 2013; Medlin, 2013; Murphy, 2014; Ray, 2013). As such, this research sought to understand how parents of gifted and twice-exceptional children develop and implement the necessary educational processes that meet the unique need of their child.

Conceptual Framework

Grounded theory seeks to develop a theory to explain a phenomenon when a theory does not exist, explain a phenomenon based on a theory has not been previously considered for the phenomenon, or develop a theory based on aspects of more than one theory (Creswell, 2013).

There has yet to be a theory that explains the educational processes used by families who homeschool their gifted and twice-exceptional children. The purpose of this study was to develop a theory or model to explain this phenomenon.

A theory is comprised of concepts, constructs, and propositions (Anfara & Mertz, 2015). The most basic building blocks of a theory are concepts. These are words assigned to concrete experiences and sensations, which are used to distinguish one event from another (Anfara & Mertz, 2015). Concepts that are related are grouped together to develop a construct, which is "a higher-order unit of thought" (Anfara & Mertz, 2015, p. 3). In grounded theory, constructs are known as categories (Corbin & Strauss, 2015). The final aspect of theory is proposition. Propositions are defined as "expressions of relationship among several constructs" (Anfara & Mertz, 2015, p. 3). Several propositions are incorporated in order to adequately define and explain the relationships among constructs (Anfara & Mertz, 2015). A theory is the composition of these propositions (Anfara & Mertz, 2015). An articulated theory blends details of concepts with the more abstract, higher-order expressions (Corbin & Strauss, 2015).

Anfara and Mertz (2015) cited several researchers (Bentz & Shapiro, 1998; Creswell, 1998; Denzin & Lincoln, 2013; Guba, 1990; Lincoln & Guba, 1985; Maxwell, 1996, 2013; Mills,1993; Ravitch & Riggan, 2012; Schram, 2003) who disagree on the exact implicit or explicit role of theory in research, but agree that qualitative researchers enter the field of research with prior knowledge, experiences, assumptions, and preconceptions. A researcher will be influenced by past knowledge; therefore, he or she must understand how to apply that knowledge (Corbin & Strauss, 2015).

Merriam, Miles, and Huberman (as cited in Anfara & Mertz, 2015) noted that the conceptual framework is "constructed from the theories and experiences the researcher brings to

and draws on in conceptualizing the study" (p. 12). Since the purpose of grounded theory was to develop a theory or model to explain a phenomenon in which no theory exists, a conceptual framework of existing theories was integrated into this study. The conceptual framework included choice theory (Glasser, 1985, 1997, 1998) with influences by aspects of theory of successful intelligence (Sternberg 1988, 2004, 2012) and dynamic skill theory (Fischer, 1980, 2008).

Choice Theory

Choice theory was developed by William Glasser during the 1980s and 1990s (Glasser, 1998; Mottern, 2008). In the 1980s, it was referred to as control theory, but the name was changed in 1996 to reflect the principles that guide the theory (Peterson, 2000). Choice theory posits that individuals cannot control other's actions or behaviors, but the only actions and behaviors that one can control is oneself (Glasser, 1985, 1997, 1998). Choice theory has been utilized in diverse cultural contexts such as Japan, Ireland, South Korea, Australia, and the United Kingdom (Bannigan, 2017; Brickell, 2017; Carelton & Kakitani, 2017; Fleming & Lacy, 2017; Wubbolding & Wubbolding, 2017). Choice theory explains that human behavior is driven by seeking to fulfill the five basic needs which are the building blocks of an individual's ideal mental picture of how one's life should appear. Glasser (1998) referred to this ideal life as the quality world.

Five basic needs. The five basic needs are part of an individual's genetic code which predetermines them for the levels at which these needs must be met (Glasser, 1998; Peterson, 2000). The ability to satisfy these needs will fluctuate throughout a person's lifetime as the person develops (Mottern, 2008). An individual's behaviors are driven by the five basic needs which Glasser defined as survival, love and belonging, freedom, power, and fun (Glasser, 1996,

1998; Mottern, 2008; Peterson, 2000). The need for survival is the physiological need to provide for the body and reproduce (Glasser, 1998; Peterson, 2000). These needs are mostly innate and derive from the portion of the brain that causes involuntary reactions, such as hunger and thirst (Peterson, 2000).

The remaining four needs are psychological in nature. The need for love and belonging is the most essential need that is not innate in nature (Peterson, 2000). Individuals need to have relationships with and feel accepted by others (Glasser, 1996, 1998). The need for freedom refers to one being able to have control over one's life (Peterson, 2000). Freedom is being able "to use creative and problem-solving skills to make choices" (Glasser, 1996, p. 20). The need for power is described as the need to be recognized for one's accomplishments and the ability to implement the choices that one makes (Glasser, 1996, 1998; Peterson, 2000). The final need is the need for fun. Fun is described as the need to derive pleasure from one's actions and work (Glasser, 1998; Peterson, 2000). In the field of education, the need for fun is learning through something that is interesting and motivational (Glasser, 1996).

In the context of homeschooling, four of the five basic needs of children are provided by parents. The survival need is met through the physiological functions of the "old brain" (Peterson, 2000, p. 43), which includes functions such a breathing and regulating blood pressure (Peterson, 2000). The thirst and hunger need are also included in the survival need; these needs are provided for by parents. Homeschooled children have been found to have better diets than traditionally schooled children (Cardel et al., 2014), which indicates that the survival need is being met sufficiently.

The need for love and belonging is nurtured by homeschooling parents' actions in ensuring their children are provided with opportunities to interact with others and develop

friendships outside the home through educational and social gatherings (Carpenter & Gann, 2016; Haugh, 2014; Medlin, 2013; Neuman & Guterman, 2016a). The need for freedom can be found through parents' providing opportunities for greater autonomy and the ability to seek after their interests (Bell et al., 2016; Jolly et al., 2012; Riley, 2015; Thomas, 2016a). The need for power in the homeschool environment can be demonstrated in the homeschooling structure in which children are given a voice about how their activities and learning objectives are scheduled throughout the day (Carpenter & Gann, 2016; Jones, 2013; Liberto, 2016; Neuman & Guterman, 2016a). Just as Glasser (1998) called for education to be fun and interesting, homeschooling families have chosen this method of educating their children in order to meet their children's unique needs while providing an interesting and engaging learning experience (Carpenter & Gann, 2016; Jolly et al, 2012; Jolly & Matthews, 2017; Pannone, 2014; Thomas 2016a).

Quality world. These five needs are the driving force behind actions as they fit into an individual's quality world (Glasser, 1998). The quality world is an individual's mental picture of the ideal qualities and people that make up their ideal world in which they interact. The quality world is how one perceives the ability to have needs met (Peterson, 2000). When the actual world does not match a person's quality world, the individual will find ways to fulfill the ideal needs or will eventually change the ideal quality world (Glasser, 1998; Peterson, 2000).

Though the basic needs are the driving force, they are not the determining factor in one's actions (Mottern, 2008). An individual has the ability to make good or bad choices in fulfilling these needs. A good choice is defined as actions that do not result in harm to the individual or others; whereas, a bad choice is the opposite (Mottern, 2008).

In the realm of education, if an individual suffers repeated or long-term frustration in an educational setting, then that person may choose to remove education or aspects of education

from the ideal quality world (Glasser, 1996, 1998). Choice theory has been used by Glasser to provide suggestions for improvement in traditional school settings (Glasser, 1988, 1989, 1996, 1997, 1998). This theory has not been applied to homeschooling and the educational processes that families implement in the homeschool setting for gifted and twice-exceptional children.

Choice theory may explain why parents seek to provide an educational environment that promotes a positive learning experience for their gifted and twice-exceptional children. Clark (2013) cited Rimm (1997), Cross (1997), and Webb, Gore, Amend, and DeVries (2007) all who stated that nearly 20% of all high school dropouts are gifted. Additionally, research as early as 1980 noted that at least 50% of the "gifted adolescents do not achieve to the level of their tested ability" (Clark, 2013, p. 84). Jolly et al. (2012) explained that parents were concerned that their children's educational progress had stagnated or regressed compared to what was expected based on the gifted identification. This led parents to choose homeschooling as a method to promote a better learning environment.

Theory of Successful Intelligence

The theory of successful intelligence was developed by Robert J. Sternberg (Sternberg, 1988, 2004, 2012). This theory was known as triarchic mind theory due to a three-dimensional view of human intelligence, but was revised with the addition of a fourth skill set, wisdom-based skills (Sternberg, 2012). The original three skill sets are analytical, creative, and practical (Miller, 2011; Sternberg, 1988, 2012). The inclusion of this theory to the conceptual framework helped to understand how intelligence is viewed in differing cultural aspects and how intelligence is applied in specific activities.

Skills sets. The skill sets are the application of intelligence to complete tasks (Miller, 2011). These skills sets are directly related to the subtheories as outlined in the following

subsection. The analytic skill set focuses on abstract judgment and assessment of tasks and situations (Miller, 2011; Sternberg, 2004). The creative skill set is applicable to novel tasks and environments in which a person must use innovative ideas to solve problems (Miller, 2011; Sternberg, 2004). Individuals use practical skills "to execute their ideas and persuade others of the value of those ideas" (Sternberg, 2012, p. 503). Practical skills are also used in adapting, altering, or selecting one's environment (Miller, 2011). The final skill set is wisdom-based skills. Individuals use these skills to ensure that ideas are ethical and beneficial to the common good (Sternberg, 2004).

Subtheories. The theory of successful intelligence is also composed of three subtheories: componential, experiential, and contextual (Miller, 2011; Sternberg, 1988). These subtheories focus on the components of intelligence, how an individual processes information, and the interaction between an individual and the environment. Sternberg (1988) stated that his theory was not meant to vie with other theories of intelligence, rather it was to consider them as differing viewpoints "of a more general theory" (p. 58). The subtheories were used to examine the mental processes utilized by individuals who are gifted or twice-exceptional, how mental processing affects the educational processes implemented in homeschooling gifted and twice-exceptional children, and how individuals, whether parents or children, adapt, shape, or select their environment to meet the specific gifted and twice-exceptional needs (Sternberg, 1988, 2004, 2012).

Componential subtheory. The componential subtheory seeks to illustrate "the relationship of intelligence to the internal world of the individual through the components, or mental processes, involved in thinking" (p. 59). The mental processes are metacomponents, performance, and knowledge-acquisition components (Miller, 2011; Sternberg, 1988).

Metacomponents refer to the executive functions which include the ability to evaluate, plan, and problem-solve (Sternberg, 1988). The performance component works in conjunction with metacomponents to implement chosen strategies (Sternberg, 1988). Knowledge-acquisition is the process by which one learns, gains knowledge, and learns to solve problems (Miller, 2011; Sternberg, 1988). Gifted children have a higher skill level in the knowledge-acquisition component with their abilities to select the most relevant information, compare it to prior knowledge, and apply it in a meaningful way (Miller, 2011).

Experiential subtheory. The experiential subtheory explains that the mental processing components of the componential subtheory are directly related to a person's experiences (Sternberg, 1988). A person's experience is divided into aspects which are novelty and automation (Miller, 2011; Sternberg, 1988). When a person first encounters a task or situation, it is novel and beyond one's experience. However, upon continuous exposure or acquisition of knowledge that can be applied to the task or situation, the novelty is reduced to where automation can occur (Sternberg, 1988). Gifted children are able to automatize new information at a higher rate (Miller, 2011). Twice-exceptional children may or may not have the higher processing and automatization speeds characteristic of gifted children due to the comorbidity of a disability that could affect processing speed (Trail, 2011).

Contextual subtheory. The final subtheory of the theory of successful intelligence is the contextual subtheory (Miller, 2011; Sternberg, 1988). This subtheory focuses on an individual's social and practical behaviors throughout daily living within a cultural context (Miller, 2011; Sternberg, 1988). While there are aspects of intelligence, such as mental processes, that are not culturally bound, application, behaviors, and the very definition of intelligence is culturally bound (Sternberg, 1988, 2004, 2012). "Intelligence understood wholly outside its cultural

context is a mythological construct" (Sternberg, 2004, p. 328). Cultures define intelligence differently based on the daily needs and socially accepted behaviors within the culture (Sternberg, 2004, 2012). In some cultures, contextually important skills may be more highly developed and valued in children than academic skills (Sternberg, 2004). These skills include those needed to participate in daily living and function as members of the respective society (Sternberg, 2004). The international aspect of this study sought to understand how parents of different cultures apply their culturally relevant definition of intelligence to planning and implementing a homeschool education plan for their gifted or twice-exceptional children.

Practical behaviors also include how individuals meet their environmental needs. "Intelligence in everyday life is defined as the purposive adaptation to, selection of, and shaping of real-world environments relevant to one's life and abilities" (Sternberg, 1988, p. 65). A person typically adapts to the environment as a form of self-management (Sternberg, 1988). If an environment does not meet an individual's needs, then that environment may not be suitable for adaptation (Sternberg, 1988). As such, a person will have to alter the environment to fulfill the unmet needs (Miller, 2011; Sternberg, 1988). If this does not prove to be effective or possible, then an intelligent person will select a new environment in order to satisfy needs (Miller, 2011; Sternberg, 1988).

Teacher training, which focuses on giftedness and twice-exceptionalities, are not consistent across the United States (Matthews, Ritchotte, & Jolly, 2014). Research demonstrates that parents often advocate changing the educational environment for their gifted or twice-exceptional children when their children are unable to adapt to their current learning environment (Leggett et al., 2010; Ritchotte & Matthews, 2012; Wiskow et al., 2011). At times,

this requires the parents to educate teachers about the unique needs of twice-exceptional children (Besnoy, Swoszowski, Newman, Floyd, Jones, & Byrne, 2015).

Access to and equity of gifted education programs vary by location (Kettler, 2015). If the schools or teachers are unable or unwilling to meet the needs of a gifted or twice-exceptional child, parents have chosen to find different educational options. Parents may have to opt for changing schools, if it is feasible. If another school setting is not available, parents have chosen to select homeschooling as the new education environment (Clark, 2013; Delisle, 2014; Jolly et al., 2012; Karnes & Marquardt, 2003).

Dynamic Skill Theory

Dynamic skill theory was developed by Kurt Fischer during the 1970s and 1980s and has been refined as new technology has become available (Fischer & Yan, 2002; Miller, 2011). It has been referred to as skill theory (Fischer, 1980) and dynamic skill theory (Miller, 2011). Fischer expanded the work of Piaget's (1896–1980) cognitive development stages to seek and understand the variability in development (Fischer & Yan, 2002; Miller, 2011). This developmental theory states that cognitive development occurs in 10 levels which are divided into three tiers that represent different skill abilities: sensorimotor, representational, and abstract skills (Fischer, 1980, 2008; Rose & Fischer, 2011). The theory also explains the variations in cognitive development and development range of individuals (Fischer, 1980, 2008; Fischer & Yan, 2002; Miller, 2011; Rose & Fischer, 2011). It is these aspects of the theory which were applied to the conceptual framework of this study because they explain the asynchronous development common among gifted and twice-exceptional children (Colangelo & Wood, 2015; Delisle, 2014; Peterson, 2009; Silverman, 1997) and how learning is connected to an individual's cognitive processes and environment.

Cognitive variations. People will experience growth spurts and drops in cognitive development throughout their lifetime (Fischer, 1980, 2008; Fischer & Yan, 2002; Rose & Fischer, 2011). These growths and drops in cognitive development explain the variations of a person's ability (Fischer, 1980, 2008; Rose & Fischer, 2011). Dynamic skills theory highlights the variations among individuals of the same age, similar cultural backgrounds, and the individual differences based on circumstances. The variations can occur in different domains of learning, at different times and locations, and with different individuals present (Rose & Fischer, 2011). Individuals are also highly likely to experience different patterns in the developmental cycle (Fischer, 1980). The variations in development are "the rule, not the exception" (Fischer, 1980, p. 480).

Miller (2011) noted that this theory takes into account the cultural context of an individual. Humans are social by nature. It is in the social and cultural contexts that variations are also noted (Fischer & Yan, 2002). Cognitive functioning is not strictly related to the individual child, but is directly related to the connection between the child and environmental factors (Miller; 2011). The cognitive variations are relevant to this study's focus on the homeschool environment and how parents may potentially create an environment in which their children are able to experience developmental growth.

Developmental range. As noted, variations in cognitive development are considered by Fischer to be the norm (Fischer, 1980; Rose & Fischer, 2011). According to dynamic skills theory, development occurs in a range between functional level and optimum level (Fischer & Yan, 2002; Miller, 2011; Rose & Fischer, 2011). The functional level is achieved when an individual can function independently without support and provides the best performance (Fischer & Yan, 2002; Miller, 2011; Rose & Fischer, 2011). The optimum level occurs when an

individual's performance is at its best with specific support (Miller, 2011; Rose & Fischer, 2011). The levels at which a person operates will change throughout a person's lifetime. An individual will require support in the beginning but will progress to automaticity as one progresses through the levels of development (Fischer, 2008; Rose & Fischer, 2011). "An essential point is that performance is not fixed for an age but instead varies dynamically on contextual support, emotional/motivational state, familiarity, and many other factors" (Rose & Fischer, 2011, p. 160).

The development range provides a developmental explanation to the asynchronous development found among gifted and twice-exceptional children. As noted previously, gifted children are able to reach automaticity at a higher rate than other children (Miller, 2011); whereas, twice-exceptional children may or may not have the higher processing speeds to achieve the faster rate of automaticity. Dynamic skill theory provides an understanding of the level of support needed for gifted and twice-exceptional children to achieve certain academic or talent-based goals within the homeschool environment.

Conceptual Framework Summary

The integration of the aspects of the three theories was important to understanding how parents created a learning environment for their gifted or twice-exceptional children that provided a culturally relevant education meeting the child's unique needs. Choice theory offered an explanation to the basic motivations compelling parents to homeschool their gifted or twice-exceptional children. While choice theory provided a developmental psychology theory driving certain behaviors, it did not provide an explanation for intelligence and cultural relevance needed in the international context of this study.

The theory of successful intelligence provided an understanding that intelligence and behaviors are culturally bound. The componential subtheory explained how individuals utilize mental processes and acquire knowledge. The experiential subtheory described how the mental processes affected automaticity and were related to a person's experiences. An individual's social and practical behaviors were explained through the contextual subtheory. This subtheory described how individuals sought to be in environments that best met their needs. The theory of successful intelligence did not provide an explanation of the basic human needs nor did it explain the variances in human development of individuals who were culturally and chronologically similar.

Dynamic skill theory delineated the cognitive development that individuals progressed through with respect to cognitive variations and ranges of development. This theory provided a rationale for asynchronous development that has been associated with gifted and twice-exceptional children. The cognitive variation offered a justification as to why individuals who are from the same culture and of similar age can have dissimilar cognitive development. Dynamic skill theory, which places an importance on cultural understanding, lacked the necessary definition of intelligence and explanations of human needs.

Choice theory, theory of successful intelligence, and dynamic skill theory are established theories that provided essential components to understand the educational processes implemented by parents who homeschool gifted and twice-exceptional, how these processes were developed, and why parents chose the processes. These theories have been examined in educational settings, but none had been applied to the homeschool setting. A theory did not exist that can fully explain the educational processes implemented by homeschooling parents of gifted

and twice-exceptional children. The three theories outlined here aided in developing a theory and models to explain such.

Summary

Modern homeschooling began in the 1960s and 1970s by individuals from the political left, but during the 1980s, homeschooling was characterized as a Christian method of education (Jolly et al., 2012; Murphy, 2013). Today, homeschooling includes highly diverse populations of varying religions, socioeconomic, racial, and ethnic backgrounds (Kunzman & Gaither, 2013; Ray, 2016; Redford et al., 2017). The growth of homeschooling has spread internationally with some countries having homeschool laws as old as the United States and others only recently providing the legal right to homeschool (Chansaengsee et al., 2017; Kunzman & Gaither, 2013; Lagos, 2012).

Homeschooling has also become an education option for specialized populations, particularly gifted and twice-exceptional children. Education policy changes and inconsistencies over the years have placed gifted education programs in danger of losing funding and closure (Clark, 2013; Jolly & Robins, 2016; Plucker & Callahan, 2014). Additionally, there is no consistency in the implementation and availability of gifted education program across the United States (Young & Balli, 2014). This leaves children with unique needs without specialized education programs designed to meet their needs. Parents have chosen to homeschool their children in order to provide an education when traditional education options have not been able to do so successfully (Delisle, 2006; Jolly & Matthews, 2012; Jolly et al., 2012). However, there is limited empirical research concerning homeschooling the gifted or twice-exceptional (Hanna, 2012; Jolly et al., 2012). A review of the literature revealed there were no existent theories to

explain the educational processes implemented by families who homeschool gifted and twice-exceptional children.

The purpose of this study was to explain the educational processes homeschooling parents implement in educating their gifted or twice-exceptional children. These processes included curricula, instructional methods, and the environmental structure. Research has demonstrated that homeschooling families choose curricula based on faith, education goals, and the child's interest (Hanna, 2012; Pannone, 2014; Thomas, 2016a). Homeschooling families also use a multitude of instructional methods to provide an appropriate and customized education for their children (Carpenter & Gann, 2016; Kunzman & Gaither, 2013). The homeschool environmental structure can range from highly structured to highly unstructured with any degree of variation being implemented by families to meet the needs of their children (Anthony & Burroughs, 2012; Jones, 2013; Kunzman & Gaither, 2013; Neuman & Guterman, 2016a).

A conceptual framework was used to guide this study. The conceptual framework incorporated varying aspects of choice theory (Glasser, 1995, 1997, 1998), theory of successful intelligence (Sternberg, 1988, 2004, 2012), and dynamic skill theory (Fischer, 1980, 2008). Choice theory described how individuals make choices in order to have one of their five basic needs met (Glasser, 1985, 1997, 1998). The theory of successful intelligence was used to explain the mental processes gifted and twice-exceptional individuals undergo, how the mental process affects the homeschool environment, and how individuals adapt, shape, or select their environment to meet the unique needs of the gifted or twice-exceptional (Sternberg, 1988, 2004, 2012). Additionally, the theory of successful intelligence explained how behaviors and intelligence are culturally bound (Sternberg, 1988, 2004, 2012). Dynamic skill theory (Fischer,

1980, 2008) was incorporated into the conceptual framework due to its ability to explain cognitive variations and developmental ranges.

CHAPTER THREE: METHODS

Overview

This chapter provides an overview of the methods that were utilized in the development of the theory and models which explain the educational processes implemented by families who homeschool gifted and twice-exceptional children. The chapter begins by identifying the research design and approach chosen for this study along with the rationale for the choice. This is followed by a description of the research questions and an explanation of the setting as it details the use of cyberspace in order to gain participants at the international level. Next, the participants section provides an outline for the sampling methods and participant criterion. This is followed by an outline of the procedures implemented, the role of the researcher, the data collection methods, and the data analysis procedures. This chapter ends by examining the trustworthiness and the ethical considerations of the study.

Design

The study was conducted using a qualitative method. The objective of qualitative research is to examine, explore, understand, and explain a phenomenon in a way that will strengthen empirical knowledge (Corbin & Strauss, 2015; Creswell, 2013). This research study examined the processes implemented by parents as they homeschool gifted and twice-exceptional children. As such, the qualitative method, which allows for exploration and examination of the fluid and dynamic nature of human interactions and behaviors, was the optimum choice for this study (Corbin & Strauss, 2015; Gall et al., 2007).

The purpose of this study was to develop a theory or model explaining the educational processes implemented by parents who homeschool their gifted and twice-exceptional children; therefore, the appropriate design for this study was grounded theory. Grounded theory examines

the behaviors of individuals of a certain population within a context and endeavors to expand beyond descriptive research in order to develop a theory based within, that is grounded, in the data (Charmaz, 2014; Corbin & Strauss, 2015; Creswell, 2013; McCallin, 2003). Like other qualitative designs, grounded theory provides rich descriptive data, but the analysis includes an explanation of why the phenomenon occurs (Corbin & Strauss, 2015).

There are three versions of grounded theory designs: emerging, systematic, and constructivist (Chong & Yeo, 2015). Glaser's emerging design, also known as classical grounded theory (Bryant & Charmaz, 2007) or Glaserian grounded theory (Walker & Myrick, 2016), more closely follows the original design of grounded theory as written by Glaser and Strauss in the 1960s (Chong & Yeo, 2015; Walker & Myrick, 2016). The systematic design, as outlined by Corbin and Strauss (2015), follows a systematic process with set guidelines and procedures (Chong & Yeo, 2015; Creswell, 2013). Emerging design and systematic design have many similarities; however, the differences between these two theories lies in the procedures and analysis (Walker & Myrick, 2016). Charmaz's constructivist design places an emphasis on the researcher's values and beliefs (Chong & Yeo, 2015). This allows greater flexibility in procedures and subjectivity of the researcher (Charmaz, 2014; Creswell, 2013).

The version of grounded theory I selected for this study was systematic grounded theory as outlined by Corbin and Strauss (2008, 2015). This version was chosen for the structure of the design and ability to incorporate past knowledge into understanding the data (Corbin & Strauss, 2015). As noted by Corbin and Strauss (2015), while some forms of research require the researcher to be objective, the traditional definition of objectivity does not truly apply within the context of qualitative research, but sensitivity, "the ability to carefully listen and respect both participants and the data they provide" (p. 77), should be the aim of researchers.

Grounded theory is unique in its analytical process. While some forms of research require data collection and data analysis occur consecutively, grounded theory requires data collection and data analysis to occur concurrently (Corbin & Strauss, 2015; Creswell, 2013). As data is gathered, the researcher analyzes the information and writes a memo to document the thought process of the analysis and emergent codes (Charmaz, 2014; Corbin & Strauss, 2015; Creswell, 2013). This information is then compared to prior memos in the search for similarities and differences (Charmaz, 2014; Corbin & Strauss, 2015; Creswell, 2013). Then the researcher uses this information to guide further data collection to ensure data saturation has been achieved (Charmaz, 2014; Corbin & Strauss, 2015; Creswell, 2013). The final product of this process is a theory or model which explains the phenomenon being studied (Corbin & Strauss, 2015; Creswell, 2013).

Research Questions

Central Question

What are the educational processes that families implement within the homeschool environment in educating their gifted and twice-exceptional children?

Subquestions

1. How are giftedness and intelligence defined within the families' cultural and/or national context?
2. What is the process implemented by parents choosing to homeschool their gifted and twice-exceptional children?
3. What is the process parents employ when choosing a curriculum?
4. What is the process parents undertake when choosing instructional methods for differing academic disciplines?

5. What is the process parents encounter when determining the structure of the environmental setting based on the development of the child?

Setting

Including the international aspect of homeschooling the gifted, a unique setting in order to gather data was required. The setting was cyberspace, as accessed by participants in their respective countries. The term cyberspace was developed by William Gibson in 1984 for a novel (Whittaker, 2004). Barak (2008) described cyberspace as a phenomenon that has created a "global village" (p. i) allowing for greater international cooperation and collaborations without geographical barriers, which can open access to indigenous cultures.

Cyberspace is depicted as "the 'room' of social interaction and communication that is made possible by the Internet as the technical entity of networked computers and the World Wide Web as one service run on this infrastructure" (Flick, 2014, p. 450). The internet has broken down geographical barriers that would have otherwise prevented researchers from gaining access to such information (Barak, 2008; Flick, 2014; Whittaker, 2004). This setting was chosen for the capabilities to conduct an international study without geographical barriers. Web-based technologies used for this study include applications that allow video conferencing such as Google Hangouts, Skype, Zoom, or WebEx; social media platforms such as Facebook, Twitter, and Instagram; and email.

Since modern homeschooling began in the United States in the 1960s and 1970s and in Canada in 1982 (Jolly et al., 2012; Lagos, 2011), it was anticipated that the largest population of homeschoolers would originate in North America. Homeschooling has become a legal form of education in many countries (Kunzman & Gaither, 2013). There are many opportunities available for homeschoolers to connect internationally via the internet. Cyberspace allowed

greater access to homeschoolers who have an online presence through social media contacts and online homeschooling forums such as Facebook and Gifted Homeschoolers Forum.

The use of cyberspace has been established in grounded theory research across a range of disciplines. Rothaermel and Sugiyama (2001) studied wristwatch hobbyists through a website to develop the relationship of internet communities and commercial success. Reeder, Macfadyen, Roche, and Chase (2004) examined an internet-based course offered to Canadians by a British university to develop a theoretical model for intercultural communication online. Fleischmann (2005) explored websites created by parents of Autistic children to explain how the internet allowed parents to develop relationships with each other and develop a virtual community. Grounded theory has also been used to explore social media settings. Moore, Magee, Gamreklidze, and Kowalewski (2017) conducted research through social media to understand how social media mourning affects the bereavement process.

Participants

The proposed sample population for this study was homeschooling parents of gifted or twice-exceptional children within and outside the United States who had access to internet-based technologies. The recommended sample size for grounded theory is 12-30 participants (Charmaz, 2014; Creswell, 2013). However, more participants might have been required in order to reach theoretical saturation. The sampling procedures utilized were theoretical sampling, convenience sampling, internet-based snowball sampling, and web-based respondent driven sampling.

Sampling Procedures

Theoretical sampling guided the research based on the concepts that unfolded during data analysis (Corbin & Strauss, 2015). Initial sampling procedures to gain potential participants

were based on convenience sampling merged with internet-based snowball sampling and web-based respondent driven sampling (RDS). Convenience sampling is the process of selecting a sample that is convenient to the researcher for the purpose of the study (Gall et al., 2007). The use of convenience sampling was the beginning step to gaining participants through my personal contacts and contacts with homeschool associations for general homeschooling and gifted homeschooling. This was followed by internet-based snowball sampling and web-based respondent driven sampling.

Snowball sampling is traditionally used when the researcher asks participants for recommendations for potential participants, usually in person or over the phone (Creswell, 2013; Gall et al., 2007). Internet-based snowball sampling follows the same procedures for traditional snowball sampling. The difference between traditional and internet-based is based on the communication device, such as a computer, smartphone, or tablet, used to gather recommendations. Hogan (2008), in referencing social media based research, stated that internet-based snowball sampling is easier to conduct than in person.

Snowball sampling and RDS are not to be confused. Both sampling methods are very similar in the reliance of conscription of others for the purpose of data collection (Daniel, 2012). The difference between these two procedures is in snowball sampling a current participant provides the researcher with contact information of a potential participant; however, RDS requires the current participant recruit approximately two to three potential participants (Daniel, 2012). WebRDS is an internet-based version of RDS (Wejnert & Heckathorn, 2008). Studies have demonstrated WedRDS can be implemented to gather participants by recruiting others from social media sites with higher participation rates and faster recruitment rates (Arayasirikul, Chen, Jin, & Wilson, 2016; Hildebrand et al., 2015). This is usually conducted by the sharing of the

research study with potential participants through the current participant without the researcher gaining knowledge of the potential participants' contact information (Daniel, 2012).

WebRDS does not have the potential ethical issues that could be found in snowball sampling (Daniel, 2012). As stated, snowball sampling required personal contact information to be given to the research by a secondary party, which could create an ethical concern should the recommended participant not want to be known. WebRDS removed this ethical concern of the researcher because the researcher was removed from gaining knowledge of potential participants who may or may not want to be known (Daniel, 2012).

Recruitment Through Social Media

The sharing of information through internet-based methods was conducted through simple clicks of a sharing button on social media. Zingale (2013) noted that social media has developed into a social construct allowing individuals to communicate more readily "at a scale not available with other forms of communication and involvement and, in many cases, without a hierarchical filter" (p. 296) and individuals share information based on their reflective judgement. Individuals, who use social networks, post content on the Web and anticipate feedback, "oftentimes to begin a conversation or simply share a piece of the world with others, they are looking for how their world is the same and different from others" (Zingale, 2013, p. 296). Jolly and Matthews (2017) found that homeschooling mothers of gifted children often blog as a means of self-expression, to develop social interaction, exchange information, develop and maintain a virtual community, and to record and share life events.

The number of social media users has risen significantly in recent years. In 2005, 6% of individuals ages 30-49 used social media compared with 80% in 2016 (Pew Research Center, 2017). In 2005, only 7% of individuals ages 18-29 used social media compared with 86% in

2016 (Pew Research Center, 2017). Social media users for age groups 50-64 and 65 and over were 4% and 3%, respectively, in 2005, which grew to 64% and 34%, respectively, in 2016 (Pew Research Center, 2017). According to the Martin, Hamilton, Osterman, Driscoll, and Mathews (2015), the mean age for women having their first child is 26.4 years. This placed potential participants with school age children within the two age groups with the highest social media usage.

Given the proliferation of social media, convenient sampling, snowball sampling, and respondent-driven sampling may occur rapidly; thus, blurring the lines of varied sampling techniques. The rationale for using these combined methods was recruitment was internet-based through online communities, bloggers, and social media networks specifically targeting the intended population and disseminated information about the study. Hence, the convenience sampling blended with snowball sampling and WebRDS through the immediate sharing of the study using internet-based communication. The online communities I have access to included, but were not limited to, Gifted Homeschoolers Forum and state and national homeschool associations. Also, there were numerous Facebook groups focused on homeschooling gifted children such as Raising Poppies, Gifted Homeschoolers Forum, Homeschooling Gifted Kids, Parents of Gifted and Talented Children, and Special Needs Homeschooling: Gifted and Twice-exceptional.

Participation Criteria

Criterion for participation necessitated parents must have proof of their child's identification as gifted and/or twice-exceptionality. Since this proposed research study was integrating Sternberg's (2004) premise that giftedness is culturally bound, the specific identification of giftedness will be dependent upon the participants' cultures. To ensure multiple

cultures have a strong representation in the sample, I actively sought members from differing cultural groups through WebRDS and the requested participants share the study with their contacts on social media.

As mentioned in Chapter One, the term gifted is having an academic or non-academic ability that surpasses one's peers. Therefore, non-academic ability will require identification by an expert, coach, or teacher indicating the child has abilities that surpass one's peers. For example, Caleb Maddix was conducting public speaking engagements for corporations worldwide at 14 years old (Hammett, 2016), or Akiane Kramarik, an artist known for her painting of Jesus Christ, has been referred to as a prodigy due to her advanced abilities at a young age (Lee, 2015).

Academic and intellectual abilities criteria included (a) identification by a professional, such as a psychologist; (b) prior participation in a traditional school's gifted and talented program; (c) membership in an organization, with rigorous membership guidelines, dedicated to intellectual ability, such as Mensa or Triple Nine Society; or (d) test score performance is in the top 5%. Davis et al. (2011) noted that using the top 3% to 5% of test scores is the traditional method of selecting students in traditional school settings. The rationale behind using the top 5% for this study was based on the usage of the top 5% for entrance into gifted organizations (MENSA, 2017) and gifted and talented education programs within schools (Davis et al., 2011).

An additional criterion was parents must have completed a minimum of two years of homeschooling. The rationale for this criterion was that as time progresses families evolve in their structure, use of outside resources, and may change curriculum (Hanna, 2012; Pannone, 2014; Thomas, 2016a). This also accounted for parental adjustment to the homeschooling environment within the home, local community, and virtual communities. Participants must

have been currently homeschooling a gifted or twice-exceptional child or have homeschooled their gifted or twice-exceptional child in the past year. The rationale for this criterion was to ensure the data gathered accurately represents the participants' experiences.

The final criterion for this proposed study was the homeschool must be parent directed and parent funded, as outlined in Chapter One. Therefore, full-time virtual public and private schools were not included. Part-time virtual school attendees were allowed because parents were still responsible for directing their child's education and might have been using online courses for specific subjects.

The participants completed a questionnaire to determine eligibility and to provide demographic data. The data was self-reported without additional verification by the researcher. All participants were married. The family types consisted of 60% nuclear families, 20% cross-generational, 13% blended, and 7% adoptive. Families who earned over $100,000 annually accounted for 73% of all participating families. Families with annual income between $50,001-$75,000 was 20%. Families earning between $20,001-$50,000 annually was 7%.

The demographic data of the interviewing parent and non-interviewing parent is shown in Table 4. For one family, the mother and father interviewed together, as such they are both grouped in the interviewing participant category. The race/ethnicity was a fill in the blank on the questionnaire, accordingly the participants' wording were used. However, white and Caucasian have been grouped together.

Table 4

Participant Demographics

	Gender	Race/Ethnicity	Education
Interviewing Parent	87% Female 13% Male	88% White/Caucasian 6% Hispanic 6% American	44% Bachelor Degree 31% Master Degree 13% Graduate School 6% Some College 6% Doctoral, (ABD)
Non-interviewing Parent	7% Female 93% Male	86% White/Caucasian 7% Chinese 7% American	36% Bachelor Degree 36% Master Degree 14% Some College 7% Doctorate 7% High School Diploma

Procedures

Prior to gathering data, approval was obtained from the Institutional Review Board (see Appendix G) and state and national homeschooling associations (IRB; Corbin & Strauss, 2015; Creswell, 2013). Following approval of the IRB, I employed the sampling methods described in the participants section. Recruitment of participants was conducted using my contacts within the homeschooling community that focused on homeschooling gifted and twice-exceptional children. These contacts included individuals and organizations with websites, blogs, email lists, or a social media presence. Additionally, a search of social media websites was conducted to find virtual communities of gifted homeschooling families. These individuals, groups, and organizations were contacted to request their assistance with the disbursement of information for this research study. The readers of the websites and blogs along with social media followers

received the information and shared it with others among their contacts; thus, creating a large sample size through the combination of convenience, snowball, and WebRDS sampling (Daniel, 2012; Zingale, 2013). As previously noted, the use of social media is highest among adults ages 18-29 and 30-49 (Pew Research Center, 2017), which matches statistical age range of parents with children in school age years given the mean age of first birth (Martin et al., 2015).

Recruitment of participants lasted for 30 days initially. However, as more participants were needed for data saturation, recruitment continued for additional seven-day increments. Potential participants were directed to contact me via my university email to receive further information or begin the official participation with the signing of the informed consent form.

After confirmation of informed consent (see Appendix B) by initial participants, the data was collected through five means. First, a questionnaire was used for the strict purpose of gathering demographic data and as a screening tool to ensure potential participants met the minimum requirement for participation. The information gained from the questionnaire was not part of the data analysis but was used for descriptive purposes. "Description plays a part in theory development by filling in the details once the theoretical structure is given form" (Corbin & Strauss, 2015, p. 12). The second method used was semi-structured interviews. Third, a projective technique was employed in which participants were asked to write a letter of advice to another parent who was considering homeschooling a gifted or twice-exceptional child. The fourth method used was participant journaling. Participants were asked to reflect for one week on the choices they made for homeschooling. The final method was memoing in which I created codes that guided further data collection.

Data was collected and recorded through technology-based methods. The questionnaire was administered and recorded using an internet-based survey tool with available analysis tools,

Google Forms (Google, 2017). Google Forms has been used as a survey and questionnaire administration method for academic research in several academic disciplines (Daniel, 2016; Goulooze, Franson, Cohen, & Rissman, 2015; Manju, Nikhil, Nishanth, Vignesh, Anupama, & Murthy, 2017). Interviews were recorded using the record feature on the software used such as Google Hangouts, Skype, or Zoom, depending upon the capabilities of websites in varying countries. The interviews were also recorded using a digital voice recorder. This was to provide a backup should the primary recording feature fail. The projective technique and journal were submitted to my university email address. Memos were written and stored on a password protected computer; hand-written memos were stored in a journal. All data was stored on a password protected computer with a backup copy on an encrypted external hard drive. The external hard drive and journal is kept in a secured safe in which only I have access.

The Researcher's Role

Within qualitative research, the researcher is considered a key instrument (Creswell, 2013). Corbin and Strauss (2015) consider the researcher to be "as much a part of the research process as the participants and the data they provide" (p. 4). The researcher became actively involved in the study by creating open-ended questions which sought to gather data to answer the research questions and through examining and analyzing the data (Charmaz, 2014; Corbin & Strauss, 2015; Creswell, 2013). Throughout the process of data collection and analysis, the researcher actively engaged with the data through continual internal dialogue to question, examine, and analyze the data to develop concepts and themes. The dialogue, or thinking process, was written down in the form of memos as a means to document the thought process of the researcher. The memos provided documentation of the researcher's analytic thought process which linked data collection and data analysis. This was a continual reciprocating process

between data collection and analysis. This process ended when the researcher concluded data saturation had been achieved.

Furthermore, the researcher's personal philosophical beliefs, experiences, and reflexivity has a direct influence on the research process (Charmaz, 2014; Corbin & Strauss, 2015; Creswell, 2013). Though systematic grounded theory is considered by Charmaz (2014) as being too objective, Corbin and Strauss (2015) indicated researchers will be influenced by prior knowledge, even subconsciously. Therefore, it was not a matter of not using that knowledge but the method in which it was used (Corbin & Strauss, 2015).

As an active member of the homeschooling community, there are considerations that must be addressed. I have been actively homeschooling for 11 years. I am also an active member of organizations which support and advocate for homeschooling. The participants were individuals with whom I have no relationship. As mentioned in Chapter One, I have a blog and social media accounts that include information about homeschooling and gifted education. I did not use these avenues to gain participants. I am a member of organizations that advocate for gifted education in multiple education settings. I hold a Master of Education in general education with a graduate certificate in gifted education. I hold a professional educator license through the Association of Christian School International, a private school license through the State of Pennsylvania, and an associate educational therapist license through the Association of Educational Therapists. According to Corbin and Strauss (2015), the extent of bias may not be known to the researcher, but measures can be taken to make the researcher more aware of potential or unintended bias. Therefore, I maintained a researcher's journal, as recommended by Corbin and Strauss (2015), to note my emotional responses, concerns about the research process, and matters regarding data and coding so I did not interject my experiences and knowledge into

the participants' stories. Peer review was also conducted by dissertation committee members with expertise in grounded theory, qualitative research, and homeschool research. Additionally, member checking was conducted with participants to ensure the findings of this study were representative of their experiences.

Data Collection

Data was collected using multiple methods including questionnaires, interviews, letters of advice, journaling, and memoing. Memoing was not a participant involved method of data collection, but where the researcher linked data collection and data analysis (Corbin & Strauss, 2015). This order was selected so I could build a rapport with the participants through the interviews and gain their trust so they would be engaged to further participate in the remaining two participant involved data collection methods.

Questionnaire

A questionnaire (see Appendix C) was used as a dichotomous tool for screening participants and gathering demographic data. The questionnaire was used to ensure potential participants met the requirements for participation. Secondly, the information was used as a method of gathering descriptive data. Corbin and Strauss (2015) explained that description is important to the details of theory.

The following questionnaire (see Table 5) questions were developed to gather demographic data about families homeschooling gifted and twice-exceptional children similar to the demographic data collected in other homeschool studies (Bell et al., 2016; Hanna, 2011; Jolly et al., 2012, Mazama, 2015; Pannone, 2014; Ray, 2015). The questionnaire was divided into sections to gather data about the parents, family information, contact information for the interview, and homeschool-based questions.

Table 5

Questionnaire

Questions
Parent/Guardian #1 Information
1. Name:
a. Chosen pseudonym:
2. Age: 20-29, 30-39, 40-49, 50-59, 60+
3. Sex: Female or Male
4. Race/Ethnicity:
5. Highest education level:
a. If applicable, list all post-secondary education received and title of diploma/degree earned:
6. Occupation:
Parent/Guardian #2 Information
7. Name:
a. Chosen pseudonym:
8. Age: 20-29, 30-39, 40-49, 50-59, 60+
9. Sex: Female or Male
10. Race/Ethnicity:
11. Highest education level:
a. If applicable, list all post-secondary education received and title of diploma/degree earned:
12. Occupation:

Family Information:

13. Approximate Family Income:
14. Family size:
    a. Family size living in the household:
15. Marital status:
16. Family Type: Nuclear, Cross-generational, Blended, Grandparents as parents, Single-parent, Never-married, Adoptive, Foster, Same-sex

Contact Information for Interview and Communication

17. Which parent will be participating in the interview? Mother, Father, Both, Other
18. Email:
19. Video conferencing app preference: Google Hangouts, Skype, Zoom, or WebEx
20. Username or contact information for the app selected above:

Homeschool Questions

21. How many children do you have who are currently homeschooled?
22. How many of these children are gifted?
    a. How many of these children are twice-exceptional?
23. What age was your gifted or twice-exceptional child when you decided to homeschool?
24. How many years have you homeschooled?
    a. If, applicable, how many total years of schooling has your child had?
25. Has your gifted or twice-exceptional child graduated high school or stopped homeschooling?
    a. If so, when did homeschooling for this child end?
26. Do you use a full-time online public or private school, also known as virtual school?

27. Can you provide documentation of your child's giftedness or twice-exceptionality?

Questions one through 12 were demographic questions about the parents. The name provided by the participants in questions one and seven were pseudonyms chosen by the participants. The rationale for allowing participants to choose their pseudonyms was to maintain cultural considerations associated with names and to reduce ethical concerns (Hammersley & Traianou, 2012; Lahman, Rodriguez, Moses, Griffin, Mendoza, & Yacoub, 2015). The questions were divided into six questions each for each parent/guardian. In some family types, the information for one parent or guardian could have been missing.

Questions 13 through 16 gathered family demographic data. Family income, size, and parents' marital status were gathered to provide a description of homeschooling families. This data was gathered in questions 13 through 15. Question 16 explored family types. The family types listed were nuclear, cross-generational, blended, grandparents as parents, single-parent, never-married, adoptive, foster, and same-sex. These family types were taken from Healthychildren.org, which is website developed by the American Academy of Pediatrics (AAP; American Academy Pediatrics, 2015). The nuclear family consists of two biological parents and their children (AAP, 2015). The cross-generational family is a family which has a grandparent residing in the same home as one or both parents and the children; the home may be the parents or grandparents' home (AAP, 2015). The blended family is a two-parent family in which some children are biologically related to one parent but may or may not be related to the other (AAP, 2015). Families classified as grandparents as parents consists of family structures in which the children live with the grandparents (2015). Single-parent families include families with one parent and children living in the same household (AAP, 2015). Never-married families consists of parents who have never married but have children together (AAP, 2015). Adoptive families

are families who have children who have been adopted (AAP, 2015). Foster families include families who have foster children living in the home (AAP, 2015). Same-sex families are families whose parents are gay or lesbian (AAP, 2015).

Questions 17 through 20 were contact information questions. These questions were used for maintaining communication with participants. Communication included scheduling interviews, sending and receiving journal entries and letters of advice, clarification questions, and member checking. Member checking was utilized to ensure credibility (Creswell, 2013).

Questions 21 through 27 were demographic and screening questions. Questions 21 through 24 were designed to provide demographic data. Question 24 and 25 were dichotomous questions which served to provide demographic data and was used as a screening tool. Questions 26 and 27 were screening questions to ensure that participants were able to meet the requirements for the study.

Interviews

Interviews are a central data collection method in grounded theory (Corbin & Strauss, 2015). The type of interview conducted was a semi-structured interview (see Appendix D). This type was chosen for the ability to maintain consistency among all interviews as well as allowing me to explore potential concepts as they arose and provided a greater depth and breadth to the interview process (Corbin & Strauss, 2015; Lyons & Coyle, 2007). The interviews were conducted with the homeschooling parents using internet-based software with a recording option, such as Google Hangouts, WebEx, Skype, or Zoom.

The questions in Table 6 were developed based on research about homeschooling and gifted and twice-exceptional children. A person may be gifted without a disability but twice-exceptionality does not exist without the identification of giftedness (Leggett et al., 2010; Prior,

2013; Siegle et al, 2016). Therefore, the questions were framed to distinguish between gifted and twice-exceptionality in order to provide a tailored interview for the specific abilities of the child the participant was discussing. Theoretical sampling is a key feature of grounded theory, which guided the data collection process (Corbin & Strauss, 2015). As such, it should be noted that while these questions were of importance to the research process, as concepts emerged these concepts were explored through the interview process.

Table 6

Semi-Structured Open-Ended Interview Questions

Interview Questions
1. Please tell me about yourself as a homeschooling parent.
2. Please tell me about how giftedness is defined in your location.
3. How did you determine that your child was gifted or twice-exceptional, if applicable?
4. What was your reaction to this identification?
5. If applicable, what are the differences, based on your experience, in homeschooling a gifted or twice-exceptional child?
6. What challenges do you face in homeschooling a gifted or twice-exceptional child?
7. If applicable, what was your child's education experience prior to homeschooling?
8. Why did you choose to homeschool your child?
9. How did you come about this decision?
10. What homeschooling approach do you use? Why?
11. What type of curriculum do you use for each subject taught?
12. What factors led you to choosing this curriculum for these subjects?

13. How do you adjust curriculum for your gifted or twice-exceptional child?
14. How do you teach your children the various subjects?
15. Please tell me about any changes you have made since you began homeschooling.
16. How do you incorporate community resources into your child's education?
17. How do you choose these resources for your gifted or twice-exceptional child?
18. Please tell me about your daily routine with your gifted or twice-exceptional child.
19. How did you develop the structure of your homeschooling day and year?
20. What opportunities are provided to promote independent interests and time management throughout the day for your gifted or twice-exceptional child?
21. Please tell me about any changes that you have made to the structure of your day since beginning homeschooling?
22. As an experienced homeschooling parent, what advice would you offer someone who is considering homeschooling their gifted or twice-exceptional child?
23. Based on your experiences, what should I, as a researcher, understand about the process of homeschooling gifted or twice-exceptional children?
24. Please share with me anything else that you would like to add

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Question one was designed to build rapport with the participant to allow him or her to become comfortable with the interview and set the tone (Charmaz, 2014). Question one focused on the parent's role as a home educator which provided unanticipated statements or stories to emerge (Charmaz, 2014).

Questions two through six related to giftedness. Sternberg (1988, 2004, 2012) noted that giftedness is culturally bound; thus, what is considered gifted in one location may be different from another location. For the purpose of this study, it was essential to define giftedness within

the participants' respective cultures. There are many ways in which giftedness is identified (Davis et al., 2011). Question three provided the method by which the participant's child was identified. Parents have mixed responses to the identification and sharing of a child's giftedness (Jolly & Matthews, 2012; Jolly et al., 2012; Matthews et al., 2014; Weber & Stanley, 2012). Question four sought to understand the parent's emotional response to the gifted identification. Dynamic skill theory acknowledges there are differences in an individual's cognitive development (Fischer, 1980, 2008; Rose & Fischer, 2011). Question five addressed asynchronous development associated with gifted and twice-exceptional children (Clark, 2013; Jolly et al., 2012; Weber & Stanley, 2012). Question six explored what challenges parents face within the homeschool environment as research has noted gifted and twice-exceptional children experience unique challenges that can be highly varied (Clark, 2013; Davis et al., 2011; Jolly et al. 2012; Prior, 2013; Weber & Stanley, 2012).

Questions seven through nine examined the process of choosing to homeschool. Parents may choose to homeschool if a traditional education setting does not meet the socioemotional or educational needs of the child (Delisle, 2006; Jolly & Matthews, 2012; Jolly et al., 2012; Rothermel, 2003). This was addressed by question seven. There are other reasons for choosing to homeschool such as parental ideological or pedagogical differences to traditional schools (Kunzman & Gaither, 2013). Questions eight and nine addressed the rationale for choosing to homeschool.

Rivero (2007) explained that some parents adhere to a specific homeschooling approach. The approach implemented in the home may constitute the curriculum, instructional method, and the structure within the homeschooling practice (Rivero, 2007). For example, unschooling describes an approach without a specific curriculum, instructional practice, and an unstructured

environment (Carpenter & Gann, 2016; Liberto, 2016). Question 10 sought to determine if a parent adheres to specific approach and why they chose the approach.

Questions 11 through 13 emphasized the process of choosing the curriculum used in the homeschool environment. Homeschool families must acquire the curriculum for homeschooling their children despite many locations not allowing families access to public school resources (Hanna, 2012; Jolly et al., 2012; Ray, n.d.). This was addressed by question 11. Question 12 addressed the factors of choosing a curriculum. Homeschooling families have the flexibility to choose the curriculum to reflect religious beliefs, interest of the child, or parental goals for the children (Hanna, 2012; Kunzman & Gaither, 2013; Mazama, 2015; Pannone, 2014; Thomas, 2016a). Gifted children have a greater ability to acquire and process knowledge (Miller, 2011). Therefore, these children often need adjustments to curriculum to meet their unique needs (Clark, 2013). Question 13 explored how parents differentiated curriculum for their gifted and twice-exceptional children.

The instructional methods within the homeschooling environment can vary among and within families (Carpenter & Gann, 2016). Questions 14 through 16 addressed the instructional methods used within the homeschool environment. Question 14 allowed the participants to openly tell their story which led to unanticipated data (Charmaz, 2014). Kunzman and Gaither (2013) noted that homeschooling families change the way they homeschool over time; this was addressed by question 15. Question 16 and 17 explored how community resources are often used by homeschooling families as part of the instructional methods (Anthony & Burroughs, 2012; Carpenter & Gann, 2016; Hanna, 2012; Kunzman & Gaither, 2013; Mazama, 2015; Thomas, 2016a, 2016b).

Question 18 through 21 examined the homeschool structure implemented by parents. Research indicated there are variations in the structure of homeschooling families with some being highly structured to highly unstructured with any variation between the two options (Jones, 2013; Neuman & Guterman, 2016a). Question 18 and 19 explored the structure of the homeschool environment. Research has indicated homeschooling allows for flexibility in the daily routine in which parents may provide an autonomous environment (Bell et al., 2016; Carpenter & Gann, 2016; Jones, 2013). Question 20 examined how parents provide opportunities for autonomy. Kunzman and Gaither (2013) stated that homeschooling families become less structured as they progress through the homeschooling experience. This was explored through question 21.

Charmaz (2014) stated, "No interview should end abruptly after an interviewer has asked the most searching questions or when the participant is distressed" (p. 66). Questions 22 through 24 were final questions to ease out of the interview process in a progressive manner. These questions were designed to elicit final thoughts which provided further insight into the processes implemented in homeschooling gifted and twice-exceptional children.

Additional clarification was required throughout the interview process. The following prompts were used as needed to gain understanding of the participants' experiences and behaviors: (a) please explain further; (b) you stated _____; please elaborate on what you mean by that term or phrase; and (c) for clarification, please provide an example of what you mean. Furthermore, grounded theory incorporates theoretical sampling which is guided by developing concepts throughout the data collection process (Corbin & Strauss, 2015). The following prompt was used to ask participants about their experiences based on responses from other participants: What are your experiences with _____?

Letter of Advice

The use of projective techniques was developed in the early 1900s within the field of psychology (Catterall & Ibbotson, 2000; Frank, 1948). A projective technique includes "methods and techniques which are appropriate for revealing patterns and persistent configurations and for investigating processes, as contrasted with the description, classification, cataloging and measuring of products" (Frank, 1948, p. 16). While projective techniques are mostly used in market research, these techniques began to be used in education research during the 1990s (Catterall & Ibbotson, 2000). Projective techniques are versatile in many settings; however, concerns about validity in determining a person's psyche have been noted (Catterall & Ibbotson, 2000). For the purpose of this study, a person's psyche was not under investigation, rather examination was focused on the differentiation applied to the incomplete stimulus.

Specifically, the second data method collected was the completion of a letter of advice (see Appendix E). The participants were given the following prompt:

Another parent has reached out to you to gain advice about homeschooling a gifted or twice-exceptional child. Based on your personal experience with your child, please write a letter to this parent explaining:

1) How to begin the homeschooling process with respect to your current area.
2) What homeschooling approach do you use to meet your child's specific needs?
3) Where did you acquire your curriculum?
4) How do you adjust the curriculum to meet the interests or learning differences of your child?
5) How did you establish a daily schedule or routine?
6) What other resources do you use?

7) What factors are most important throughout the process of homeschooling a child that is gifted or twice-exceptional?

If your child is gifted, please write the letter to a parent whose child is gifted, including specific resources you use for your child's giftedness. If your child is twice-exceptional, please write the letter to a parent with a twice-exceptional child, including resources addressing your child's giftedness as well as disability.

Participants wrote these letters to reflect their personal experiences, homeschooling approach, and structure. There are many different approaches to homeschooling which may also incorporate a specific curriculum or structure (Carpenter & Gann, 2016; Duffy, 2012; Rivero, 2007). Parents submitted their letters to me via email.

Journaling

The final method of participant involved data collection was journaling (see Appendix F). Corbin and Strauss (2015) referred to these as diaries. Charmaz (2014) referred to personal diaries as elicited documents. Journaling can have several drawbacks for participants such as time-consuming, negative feelings of being exposed, and maintaining focus, which decreases participation rates (Hayman, Wikes, & Jackson, 2012). However, these drawbacks can be negated to increase participation through limiting the timeframe of the journaling, promoting the sharing of information the participant feels comfortable with, and clarifying the information requested as related to the study (Hayman et al., 2012).

Participants were asked to write a reflective journal entry daily for one week about each day's activities. The purpose of this was to examine how participants created a customized learning environment and experience. The participants were asked to answer the following prompts: (a) what homeschool activities were completed today, (b) how were these activities

chosen, (c) were the activities adjusted for different children's needs, (d) if so, how were the activities adapted to meet the needs for each child, and (e) if applicable, how did the environment affect the decisions. The journal entry could be sent to me one of two ways: (a) typed in a Word document and sent to me via email at the end of the week or (b) a daily email that will serve as a journal entry. The respondents chose the option that best met their organizational needs.

To help establish the validity of these data collection tools, an expert reviewer was utilized. The data collection tools were reviewed by an expert reviewer with expertise in homeschooling and legislative policy writing. The expert reviewer was asked to review the questionnaire, interview questions, letter of advice prompt, and journal entry prompts for proper language usage, ease of understanding, and relevancy to the target population. This expert reviewer was chosen based on her experience in writing public policy, which requires a high level of awareness in written and spoken language comprehension, and her experience in the homeschooling community. She has a bachelor's degree in speech and hearing sciences, worked for the United States House of Representatives for five years, served as a policy expert in marriage policy for two years, and served as an assistant director and manager with various associations in Washington D.C. Her expertise in homeschooling is based on extensive experience within these fields. She was a guest lecturer for a homeschool association's Capital Day in Washington D.C. for two years, has served as a senior policy analyst for a state homeschool association for the past five years and currently holds this position, and served for three years as a classroom tutor for a homeschool cooperative. Currently, she is a member of the government affairs committee for a state homeschool association, the local director of a national homeschool cooperative, and is a member of the Educational Outcomes Task Force for the Commission on Improving the Status of Children in Indiana.

Memoing

Memoing is described by Charmaz (2014) as "the pivotal intermediate step between data collection and writing drafts of papers" (p. 162). Memoing is a diverse aspect of grounded theory (Charmaz, 2014). It is described at the end of the data collection section of this dissertation, but it should be noted memoing has been described as a data source and an analysis (Charmaz, 2014; Corbin & Strauss, 2015; Saldaña, 2016). Memos were written about all data and began immediately during data collection (Charmaz, 2014, Corbin & Strauss, 2015, Saldaña, 2016). Memos guided subsequent data collection through the development of concepts, codes, and categories (Charmaz, 2014; Corbin & Strauss, 2015). As such, a reciprocating movement between data collection and data analysis occurred (Charmaz, 2014; Corbin & Strauss, 2015; Creswell, 2013).

Data Analysis

Data analysis begins immediately in grounded theory with the use of memoing and constant comparison (Corbin & Strauss, 2015; Creswell, 2013; Saldaña, 2016). This is followed by three levels of coding: open coding, axial coding, and theoretical coding (Corbin & Strauss, 2015; Creswell, 2013; Saldaña, 2016). The final phase of data analysis is conducted with the development of a theory and conditional matrix (Corbin & Strauss, 2015; Creswell, 2013).

The data analysis was assisted using MAXQDA software (MAXQDA, 2017). This was one of many commercially available programs suggested by Corbin and Strauss (2015). The rationale for choosing this program was based on the program features as compared to other programs of a similar nature and price. MAXQDA has a built-in feature that allowed me to transcribe the data within the software (MAXQDA, 2017). This reduced the need to import transcription from another program.

Memos and Constant Comparison

As previously stated, researcher memos link data collection and data analysis. Memos are the driving force of grounded theory which allows the researcher to make comparisons during the data gathering process (Corbin & Strauss, 2015; Saldaña, 2016). As data was gathered, memos were written, then a comparison to prior data was conducted to examine it for similarities and differences to the developing concepts (Creswell, 2013; Corbin & Strauss, 2015). This spiraling process between gathered data and developing concepts is constant comparison. Constant comparison was used to guide the research in conjunction with memoing, to ensure data saturation was achieved, and no new categories emerged (Corbin & Strauss, 2015; Creswell, 2013). All data gathered was examined through the same analytical process, which required a constant comparison to other forms of data collection.

Open Coding

The first phase of coding in grounded theory was open coding (Corbin & Strauss, 2015; Creswell, 2013; Saldaña, 2016). This phase of coding is the process of separating data into manageable parts and examining the data for prominent concepts (Corbin & Strauss, 2015; Saldaña, 2016). During this phase of coding, one should remain open to new ideas and changes in categories (Saldaña, 2016).

According to Saldaña (2016), open coding can incorporate in vivo or process coding. In vivo coding used the participants words as concepts or codes (Charmaz, 2014; Corbin & Strauss, 2015; Creswell, 2013; Saldaña, 2016). In vivo coding, honored the voice of the participants, provided rich language for coding, and allowed for the expression of potentially marginalized cultural understanding (Saldaña, 2016).

Process coding required the researcher to assign gerunds, words ending in -ing, as the concepts or codes (Saldaña, 2016). The use of gerunds demonstrated action and allowed the researcher to interact and become engaged with comparisons between data (Charmaz, 2014; Saldaña, 2016). Saldaña (2016) stated that process coding is particularly useful for examining the "routines and rituals of human life" (p. 111). Corbin and Strauss (2015) noted that process is the action-interaction "linked to the conditions that persons are responding to and trying to manage or shape when they interact" (p. 172).

Axial Coding

The second phase of coding was axial coding. Axial coding is the process of combining similar concepts, which were found during open coding, into categories (Corbin & Strauss, 2008; Creswell, 2013; Saldaña, 2016). While open and axial coding are explained as different steps in texts (Creswell, 2013; Saldaña, 2016) and this dissertation, Corbin and Strauss (2008) noted that these phases occur simultaneously because the researcher will automatically make connections among the common concepts. The concepts derived from axial coding determined how all the information was linked together and led to the next phase of coding (Saldaña, 2016).

Theoretical Coding

The third phase of coding was theoretical coding (Corbin & Strauss, 2015; Creswell, 2013; Saldaña, 2016). Theoretical coding is also referred to as selective coding (Creswell, 2013; Saldaña, 2016). For the purposes of this study, I used the term theoretical coding. The choice to use the term theoretical coding is based on the change of terminology found in texts by Charmaz (2014), Corbin and Strauss (2015), and Saldaña, (2016). Theoretical codes were used to assist in developing data, categories, and concepts into a coherent and connected framework.

During this phase of coding, the concepts derived from axial coding were examined to identify the core category (Corbin & Strauss, 2008, 2015; Saldaña, 2016). The core category is a word or phrase that served as an overarching abstract representation of all categories with the ability to be explained in depth to each category (Charmaz, 2014; Corbin & Strauss, 2015). The core category must be broad enough to accurately represent all participants (Charmaz, 2014; Corbin & Strauss, 2015). According to Corbin and Strauss (2015), the core category must have the ability to be used in conceptually similar future studies. The core category led to the analytical discussion and to the development of the theory (Saldaña, 2016).

Theory Development and Conditional Matrix

The final phase of analysis was the development of the theory, which could have been represented through a conditional matrix (Creswell, 2013; Corbin & Strauss, 2015). An explanation of the relationship between the categories and concepts created an outline (Corbin & Strauss, 2008; 2015). This outline was examined against the raw data and reviewed with the participants for accuracy (Corbin & Strauss, 2015). Once the outline was verified, the theoretical scheme was developed, which was a logical explanation of the theory or model (Corbin & Strauss, 2008, 2015).

The use of diagrams assisted in the analytical thinking process as well as providing an explanation of the resultant theory or model (Corbin & Strauss, 2015). A diagram provided a visualization of the relationships between categories (Charmaz, 2014; Corbin & Strauss, 2015). The diagram can be a map, figure, or chart demonstrating the direction of the relationship between categories (Charmaz, 2014).

A conditional matrix may be developed to demonstrate how the theory is integrated from an individual perspective to a global perspective (Creswell, 2013). The conditional matrix is

unique to Corbin and Strauss's method of grounded theory, but not all researchers included this as part of the study (Creswell, 2013). A conditional matrix was not included in this study due to the geographical limitations and limited number of participants.

Trustworthiness

Trustworthiness is the qualitative research equivalent of quantitative research's validation and reliability (Creswell, 2013; Guba & Lincoln, 1982). Trustworthiness was developed through credibility, transferability, and dependability and confirmability (Guba & Lincoln, 1982). These elements ensure researchers are monitoring themselves throughout the research process as well as providing "ex post facto judgments of products of research" (Guba & Lincoln, 1982, p. 248).

Credibility

For a grounded theory to achieve credibility, Guba and Lincoln (1982) stated that credibility is the internal validity that is "best demonstrated through an isomorphism or verisimilitude between the data of an inquiry and the phenomena those data represent" (p. 246). Corbin and Strauss (2015) further explained credibility as the explanation of the theory being "one of many 'plausible' interpretations from the data" (p. 346). Credibility was confirmed through triangulation and member checking. Triangulation is using at least three methods of data collection to ensure the phenomenon is being explored with supportive evidence (Creswell, 2013). This study utilized five methods of data collection: questionnaires, interviews, letters of advice, journaling, along with memoing, which served as a data source and analysis. Participants were required to supply evidence of their child's giftedness in order to establish a verification of giftedness through an unbiased third-party rather than relying on the potentially biased opinion of a parent. Member checking was conducted by requesting the participants examine the data, findings, and conclusion for accuracy (Creswell, 2013). Participants were asked to verify

interview transcriptions, their data from the initial questionnaire, and the final theory and process models.

Transferability

Corbin and Strauss (2015) referred to transferability as applicability, in which findings "can be applied to diverse situations and populations" (p. 345). For the purposes of this study, I used the term transferability. Transferability was established by gathering rich, thick descriptions. Rich, thick descriptions require provision of enough details for the reader to apply the findings to other settings based on the commonalities found within the details (Creswell, 2013). Transferability, or application of the theory to other settings, is essential.

Transferability was established through increasing variations of participants. This study sought to ensure there was a maximum variation of homeschooling families represented. Variation was sought by ensuring different approaches, structures, and reasons for homeschooling were represented. Additionally, variation was sought through the availability of families from different cultures and countries. However, international participants were unable to meet the guidelines set forth in the participant criteria.

Dependability and Confirmability

Confirmability is the qualitative research equivalent to reliability in quantitative research in which the interpretations and findings are confirmed against the data (Given & Saumure, 2008). Dependability and confirmability were established through an audit trail and reflexivity. An audit trail was used to systematically document the steps I took to arrive at my categories and developed theory (Bowen, 2009). Additionally, the theoretical outline was examined against the raw data as outlined by Corbin and Strauss (2015). Reflexivity required me to be self-aware of

my attitudes and perceptions during the research process and understand how my preconceptions may have influenced analysis (Thomas & Magilvy, 2011).

Ethical Considerations

Because the line between the participants and the researcher may become blurred, ethical considerations in grounded theory studies are to be taken into careful consideration by the researchers (Corbin & Strauss, 2015). Corbin and Strauss (2015) noted that qualitative researchers conduct this method of research due to the desire to gain knowledge from participants which may not be available through other means. As such, the connection between the participant and myself must be considered carefully and protected.

Ethical considerations at the center of this study were confidentiality, respect, and proper data storage techniques (Corbin & Strauss, 2015; Creswell, 2013). Confidentiality was maintained throughout the study. Pseudonyms were chosen by the participants. The option to allow participants to choose their pseudonym also reduced ethical concerns of assigned pseudonyms and allowed the participant to maintain the cultural aspect of the chosen name (Hammersley & Traianou, 2012; Lahman et al., 2015).

International recruitment of participants led me to encounter individuals whose philosophies and ideologies differed from my own. However, no data was gathered from these individuals because they were unable to provide documentation of giftedness or twice-exceptionality. I ensured that I was respectful of the differences without making judgments (Corbin & Strauss, 2015). As mentioned previously, electronic data is stored on a password protected computer and an encrypted external hard drive. The external hard drive and paper format data, such as my personal journal, are stored in a locked, fireproof safe in which only I have access.

Summary

Chapter Three provided an overview of the methods implemented in this study. This qualitative study was conducted using systematic grounded theory to develop a theory of the educational processes implemented by homeschooling families of gifted and twice-exceptional children. The site was identified as cyberspace providing a rationale of the usefulness for this setting in the international context of this study. Next, details concerning the participant sampling and criterion were described. The procedures and researcher's role were explained thereafter. This was followed by the data collection methods of interviews, letters of advice, journaling, and memoing. Then data analysis procedures of constant comparison, open coding, axial coding, theoretical coding, and theory development and the conditional matrix were elucidated. The chapter culminated in an evaluation of the trustworthiness and ethical considerations implemented in this research study.

CHAPTER FOUR: FINDINGS

Overview

This chapter provides the results of the study's data analysis designed to explain the educational processes implemented by families who homeschool gifted and twice-exceptional children. The chapter begins by providing narratives of the participants in 15 individual sections, one section includes a mother-father couple. The participants' section is followed by the results portion which covers the theme development and theoretical integration. The six themes revealed in the data are (a) becoming a homeschooler, (b) uniqueness of giftedness and twice-exceptionality, (c) parental experiences, (d) personalized curriculum, (e) personalized instructional methods, and (f) personalized structure. These are centered around the core theme of personalized home education. The theoretical integration reveals the assimilation of the theories in the conceptual framework to develop a new theory, the personalized education theory of gifted and twice-exceptional homeschooling. The chapter concludes by answering the research questions.

Participants

The following sections provide a narrative of each participant's experiences in homeschooling their gifted and twice-exceptional children. There were 14 single participants and one couple described in a single narrative. The pseudonyms used were chosen by the participants during their initial questionnaire.

The demographic data was self-reported on the initial questionnaire. All participants were married. The family types included nuclear (60%), cross-generational (20%), blended (13%), and adoptive (7%). The gender of the interviewing parents, including the mother-father couple, was 87% female and 13% male. The racial/ethnicity demographics of the interviewing

parents were 88% White/Caucasian, 6% Hispanic, and 6% American, as noted by the participants.

Ross

Ross is the father of a gifted daughter. His daughter attended a public school until third grade. After moving to a new school district, she attended a charter school for one year. The family discussed using an individualized education plan (IEP) for their daughter, but the plan "was unsatisfactory." Ross looked into a private school in the area and contacted the county school board's gifted coordinators to find an acceptable education plan for his daughter. At one point, a principal stated privately, "If I was you, I would consider homeschooling." Ross did "extensive research" into the available traditional options. Then he explored homeschooling options, and his research "convinced him that was the best option."

Ross is a retired naval officer and the primary homeschooling parent. He follows a philosophical unschooling approach but implements an eclectic, student-centered approach to education. He did not use traditional academic curriculum for all subjects but provided his daughter with an array of resources with traditional curricula used based on his daughter's desire. Ross required English and Math, while his wife required Mandarin. Ross's wife is Chinese, and her parents live in China. In order for his daughter to converse with her grandparents, she must speak Mandarin. Both parents required her to participate in a sport; she chose badminton. "Everything else she gets to choose what she does."

Ross stated that there was a "constant-feedback loop" between him and his daughter. He sought to determine her interests and then facilitates learning experiences for those interests. He paid attention to her interests and activities. He was aware of her level of interest in topics and

would “invite her to explore other things.” One area in which Ross used traditional curriculum is math. He has tried several different options to find what works.

The instructional methods Ross used include acting as a facilitator or direct teaching by tutoring his daughter in math when she was struggling. He also hired instructors or tutors for content specific needs, sports, and music. His daughter was involved in several cocurricular and extracurricular activities within the community ranging from social events to a math circle at a local university.

When the family changed from traditional school to homeschooling, they went through a period of deschooling. During this time, there was no set structure. “I started adding a little more structure by standardizing her musical practices and then we also started getting involved in online classes that were particularly timed.” The daily schedule was flexible while also having specific routines such as specific time to go to bed and wake up. This provided a framework around her day while also meeting her needs. Ross stated, “She’s not a morning person.” Mornings were for music lessons and preparation for upcoming classes. Most of the academic, cocurricular, and extracurricular activities took place during the afternoon and evening. Due to the mother’s summer work schedule, the family implemented a year-round annual structure to allow travel and vacations when it is best for the family.

Sarah

Sarah is the mother of two children, a ninth grader who is profoundly gifted and a seventh grader who is twice-exceptional, profoundly gifted with sensory processing disorder, dysgraphia, ADHD, nonverbal learning disorder, and undiagnosed traumatic brain injury, which “damaged her visual cortex and executive functioning frontal cortex.” Sarah is a state licensed teacher and previously taught general and special education and preschool. Her children

attended a preschool for a short time. Her son went to preschool for three months but was removed after it was determined not to be a good fit for him. When he was removed from the preschool, his sister started attending. She attended for a year and a half. Sarah took her son to a mommy and me class at the preschool for one year.

Sarah began homeschooling when she could not find a suitable school for her children. She explored traditional options of public school and school for the gifted. The gifted school suggested homeschooling at least for the early years. "By third grade, when we could have put him back in that gifted school, there's no way that I would have cause we had seen all the other benefits by then."

Sarah followed an eclectic approach combining the philosophies of Charlotte Mason education, Thomas Jefferson education, neoclassical models, and unschooling. She chose the aspects of these philosophies she agreed with while ignoring the aspects that were not aligned with her expectations and needs. She used traditional academic curriculum, but "pretty much never use a curriculum exactly as written." She picked and chose from a variety of publishers based on her children's needs. "The most important thing when homeschooling a gifted or twice-exceptional child, or really any child, is to let go of grade levels. In homeschool, you look at each child and determine what she already knows and what she needs to learn next in each area." Sarah evaluated her homeschooling several times a year. If something was not working, she dropped it and tried a new option.

Sarah used a variety of instructional methods based on the needs of her children. She chose these based on what was the best fit for her children's needs. Sarah is a certified instructor of the Institute for Excellence in Writing and hosted classes in her home for other homeschoolers. Her children participated in these classes based on their respective levels.

The children participated in several cocurricular and extracurricular activities. "It's hard to define the difference between curriculum and extracurricular activities when you're homeschooling." These events took place during traditional school hours. "It's hard to balance that," she stated when discussing how to determine whether piano should be classified as a part of the curriculum or part of extracurricular activities.

Curriculum and instruction were adjusted to meet the needs of each child. Sarah chose honors level courses for her son. For her daughter, she made accommodations based on her disabilities. Her daughter is assessed orally for many subjects. Sarah's goal is to move her children toward working more independently.

Over the years, the family's homeschooling structure has evolved. They started out doing certain subjects, such as history and science, together. Now they do not do school together. They may use the same textbook, but the way the content is presented and assessed are different based on the needs of each child. Each day looked different for each child based on their courses and activities outside the home. Subjects drop off as the school year winds down.

Drizzt5

Drizzt5 is the mother of two children who are twice-exceptional. The older child who is in the eleventh grade is gifted with a diagnosis of convergence vision issues, ADHD, nonverbal learning disorder, anxiety, and autism. The younger child, who is in ninth grade, is gifted with a diagnosis of ADHD, dyslexia, dysgraphia, and executive functioning issues. Drizzt5 referred to herself as an "accidental homeschooler" and a "reluctant homeschooler." Drizzt5 explained, "I accidentally got here because there was no other choice." They were in their third year of homeschooling.

Prior to homeschooling, the children attended a local public school. During the time in public school, they did not receive appropriate services for their unique needs. Despite the mother's requests for testing and services, the schools delayed for several years. Drizzt5 paid for neuropsychological testing through a private provider who provided diagnoses for her children. The children were in several different therapies at this time. She requested meetings and an IEP for her children. The IEP was denied for one child. The school reported the family to DSS "for making up the kids' disabilities even though we had like multiple therapists seeing all the kids." Drizzt5 filed grievances against the school and a psychologist who falsified data. The complaints against the school required corrective action by the school district. Drizzt5 stated, "The school failed them."

Drizzt5 looked into a private school as an alternative education method but could not afford the tuition. During this time, she lost her job; the family had to downsize and move to a new home. The only option left was homeschooling. While no one at the school suggested homeschooling, it was suggested by a psychiatrist, a board-certified behavior analyst, and a gifted, twice-exceptional education expert. When she pulled them out from the public school, she "accidentally" deschooled them. She had planned to allow them downtime and have fun with some unschooling integrated into the process but was unaware that this was a process called deschooling.

Drizzt5 followed a child-led, whole-child approach with an integration of unit studies. However, she ensured her children were fulfilling the state requirements as well as looking ahead to the admissions requirements of her children's prospective colleges. She used a combination of traditional academic curriculum along with the children's ability to design their own curriculum by integrating cocurricular and extracurricular activities. She has tried a variety

of traditional curriculum options. Math, in particular, took several tries to find an appropriate program for their learning needs.

She used different instructional methods based on the subject. Cocurricular and extracurricular activities were chosen based on the needs and preferences of her children. The purpose was "to create a customized program chosen by the child." Accommodations and modifications were made to meet the children's needs. Both children used audiobooks, kinesthetic learning opportunities were provided based on preferences, and opportunities to interact with others were provided. The older child was provided front loading in literature because "he doesn't understand nonverbal and stuff like that." PowerPoint presentations were substituted for research papers.

When Drizzt5 started homeschooling, she had a school-at-home plan. "At first, I had a big ol' spreadsheet plan that would make teachers envious." However, that plan did not fit the family's needs. Drizzt5 worked from home and did education advocacy. At the beginning of each week, she wrote weekly goals and chores on a to-do board; her children were expected to assist with housework. They completed their school while she worked. "We have incorporated homeschooling into every aspect of our life, so there is no 'school,' 'home,' 'vacation,' 'friends,' 'work,' etc. It makes life much less hectic and allows the kids to take breaks when they need them."

When the children left the public school system, they were two or more years behind functionally/socially/emotionally and under the care of a psychiatrist. The children are now performing above grade-level. The oldest one advanced two years in one year. The psychiatrist released the youngest child from care with the provision he not be placed back in public

school. Both children "were heavily medicated," and now are off most medications (oldest is on a small dose of Abilify; youngest is medication free). "They are thriving," stated Drizzt5.

ChemistryMom

ChemistryMom is the mother of four children, three who are gifted. The first child is in twelfth grade. The second child is in the tenth grade. The third child is in eighth grade. When her oldest child was younger, he started reading early, and she felt he was ready for kindergarten at four years old. She checked the public school website and found he would not qualify for school until he was five years old. Based on her and her husband's experiences in school, they decided it would best to homeschool their children. "Basically, just that my husband and I were both bored to death in the entire 12 years of public school. We didn't want that for our kids." Additionally, ChemistryMom provided math and science tutoring for children in varying educational settings. "It's amazing how bad the school system is. … not every teacher is bad here and not every class is bad, but I've seen way too much here in our town. There's no way I would want to send my kids there. I don't think they would get a good education."

ChemistryMom used an eclectic traditional approach to homeschooling by utilizing textbooks and workbooks. She did not purchase a grade level curriculum package. Rather each subject was chosen individually based on what was best for each child and the family. Despite the focus on a traditional approach, she allowed her children to explore topics that piqued interest either by a temporary pause in the routine, or they added that interest into the education plan.

During the beginning years of homeschooling, ChemistryMom chose to homeschool independently. However, she utilized a Homeschool Assistance Program, which was provided through the local school district but provided all of the homeschool freedoms by state law, once her children enter the high school years. The choice to use the Homeschool Assistance Program

was based on her children's desire for dual enrollment in the local community colleges, which were not as friendly to independent homeschoolers, participation in homeschool band, and receipt of an accredited high school diploma. A variety of cocurricular and extracurricular activities were provided for their children.

ChemistryMom incorporated several different instructional methods. Her older two children were enrolled in classes at the community college. She hired tutors for foreign languages. She also utilized cooperatives, homeschool clubs, and the Homeschool Assistance Program for band.

The children were provided one accommodation and a couple of modifications. The accommodation was the ability to accelerate based on individual ability to master the content. "They go at their own pace, and as long as they're doing fine, they just go, go, go, go, go until they get stuck. Then we slow down." For their oldest child, they decided to have him take composition at the community college while he was still home, since writing was his weaker area. Another modification was the ability to explore interests that arose.

When her children were younger, they followed a daily schedule. However, ChemistryMom made her routine less structured. "They work better independently." However, if one of her children was struggling with meeting their requirements, she sat next to them until they completed the assignment. The daily routine fluctuated based on activities. She allowed her children to choose their daily schedule based on their preferences.

The annual routine revolved around the start of the community college and went through May. However, if the learning objectives had not been met, they continued until they completed the books. Schooling still occurred during the summer. It was a more relaxed schedule in which foreign languages were still taught. "So, we pretty much just finish up things

that didn't quite get done and start things, if they'd like, to give them more free time to do what they want in the fall."

Beetlemaniac

Beetlemaniac is the mother of three children, one who is gifted. Her oldest child is four years older than the child who is gifted. She began homeschooling when her daughter was in first grade and started homeschooling her son when he was in kindergarten. However, due to family situations, the children were enrolled in their church school the following year. When her daughter graduated from the eighth grade, she brought both children home to be homeschooled. Her son suffers from chronic migraines and has severe allergies. His health issues had caused him to miss many days from school. The school was going to have him repeat fourth grade based on his number of absences but without consideration of his academic abilities.

Beetlemaniac used an eclectic approach with aspects of classical education such as narration and poetry memorization and literature. When she first started homeschooling, she used a grade level curriculum for all subjects. Her son quickly moved from fifth-grade math to doing algebra with his sister who was a sophomore. She used curricula from different publishers. When searching for curriculum, she looked for consistent programs. Cocurricular and extracurricular activities were incorporated into the education plan, such as math club, cooperative classes, and field trips. The accommodations provided were acceleration and a focus on oral assessment.

Beetlemaniac employed a combination of direct instruction and discussion. Both children completed math and science around the kitchen table, and the rest was conducted on the couch through reading and discussion. If her son had a headache and could not read, she read to him while he was laying down. "The hardest thing I think for me was taking school out of my

picture of what this was supposed to look like because when I think of school, I think of regimen."

The daily routine was highly structured but was highly flexible around her son's health needs. The day began with the homeschooled children doing chores while Beetlemaniac drove her youngest to the church school. They started the schooling portion of the day by saying the Pledge of Allegiance and putting the flag on the house and prayers followed. The weekly schedule was planned out to make time for tests on Thursday and to keep Fridays available for activities. The annual schedule allowed some breaks in the summer, but academics did not stop. There was a less structured focus on academics in the summer. "I do encourage them to keep reading, and I've been encouraging them to continue with math in some capacity."

Kanna

Kanna is the mother of three children, one who is twice-exceptional. Her older two children are grown with families. Her homeschooled son, age ten, is gifted with ADHD and oppositional defiance disorder (ODD). She has been homeschooling him since he was preschool age. Kanna decided to homeschool her son, because "at least in the younger years, boys have a harder time learning from a sitting position," and she "would be able to notice when he's being challenged enough [or] when he's being challenged too much." She felt her older children were not served well in the public school system, and by homeschooling, she could provide the education her son needed.

Kanna chose an unschooling approach but modified it to be guided unschooling. The first curriculum she purchased was grade-level appropriate. He completed the curriculum in three months. Her son did not like to complete fun activities and review the same concepts. "He just kind of took off on his own and following a curriculum for most subjects was just…I just

think he felt too limited." She incorporated a variety of resources to provide her son with a personalized education plan to meet his needs and learning style. Kanna used published curriculum for math and history. For geography, she used a text written in 1907. Kanna created her own grammar worksheets and separated writing into a separate subject. The other subjects were pieced together based on his interests.

Kanna used a variety of instructional methods and cocurricular and extracurricular activities for her son. She provided modifications and accommodations to the curriculum, instructional methods, and structure. As part of his assessment, he was able to create puppet presentations to share with his niece and nephews.

Kanna used a combination of strict and flexible structure for their daily routine. Her son was allowed to choose his daily schedule within the guidelines set by Kanna. This routine was developed after adjusting their beginning routine. "I just kind of started tweaking it because anything that's very rigid, he doesn't seem to tolerate very well." The annual schedule had changed through the course of homeschooling. At first, they would take summers off, but it would take three months for him to get into the routine again. Therefore, they continue schooling throughout the year, but with a lighter course load.

Ruth

Ruth has six children. Two are stepchildren who attend public school. One child is adopted and currently in a residential program. Three children are homeschooled. Two of her children are gifted: a daughter in the ninth grade and her son in sixth grade. She has been "homeschooling since the beginning." Her children did mention a desire to attend school, so she enrolled them in a summer program hosted by the local public school. The courses were electives, such as drama and robotics. Ruth stated that her son came home complaining after he

is done with his work, he has to sit there all day and do nothing. After that experience, they did not want to enroll in school.

Ruth decided to homeschool many years before having children. She was a public school teacher in the early and mid-1990s, but "I just knew my kids were not going to the public school." She was bored in school and did not enjoy her education experience as a student. Other factors that influenced her decision to homeschool are the negative environments, politics taught in school, the bigotry towards Christians, and the quality of education. "I'm a college professor and my students cannot, the vast majority of them, cannot write a coherent paragraph."

Ruth used an eclectic approach to homeschooling and ensured they meet their state requirements. She chose curricula subject by subject and based on each child's needs. "By picking and choosing for each subject, it lets me find things that interest the kids." She has tried different curriculum over the years. Each year she conducted evaluations based on the children's needs and interests. If a curriculum was not working, she dropped it and found one to fit her children's needs and her instructional style.

Ruth employed a child-directed instructional method. The children were given their books and allowed to go at their own pace. At the beginning of the school year, Ruth sat down with each child to discuss when they would like to complete a subject. Her daughter was given a semester syllabus for each course which provided a list of when assignments were due. She was used this method to prepare her daughter for college. The instructional method and structure changed over time. During the early years of homeschooling, Ruth tried an hourly schedule, but it did not work for her family.

The cocurricular and extracurricular activities incorporated into the children's education plan were diverse. Additionally, they utilized community resources such as the library,

museums, and field trips. The children were limited to the number of activities they could choose because of the size of the family.

The family followed the academic calendar of the public school where her stepsons attended. However, she incorporated aspects of year-round schooling and used a year-round approach to her record keeping. The year-round approach allowed her to integrate swim lessons as part of the children's physical education program or summer travel for geography, science, or history. If her children did not complete their learning objectives during the planned school year, they were required to continue working through the summer until completed.

Dorothy

Dorothy has two children, one who is gifted and homeschooled. Her daughter attended a preschool at a private school. The summer before beginning kindergarten Dorothy's husband lost his job, which caused them to look for alternative options at the public school. When she attempted to contact the local public school to enroll her daughter, she could not reach anyone and never received a return call. She decided to homeschool her daughter, while also working as an adjunct college algebra professor. During that October, Dorothy was hired as a public school teacher for the visually impaired. Dorothy and her husband decided to enroll their daughter in the private school where she had attended preschool.

Her daughter's experience in kindergarten was stressful. She would have nightmares about performing poorly at school. When Dorothy spoke with the teacher, she found out the teacher was giving her daughter work from the fourth and fifth-grade curriculum with the expectation she could write paragraphs and spell at an advanced level. Her daughter was reading at that level, but the teacher did not see the disconnect between the different skills. "Oh, she's

just being manipulative," the teacher stated to Dorothy. Additionally, her daughter was placed between two children who would misbehave. Her daughter would come home with bruises.

On the day of the class' scheduled Saint Patrick's Day party, the family was running late. Her daughter chose to skip breakfast so she could get to school on time and eat at the party. When they arrived, Dorothy found out the party had been canceled for testing preparations. Dorothy removed her daughter from the school at lunch and began homeschooling her again. "She was miserable, and I just couldn't do it anymore. So that's how I became a homeschooler."

Dorothy's approach to homeschooling was an adapted form of classical education. She used the structure of the book *The Well-Trained Mind* with a secular focus on curricula. At first, she followed the recommended resources, but she started branching out when the options were not the right fit for her daughter. She conducted assessments regularly using criterion-referenced tests to ensure her daughter was progressing,

Due to her daughter's asynchronous development, the curricular options for language arts were broken down by skill rather than using a grade level set. Math was one subject that took several trials to ensure her daughter was meeting expected learning objectives. When her daughter did not show progress in math, she increased the amount of time daily on math to two hours and used two different math programs. She also did not purchase anything with an auditory component. If there was an auditory component, she adjusted the curriculum to allow her daughter to write it out.

The methods of instruction varied for her daughter. Dorothy's mother, who is a retired public school teacher, taught most of the language arts classes. Dorothy also outsourced as much as possible by using online homeschooling classes through different providers and classes at a cooperative. Direct instruction was provided for her more difficult subjects. Independent work

options were provided for easier subjects. Several cocurricular and extracurricular activities were integrated into her education plan, which were chosen by her daughter.

To meet the family's needs, Dorothy implemented a "very rigid routine" daily with courses and activities happening at specific times. Annually, they followed a traditional school year at the insistence of the maternal grandmother. However, Dorothy enrolled her daughter in several summer camps to ensure a routine was still established and ensured learning was still occurring. This allowed her daughter to have social outlet. Also, her daughter participated in a summer book club.

Spartiger

Spartiger has four homeschooled children; two are part of this study. Her eighth-grade daughter is gifted, and her sixth-grade son is twice-exceptional; gifted with diagnoses of ADHD, anxiety, and dyslexia. She has been homeschooling "since the beginning." However, her children did attend preschool. One attended full time, and the others attended two days a week. Spartiger chose to homeschool her children because she wanted to spend more time with her children. She felt that she "could do as good as, or better, job than the school system, especially for the one who's gifted. I thought she would be bored in school." The cost of private school played a factor in choosing to homeschool over traditional education options. Homeschooling also fits their lifestyle.

A combination of classical, traditional, and Charlotte Mason approaches were used to develop the homeschooling plan. The family participated in a classical homeschooling cooperative, which provided the framework of her homeschooling plan. She also integrated additional curriculum by using workbooks found in more traditional methods. She adjusted the curriculum to allow her children to accelerate at their own pace. "We just work for mastery."

The older children were self-taught by following the curriculum based around the homeschool cooperative and the additional curriculum been added by Spartiger. Math was taught through video instruction. Direct instruction was used when she was the teacher for her child who was in her class at the cooperative and during set times scheduled for each child.

Spartiger followed a strict daily schedule, in which hourly blocks of time were provided for each subject. She allowed each child to spend one hour with her during this time and then they were to work independently or spend one hour playing with the youngest child. After each block of time was completed, everyone moved on to the next subject whether the assignments were finished or not. The afternoon was less structured. It was reserved for finishing assignments and any activities outside the home. The children were involved in several cocurricular and extracurricular activities. The annual schedule typically followed the calendar of the homeschool cooperative, which was from August to April. Schooling did occur during the summer months; however, it was relaxed.

A.G.A-S

A.G.A-S is the mother of a gifted daughter. Her daughter attended public school prior to homeschooling. During her first-grade year, she was placed in a first-second grade split class in which she was doing the second-grade work. The following year her daughter was not allowed to enter the third grade due to lack of room. Rather than having her daughter repeat the same curriculum, she decided to homeschool. A.G.A-S's husband is a maritime archeologist, which caused the family to move often and change schools. The decision to homeschool was also influenced by environmental and food allergies.

A.G.A-S incorporated an eclectic unit studies into her education plan. Her daughter is gifted in language arts, so the entire curriculum plan revolved around reading. The plan

followed a thematic historical timeline. "I asked her what time period she wanted to learn about and then I based her unit studies off that." She also incorporated additional workbooks to ensure there were no gaps in her daughter's education. The curriculum was adjusted based on her daughter's needs. A.G.A-S allowed her daughter to work at her own pace. "With anything reading related, I really just let her take charge."

A.G.A-S saw herself as a facilitator instead of a teacher. She preferred a structured plan, but her daughter's learning style was different, and she wanted to explore. Gifted kids "need to be given as much time as possible to explore and dive into things that interest them."

The daily routine was always evolving because the family may have to move to another portion of the globe and homeschool while living in a hotel. The family chose from the opportunities around them and used books from the library until their household goods arrived. Math was completed immediately after breakfast because it was the least liked subject; this was continued year-round. The rest of the daily schedule revolved around projects and activities outside the home. Her daughter participated in a variety of cocurricular and extracurricular activities. They chose to homeschool year-round to have the flexibility to travel as needed.

Sarah M.

Sarah M. has two children who are homeschooled; one child is gifted and in the ninth grade. Her son attended public school from kindergarten until third grade. She decided to homeschool because the school could not meet her son's educational needs. The gifted program was experiencing budget reductions, and the principal would limit the teacher's ability to provide higher level work in the classroom. Their faith also influenced their decision to homeschool. Sarah M. stated, "so that did play a part as well, but it wasn't as big of a factor at that age for him."

Sarah M. started with a traditional approach but changed to an eclectic approach with some aspects of the traditional approach and child-led learning. She chose curriculum based on her son's learning needs and interests. Textbooks were used as the framework of the educational plan, but her children were free to explore additional topics as they arose. She wanted school to be "something that he enjoyed doing rather than a drag and constant battle." The curriculum was adjusted by providing higher level course work and allowing him the option to choose how he demonstrated what he learned.

Sarah M. used direct instruction for history and language arts. She also used online courses and dual enrollment. During the 2018-2019 school year, he took four courses through dual enrollment. Her son's education plan included several cocurricular and extracurricular activities.

Sarah M.'s son's preference determined the daily structure. She provided suggested goals of what needed to be completed before and after lunch because her son could get off task. While one child was doing an online class, she used the time to work with the other child. This time was "not so much me directly teaching, but more of just a discussion and asking questions." The day also revolved around activities outside the home. Annually, she was required to complete 180 days with at least four and a half hours a day. Sarah M. preferred to keep to a traditional school year. If her children did not complete a text, they were required to continue working until the textbook was finished.

Lynn and Grant

Lynn and Grant implemented a combination of four different approaches: play-based, classical, child-directed, and Montessori. The curriculum choices and instructional methods revolved around these options. The math program was based on Montessori principles. They

integrated science textbooks based on their child's interest while incorporating different games, manipulatives, and experiments. They used two Language Arts programs that focused on different approaches of learning. Grammar was taught through games and manipulatives. Lynn and Grant enrolled their daughter in a local classical homeschool cooperative community as part of their curriculum framework.

The curriculum was adjusted based on their daughter's interest. They allowed her to self-pace, explore topics deeper, and accelerated her lessons based on her desire. Lynn and Grant tried to make her content and instructional methods experiential and child-led. In addition to instruction in the home and at the classical homeschool cooperative, they found classes in the community and allowed their daughter to choose based on her interests.

Their daughter followed a flexible daily routine. During breakfast, Bible devotion, language arts, and math were completed. "She's a very leisurely eater." The pacing of the mornings varied from day to day based on their daughter's desire. She might have requested extra games or handwriting. The morning routine could last one to three hours. Afterward, they would break for play or independent reading. Grant, who is an engineer, came home for lunch each day. They might have played math games as a family or conducted a science experiment. The afternoons were reserved for activities outside the home, spending time with grandma, or doing extracurriculars.

Lynn and Grant homeschool year-round. The summer days were less structured, and they went on more field trips during the summer. Math and language arts were completed on days when they were home at least half a day.

Nicole

Nicole is the mother of a seventh-grade son who is gifted. Her son has been homeschooled since kindergarten. "I knew I wanted to homeschool before I even had my son." She wanted to spend time with her son and be a part of his learning experience. He attended preschool for two days a week. He did not want to be with other children. During his kindergarten and first grade years, he attended a homeschool enrichment program. The school psychologist noted that he was not interested in the same things as a typical five-year-old.

Nicole employed a classical approach. She began by following recommendations in *The Well-Trained Mind*. Some recommendations did not suit her son's learning style and needs. She tried different curriculum from different publishers in order to find the right fit for him. "The whole math thing has been a total debacle as far as picking out curriculum."

Nicole used different methods of instruction based on the subject. Additionally, accommodations and modifications were made based on her son's ability. Nicole was increasing the content difficulty at a faster pace and slowing down the pace for writing assignments since writing was an area of difficulty. Additionally, acceleration was allowed.

Nicole's son chose to be involved in several cocurricular and extracurricular activities. Due to the number of activities, Nicole followed a strict schedule. This allowed him "to have fewer assignments to complete in the evening and over the weekend." She entered his assignments in an electronic planner, and he checked off assignments after they were completed. Nicole started the day with Latin because it was an easier class. Then she switched between subjects and instructional methods so there was variety in his daily routine. Math was placed at the end of the day because it was the most disliked. Nicole had math at the beginning of the day, but he did not respond well emotionally. Nicole followed the traditional school year.

Specifically, she followed the school calendar of the public school where her husband taught. By following the school calendar, they were able to spend more time together as a family and ensure the house was at an optimum working condition for her son.

Julie

Julie is the mother of three children; two are gifted. "I was very reluctant," she stated. Her oldest child attended a private preschool before homeschooling. However, she only was enrolled for half a year before being pulled out due to behavior concerns. When she wanted to read, and the teacher would not let her, she would have a tantrum. Additionally, she was given kindergarten level work while other children played. "It was very isolating for her, and it was just a negative experience for someone so young."

Julie's son attended school for his kindergarten year. She was informed that her son "probably wouldn't be promoted because he couldn't hold his pencil correctly and he also had a severe stammering problem." Her son also attended speech and occupational therapy. Due to asthma, he also missed several days.

The homeschooling approach Julie used was a blend of traditional and classical. She used several different curricula from varying publishers, which provided a framework for her children to explore their interest. If they expressed an interest in a particular subject or activity, she would add it to the education plan. Julie tailored her children's curriculum to reflect their future goals. Also, she used her background in molecular biology to choose science programs.

Adjustments were made to the curriculum by dropping what did not work. Julie planned experiential learning experiences to correspond with lessons. She allowed her children to choose how they would present their mastery of the content such as completing a report, building a diorama, or some other project. If her husband suggested a specific topic, she would add it to the

education plan. Julie integrated cocurricular and extracurricular activities into the education plan. Additionally, they were involved in community service projects, activism, and took classes at community centers.

Julie implemented different methods of instruction in the home. She also found courses at local colleges. "I can't direct instruct. A lot of this stuff I'm learning along with them. They're pushing me a lot of times."

The daily routine was flexible based on the needs of the children and family. Julie provided the children with deadlines for assignments, and they were responsible for completing the assignment or project. They tried to adhere to a four day a week school schedule while keeping the fifth day available for activities outside the home or to complete chores around the house. They tried to complete school before her husband returned home from work. He is active duty military. If he had time off work, they spent time as a family. "We want to maximize our time spent with him when he's not deployed." Julie explained, "We've never had a traditional school year." There have been times in which her children are homeschooling until the moment they have to move. They may have stopped in March and had a long summer or may have had a shorter summer. Julie tried to ensure they have some form of summer break.

Grace

Grace is the mother of four children and has been homeschooling for 23 years. She has graduated three children and is currently homeschooling her youngest son who is in tenth grade. She did explore traditional options for preschool but decided against it. Grace decided to homeschool based on religious conviction. Also, the ability to provide her children with an individualized education was a factor in choosing to homeschool.

Grace employed an eclectic approach. Over her 23 years of homeschooling, she has changed the curriculum numerous times. The education plan was tailored to meet the specific needs of each child. She used traditional curriculum from varying publishers based on the subject. Grace also incorporated several cocurricular and extracurricular activities as supplements to her son's education plan. Additional accommodations and modifications included were acceleration in areas of strengths and breaking writing down into smaller, easier to handle chunks. She would skip portions of the curriculum that did not align with her teaching style or her son's learning style. "I'll pick out the things I want out of it, and I have no bad feelings about setting the curriculum aside if I've only used the chapters I want to use."

She used different methods of instruction based on the subject and hired tutors for piano, Spanish, and computer. Science was learned through independent study using a high school level textbook. Once the children were about 15 years old, they enrolled in college-level courses in math and sciences.

The daily schedule was highly flexible. Grace had a list of things that must be completed, but her son was free to choose the order in which it was done and the amount of time spent on each subject. He was allowed to explore topics based on his interest. This structure was developed because she "got tired of nagging" after trying a traditional schedule. Additionally, she wanted more freedom to explore topics of interest fully. Grace followed a traditional school year. However, whatever was not completed was done through the summer. "You got to finish the book." She further clarified that for subjects that did not have textbooks her children were required to complete the "expected curriculum."

Results

The following sections delineate the results of this study. The first section describes the theme development. Then the next six sections describe the themes: (a) becoming a homeschooler, (b) uniqueness of giftedness and twice-exceptionality, (c) parental experiences, (d) personalized curriculum, (e) personalized instructional methods, and (f) personalized structure. The final section explains the theoretical integration and development of the personalized education theory of gifted and twice-exceptional homeschooling.

Theme Development

Themes were developed through constant comparison throughout the data gathering phase, memo development, and coding phases. During the open coding phase, codes were created through in vivo coding, to reflect the participants' voice, and through process coding. While it was unintentional, during the analysis phases, the process codes became an additional level of coding to summarize the participants' words and experiences.

Axial coding was performed to group similar open codes together into themes. Corbin and Strauss (2008) warned that open coding and axial coding might occur simultaneously because of the natural ability of the researcher to form connections. This occurred for several themes that emerged; however, some themes did not emerge until further analysis was conducted.

The coding system is provided in a hierarchical table in Appendix H. There are five levels of coding for each theme, except for parental experiences which only had four levels. The open coding phase resulted in 3,510 in vivo codes. In the hierarchical table, these are the fifth level of the coding system. The in vivo codes are not included in the code system for two reasons. First, MAXQDA has limited character space when generating the code system. This

would result in the in vivo codes not being fully generated; therefore, potentially misleading to the reader. Secondly, the table length for the code system generated would be 93 pages with the inclusion of in vivo codes.

In the parental experiences theme, the in vivo codes are the fourth level. The axial coding for parental experiences became immediately apparent. Therefore, process coding was not used for this theme.

The process codes became the fourth level in the code system. There are 111 process codes which serve as subcategories. The third level of the code system consists of 22 categories. The second level of the code system consists of six themes. The core category, personalized home education, serves as the first, or top, level within the code system (see Appendix H).

The central question to this study posed the question "what are the educational processes that families implement within the homeschool environment in educating their gifted and twice-exceptional children?" The definition of educational processes are the instructional methods, curriculum, and structure used by homeschooling parents in the academic development of their children. These aspects were studied through subquestions. As such, the data were analyzed separately based on subquestions while also being analyzed collectively for themes that emerged to explain the central question and core category.

The core category that emerged was *personalized home education*. The core category is supported by themes from subquestions which focus on experiences of homeschooling gifted and/or twice-exceptional children and the educational processes utilized. These themes include (a) becoming a homeschooler, (b) uniqueness of giftedness and twice-exceptionality, (c) parental experiences, (d) personalized curriculum, (e) personalized instructional methods, and (f) personalized structure. These themes played an integrated role in the development of the core

category as demonstrated in the personalized education code model in Figure 1. The arrows from themes and axial codes demonstrate the interconnection between the different aspects of the entire model.

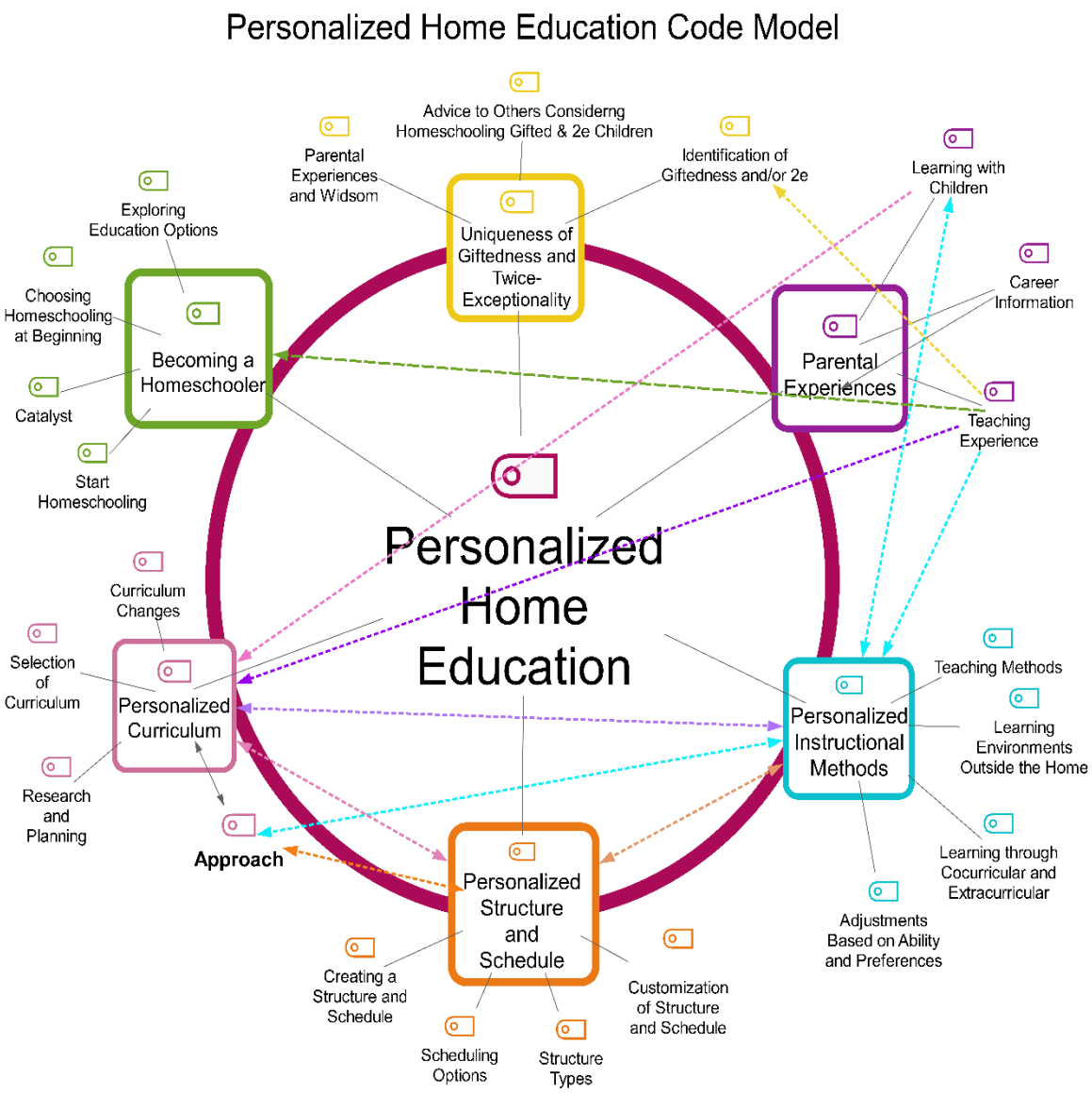

Figure 1: Code Model of Personalized Home Education

The purpose of this grounded theory study was to explain the educational processes implemented by homeschooling families of gifted and twice-exceptional children. The intention

was to develop a theory or model by which this occurs. In the pursuit of developing either a theory or model, both have emerged. The models are explained individually in the Research Questions Responses section based on each component of the educational process. The theory is explained in the theoretical integration.

Becoming a Homeschooler

The theme of becoming a homeschooler envelops the parents' experiences of choosing to homeschool. This theme is supported by the categories as seen in Figure 1. The categories include: start homeschooling, chose homeschooling at beginning, exploring education options, and catalyst. The category of start homeschooling encompasses participants advice, suggestion, and insights into homeschooling. Sarah M. (Letter of advice, December 10, 2018) advised, "I found that one of the best resources when starting homeschooling was to attend a homeschool convention." Dorothy (Letter of advice, September 25, 2018), ChemistryMom (letter of advice August 8), Sarah M. (Letter of advice, December 10, 2018), and Lynn and Grant (Letter of advice, August 13, 2018) encouraged potential homeschooling parents to seek out local organizations. The second category chose homeschooling at beginning includes families who chose to homeschool in their child's early years. The third category is exploring educational options, in which families evaluated their education options. Finally, the final category is catalyst. A catalyst caused participants to leave traditional school systems. From these categories, four classifications of homeschoolers emerged: (a) homeschool as primary option, (b) preschool-to-homeschool, (c) homeschool post-evaluation, and (d) compelled homeschoolers.

Homeschool as primary. Homeschool as primary families chose to homeschool before their child's eligibility to preschool. Two participants noted they chose to homeschool as their primary option. The reasons for this early choice varied among participants. When Grace

(Interview, August 23, 2018) looked into preschool for her first child, she realized she could do preschool at home. She has been homeschooling for 23 years. Ruth (Interview, July 9, 2018) stated, "I chose to homeschool was because I was miserably bored in public school and I wasn't going to put my kids through that."

Preschool-to-homeschool. Some participants used preschools before homeschooling, even with the intention of homeschooling. Four participants used preschools prior to homeschooling. Spartiger (Interview, July 15, 2018) explained that her children attended preschool before she started homeschooling them. Nicole, who wanted to homeschool before her son was born, noted it was her son's experience in preschool that made her realized homeschooling was the better option, "With his experiences in like preschool and knowing that he was probably on a faster scale of learning, we thought, 'well, we can kind of go at his own speed and not have him worried about being bored'" (Interview, August 3, 2018).

Homeschool post-evaluation. Homeschool post-evaluation are families who evaluated compulsory education options for their children and could not find a school to fit their child's education needs. There were three participant families in this category. Lynn and Grant (Interview, June 6, 2018) explained "We looked at private schools. We looked at Montessori schools. We went and toured those. Our local school." Sarah explained she also looked into a local, highly regarded school district, a local private school, and the private school recommended a gifted school. "They suggested we homeschool" (Sarah, Interview, May 21, 2018).

Compelled homeschoolers. Compelled homeschoolers are those who left traditional education options to homeschool due to a catalyst. The catalyst varied from health reasons to problems with the school system. There were six participant families in this category. Beetlemaniac (Letter of advice, October 30, 2018) began homeschooling after her son was

"diagnosed with Chronic Migraine due to allergies." Drizzt5 and Julie referred to themselves as "a reluctant homeschooler" after having negative experiences with traditional schools. Sarah M. summarized the essence of all reasons in her statement "it just wasn't meeting his needs" (Interview, June 5, 2018).

Uniqueness of Giftedness and Twice-Exceptionality

Participants shared their unique experiences in raising and homeschooling a child, or children, who are gifted or twice-exceptional. This theme is the combination of the identification of their child's abilities, their advice to others, and their parental experiences and wisdom, see Figure 1. The identification process varied for participants. Some were identified based on high academic test results and a propensity toward academics. Kanna (Interview, June 19, 2018) stated, "he finished his kindergarten curriculum in three months." Others were identified based on psychological testing,

> She took a screening test and then it was followed up with an IQ test. I believe it was a WISC-IV and then we actually took her to a psychologist and repeated the IQ test because I wanted to have enough data to make good decisions. (Ross, Interview, May 10, 2018)

The process of identification also included the participants' reaction. These ranged from no reaction to confirmation to shock. Ross stated that he was "not really surprised" (Interview, May 10, 2018). Sarah had feelings of relief and shock, "With him, I think it was. It was confirmation that I wasn't crazy, cause I knew that something's up here . . . . For our daughter, it was more of a shock because her academics do not match her IQ score at all" (Interview, May 21, 2018).

Participants also shared their wisdom and experiences. Some families had negative experiences based on their children's giftedness or twice-exceptionality and the decision to homeschool.

> We have lost some friends because we made this decision and then they, they treated my child differently. They called her out. They made examples of her. They made her, put her on the spot. They treated her differently than the other children in the group, and it made her upset, uh, and kids were mean to her. (Dorothy, Interview, July 11, 2018)

Whereas, other families experienced improvements and positive experiences. "In two years of private service, both kids are testing not just above grade level but like my oldest son has skipped a grade" (Drizzt5, Interview, June 11, 2018).

Homeschooling these unique children opened the parents to new challenges. "Educating gifted children for us was harder in the beginning" (Julie, Letter of advice, November 5, 2018). Ross (Interview, May 10, 2018) admonished "I've found there is no real community of gifted homeschoolers who are actually working on education of their gifted kids." Julie shared experiences of "hurtful" loss starting when her children were young:

> I lost friends this way. They'd say well you're getting too obsessed with your kids; you're doing too much with your kids, your hot-housing your kids. I was like, no, really, they demand this sort of attention. I've had to change my priorities around. I had to give up work. I've had to stay at home. Nobody would sit with them when they were young. (Interview, August 9, 2018).

Participants also demonstrated an understanding of the differences between gifted and twice-exceptional children and typically developing children. "They're going to learn differently than other kids, and you're going to have to make a lot of time, sacrifices, a lot of patient sacrifices

and you're gonna have to learn a lot yourself just to keep up with them" (A.G.A-S, Interview, July 18, 2018). Kanna articulated the unique differences twice-exceptional children experience:

> The 2e kids don't really fit in with the gifted kids because they have some sort of issue that the gifted kids don't have, and they don't fit the special needs kids because they're gifted and the special needs kids aren't and so the 2e kids are in this completely alien category of their own and if they don't have somebody else even with different strengths and struggles to connect with. (Interview, June 19, 2018).

The participants provided an array of counsel when asked what advice they would offer to someone who is considering homeschooling. Advice included sharing encouragement and viewpoints. Spartiger (Letter of advice, October 1, 2018) stated, "My advice to a new homeschooling mom is to be confident." Grace (Interview, August 23, 2018) offered her viewpoint on homeschooling gifted and twice-exceptional children, "The only, the only thing I do like to tell people is that as long as you know how to learn, do research, and find out the answers, you're fine. Doesn't matter what kind of degree you have." Participants also offered advice on how to homeschool. These included having fun and exploring, finding others, and focusing on character. Finally, participants shared the importance of understanding the uniqueness of these children.

Parental Experiences

Parental experiences had direct effects on their homeschooling choices. The categories included in this theme are career information, teaching experience, and learning with children. Some participants shared the career information of themselves or their spouse which influenced the core category of personalized home education. Lynn (Interview, July 31, 2018) and Ruth (Interview, July 9, 2018) are college professors and used their knowledge to guide their

children's education. A.G.A-S (Interview, July 18, 2018) explained that her husband is a maritime archeologist; therefore, they move frequently.

Some of the participants were former teachers. Their experience as a teacher affected their ability to identify their child's abilities as being outside the normal range and choose curriculum. "I was a regular preschool teacher, regular kindergarten and first-grade teacher, and then a special education teacher" (Sarah, Interview, May 21, 2018). Sarah further explained her teaching experience is what led her to realize her son's abilities are beyond typical children. Sarah M. (Interview, July 22, 2018) was a teacher as well "I think that when I started homeschooling, I took more of a traditional type of approach because that's what I was used to in the classroom." Grace (Interview, August 23, 2018) stated her degree in education does not help her in homeschooling her son.

The final category in this theme is learning with children. Participants explained that throughout the process of homeschooling they have had to relearn topics. In her letter of advice, Spartiger (October 1, 2018) noted that she had to relearn algebra with her children. Others were learning topics of which they had no interest because of their children's interests. Julie (Interview, August 9, 2018) shared "it pushed me into different things…I'm learning along with them."

Personalized Curriculum

Encompassed in this theme are the subthemes (a) approach, (b) research and planning, (c) selection of curriculum, and (d) curriculum changes as seen in Figure 1. These subthemes delineate the process of choosing the curriculum. First an approach is selected. Then participants conducted researching and planning. However, a homeschooling parent could

reciprocate between these two stages. Once the research and planning were completed, curriculum was selected. The final step included any changes to the curriculum.

Approach. The approach was an integral portion of the homeschool experience and influenced the instructional methods and structure. The approach was affected by their philosophical and personal beliefs about education. Ross (May 9, 2018) explained in his letter of advice "The primary inspiration for our homeschooling approach has been the writings of Dr. Peter Gray. Secondary sources include the writings of John Holt and Alfie Kohn." Parents may have used one approach, a blend of approaches, or modify their approach. Beetlemaniac (Interview, June 18, 2018) combined classical and eclectic approaches, whereas Lynn and Grant (Letter of advice, August 13, 2018) blended four approaches, which were classical, play-based, child-led, and Montessori. Participants may have used past experiences when choosing an approach. "My past educational experience drew me to classical education because of the repetition of historical material at increasing complexity levels, the specific study of logic and rhetoric, the Latin component, and the emphasis on major literary works," (Nicole, Interview, August 3, 2018). A modification to the first chosen approach might have been required to provide a personalized home education for his or her child. "Our approach to homeschooling has been constantly evolving according to the needs of our daughter, and continuing feedback concerning the effectiveness of the particular approach," (Ross, Letter of advice, May 9, 2018).

Research and planning. The second subtheme of personalized curriculum is research and planning. Those who came from traditional education options went through a period of deschooling. Ross (Interview, May 10, 2018) and Drizzt5 (Interview, June 11, 2018) used deschooling to understand their children's needs. Drizzt5 explained:

> There are so many approaches out there to learning and teaching that it can be overwhelming. I suggest you spend your first 2-3 months deschooling (which is a fancy word that means let them destress relax and do informal learning) as your family adjusts to this new reality. It will allow the kids to refocus and for you to learn about your kids- what they love, how they prefer to learn, their strengths, their weaknesses, and when they learn best. It also will destress them and rekindle their curiosity again if that was slowly disappearing. This is a time for you and your children to breath relax and heal. (Letter of advice, June 11, 2018)

Participants indicated they researched options, sought advice from others, considered their child's reactions, and planned for the future when choosing curriculum. Ross (Interview, May 20, 2018) did extensive research through books and online when searching for curriculum and resources. ChemistryMom talked with other parents, "It's really great to glean information off of people who are ahead of you," (Interview, June 13, 2018). She also noted that her daughter's activities were chosen because she wants to become a physical therapist (Journal entry, September 23, 2018). Julie (Interview, August 9, 2018) talked to her children about their future goals so she could tailor the curriculum. Drizzt5 planned her sons' education based around the requirements for admissions to prospective universities, which were more than what was required by the state (Interview, June 11, 2018).

Evaluations of test results and life skills also played an important role in curriculum choice. A.G.A-S (Interview, July 18, 2018) and Dorothy (Interview, July 11, 2018) conducted assessments using criterion referenced or other standardized tests regularly. A.G.A-S also shared that her daughter "is responsible for helping meal plan, budget and help make selections. These

are important life skills for her to practice because of her food allergies and dietary restrictions" (Journal entry, December 7, 2018).

Selection of curriculum. The third category is the selection of the curriculum. There were several influential factors such as state requirements, by subject basis, integration of subjects, parental judgment, child's interest, child's request, learning style, or faith-based. During the Interview with Drizzt5 and in the letters of advice from Lynn and Grant (August 13, 2018), Nicole (November 2, 2018), and Ruth (November 5, 2018), the participants listed the state requirements as part of the guidance principles of choosing curriculum. "With science, maybe because I'm a science person, I look at material that's science related and I, I know right away if I like it or I don't. And I have to teach it, so I have to like it too. Now they may not like it. But if I like it, then I know I can at least teach it, and I can get the information across" (Beetlemaniac, Interview, June 18, 2018). A.G.A-S (Letter of advice, November 17, 2018) explained that her unit studies approach to homeschooling integrated several subjects and is based on her child's learning style. Sarah M. (Interview, July 22, 2018) exercised her parental judgment in determining the math level her son should take. "When he went to take the dual enrollment thing, he tested into calculus, and I said Um, no, and I made him back up because he just, he took the placement test when he was 13, and I'm like, I just feel like there's something that's missing."

A focus on the child's requests, interests, and needs was evident. Julie shared that her son begged her to include logic (Interview, August 9, 2018). ChemistryMom allowed her children to choose their foreign language courses (Interview June 13, 2018). Ruth explained that she was able to choose a curriculum that fits her son's "learning style and my teaching style and available time to work with him" (Letter of advice, October 30, 2018).

When selecting a homeschooling curriculum, faith played a role in the selection process for several participants. The level of influence faith had on curriculum choice varied among participants. Nicole's Christian faith influenced her choices. Sarah stated that her faith did influence her choices, but she did not limit her choices to only Christian curriculum. "It's important to me that my kids have exposure too, especially in science. I want them to understand all the different sides" (Interview, May 21, 2018). ChemistryMom, Kanna, and Sarah M. chose certain subjects such as history or science based on faith. Ruth stated that even though she used a curriculum with a Christian worldview; it was not a deciding factor in choosing a particular curriculum. "It's not a deciding factor, and most homeschool curriculum is Christian. I don't eliminate secular curriculum just because it's secular, but I don't pick curriculum just because it's Christian" (Interview, July 9, 2018).

Participants also noted they outsource curriculum through dual enrollment, cooperatives, and online courses. Sarah (Letter of advice, June 11, 2018) allowed her children to take classes with other homeschooling parents, at local charter schools, cooperatives, and online courses. All participants noted the use of cooperatives. Ross (Letter of advice, May 9, 2018) stated that he has signed his daughter up for freshmen level course on massive open online courses (MOOCS). Outsourcing is a blend of curriculum and instructional methods.

Some participants indicated they did not choose conventional methods to provide curricular options. They gathered books from the library, used non-traditional methods, and supplemented with cocurricular options. Lynn and Grant (Interview, July 31, 2018) used library books as portions of their curriculum based on their daughter's interest. Drizzt5 (Interview, June 11, 2018) used games and Boy Scout merit badges as curricular options.

Curriculum change. The final category is curriculum change. Change may be required for several reasons: life's needs, the child's needs, parent's needs, and changes occur as parents become accustomed to their child's needs as they try different curriculum. Evaluations occurred to determine if changes needed to happen. Sarah (Interview, May 21, 2018) stated that she is "constantly evaluating and changing."

The change may have required a modification of the approach, within curriculum change, or a total curriculum change. When the approach was modified, parents may have changed their approach entirely or incorporated another approach into their primary option.

> I originally started with a very traditional approach because it was what I was familiar with; however, it was not the best fit for my son. He needed more opportunities to explore and progress very quickly through some areas while taking more time in others. We are definitely more eclectic now in our approach. (Sarah M., Letter of advice, December 10, 2018.)

These approaches might have been complementary such as blending classical with traditional. "I use the classical approach, you know, there might be some things that are probably a little bit still more traditional" (Spartiger, Interview, July 15, 2015). However, these may have been opposing approaches such as when Lynn and Grant combine child-led learning with classical.

Within curriculum change encompassed small changes that parents made to the curriculum by limited change, adjusting, accommodating, and modifying. Some have limited changes. Ross (Interview, May 10, 2018) explained that he did not have "a lot of changes because we settled into a kind of philosophical approach fairly early." Rather than a set curriculum, he followed his daughter's interests. Others adjusted the curriculum by skipping portions. "I will take a curriculum and review it and piecemeal it" (Grace, Interview, August 23,

2018). Others adjusted the curriculum or provided accommodations or modifications. ChemistryMom (Letter of advice, August 8, 2018) stated, "As for adjusting the curriculum for gifted students, after finding a challenging curriculum, I just allow our kids to proceed at their own pace." Nicole wrote, "In fact, even within a specific text, you may have to make changes in the order of topics taught or alter the types of assignment to fit your child" (Letter of advice, November 2, 2018).

Total curriculum change occurred over time, by dropping curriculum, trying different curriculum, and struggling with math. Parents may have chosen one curriculum in the beginning but changed over time. A.G.A-S started with a packaged curriculum with all subjects in one box, but she discovered her daughter was ahead. "I started, piecing together things. There was a lot of trial and error with math programs on what worked best for her" (A.G.A-S., Interview, July 18, 2018). Additionally, A.G.A-S (Letter of advice, November 17, 2018) explained, "I drop things that make our homeschool unhappy, unless it is necessary." This was also echoed by Dorothy (Interview, July 11, 2018), "If it's not working that, it, I'm obviously not going to continue keeping it." Grace acknowledged that she was "always open to trying new curriculum," (Interview, August 23, 2018).

Math was one subject several parents mentioned struggling to find the right fit for the child. Ross (Interview, May 10, 2018) stated that he had gone through about half a dozen different math options. "Math, it's been very different for each kid, because they've needed different things" (Ruth, Interview, July 9, 2018). This struggle was noted by a few other participants, but not everyone had this struggle.

Total change and within curriculum change may have been for the parent's needs, the child's needs, or both. A.G.A-S (Interview, July 18, 2018) explained that she started with a

traditional curriculum, but her daughter "didn't retain the information." Therefore, she changed based on her daughter's needs but still planned a structured curriculum using unit studies based on her needs. Spartiger (Interview, July 15, 2018) explained that when she began homeschooling, the first curriculum choice made her feel stuck, "I was stuck by, with the boxes and completing everything and I would read books that I didn't like, and it was just a lot."

Choosing curriculum was a highly involved process which required parents to understand their pedagogical beliefs and child's learning style and needs. Parents chose an approach and curriculum and evaluated each to confirm the education they were providing was reflective of these needs. If their child's needs were not being met, then the parents would change the curriculum in order to provide an appropriate education.

Personalized Instructional Methods

The instructional methods were operationally defined for this study as the differing methods by which families provide varied instruction and learning opportunities inside and outside the home (Anthony & Burroughs, 2012; Carpenter & Gann, 2016b; Pannone, 2014; Thomas 2016a). Personalized instructional methods is comprised of teaching methods, adjustments based on ability and preferences, learning environments outside the home, and learning through cocurricular and extracurricular. Parents implemented a teaching method based on their chosen approach or preference. "I can choose something that fits his learning style and my teaching style and available time to work with him. Some things are more independent, such as the reading for history, whereas other things require my one-on-one time and attention" (Ruth, Letter of advice, October 30, 2018).

Teaching methods. The teaching methods used in the home were direct instruction, child directed learning, independent learning, kinesthetic learning, discussion, online or video

instruction, or a blending of various methods based on the child's ability. Parents who followed a child-directed method or independent learning, such as Ross (Interview, May 10, 2018) and A.G.A-S (Interview, July 18, 2018), noted they served as facilitators.

Additionally, parents employed therapists, tutors, or instructors for special needs, music, foreign languages, core courses, and special interest courses. Drizzt5 took her children to necessary therapists and classes based on her children's special needs (Interview, June 11, 2018). Grace hired a piano instructor and tutors for foreign language and computers (Letter of advice, August 9, 2018). ChemistryMom (Interview, June 13, 2018) also used a tutor for Spanish. Ross (Interview, May 10, 2018) utilized tutors for music and two language arts sessions.

Adjustments based on ability and preferences. If the chosen teaching method was not effective, then evaluations for adjustments were conducted. Ross explained that even though he used a child-led approach to learning, math "required me to assess her performance and to either choose a different book or a different method of teaching or learning" (Interview, May 10, 2019). Adjustments of the instructional methods occurred based on the abilities and preferences of the parent, child, or both. "Everything is adjusted in some way" (Ruth, Journal entry, December 3, 2018). These adjustments included accommodations and modifications. "Part of the sensory processing in there is the dysgraphia, so writing is a difficulty for her. So, she does, like this year she's done most of her history and most her science orally," (Sarah, Interview, May 21, 2018). Modification may have happened based on immediate need. A.G.A-S, who recently moved, emphasized: "Please know that we usually do a weekly work out and hiking activities, but due to a recent injury of mine, we have been unable to. Piano is also practiced daily in our homeschool, and we will resume with lessons once the piano arrives" (Journal entry, December 7, 2018).

Learning environments outside the home. Participants incorporated learning environments outside the home. Participants found these opportunities by researching options available in their locations. Beetlemaniac (Interview, June 18, 2018) and Nicole (Interview, August 3, 2018) where notified of these opportunities through their local homeschool association and homeschool group. Participants also used online methods of researching learning opportunities outside the home. A.G.A-S (Letter of advice, November 17, 2018) used Facebook to search for options. ChemistryMom (Interview, June 13, 2018) utilized Google Groups.

Some participants enrolled their children in higher level learning. This included taking classes at local high schools, colleges, and other dual enrollment options. Sarah M. explained that dual enrollment in her state was free, and her son would be "doing dual enrollment just because I can't teach college-level math" (Sarah M., Interview, July 22, 2018). Beetlemaniac's son would be taking honors algebra at the local high school (Interview, June 18, 2018).

Homeschool cooperatives are widely available in the homeschooling community. A specific approach or faith can influence cooperatives. Sarah's children took classes "at the local Christian co-op" (Sarah, Letter of advice, June 11, 2018). A.G.A-S. stated that her daughter "is going to be participating in a Waldorf group" (Interview, June 18, 2018). Spartiger, Lynn and Grant, and Sarah used cooperatives based on the classical approach to education. Some cooperatives were more generalized. Families also created their own smaller, exclusive cooperatives. "I make my own co-ops. In other words, I decide something that I want my kids to do, and then I hand pick people that I think might want to do it with us," (Ruth, Interview, July 9, 2018).

Participants also used other community resources, which was predicated on what was available in their location. Drizzt5 stated that they joined several museums (Interview, June 11,

2018). Ross's daughter played in a community-based orchestra (Interview, May 10, 2018). For some participants, the use of community resources changed over time. ChemistryMom (Interview, June 13, 2018) explained that she used the library more when her children were younger. A.G.A-S (Interview, July 18, 2018) stated that she would take her daughter to the local museums when the exhibits were changed, but most of the time they were used as meeting locations.

Local libraries were used by participants based on individual needs. Lynn and Grant (Interview, July 31) stated "that our metro parks here have amazing classes and the library does too." Julie (Interview, August 9, 2018) explained that they used the library to supplement their curriculum.

Learning through cocurricular and extracurricular. All participants integrated learning through cocurricular and extracurricular activities into their education plan and instructional methods. The selection of cocurricular and extracurricular activities was based on location and the child's interests and ability. Spartiger (Interview, July 15, 2018) explained that they chose activities based on what their children were good at. Ruth (Interview, July 9, 2018) shared, "for the most part, the kids only get to choose one thing because we got six kiddos."

Sarah (Interview, May 21, 2018) made an important observation, "It's hard to define the difference between curriculum and extracurricular activities when you're homeschooling." Throughout the data, this overlap was seen. For example, in a traditional education setting, Boy Scouts would be considered an extracurricular activity. Drizzt5 allowed her sons to use merit badge requirements as a part of their curriculum because it met the requirements for the subject. "I looked at what the standard for AP Environmental Sciences…doing this and the labs, they are going to do more work through their merit badges" (Interview, June 11, 2018). Based on this

data, cocurricular and extracurricular activities are connected in this study and overlap as curriculum and instructional methods.

The dissonance between cocurricular and extracurricular as being part of the education plan and being separate from the education plan varied based on the participant's perspective. Some activities were explicitly extracurricular, such as sports, in traditional school, but in homeschooling, they were a necessary portion of the education plan. However, Ruth (Interview, July 9, 2018) explained that her daughter's swimming, which took place during the summer, was part of her physical education program. ChemistryMom adapted extracurricular activities into her children's education plan. "We send them off to clubs where they have mentors that are specific to whatever that club is" (Interview, June 13, 2018). In the homeschool journal entries, Sarah (June 6, 2018) noted her children's swim and MMA classes and Ross (May 8, 2018) included his daughter's badminton.

Some participants also noted the inclusion of religious activities as part of the child's education. Ruth mentioned religious activities when discussing the community resources that she integrated into her children's education plan. "Of course, there's all sorts of activities and things at church." (Interview, July 9, 2018). Nicole (Letter of advice, November 2, 2018), Spartiger (Interview, July 15, 2018), Kanna (Interview, June 19, 2019), Sarah M. (Interview, July 22, 2018), and Lynn and Grant (journal, September 18, 2018) also noted the children's involvement in church youth groups and other faith-based activities.

Instructional methods implemented among parents homeschooling gifted and twice-exceptional children varied based on the influence of the approach the parents chose. The instructional methods include teaching methods, learning environments outside the home, and learning through cocurricular and extracurricular activities. The teaching methods used in the

home were directly related to the approach chosen by the parent. If a teaching method was not working, parents adjusted accordingly based on the needs and preferences of themselves, their child, or both.

Learning environments outside the home included using cooperatives, community resources, and enrolling in higher level learning. Learning through cocurricular and extracurricular activities involved adapting cocurricular and extracurricular activities to meet a learning need and the inclusion of religious activities, sports, and volunteering. These alternative methods allowed parents to provide instructional methods and learning environments by creating a personalized home education for each child based on ability and preference.

Personalized Structure

The structure is defined as the process implemented by parents to provide educational content through scheduling, autonomy, and adherence to a curriculum (Carpenter & Gann, 2016; Jones, 2013; Neuman & Guterman, 2016a). The theme of personalized structure was developed based around the categories seen in Figure 1. These include the structure type, scheduling options, creating a schedule and structure, and customization of schedule and structure.

Structure type. The structure type is affected by the chosen approach. Structures can be either strict, flexible, or both. Dorothy (Interview, July 11, 2018; journal, September 25, 2018) followed a very precise structure with all academic, cocurricular, and extracurricular activities at scheduled times. Spartiger (Interview, July 15, 2018) "We have a strict schedule." However, she stated there was less structure in the afternoons based around activities that took place outside the home. Grace (Interview, August 23, 2018) and Julie (Interview, August 9, 2018) have highly flexible structures.

Scheduling options. Scheduling options are a component of the structure. These include the daily, weekly, and annual schedules, as well as activities outside the home and family needs. The daily and weekly schedules may be strict or flexible. The annual schedule varied among participants. Some adhered to a traditional school year, but others followed a year-round approach to homeschooling. Ross (Interview, May 10, 2018) used a year-round approach to allow his family to travel as needed. Nicole (Interview, August 3, 2018) and Ruth (Interview, July 9, 2018) followed the traditional school year of their local school due to family involvement in the school.

When activities took place outside the home, the structure and schedule were affected. "Our schedules, a lot, revolves around, you know, who needs to be where, when, but also that they know what has to be accomplished for the week," explained Sarah M. (Interview, July 22, 2018). Grace (Journal entry, September 3, 2018) stated the "tyranny of the urgent" affected her day. Julie (Interview, August 9, 2018), who is a military spouse, clarified that if her husband was home, school ended. "We want to spend, maximize our time spent with him when he's not deployed."

Creating a schedule and structure. In creating a schedule and structure, participants considered the best options for their children, themselves, and their family. Creating the schedule and the structure was a process that was developing and changing periodically. Sarah (Letter of advice, June 11, 2018) shared, "Our routine has changed through the years." Dorothy (Interview, July 11, 2018) stated that as her daughter grew older, she gave her more specific tasks. A.G.A-S (Interview, June 18, 2018) emphasized that her schedule was "a constant evolving thing."

Parents considered the management of goals, which includes short-term and long-term goals. Short-term goals included what must be completed daily or weekly. Lynn and Grant (Interview, July 31, 2018) made a daily checklist for their daughter. Whereas, Grace (Interview, August 23, 2018) provided her son with lists of what must be completed in a week. Long-term goals included the parents' goals of completing a curriculum. Sarah M. (Interview, July 22, 2018) required her children to complete their textbooks.

Customization of schedule and structure. The customization of structure and schedule found that participants made temporary adjustments to the overall structure or schedule. Grace (Journal entry, September 3, 2018) explained that she would be making adjustments to their Thursday schedule for the remainder of the semester for her son's swim team practices. Beetlemaniac (Interview, June 18, 2018) described how her son's medical needs could affect the daily schedule and overall structure of their homeschooling plans. Parents focused on the needs of their children to create a personalized structure.

The definition of structure includes autonomy. The autonomy a child had could be determined by the type of approach. Ross (Interview, May 20, 2018) and Lynn and Grant (Interview, July 31, 2018) followed a child-led approach to homeschooling; therefore, their children had more autonomy throughout the day than those who followed a stricter approach to homeschooling.

Also, within the structure is the adherence to curriculum; this varied among the participants. Most participants made modifications and accommodations, and pacing was based on the child's needs rather than adhering to the curriculum as planned or suggested by the publisher. Kanna shared (Journal entry, June 23, 2018) "I allow oral retelling in place of written summaries to lessen the anxiety and difficulty associated with writing." In her interview (July

11, 2018) Dorothy explained, “For areas in which she needs reinforcement, we use really structured, um, and repetitive kind of things. For areas that she doesn't need reinforcement in, um, I tend to give her suggestions and like let her go.” Some participants tailored the structure and schedule to their child’s needs. “We have found new ways to meet his needs/requirements and still get his work done,” (Julie, Journal entry, October 5, 2018).

The combination of flexibility and strictness may be found in the level of autonomy allowed and adherence to the curriculum. The combination of flexible and strict in autonomy and adherence to the curriculum was seen when parents chose the curriculum but allowed the child to choose how, when, and at what pace the work was completed. Ruth explained the connection between autonomy and adherence to the curriculum:

> I choose to use published grade level curriculum. … I learned that my son was very motivated by being able to “put checks in boxes.” He liked controlling his own schedule (sequence of activities), and checking off his to do list each day. (Letter of advice, October 30, 2018)

Grace echoed this freedom, “I let them explore topics in-depth instead of breaking the day into little chunks of every topic. Each child had a list of things to complete, they but [sic] could do so at their own pace,” (Letter of advice, August 9, 2018). Parents may have allowed children to skip portions of the curriculum based on ability or interest. Kanna chose the curriculum but allowed flexibility in how it was completed while also having stricter monitoring of his progress.

> He often chooses to skip things that I personally wouldn’t be able to skip. But I have him take the tests anytime I’m wondering if he’s retained the information sufficiently and if there are any mistakes we just go back to those lessons. (Kanna, Letter of advice, June 23, 2018)

Theoretical Integration

The conceptual framework was constructed from the theories and experiences the researcher brought into the study (Anfara & Mertz, 2015). The conceptual framework was comprised of three theories: (a) choice theory (Glasser, 1985, 1997, 1998), (b) theory of successful intelligence (Sternberg 1988, 2004, 2012), and (c) dynamic skill theory (Fischer, 1980, 2008). As an experienced homeschooling parent, I was able to utilize my experiences to understand the terminology commonly used among homeschooling families. The theoretical integration model, as seen in Figure 2, demonstrates how the aspects of each theory as described in Chapter Two amalgamate to form an integrated theory in homeschooling gifted and twice-exceptional children, *personalized education theory of gifted and twice-exceptional homeschooling.*

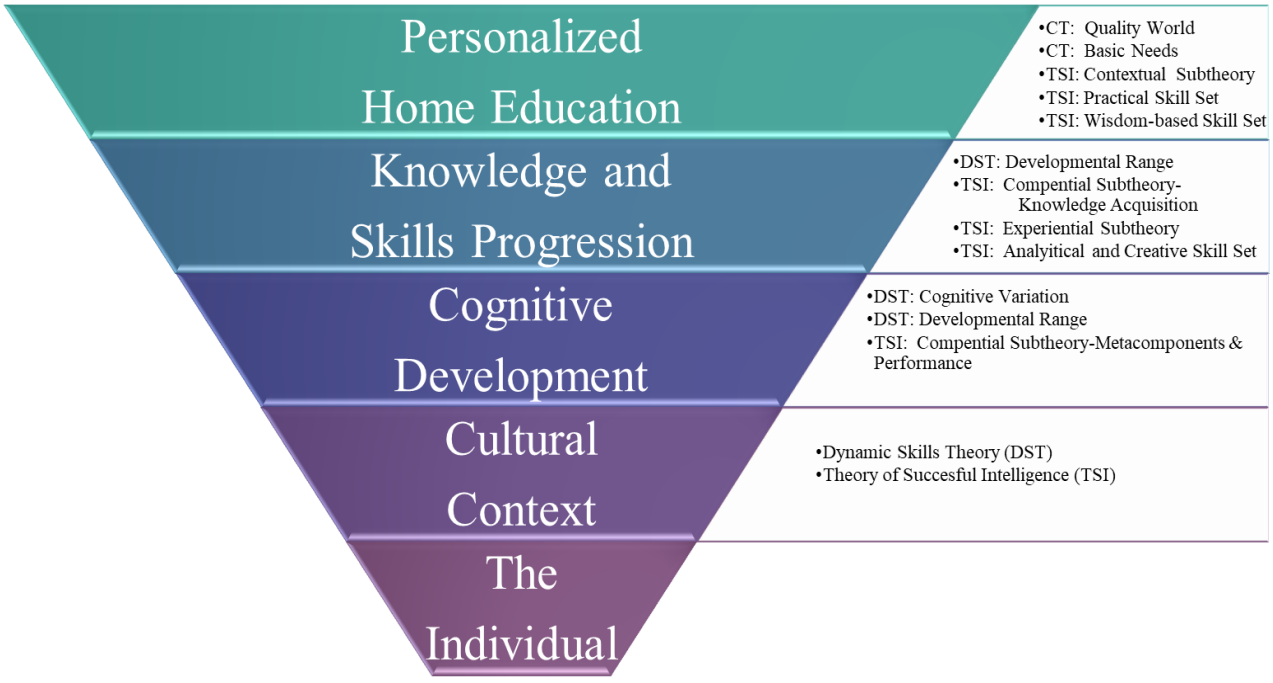

Figure 2: Personalized Education Theory of Gifted and Twice-Exceptional Homeschooling

The individual. The diagram is an inverted pyramid which moves downward to arrive at the core category of the individual. The base component symbolizes the *individual*. The individual is defined as the person of interest. Each of the components add the differing aspects that contributes to the individual's unique constitution.

Cultural context. The next component examines the *cultural context* of the individual. Cultural context is the behavioral and social norms of the individual including micro- and macro-cultures. In the cultural context, dynamic skills theory and theory of successful intelligence are integrated to form one new component. Dynamic skills theory (Fischer, 1980, 2008) integrates the importance of understanding culture when evaluating an individual's cognitive variations. Theory of Successful Intelligence (Sternberg 1988, 2004, 2012) directly focuses on the importance of culture when examining intelligence. "Different cultures have different conceptions of what intelligence is and how it manifests itself in everyday life" (Sternberg, 2012, p. 507). This study was open to parents homeschooling gifted and twice-exceptional children around the world. However, the only participants who volunteered and who met the requirements were those in America, with one American family living abroad in Guam. While there is a consensus of the intelligence values in Western societies, it is important to recognize the regional and microcultures within Western societies, as well as in all macro-societies.

Cognitive development. The third level of the pyramid focuses on the *cognitive development* component, which is the degree of mental processes and intellectual growth. It merges components of dynamic skills theory and theory of successful intelligence to explain the phenomenon of high ability and asynchronous development. From dynamic skills theory (Fischer, 1980, 2008) cognitive variations and developmental range components are combined with the componential subtheory's metacomponent and performance components of the theory

of successful intelligence. As explained by Fischer (1980, 2008), individuals with the same age and similar backgrounds would have variations in their cognitive development. Development occurs in a range, changes throughout a person's lifetime, and is affected by several factors such as context and emotional state (Fischer 1980, 2008; Rose & Fischer, 2008). The metacomponent and performance component of the componential subtheory from the theory of successful intelligence are connected; these explain a person's executive functioning skills (Sternberg, 1988).

Individuals who are gifted and twice-exceptional have a higher variation in their abilities than their same age counterparts and process information at a higher pace. "At four-years-old, she was reading at a third-grade level" (Lynn & Grant, Interview, July 31, 2018). At 13 years old, Sarah M.'s (Interview, July 22, 2018) son tested into calculus on his dual enrollment exam. "They tackle their studies at levels about 2 or 3 years ahead of most other children their age" (ChemistryMom, Letter of advice, June 13, 2018).

Twice-exceptional children may have lower executive functioning skills abilities in certain areas such as planning and organizing. Drizzt5 (Interview, June 11, 2018) explained that both of her twice-exceptional sons have difficulty with executive function skills, such as planning. Sarah's twice-exceptional daughter had a traumatic brain injury which affected her executive functioning skills (Interview, May 21, 2018).

Asynchronous development is irregular development of a person's affective, intellectual, and psychomotor development (Colangelo & Wood, 2015; Peterson, 2009; Silverman, 1997). Asynchronous development is a common characteristic of gifted children. "Remember asynchronous development, and that not all gifted children emotionally mature at the same rate as their academic ability" (Dorothy, Letter of advice, September 25, 2018). Sarah noticed how

the asynchronousness changed overtime, “The asynchronous starts to balance out some as they get older, and so it's a little easier now” (Interview, May 21, 2018). Nicole also emphasized the unqiueness of a gifted child being asynchronous: “A gifted child who like content-wise, maybe, further along, maybe ready for like high school material, but emotionally-wise they're really asynchronous” (Nicole, Interview, August 3, 2018). She also noted, “Homeschooling is a great educational option for gifted children, especially when a gifted child exhibits asynchronous development, a hallmark trait of giftedness” (Letter of advice, November 2, 2018).

Knowledge and skills progression. The fourth level is the *knowledge and skills progression* component, which is defined as the advancement and application of information, facts, and experience. The component of developmental range from dynamic skills theory is joined with the exponential subtheory, componential subtheory: knowledge acquisition, and analytical and creative skill sets of the theory of successful intelligence. The developmental range is the fluctuation between optimum level and functional level in which a person develops automaticity over time (Fischer, 2008; Fischer & Yan, 2002; Miller, 2011; Rose & Fischer, 2011). The experiential subtheory also explains the process in which a person achieves automaticity over time (Miller, 2011; Sternberg, 1988). The knowledge acquisition component of the componential subtheory is the process an individual goes through to learn, gain knowledge, and solve problems (Miller, 2011; Sternberg, 1988). The analytical and creative skill sets are applied to learning by judging and assessing tasks or situations and using innovative ideas to solve problems (Miller, 2011; Sternberg, 2004).

The movement from the optimum level to the functional level, in which little supports are needed, are found in the data. ChemistryMom allowed her children to work independently at the functional level until they needed help at the optimum level: “We just let them go and then when

they are stuck, I answered that question" (Interview, June 13, 2018). Participants assisted their children with knowledge acquisition. "I sit there with them and walk them through it and make sure that they're understanding it" (Beetlemaniac, Interview, June 18, 2018). Automaticity was found in the focus on content mastery, "we work for mastery" as explained by Spartiger (Interview, July 15, 2018).

Problem-solving skills were found in the participants' use of cocurriculars focusing on problem-solving and allowing their children to develop their own structure throughout the day. "Engineering, robotics and computer competitions in both middle school and high school kept them busy, engaged and challenged in a way that textbook learning could have never done" (Grace, Letter of advice, August 9, 2018). Ruth reiterated the focus on problem-solving:

> She gets a syllabus just like she would in college, and it says, okay, this week's assignments are this. This week's assignments or this, and you know, she has to figure it out, you know, and this, this nine-week span, you need to do one research paper that needs to meet these criteria, you know. And I'm not breaking it down for her day by day or even week by week. I'm doing it more a semester by semester or course by course because she's got to learn to handle that. (Interview, July 9, 2018)

Personalized home education. The final component of this combined theory is the core category of *personalized home education*. Personalized home education is the whole-child pedagogical plan designed to meet an individual's academic, psycho-emotional, and social needs while taking into account his or her personal preferences. In the home education setting, the plan is created by parents with an emphasis on the whole-child. Parents allow varying degrees of collaboration of each child in the creation of a personalized home education plan. The level of

child input is dependent upon the approach chosen, the child's ability, and parent's needs or goals for the child.

Choice theory's basic needs components and quality world merge with the contextual subtheory, practical skills, and wisdom-based skills of the theory of successful intelligence to support personalized home education. Four of the basic needs in choice theory are central to personalized home education. The needs include love and belonging, freedom, power, and fun (Glasser, 1996, 1998; Mottern, 2008; Peterson, 2000). The quality world is the ideal world and the manner in which a person has their needs met (Glasser, 1998; Mottern, 2008). The focus on the contextual subtheory of the theory of successful intelligence is social and practical behaviors within the scope of culture (Miller, 2011; Sternberg 1988). Practical skills are essential in executing ideas and adapting to, altering, or selecting one's environment (Miller, 2011; Sternberg, 1988, 2012). The wisdom-based skill set are used to ensure one's actions are ethical and work to achieve a common good (Sternberg 2004, 2012).

Love and belonging were satisfied through interaction with peers. "They need to be able to spend time with their peers (other gifted kids) and form a sense of safety and belonging, especially during the teen years" (A.G.A-S, Letter of advice, December 7, 2018). All participants were involved in cooperatives, cocurricular, and extracurriculars with peers.

Kanna explained that homeschoolers may not have peers with the same ability levels as them, but it was still important to encourage that interaction:

> Try to foster some of those things so that they can get information from their peers because 2e kids in most circumstances don't have peers. They don't really fit in. Homeschooling is a little more forgiving in that regard than other communities, but still, it's very difficult. (Interview, June 19, 2018)

The need for freedom and power was demonstrated by parents allowing their children to choose their interest and have greater autonomy over their day. Ross (Interview, May 10, 2018) explained that his approach to homeschooling allowed his daughter to choose her interests and "she has a huge amount of autonomy." All parents provided their children with some level of freedom of choice in developing their education plan. Some allowed it in academics, cocurriculars and extracurricular, or both. Parents who followed the strictest structures during part of the day may have allowed more freedom at other times. Spartiger (Interview, July 15, 2018) explained that her mornings followed strict structure and adherence to the curriculum, but the afternoons had less structure with more freedom in choice of activities. There was a flow among the level of freedom found in the data.

The need for fun was demonstrated through participants' encouragement to make learning engaging. Lynn and Grant (Letter of advice, August 13, 2018) offered the advice of "incorporating fun, play, and laughter into learning and chores/work." Grace suggested, "So just have fun, enjoy, go wide with all of their interests and where they want to go deep, but don't feel like you're in a race to finish textbooks and move on to the next textbook" (Interview, August 23, 2018). Kanna also encouraged the need for fun while learning: "Just do fun, educational stuff and focus on that for a really, like at least, until they're at least seven and just foster the love of learning," (Interview, June 19, 2018).

The child's quality world was shared with the parent. Parents act on their child's behalf by understanding the child's needs and knowing of what was best for their child. Kanna (Interview, June 19, 2018) felt the public school did not meet her daughters' need which influenced her decision to homeschool her son who had learned to read by age three. After several negative experiences at public school, Drizzt5 (Interview, June 11, 2018) stated that her

sons “refused to go back.” Lynn and Grant reiterated this in their letter of advice: “We wanted more for her: the ability to learn at her level, in her style, at her speed, according to her passions and talents” (August 13, 2018). Participants had to adjust their ideal of an educational quality world.

Academically, parents adjusted the curriculum to meet their children’s needs and ensure the balance of the quality world “if something isn't working, we will change to something that is working” (A.G.A-S, Interview, November 17, 2018). Nicole shared, “We moved to math because math was such an emotional subject for him, we moved math last year to the end of the day so that he would actually finish all of the other things that he wasn't really worried about” (Interview, August 3, 2018).

The contextual subtheory encompasses social and practical skills. Social skills were encouraged, as noted above in the explanation of love and belonging. Drizzt5 (Interview, June 11, 2018) explained that her sons have autism, as such “they were both in two different social skills classes” and she intentionally provided opportunities for them to interact with others to develop these skills in real-life settings:

> They go and interview authors and talk to authors and go to panels and ask about how they get their ideas. So, they do different types of things, if that makes sense. They do different types of things that will allow them to interact with people.

Practical skills for the purpose of this study focused on the adapting, altering, and selecting of environments. Parents, whose children began at a public school and needs were not being served, needed the environment altered. Drizzt5 (Interview, June 11, 2018) requested the implementation of an individualized education plan and other modifications or accommodations to the traditional setting. When this was refused, and her children refused to return to school, she

had to select a new environment through homeschooling. Lynn and Grant (Interview, July 31, 2018) explored traditional options, but they were discouraged from early enrollment at a public school, and private schools did not offer an acceptable alteration for their daughter's education needs. This caused them to select homeschooling as an education option.

Homeschooling families also experienced the need to adapt, alter, or select new curricula, instructional methods, and structures. Families have dropped curriculum and selected new ones. Other families altered the way it was used. "They are both using the same nutrition book, but they do different things in the book" (Sarah, Interview, May 21, 2018). Families altered or selected new instructional methods. Sarah M. (Interview, July 22, 2018) explained that her children would be "doing dual enrollment just because I can't teach college level." Julie altered the curriculum and instructional methods for her daughter, "With her eyes as they are, we do oral quizzes frequently" (Interview, August 9, 2018). The structure had also been altered or changed. "Our routine has changed through the years" (Sarah, Interview, May 21, 2018). Ruth had to alter her structure for a semester: "The effect of the current environment on our decisions is that science and writing have largely been pushed off to second semester, because I am more hands-on with him on those subjects" (Journal entry, December 3, 2018).

Wisdom-based skills were seen in the parents' desire to raise children to be positive members of society. "We want her to learn she is a contributing part of the family, she is capable, and she provides important help" (Lynn and Grant, Letter of advice, August 13, 2018). Drizzt5 stated, "I spend my, easily 20-30 hours on the road running kids to therapy to address stuff, to get them up to speed, so that when they are 18, they can go off to college and be independent adults that are like functioning and not getting a phone call saying 'I need to come home, I'm dropping out'" (Interview, June 11, 2018).

The personalized education theory of gifted and twice-exceptional homeschooling combined components of choice theory, theory of successful intelligence, and dynamic skills. The derived components of this theory are the individual, cultural context, cognitive development, knowledge and skills progression, and personalized home education. Personalized education theory of gifted and twice-exceptional homeschooling provides a theoretical understanding of how homeschooling provides a personalized education for gifted and twice-exceptional children.

Research Question Responses

This section provides answers to the research questions that guided this study. One central question encompassed the purpose of this study, which was to determine the educational processes families implement within the homeschool environment in educating their gifted and twice-exceptional children. Five subquestions were constructed to support the central question. These questions focused on the cultural definition of giftedness, the process of choosing to homeschool, the process of choosing a curriculum, the process of choosing an instructional method, and the process of developing a structure. The processes were grounded in data which focused on the homeschooling of gifted and twice-exceptional children; however, the processes are applicable to other subpopulations of homeschooling families. This was confirmed through discussion with expert reviewers.

Central Question: What are the educational processes that families implement within the homeschool environment in educating their gifted and twice-exceptional children?

As operationally defined in Chapter One, the educational processes are the curriculum, instructional methods, and structure used by homeschooling parents in the academic development of their children (Anthony & Burroughs, 2012; Carpenter & Gann, 2016; Christian,

2003; Kunzman & Gaither, 2013). Participants used these factors but in variations based on the needs of the child. "It's my moral duty as a parent to do my best for her," (Dorothy, Letter of advice, September 25, 2018).

Analysis of the data did not reveal any identical curricula, instructional methods, or structural methods in all families. Instead, the data demonstrated there were forms of personalization across all families in these areas as well as an emphasis on the whole-child. Participants noted the inclusion of life skills, consideration of emotional wellness, and the need for social skills in their home education plans.

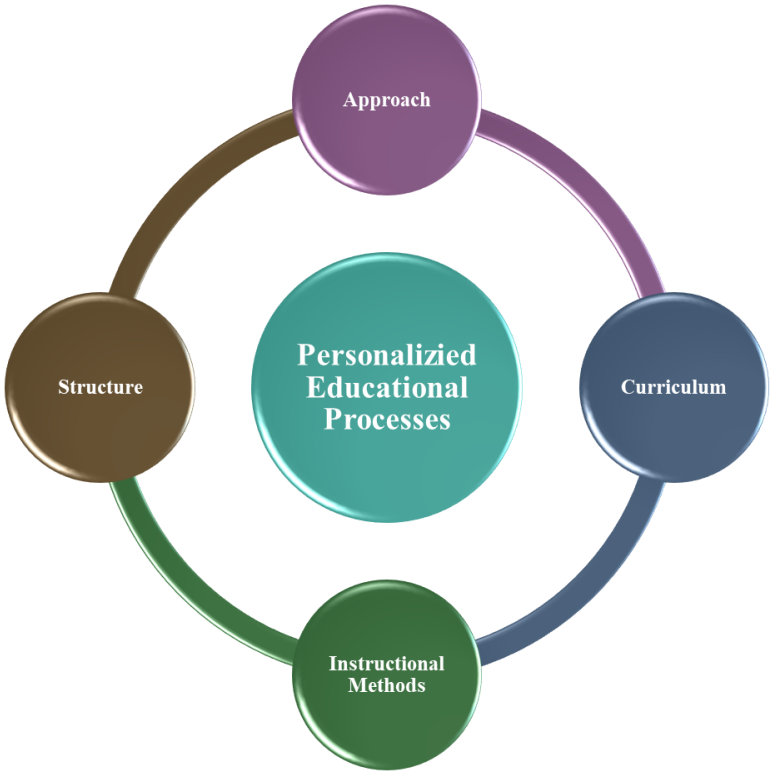

Figure 3: Personalized Educational Processes Model

The educational processes can be described by the core category: *personalized home education*. Through the personalization of the components outlined in the definition, parents are able to homeschool their gifted and twice-exceptional children.

> I think the ideal thing about homeschooling is to let it be personalized and based on the gifted child, their, again, their speed, their interests, being able to have all those in mind when you're choosing curriculum and when you're going about your day to see if things go quickly that day (Lynn and Grant, Interview, July 31, 2018).

A.G.A-S stated, "I would say that there's a lot more personalized, individualized education planning goes into it" (Interview, July 18, 2018).

Educational processes chosen by parents are understood through the personalized education theory of gifted and twice-exceptional homeschooling. In order to develop the educational processes, parents must first understand each individual child within the family. The concept of looking at each child individually was reiterated by Spartiger (Interview, July 15, 2018), ChemistryMom (Interview, June 13, 2018), and Grace (Interview, August 23, 2018). The cultural context was indirectly applied to the educational processes through daily actions. Behaviors and actions are culturally bound (Miller, 2011; Sternberg, 1988).

Parents also considered their child's cognitive development in the planning and implementation of educational processes. Parents chose advanced content in their child's areas of giftedness. Lynn and Grant (Interview, July 31, 2018) chose higher math content for their daughter. Beetlemaniac (Interview, June 18, 2018) had to find alternative math options for her son who is advanced in math. A.G.A-S (Interview, July 18, 2018) and Kanna (Interview, June 19, 2018) noted their children's advanced abilities in language arts resulted in challenges in finding developmentally and academically appropriate materials. Parent's noted difficulty with executive function skills and asynchronous development. Drizzt5 (Letter of advice, June 11, 2018) and Kanna (Letter of advice, June 23, 2018) noted their children's difficulty with executive function skills. Asynchronous development was a factor in the parents' ability to

personalize the homeschool educational processes as explained by Dorothy (Interview, July 11, 2018), Nicole (Interview, August 3, 2018), and Sarah (Interview, May 21, 2018).

Knowledge and skills progression is the component of the personalized education theory of gifted and twice-exceptional homeschooling that focuses on the acquisition of knowledge and development of skills. Parents who chose to homeschool their gifted and twice-exceptional children purposefully ensured their children were progressing academically, socially, and emotionally. Dorothy (Interview, July 11, 2018) emphasized the need for skill development in her daughter's areas of weaknesses. Drizzt5 (Interview, June 11, 2018) had her sons in two different social skill classes. Lynn and Grant, in their letter of advice (August 13, 2018), encourage books focused on character development.

The center of the personalized educational theory of gifted and twice-exceptional homeschooling is personalized home education, which is defined as the whole-child pedagogical plan designed to meet an individual's academic, psycho-emotional, and social needs while taking into account his or her personal preferences. Personalized home education is the driving force behind any changes to these processes. The changes may be initiated by either the child or the parent based upon his or her own needs, or the changes may be initiated by the parent acting on behalf of the child without the child requesting a change. "As per the WTM, I decided to add a second language to my eldest child's education program this school year. I decided to add a modern language, and Mandarin seemed useful" (Dorothy, Journal entry, September 25, 2018). The changes to the curriculum, instructional methods, or structure are in pursuit of ensuring the child has a personalized education plan to fit his or her needs and preferences and is based upon his or her abilities within a familial context. ChemistryMom (Interview, June 13, 2018) explained that she creates an education plan "the way it works best for us." It is through

personalization that parents are developing the educational processes needed for a whole-child approach to learning.

SQ 1: How are giftedness and intelligence defined within the families' cultural and/or national context?

This study was open to international families. However, no international families were able to provide the documentation to meet the criteria to participate in this study. The families defined giftedness based on the local schools determining factors, high academic abilities, and the differences they noticed in the children. "The school districts work with; I think 130 as being the IQ score for being considered to be a part of the gifted and talented programs" (Nicole, Interview, August 3, 2018). "I had previously taught preschool, so I knew what preschoolers where supposed to do," (Sarah, Interview, May 21, 2018).

Giftedness and intelligence found in this study was based on the participants' locations. Therefore, giftedness and intelligence used the traditional Western society methods of standardized tests for academics and intelligence quotients as a definition. Parents determined their child's giftedness based on factors used by local school, high academic abilities, and the differences noticed among their children.

SQ 2: What is the process implemented by parents choosing to homeschool their gifted and twice-exceptional children?

There are four classifications of the methods by which families chose to homeschool: (a) homeschool as primary, (b) preschool-to-homeschool, (c) homeschool post-evaluation, and (d)

compelled homeschoolers. Families in these classifications followed different paths of choosing to homeschool. The process of choosing to homeschool is illustrated in Figure 4.

The homeschool as primary classification are families who chose to homeschool their gifted or twice-exceptional before their child's eligibility to preschool. Homeschool as primary is represented by the red box labeled "homeschool chosen first" and leads directly to homeschooling. During the preschool years, families evaluate their options for preschool. Some may enroll their children in preschool, either full-time or part-time, others may choose no preschool as seen in the three option boxes in Figure 4.

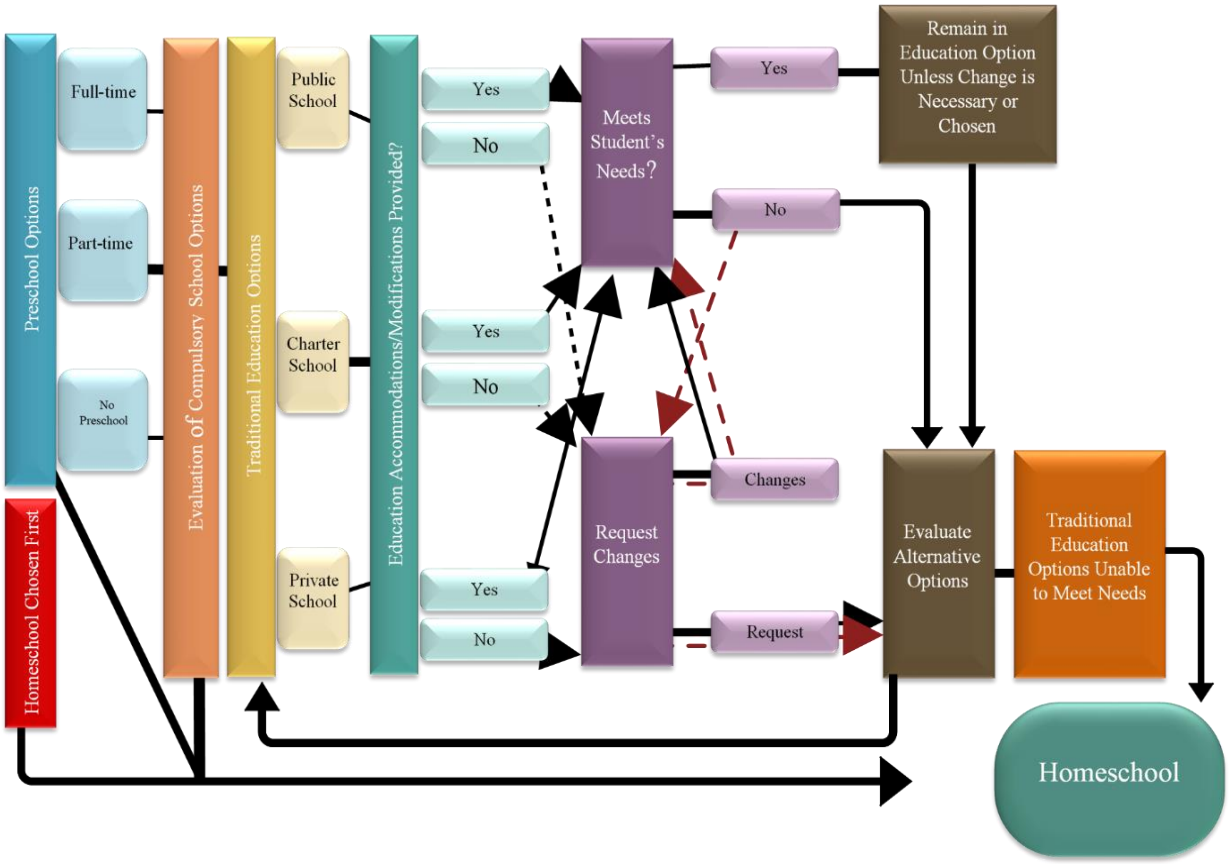

Figure 4: Process of Choosing to Homeschool

The preschool-to-homeschool classification includes those who choose to homeschool based on their child's experiences and abilities in preschool. Additionally, this classification

includes those who used preschool while also intending to homeschool. These families are demonstrated by the line extending diagonally from preschool options to the line leading to homeschooling.

The third classification is homeschool post-evaluation. These families chose to homeschool after an evaluation of traditional options, whether it was public, charter, and private, did not meet the child's need or the parents' expectation of the setting to meet their child's needs. This is shown in Figure 4 by the line extending down from the box labeled "evaluation of compulsory education options."

The final classification is compelled homeschoolers. These are the families who were compelled to choose homeschooling after traditional methods could not meet their child's needs. Families who used traditional education options had the choice of public, charter, and private schools. The participants utilized these options until a need for modifications or accommodations presented itself. This is shown in teal in Figure 4.

If the accommodations/modifications were provided, the next step was to determine if the changes met the student's needs, shown in purple. If the student's needs were being met, they remained in the education option until a change was needed, as shown in brown. If the changes were not meeting the student's needs, the parents either evaluated alternate options or requested changes. If parents requested changes and the changes were made, the cycle would return to ensure the student's needs were being met. If the changes were rejected, parents would evaluate alternative options, as Ross (Interview, May 10, 2018) explained:

> I discussed with the school that she was attending, which was the charter school, we looked at doing an IEP. We came up...They told us what they planned, which was

> unsatisfactory. I contacted the county's school board-their gifted program coordinators. I checked into private schools in the area.

This cycle is represented by the red dotted lines.

If the accommodations/modifications were not provided, the next step was to request changes, also shown in purple. If parents requested changes and the changes were made, then parents would ensure the student's needs were being met. If their needs were not being met after changes, then the cycle would repeat through the cycle as previously described and outlined using red dotted arrow lines in Figure 4. If the changes were rejected, parents would evaluate alternative options. After the evaluation of alternative traditional options, parents would either select one of those options or choose to homeschool.

> The school told me that he didn't qualify for services. They didn't recognize vision and that he was too smart. Two years later in third grade, he had a meltdown. I asked, "Do you think he wouldn't qualify for an IEP or 504 cause my other kid's got ADHD?" And that one was in kindergarten by then. And I was like he's on ADHD meds and had friends who were like in school teachers and stuff. I was like are you sure he doesn't qualify, and I was told no cause they are too smart, the medicines are working on one, and he's too smart he doesn't qualify for an IEP. … So, I guess I just kind of stumbled into it. The accidental homeschooler. I accidentally got here because there was no other choice. (Dritzzt5, Interview, June 11, 2018)

Four classification routes of choosing to homeschool were determined. For some families, the decision to homeschool was the primary choice and happened during the preschool years or before. Some chose homeschooling after preschool experiences led them to homeschool. Others felt homeschooling was the best option after evaluating the traditional

options available in their area. Finally, compelled homeschoolers chose to homeschool after a catalyst required a change in the environment that could not be met in traditional education options.

SQ 3: What is the process parents employ when choosing a curriculum?

The curriculum was operationally defined as the materials used to provide instruction for an individual over a specific period of time or course of learning (Hanna, 2012; Mazama, 2015; Pannone, 2014; Thomas, 2016a). The process of choosing a curriculum is affected by the participants approach to homeschooling. A parent may choose one specific approach or a combination of approaches to create a personalized education for his or her child.

The process by which families choose to homeschool is outlined in Figure 5.

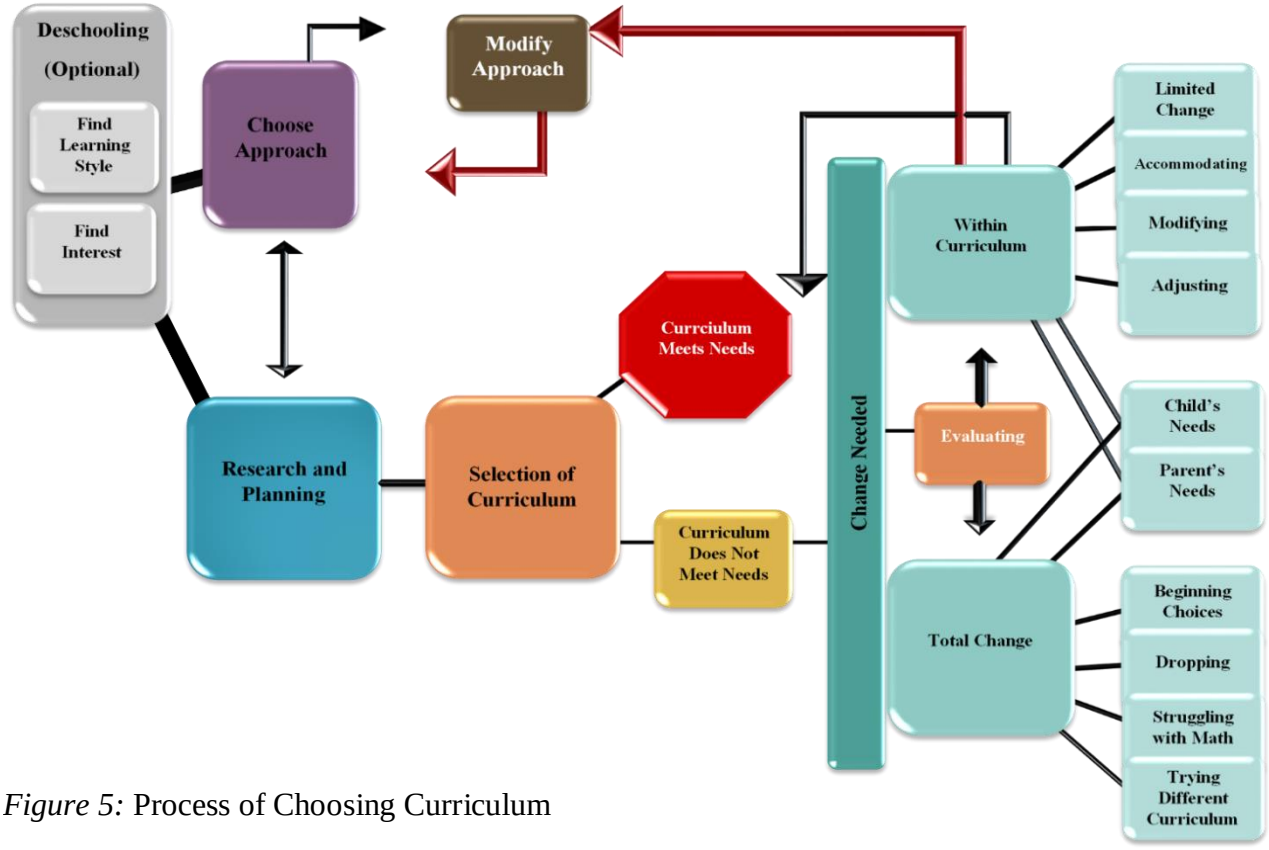

Figure 5: Process of Choosing Curriculum

Deschooling is an optional step that some compelled homeschoolers used in order to determine their child's learning style and interest.

Next, they may enter a phase of research and planning, shown in blue in Figure 5, or they may move to choose approach, shown in purple in Figure 5. Families who do not use deschooling may begin with choosing an approach based on prior knowledge or experience, or they may enter the research and planning phase then move towards an approach. Families may alternate between the research and planning and choose approach phases as they try to determine their child's needs and their teaching style.

Once parents have chosen an approach and researched their options, he or she will move to selecting and acquiring the curriculum. "Choose curriculum carefully," advised Dorothy (Letter of advice, September 25, 2018). If the curriculum meets the child's need, the process stops. If the curriculum does not meet the child's needs, then the parents move towards the process of changing the curriculum, as demonstrated in Figure 5.

The process of changing the curriculum begins with an evaluation. The changes may occur as a modification of the approach to homeschooling, changes within the curriculum, or a total change of curriculum. The red arrows indicate the process of modifying the approach and curriculum in Figure 5.

Within curriculum change represents the small to moderate changes made to curriculum being used. These include limited changes, accommodating, modifying, and adjusting. Total change occurs when a chosen curriculum is not effective. These changes may be based on the child's needs or the parent's expectations or goals for the child. These changes include beginning choices, dropping, struggling with math, and trying different curriculum. Both within curriculum change and total curriculum change may happen based on the parent's need, child's needs, or both.

SQ 4: What is the process parents undergo when choosing instructional methods for

differing academic disciplines?

The process by which parent chose instructional methods is depicted in Figure 6. On the left is the approach, which has a direct effect on the instructional methods chosen by parents. After the approach, there are three main categories of instruction: teaching methods, learning environments outside the home, and learning through cocurricular and extracurricular. Parents choose teaching methods based on the approach they selected. However, if the method is not working, then an evaluation is conducted. Adjustments are made based on the ability and preference of the child, parent, or both. Accommodations and modifications to the instructional methods are provided.

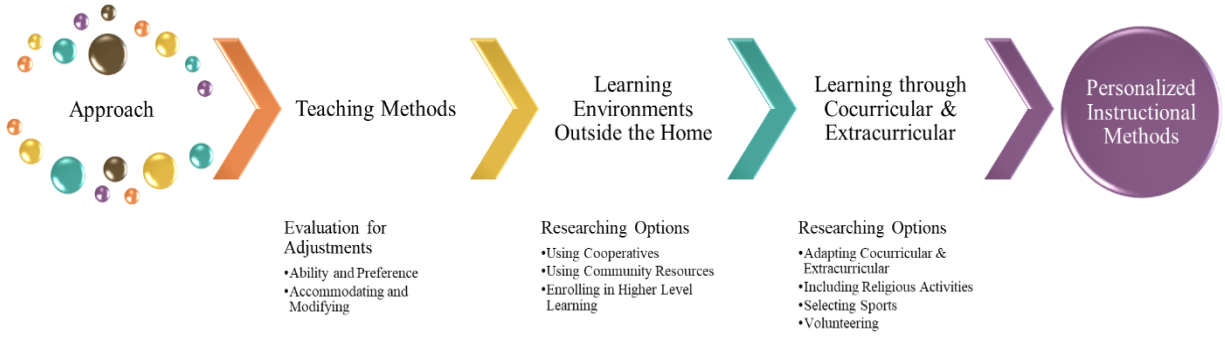

Figure 6: Process of Choosing Instructional Methods

Parents may utilize learning environments outside the home, which include cooperatives, community resources, and enrollment in higher level learning. Parents begin by researching their options. "Those have been really by word of mouth recommendations. Our homeschool association is very good about keeping everybody in touch. … The math group I found out about through another homeschooling mom" (Beetlemaniac, Interview, June 18, 2018). A.G.A-S wrote, "I use face book [sic] to search for clubs and activities in our community" (A.G.A-S, Letter of advice, November 17, 2018). Participants chose the options to best fit their children's needs.

The process of including cocurricular and extracurricular activities is seen in Figure 6. There is a dichotomous usage of cocurricular and extracurricular activities in the education plan. They may be viewed as separate from the educational needs of their child or as an integral part. Most participants used cocurricular and extracurricular activities as part of their child's education plan or they acknowledged the dichotomy of these events.

Parents researched options and chose based on their and their child's preferences. "We've just kind of seemed like what are, what are they good at," (Spartiger, Interview, July 15, 2018). These include adapting cocurricular and extracurricular activities, including religious activities, selecting sports, and volunteering.

The instructional methods implemented are based on the needs and preferences of the parents, child, or a combination of both. The participants indicated they researched options to provide their children opportunities to learn in ways that fit their needs. The instructional methods implemented are an important aspect of providing a personalized home education.

SQ 5: What is the process parents undertake when determining the structure of the environmental setting based on the development of the child?

The structure implemented in homeschooling is multifaceted. It includes daily, weekly, and yearly scheduling, the level of autonomy, and the adherence to the curriculum. The facets are affected by the chosen approach to homeschooling, see Figure 7.

The influential factors that affect the structure are parental needs, the child's need, the family's needs, academic needs, and cocurricular and extracurricular activities. As seen is Figure 7, the structure choice maybe strict, flexible, or a combination. The combination of structure may be reflected in having stricter structure during one portion of the day, while allowing more flexibility in the other portion of the day. Beetlemaniac started each morning off

with the Pledge of Allegiance, posting of the American flag on her home, and prayers (Journal entry, June 6, 2018). However, she has learned to "become more relaxed over schedules" (Beetlemaniac, Letter of advice, June 6, 2018).

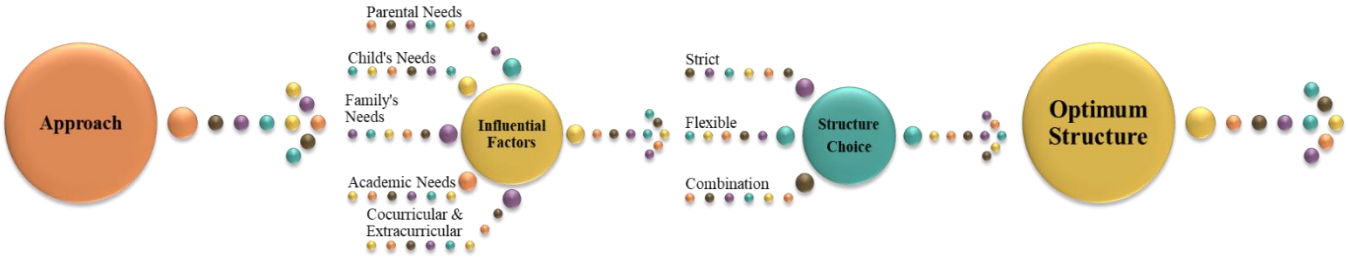

Figure 7: Process of Choosing Structure

Within the structure are the autonomy and adherence to the curriculum. The levels of autonomy and adherence to the curriculum varied among families. These facets are affected by the approach, influential factors, and can be implemented strictly, flexibly, or a combination depending on the circumstance. The family arrives at an optimum structure that will continue until one of the influential factors requires change to occur. In this event, the process will start over, and the parents will adapt or modify until they develop another optimum structure fulfilling the educational and familial needs to create a personalized home education.

Summary

Chapter Four provided rich descriptive data of each participant. There was a total of 16 participants described in 15 narratives; 14 were individuals and one mother-father couple. An analysis of the data was conducted independently as well as collectively under the purview of the research questions to answer each question, develop themes, and discover the core category. The themes that emerged were (a) becoming a homeschooler, (b) uniqueness of giftedness and twice-exceptionality, (c) parental experiences, (d) personalized curriculum, (e) personalized instructional methods, and (f) personalized structure. The core category that emerged was

personalized home education. Personalized home education is defined as the whole-child pedagogical plan designed to meet an individual's academic, psycho-emotional, and social needs while taking into account his or her personal preferences. A personalized home education looked different for each participant and was different for each child in the family.

The theoretical integration revealed a merging of the conceptual framework which included choice theory (Glasser, 1985, 1997, 1998) with portions of the theory of successful intelligence (Sternberg, 1988, 2004, 2012) and dynamic skill theory (Fischer, 1980, 2008). The new theory, personalized education theory of gifted and twice-exceptional homeschooling, was expressed using an inverted pyramid. The lowest component focused on the individual. The second level, cultural context, combined the importance of cultural recognition of dynamic skills theory and theory of successful intelligence. Cognitive development is the third component. It was created by merging dynamic skills theory's cognitive variation and developmental range with the theory of successful intelligence's componential subtheory-metacomponents and performance. The next component, knowledge and skills progression, is an amalgamation of the development range from dynamic skills theory with the theory of successful intelligence's componential subtheory-knowledge acquisition, experiential subtheory, and analytical and creative skill sets. The final component is personalized home education. This component was formed by the merging of choice theory's (Glasser, 1985, 1997, 1998) quality world and basic needs with the theory of successful intelligence's contextual subtheory, practical skill set, and wisdom-based skill set.

The final section of this chapter answered the research questions. The central question focused on the educational processes parents implement when homeschooling gifted and twice-exceptional children. The educational processes chosen by parents were affected by the

personalized education theory of gifted and twice-exceptional homeschooling, the approach, curriculum, instructional methods, and structure. Educational processes are personalized based on the needs of each child and parent. The first subquestion inquired about giftedness in a cultural context. All participants were located in Western society; therefore, all had a similar cultural context, which defined giftedness based on standardized tests of academics and intelligence quotient. The participants indicated differing definitions based on local systems. The second subquestion inquired about the process parents undergo to choose homeschooling for their gifted or twice-exceptional children. A model was developed to explain this process. The third subquestion explored the process parents encounter when choosing a curriculum. This resulted in a model to demonstrate the process of parents creating a personalized curriculum for their child. Next, the process of choosing instructional methods was examined. A diagram outlined the various methods by which participants provided personalized instructional methods. The final subquestion investigated the process parents encounter when developing the structure for their gifted or twice-exceptional child. The diagram demonstrated the different facets that played an integral role leading to an optimum, personalized structure for each child.

CHAPTER FIVE: CONCLUSION

Overview

The purpose of this study was to explain the educational processes implemented by homeschooling families of gifted and twice-exceptional children. The chapter begins with a summary of the findings. Next, the discussion section examines the results of the study within the scope of the related literature and conceptual framework. The discussion section is followed by the implications section which outlines the theoretical, empirical, and practical implications of the results of this study. The next section discusses the delimitations and limitations of this study. The chapter concludes with recommendations for future research.

Summary of Findings

The data revealed six themes which influence the educational processes implemented by parents who homeschool gifted and twice-exceptional children. The themes were (a) becoming a homeschooler, (b) uniqueness of giftedness and twice-exceptionality, (c) parental experiences, (d) personalized curriculum, (e) personalized instructional methods, and (f) personalized structure. These were crucial to identifying and understanding the core category: personalized home education. Personalized home education is the pedagogical plan designed to meet an individual's academic, psycho-emotional, and social needs while considering his or her personal preferences.

The theoretical integration revealed a new theory, personalized education theory of gifted and twice-exceptional homeschooling, by combining three existing theories, Glasser's (1985, 1997, 1998) choice theory, Sternberg's (1988, 2004, 2012) theory of successful intelligence, and Fischer's (1980, 2008) dynamic skills theory, as outlined in the conceptual framework. Additionally, each integrated component was supported by the participants' experiences. The

components were described using an inverted pyramid. The lower level represented the *individual*, followed by *cultural context*, *cognitive development*, and *knowledge and skills progression*. The overarching concept of this theory is *personalized home education*. It is through a personalized education that parents develop a pedagogical plan which focuses on the whole-child. Education encompasses more than academics for their gifted and twice-exceptional children. It incorporates the child's psychological, social, and emotional needs as well as individual interest.

The central question guiding this study was "what are the educational processes that families implement within the homeschool environment in educating their gifted and twice-exceptional children?" The educational processes were influenced by the personalized education theory of gifted and twice-exceptional homeschooling, the approach, curriculum, instructional methods, and structure. These influential factors led to a finalized concept of personalized educational processes. The personalized educational processes model was provided in Figure 3.

There were five subquestions to support the central question. The first subquestion was "how are giftedness and intelligence defined within the families' cultural and/or national context?" The study was available to international participants. However, none of the individuals from international locations were able to provide third-party documentation of giftedness or twice-exceptionality. This resulted in all participants being from Western society. Giftedness was defined by standardized tests of academics and intelligence quotient with some variance dependent on local systems.

The second subquestion was "what is the process implemented by parents choosing to homeschool their gifted or twice-exceptional children?" Four classifications by which parents chose to homeschool were identified: (a) homeschool as primary, (b) preschool-to-homeschool,

(c) homeschool post-evaluation, and (d) compelled homeschoolers. The process of choosing to homeschool, as seen in Figure 4, provided a visualization of this process.

The third subquestion was "what is the process parents employ when choosing a curriculum?" The process of choosing curriculum was detailed in Figure 5. This process revealed the selection of an approach, and its direct effect on choosing curriculum, instructional methods, and structure.

The fourth subquestion asked "what is the process parents undergo when choosing instructional methods for differing academic areas?" This process included the teaching methods, learning environments outside the home, and the cocurricular and extracurricular activities implemented the educational process. The process of choosing instructional methods was outlined in Figure 6.

The final subquestion inquired "what is the process parents undertake when determining the structure of the environmental setting based on the development of the child?" The process of choosing a structure was affected by the approach and influential factors which led to either a strict structure, flexible structure, or a combination of both. Within the concept of structure is also adherence to the curriculum and autonomy, which may be strict, flexible, or a combination. The process of choosing structure was shown in Figure 7.

The intention of this study was to determine the educational processes implemented by families homeschooling gifted and twice-exceptional children. The processes developed were grounded in data from these combined subpopulations. After discussion with expert reviewers, it was agreed that these processes are applicable to other subpopulations of homeschooling families and could be generalized to most homeschooling families.

Discussion

The following sections discuss the findings in reference to the related literature and conceptual framework described in Chapter Two. The discussions explain any confirmation or corroboration of the literature found in the study. Additionally, any divergence or extension of literature is explained.

Empirical Literature

The participants had children whose gifts ranged in multiple areas and abilities. The consistency of the data indicated all children excelled above their same age peers based on their standardized test results demonstrating higher academic and aptitude abilities. Participants indicated their children were identified as gifted based on standardized tests for academics or intelligence. Sternberg (2004) noted that giftedness is found in academic and non-academic areas based on cultures. While many cultures identify giftedness within the realm of academics, there are other cultures who place more value on skills needed for daily survival and function within that society. Other non-academic areas in which giftedness is recognized are athletics and fine arts.

The identification of giftedness and twice-exceptionality can be difficult due to masking effects (Prior, 2013; Trail, 2011). One participant indicated that prior to homeschooling, she had difficulty with the identification of twice-exceptionality because her children's giftedness masked the areas of weaknesses. This struggle was further complicated by the teachers' lack of knowledge about twice-exceptionality (Bianco & Leech, 2010; Foley-Nicpon, Assouline, & Colangelo, 2013). Her children were not behind enough to get the necessary testing and services. Researchers have referred to children having to wait until they are two or more years behind to receive services as the wait-to-fail method (McCallum et al., 2013). This further

supports the criticisms of the discretionary model and RtI's inability to identify twice-exceptional students (Crepeau-Hobson & Bianco, 2011; Fuchs & Fuchs, 2006; Postma et al., 2011). The difficulties the participants shared further supports the need to use multiple methods of identification, such as combining the discrepancy model with RtI (Postma et al., 2011; Restori, Gresham, & Cook, 2008) or using a comprehensive and multidisciplinary evaluation (Crepeau-Hobson & Bianco, 2011).

Another participant shared her daughter's story of being given fourth-grade level writing and spelling assignments in kindergarten based on a faulty assumption that she was able to write and spell at the same level as her reading ability. According to the participant, who works as a teacher for the visually impaired, the classroom teacher did not understand that reading, writing, and spelling are separate skills. These experiences corroborate the research indicating general education teachers do not receive adequate training in relation to giftedness and twice-exceptionality; thus, cannot provide proper services for their unique abilities (Bianco & Leech, 2010; Foley-Nicpon et al., 2013).

The negative effects of inadequate gifted education policies were in the various locations represented in this study. Participants noted the reduction of gifted education availability, the delay in accessibility until a particular grade, and the complete lack of programming. These factors influenced the decision to choose homeschooling as an education option after advocacy efforts failed (Delisle, 2006; Jolly & Matthews, 2012; Jolly et al., 2012; Leggett et al., 2010).

Homeschool demographics. The racial/ethnicity demographics of the interviewing parents were a general representation of the documented demographics. They were 88% White/Caucasian, 6% Hispanic, and 6% American. The non-interviewing parents were 86% White/Caucasian, 7% Chinese, and 7% American. The National Center for Education Statistics

(NCES) 2012 survey found that of the homeschooling respondents 83% were Caucasian, 7% Hispanic, 5% Black, and 2% Pacific Islander or Asian (Redford et al., 2017). Of the interviewing parents, 87% were female, and 13% were male. The non-interviewing parents were 7% female and 93% male.

The educational demographics of the participants who completed interviews are not representative of the data from the 2012 NCES survey, which demonstrated of the respondents, 32% had vocational training or some college, 26% bachelor's degree, 23% high school, 18% graduate degree, and 2% had less than a high school education (Redford et al., 2017). In this study, the educational demographics of the interviewing parents were 44% had a bachelor's degree, 31% master's degree, 13% attended graduate school, 6% had some college, and 6% had completed a doctorate level, except the dissertation. The educational demographics of the non-interviewing parents were 36% had bachelor's degree, 36% had master's degree, 14% had some college, 7% had a doctorate, and 7% had high school diploma.

Homeschooling approach. Homeschooling method, also known as style, was referred to as approach throughout the data collection and analysis process to distinguish it from instructional methods. The term approach is used for this study. The approaches revealed in this study were consistent with the most commonly used approaches in homeschooling practitioner literature (Duffy, 2012; Suarez & Suarez, 2006). Expanding on these approaches was the inclusion of Montessori, play-based, and child-led learning. Child-led learning differed from unschooling in that parents were serving as facilitators or guides in learning and ensured that their children were making progress. Those who used unschooling philosophies modified the application of the approach to become guided unschooling, in which they allowed their children to explore their interest while requiring specific goals to be met.

Homeschool educational processes. Homeschooling has been documented as being a method of education that can be customized for the education of each child (Jolly et al., 2012; Ray, 2002). The study expanded upon the idea of customization presented by Jolly and colleagues and Ray to be more detailed and focused on each individual. The Oxford Dictionary defines customize as "modify (something) to suit a particular individual or task" (Customize, 2019). Personalize is defined as "design or produce (something) to meet someone's individual requirements" (Personalize, 2019). The participants' attention to detail, awareness of their children's learning styles and abilities, and their dedication to providing an education unique to each child indicates parents are designing, not just modifying, the homeschool educational processes to meet their children's individual needs. The participants emphasized educating the whole-child and not just the academics. This study answered the call of Bannier (2007) and Howell (2013) to expand research into how homeschooling families have been successful in educating their children rather than focusing on the validity of homeschooling.

Homeschool curriculum. Each state has different regulations of the required subjects to be taught in the homeschool environment (see Table 3; Coalition for Responsible Home Education, 2017c). While this was not the focus of the study and participants were not required to disclose their state of residence, several participants either indicated they required their children to adhere to the state requirements, or in the letter of advice, they recommended parents check the state requirements. Additionally, the parental education levels of the participants meet or exceed the minimum as regulated by most states (Coalition for Responsible Home Education, 2017b; Karinen, 2016).

Choosing curriculum was determined to be a highly detailed process. The process may begin with a period of deschooling. The next phase was to choose an approach or conduct

research. There may be a reciprocation between research and approach until parents find an approach or combination of approaches to meet their philosophical-teaching needs and their child's need.

The approach was the most significant factor when choosing curriculum. Participants who adhered to a classical approach chose a curriculum in line with this method such as the study of Latin and Greek and classical literature. Participants who followed an unschooling, or guided unschooling, approach may not purchase a specific curriculum for each subject but followed their child's interest while guiding their children to ensure mandatory subjects were being met. Eclectic homeschoolers chose curriculum based on several factors including, but not limited to, their child's interest, areas of giftedness, and state and parental requirements. The results of this study also support previous findings that some families may choose a prepackaged curriculum at the beginning of the homeschooling experience, but after gaining experience or requiring a change, move towards a more eclectic method (Hanna, 2012; Kunzman & Gaither, 2013; Pannone, 2014).

The need for change found in this study included the child's needs, parent's needs, and changes as parents become accustomed to their child's needs. The changes occurred within the curriculum and total change. Parents changed their approach to homeschooling, most became more eclectic and relaxed; however, some did become more structured in certain areas of homeschooling. Within curriculum changes occurred when parents needed to provide accommodations or modifications to the curriculum. Total change occurred when parents changed from their first choice, dropped a curriculum, struggled with math, or tried different curriculum to find the right fit for their child.

Participants indicated they did extensive research when exploring curriculum options. The data confirmed prior research findings that parents sought recommendations of other parents (Pannone, 2014) and used the internet to find recommendations (Carpenter & Gann, 2016; Mazama, 2015; Jolly & Matthews, 2017). After parents completed their research, they began selecting and acquiring the curriculum. Previous researchers have noted one of the most prevalent factors in selecting curricula is faith (Anthony & Burroughs, 2012; Hanna, 2012; Kunzman & Gaither, 2013; Pannone, 2014; Thomas, 2016a, 2016b). The influence of faith on curriculum choice was not in the purview of this study. However, when a participant indicated the use of a curriculum known to the researcher as being faith-based, it was inquired of the participant if their faith influenced their choice. Several indicated it does to an extent but they are not opposed to secular, non-faith based, curriculum. Some indicated faith was an influential factor. Others indicated faith was influential in the beginning, but not as much of a factor as their children got older. One participant did indicate the purposeful use of only secular curriculum.

One of the most prevalent methods of choosing curriculum found in this study was choosing based on the interest of the child, which supports the previous research (Bell et al., 2016; Hanna, 2012; Jolly et al., 2012; Jones, 2013; Kunzman & Gaither, 2013; Liberto, 2016; Pannone, 2014). The data also supported previous research that parents choose the curriculum based on their goals for their children (Mazama, 2015; Pannone, 2014; Thomas, 2016a). This study expanded the related research by demonstrating curriculum is chosen based on future goals, learning style, the child choosing a subject, and integration of subjects based on approach.

Additionally, participants outsourced curriculum through dual enrollment, online classes, and cooperatives. Participants indicated that they chose some curriculum based on the

requirements of a cooperative or class, which supports prior research (Anthony & Burroughs, 2012; Mazama, 2015; Pannone, 2014; Thomas, 2016a, 2016b). The inclusion of dual enrollment expands current literature. This study placed cooperatives and classes outside the home as instructional methods in the related research. However, based on the data, the parents see cooperatives and outsourced classes as both a curriculum choice and instructional practice.

Homeschool instructional methods. The results of this study confirm research by Carpenter and Gann (2016) who found that families integrate multiple modalities of instructional methods. Instructional methods are affected by the approach. The participants chose among different teaching methods, learning environments outside the home, and learning through cocurricular and extracurricular activities. The teaching methods used in the home are directly related to the approach used. However, participants modify how they teach in the home based on student needs and preferences.

Other methods used in the home include online classes and the use of tutors and therapists. The rise of online classes has allowed homeschooling parents the opportunity to choose specific courses or an entire curriculum (Carpenter & Gann, 2016; Hanna, 2012). Parents may choose these options when they are unable to teach a course or are having difficulty with a child (Pannone, 2014). The choice of online classes used by parents in this study is based on the child's interest, the parent's need to outsource for scheduling purposes, and the parent's inability to teach a class.

Homeschooling families have used tutors for core courses, foreign and ancient languages, and music (Bell et al., 2016; Carpenter & Gann, 2016; Jolly et al., 2012; Mazama, 2015; Pannone, 2014; Thomas, 2016a, 2016b). Participants employed tutors for music, foreign

languages, and core courses. Participants also utilized therapists for children with special needs, which supports previous research (Thomas, 2016b).

Additionally, instructional methods included enrolling in higher level learning. Research indicated that when parents are unable to teach a subject, online options were available (Pannone, 2014). Online classes are available for specialized subjects or an entire curriculum (Carpenter & Gann, 2016). This study expanded research by the parents enrolling their children in higher secondary level classes, dual-enrollment, and free online courses that are at the collegiate level. The basis for choosing these methods was the child's needs or interest.

The use of cooperatives is documented throughout research (Carpenter & Gann, 2016; Kunzman & Gaither, 2013; Thomas, 2016a). Cooperative types have included large scale, networked learning cooperatives (Anthony & Burroughs, 2012) or location specific cooperatives (Kunzman & Gaither, 2013). This study revealed families are incorporating these learning environments outside the home as part of the education plan. A few participants used larger cooperatives that may be part of a network or available locally with an online option. Other participants used location specific groups or created cooperatives based on need and subject.

Homeschooling families have used community resources as part of the education plan (Hanna, 2012; Mazama, 2015; Neuman & Guterman, 2016a; Pannone, 2014; Thomas, 2016a, 2016b). Families have used local libraries to acquire books and attend classes (Hanna, 2012; Mazama, 2015; Pannone, 2014; Thomas, 2016a). This study divided the use of the library into two portions of the homeschooling process. Using the library to acquire books was separated into the curriculum process and attending classes at the library were listed as instructional methods.

Other community resources used included museums, parks, and field trips (Hanna, 2012; Neuman & Guterman, 2016a; Thomas, 2016a, 2016b). The participants indicated the use of community resources. However, parents of high schoolers noted that as their children aged the usage of community resources changed, either in the reduction of use or through finding more interest-focused resources.

Jones (2013) noted that formal and informal learning occurs on a continuum without a distinctive line between these methods of learning. Participants reiterated this notion as well. Cocurricular and extracurricular activities provide learning opportunities which may or may not be considered part of the education plan based on how it is viewed. When viewed holistically, these activities provide the impartation of knowledge, skills, and character development. Therefore, these activities are considered part of the instructional methods.

Homeschool structure. The structure of the homeschool environment is affected by the approach and other influential factors. These factors include the child's needs, parent's needs, family's need, academic needs, and cocurricular and extracurricular activities. The types of structures derived from this study were strict, flexible, and combination. The participants arrive at an optimum structure until an imbalance in the influential factor necessitates a change. Prior research determined there were two types of structure, structured and unstructured (Anthony & Burroughs, 2012; Carpenter & Gann, 2016; de Waal & Theron, 2003), with a fluctuation between these two forms (Jones, 2013; Mazama, 2015; Neuman & Guterman, 2016a; Ray, 2015; Thomas, 2016b). Neuman and Guterman (2016a) found that structure and content can be structured, unstructured, or varied along an axis. The results of this study corroborated these findings and expanded them to include instructional methods.

Additionally, the expansion to include the instructional methods also corroborates research into the autonomy in homeschooling (Bell et al., 2016; Carpenter & Gann, 2016; Jones, 2013). Participants indicated a range of allowed autonomy. At one end of the spectrum, participants allowed their children to have full autonomy over the curriculum, instructional methods, and structure within requirements set by the state or parental goals. At the other end of the spectrum, participants allowed specific autonomy over aspects of the curriculum, instructional methods, and structure. There were participants in the middle of the spectrum who varied the level of autonomy based on specific needs, educational goals, and interests. Variances in the level of autonomy was also dependent upon the time of day. Some participants provided less autonomy during specific portions of the day or subjects, but gave more autonomy during another portion of the day or other subjects.

This study expanded the literature by demonstrating a combination of flexibility and strictness in autonomy and adherence to the curriculum. It also found a connection between autonomy and adherence to the curriculum. This was demonstrated when parents chose the curriculum but allowed the child to choose how, when, and at what pace the work is completed.

Conceptual Framework

The conceptual framework consisted of three existing theories: choice theory (Glasser, 1985, 1997, 1998), theory of successful intelligence (Sternberg, 1988, 2004, 2012), and dynamic skills theory (Fischer, 1980, 2008). These theories were chosen based on prior knowledge of these theories and their applicability to the gifted and twice-exceptional population. However, these theories had not been applied to the homeschooling population, nor had they been combined to develop a new theory: personalized education theory of gifted and twice-exceptional homeschooling.

Choice theory. The research questions guiding this study concentrated on the processes of homeschooling gifted and twice-exceptional children. This required an examination of the choices parents took to develop the educational processes. Four of the five basic needs, as outlined in choice theory, were used to examine these motivations. The four needs were love and belonging, freedom, power, and fun (Glasser, 1996, 1998; Mottern, 2008; Peterson, 2000).

In choice theory, love and belonging focus on an individual's need to be accepted by others and develop relationships (Glasser, 1996, 1998). In this study, this need was fulfilled by interaction with peers through participation in cooperatives, cocurricular, and extracurricular activities. This supports research that homeschooled children are provided opportunities to interaction with peers and develop friendships through events and activities outside the home (Carpenter & Gann, 2016; Haugh, 2014; Medlin, 2013, Neuman & Guterman, 2016a). It also expands the research to show families sought out activities with intellectual peers who are also gifted, not just same-age peers.

Freedom is described as the ability to have control over one's life (Peterson, 2000) and make choices using problem-solving and creative skills (Glasser, 1996). Power is defined as the ability to implement the choices made by an individual and to be recognized for accomplishments (Glasser 1996, 1998; Peterson, 2000). The results of this study found the need for freedom and power are integrated together when parents allow their children the opportunities to pursue their own interest and have more autonomy throughout the day. This study supports research demonstrating parental provision of options in autonomy, allowing exploration of interests, and allowing children to have input in their schedules (Bell et al., 2016; Carpenter & Gann, 2016; Jones, 2013; Liberto, 2016; Neuman & Guterman, 2016a; Jolly et al.,

2012; Riley, 2015; Thomas, 2016a;). The literature on the combination of flexibility, strictness, and variances between the two throughout the day is broadened as a result of this study.

Fun was the final need of choice theory to be integrated into this study. Fun is needing to derive pleasure of one's work and actions (Glasser, 1998; Peterson, 2000). Glasser (1996) explained learning within education should be interesting and motivational. Researchers (Carpenter & Gann, 2016; Jolly & Matthews, 2017; Jolly et al., 2012; Pannone, 2014; Thomas 2016a) determined homeschooling families provide opportunities to learn which are interesting and engaging to meet their children's specific learning needs. The results of this study support prior research. Participants in this study noted education in the homeschool environment should be engaging and fun while supporting a child's giftedness and accommodating learning differences.

The final aspect of choice theory integrated into the conceptual framework was quality world. The quality world is the mental picture an individual has of the ideal qualities and people comprising the ideal world in which they interact and how one perceives to have their need met (Glasser, 1998; Peterson, 2000). If the quality world and actual world are inconsistent with each other, the individual will find a way to fulfill their needs, or over time, may change their ideal world (Glasser, 1998; Peterson, 2000). In homeschooling and parenting, the quality world is shared between the parents and children. Parents will act on behalf of their children to ensure the quality world and needs are fulfilled. When traditional schools were unable to provide an appropriate education for their children, participants had to change the educational quality world. Parents will also adjust the educational processes to ensure a balance of the quality world in the homeschool setting. The results of this study support the conditions of the quality world.

Furthermore, it expands the applicability of choice theory to the homeschool setting as well as indicates how it is shared between the parent and child in the homeschool setting.

Theory of successful intelligence. The theory of successful intelligence (Sternberg, 1988, 2004, 2012) was incorporated into the conceptual framework because it provided an understanding of the cultural relativity of intelligence as well as different subtheories and skill sets to explain behavior. These subtheories include the componential subtheory, experiential subtheory, and contextual subtheory. The skill sets included analytical, creative, practical, and wisdom-based skill sets. This study extends the application of the theory of successful intelligence to the home education setting.

Mental processes and acquisition of knowledge are understood through the componential subtheory (Miller, 2011; Sternberg, 1988). These affect an individual's executive functioning. Participants with twice-exceptional children indicated their children had difficulty with executive functioning skills, specifically planning and organizing. Participants with gifted children noted that in areas of strengths, or giftedness, their children were able to acquire knowledge and skills at faster rates and in higher content levels. This supports research that gifted children have higher abilities in the knowledge-acquisitions component (Miller, 2011).

Automaticity is affected by mental processes and a person's experiences as described in the experiential subtheory (Miller, 2011; Sternberg, 1988). The findings of this study determined automaticity was developed through the mastery of content. The participants in this study noted that their children with twice-exceptionalities required more time in areas of weaknesses. This supports research that processing speed and automatization is affected by the comorbidity of giftedness and a disability (Trail, 2011).

The contextual subtheory outlines a person's social and practical behaviors (Miller, 2011; Sternberg, 1988). Practical behaviors demonstrate how a person adapts, alters, or selects their environment (Sternberg, 1988). These behaviors are bound in an individual's culture. Participants provided opportunities for social settings and encouraged the development of socially appropriate skills. Parents experienced these practical behaviors throughout their process of choosing to homeschool, choosing curriculum, choosing instructional methods, and choosing structure.

The skill sets in the theory of successful intelligence describe the completion of tasks through the application of intelligence (Miller, 2011). Analytical and creative skill sets are used in the judgment and assessment of situations or tasks and the implementation of innovative ideas to solve problems (Miller, 2011; Sternberg, 2004). Participants indicated their children employed analytical and creative skills though cocurriculars which focused on creative and problem-solving tasks. Additionally, children were allowed to develop their own structure throughout the day to accomplish goals.

Individuals ensure their actions are ethical and work toward achieving a common good through the wisdom-based skill set (Miller, 2011; Sternberg, 2004). The use of wisdom-based skills was demonstrated through the participants' focus on developing their children's character and skills needed to be positive members of society.

A person uses practical skills to implement ideas and to change his or her environment either through adaptation, alteration, or selection (Sternberg, 2004). Practical skills were demonstrated through the conscious efforts to arrange an appropriate environment to meet the children's needs. If an environment was unsatisfactory, participants either altered or selected a new environment for their children. Within the homeschool environment the ability to adapt,

alter, or select new aspects of the environment were witnessed in the accommodations, modification, and adjustments to the curriculum, instructional methods, or structure.

Dynamic skills theory. Dynamic skills theory (Fischer, 1980, 2008) was included in the conceptual framework, because it contained essential components applicable to the abilities of gifted and twice-exceptional children. The importance of understanding intelligence in a cultural context is an essential aspect of this theory (Miller, 2011). Cognitive variation and developmental range were the two components of dynamic skills theory applied to the conceptual framework. The findings of this study add to the literature the use of dynamic skills theory within a homeschool context and homeschooling gifted and twice-exceptional children.

Cognitive variation describes how individuals with similar backgrounds, cultures and age group have variations in their cognitive abilities (Fischer, 1980, 2008; Fischer & Yan, 2002; Rose & Fischer, 2011). The variations may occur within different domains of learning, different physical environments, and with different individuals (Rose & Fischer, 2011). A child's cognitive functioning is directly related to their environment (Miller, 2011). The cognitive variations explain why a gifted or twice-exceptional child may be gifted in one domain while struggling in another. Within the homeschool setting, parents were able to create personalized educational processes to provide an environment in which each child's educational, emotional, psychological, and social needs were individually met.

Developmental range explains an individual will shift between optimum level and functional level, in which a person develops automaticity over time, and is affected by emotional state and context (Fischer & Yan, 2002; Miller, 2011; Rose & Fischer, 2011). Automaticity is developed as an individual progresses through levels of development (Fischer, 2008; Rose & Fischer, 2011). Participants noted their children's asynchronous development and the

uniqueness of their experiences with this phenomenon. The development range provides a rationalization for the need of personalized educational processes to provide academic, emotional, and psychological supports for gifted and twice-exceptional children with an educational plan to meet their unique needs.

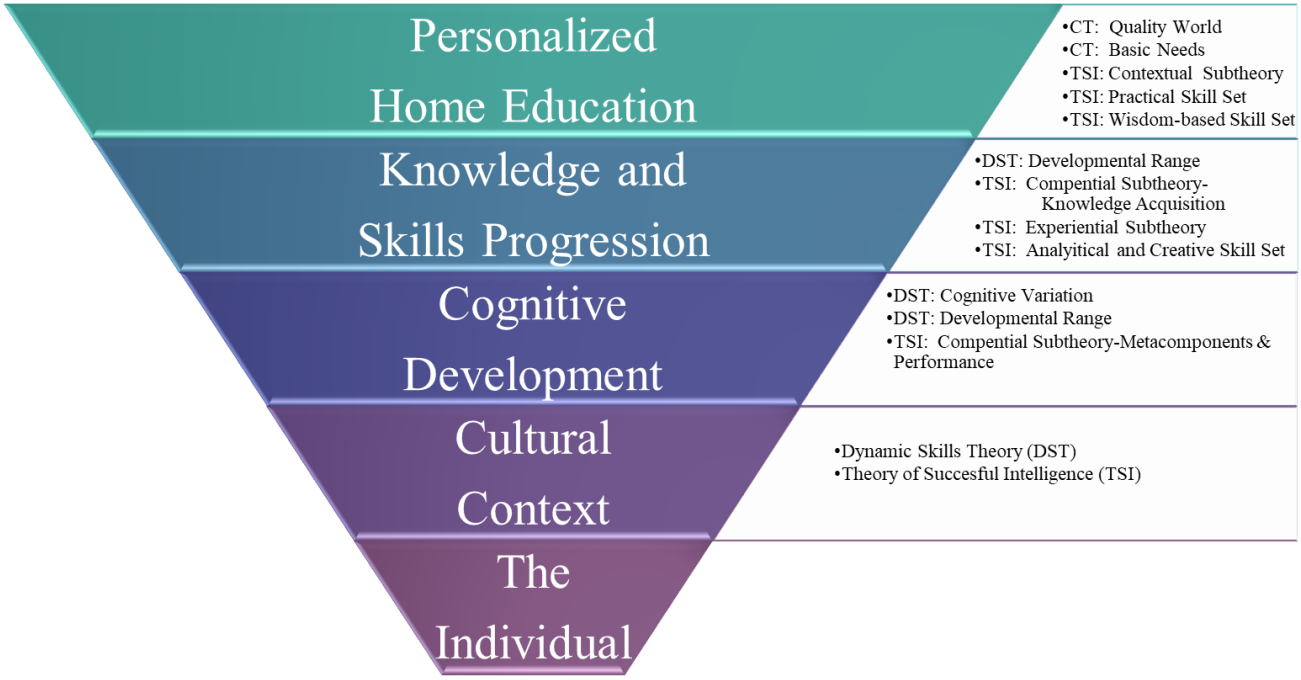

Figure 8: Personalized Education Theory of Gifted and Twice-exceptional Homeschooling

A new theory, personalized education theory of gifted and twice-exceptional homeschooling, was developed through the integration of these theories and grounded in the data. A visual representation of this theory was shown using an inverted pyramid, see Figure 8. The base component is the individual. The second level represents the cultural context, which was developed by an amalgamation of cultural effect on intellect found in dynamic skills theory and theory of successful intelligence. The third component is cognitive development, which combined cognitive variation and developmental range from dynamic skills theory with the componential subtheory of the theory of successful intelligence. Knowledge and skills progression is the fourth level. It is the integration of aspects from the componential subtheory,

experiential subtheory, and analytical and creative skill sets from the theory of successful intelligence with the development range from dynamic skills theory. At the top is personalized home education, which was created by combining quality world and four of the basic need from choice theory with the contextual subtheory, practical skill set, and wisdom-based skill set from the theory of successful intelligence. Personalized home education is defined as the whole-child pedagogical plan designed to meet an individual's academic, psycho-emotional, and social needs while taking into account his or her personal preferences.

Implications

The results of this study have theoretical, empirical, and practical implications. The theoretical implications expanded the applicability of the chosen theories of the conceptual framework and the development of a new theory to explain the homeschooling of gifted and twice-exceptional children. The empirical implications furthered current literature of the needs on gifted and twice-exceptional children, homeschooling, and gifted and twice-exceptional homeschooling. The practical applications affect the traditional education and homeschooling stakeholders.

Theoretical Implications

The theoretical implications of this study develop the application of the theories incorporated into the conceptual framework. These theories were choice theory, theory of successful intelligence, and dynamic skills theory. The theories were used individually and conjointly to understand an individual's choices, behaviors, abilities, and intelligence in relation to their choice to homeschool and choices of curriculum, instructional methods, and structure.

The new theory, personalized education theory of gifted and twice-exceptional homeschooling, was developed through an amalgamation of choice theory, theory of successful

intelligence, and dynamic skills theory. Through the integration of these existing theories, the new theory provides a theoretical understanding of homeschooling gifted or twice-exceptional children. Research presented in the literature review demonstrated homeschooling has become an acceptable and appropriate form of education which has increased annually. Therefore, the theory and models of the processes derived from the research questions may assist researchers in future studies of homeschooling, gifted children, and twice-exceptional children.

Empirical Implications

The focus of this study was the educational processes implemented by parents in the homeschool school environment. By examining the processes, four new models were developed. These models were (a) the process of choosing to homeschool, (b) the process of choosing a curriculum, (c) the process of choosing instructional methods, and (d) the process of choosing structure. Prior research examined diverse aspects of homeschooling and educational processes, but no prior research resulted in a model. These models add to the literature and may assist in future research in the field of homeschooling.

Additionally, this study further documented the unique needs of gifted and twice-exceptional children. It bolsters supports research that parents of gifted and twice-exceptional children are withdrawing their children from traditional schools due to the inability of some schools to provide an appropriate education. The literature is expanded to show that some school administrators recognized their inability to provide an appropriate education for these children by referring them to alternative schools and homeschooling.

Practical Implications

Stakeholders in traditional education options and homeschooling may benefit from understanding and applying the results of this study to their respective fields. Traditional stakeholders include administrators, policy makers, and educators. Homeschool stakeholders include parents, policymakers, advocates, and consultants.

Traditional education stakeholders. The results of this study confirm and expand the literature on families, whose gifted and twice-exceptional children are unable to have their needs met in a traditional education setting, are withdrawing their children to begin homeschooling. Administrators may consider adding teacher training and requesting professional development for all teachers and staff focusing on identifying, supporting, and differentiating for gifted and twice-exceptional children.

Gifted education teachers and special education teachers may also consider developing processes for screening all children in comprehensive manners to lessen the likelihood that a child is unidentified due to potential masking effects noted among twice-exceptional children, which results in the lack of appropriate supports. Policymakers and administrators should be aware that this research further documents the reduction in gifted education leads to parents removing their children from traditional schools. Policies should be enacted to protect gifted education programs within each state, as well as ensuring teachers and administrators understand the dichotomous nature of these students.

The models developed in this study are based on a homeschool setting. However, they may be adapted to work within traditional education options. The theory developed emphasizes education should be personalized to the individual. While the ability to do this in traditional schools may not be as easily accomplished as in homeschool settings, adaptations can be created to allow a more personalized education for gifted and twice-exceptional children.

Homeschool stakeholders. Stakeholders in the homeschool setting include the parents, policymakers, advocates, and consultants. The results of this study demonstrate that parents of gifted and twice-exceptional children are able to provide an education to meet state requirements while also being personalized for the child. Parents may use the process models presented in this study to develop a personalized home education plan for their children. The theory may assist parents in examining their child's needs and abilities to ensure the education plan they are developing is appropriate for their child and family.

The educational processes and the theory presented may assist policymakers and advocates in understanding homeschooling among the gifted and twice-exceptional. Policies to reduce funding and access to gifted education are forcing the parents to choose alternative options. Policy makers may be able to apply the findings of this study to create policies allowing parents greater ability to personalize education in the home. The findings of this study demonstrate, in some cases, traditional education policy makers have failed to provide an environment which gives these children a free and appropriate education within the traditional system. Therefore, these policy makers should not develop policies for the homeschool setting designed to confine education inside set parameters as in a traditional setting. States with stringent homeschool polices restrict parents' ability to customize the learning experience.

Additionally, some states allow homeschool students access to participation in public school activities and classes. Policies should be enacted to provide better access to public school options for families who would choose these options based on their child's needs. These policies should ensure a parent's right to provide a personalized education is not encumbered by a traditional view of education.

Advocates of homeschooling may use these results in policy advocacy as well as homeschooling support. As parents leave traditional education options, they seek out assistance through homeschool organizations and support groups. These groups may have an advocate or consultant on staff or volunteers to help guide new families when beginning homeschooling. Advocates work to ensure homeschooling freedoms are protected. The process models and theory provided can assist advocates in guiding and explaining the variances among homeschooling families and their choices of curriculum, instructional methods, and structure by documenting homeschooling as an education option with the ability to be personalized to meet the needs of the individual child. Consultants may use the process models to assist parents in developing a personalized home education plan which provides for the needs of each child. Consultants may use the personalized education theory of gifted and twice-exceptional homeschooling to show parents how home education can be personalized to meet the individual needs of each child within the home based on the child's abilities and cognitive development.

Delimitations and Limitations

The delimitations of a study are the self-imposed limitations placed by the researcher which should not be seen as weaknesses of the study (Joyner, Rouse, & Glatthorn, 2013). The first delimitation of this study was the inclusion of gifted and twice-exceptional children rather than focusing on one population. If this study were to focus only on the educational processes implemented for those identified as gifted, then study would exclude the processes implemented for those who are gifted with a disability. If the study only focused on the educational processes used in homeschooling twice-exceptional children, then the processes for homeschooling children with only the gifted identification would be excluded. The exclusion of gifted children due to dichotomous exceptionalities would result in missing potential valuable data

demonstrating how homeschooling parents focus on the giftedness even though they may be accommodating for the disability. The practice of focusing on giftedness and accommodating weaknesses is an educational practice found in research (Clark, 2013; Prior, 2013; Ritchotte & Matthews, 2012).

The second delimitation of the study was the use of a global location. As mentioned previously, giftedness is defined by an individual's culture (Sternberg, 2004). Opening this study to international participants would have allowed for exploring the research on a global scale in the cultural context of homeschooling the gifted and twice-exceptional. Unfortunately, the international participants who inquired about this study did not meet the screening requirements.

The third delimitation was the research purpose, which was to develop a theory of the educational practices rather than exploring other aspects of homeschooling gifted children. Even though there is a lack of empirical evidence describing or examining the experiences of those who homeschool gifted children, the choice of grounded theory generated a theoretical model with the potential to significantly benefit the homeschool community. Furthermore, this framework could be adapted to assist stakeholders in traditional education settings by personalizing education plans for the gifted population.

The limitations of this study include the need for participants to have internet access. Since the intentions of this study were to understand the educational processes of homeschooling gifted and twice-exceptional children at the international level, participants had to have access to the internet. This excluded families without internet access.

Another limitation of this study was the requirement of the participants to be English speaking or have access to a translator. This limitation prevented data collection among non-

English speaking individuals. The use of a translator would have required an assumption that the translator would be able to accurately transmit the meaning of what is being said by the participants.

Limitations are derived from the sampling methods used: a web-based respondent sample, snowball sample, and theoretical sample. Web-based respondent sampling required internet access, which excluded the ability to draw from populations who did not have internet access (Wejnert & Heckathorn, 2008). Snowball sampling required the identification of potential participants by others (Daniel, 2012). Finally, theoretical sampling is a grounded theory method of intentionally choosing participants who can contribute to the generation of the theory (Creswell, 2013). Theoretical sampling does not follow a systematic process of gathering participants, collecting all of the data, and then analyzing it; rather it looks to the data to lead the research until data saturation is achieved. As a result, data saturation is achieved based on the researcher's perspective (Creswell, 2013). Saturation was met when there were no new themes derived from the data.

Recommendations for Future Research

This study provided evidence of the processes parents use to homeschool their gifted and twice-exceptional children. Further grounded theory studies should be conducted to examine these distinct populations separately. An international study examining the educational processes implemented by homeschooling parents of gifted or twice-exceptional children should also be conducted. It was the intent of this study to do such, but it was not possible based on the parameters outlined in the participant criterion, which required a third-party identification of giftedness and/or twice-exceptionality through a professional, standardized test result, or expert such as a coach or tutor. Parents were not permitted to self-identify their children as gifted

without documentation. The limitation of conducting interviews via video conferencing may not have been feasible for some families, especially those internationally. An altering of the data collection methods could allow for better communication. While this study was open to anyone who met the criterion, the majority of the participants were Caucasian. Further studies would need to be conducted among minority groups.

The processes and theory revealed were determined by expert reviewers to be applicable to other subpopulations of homeschooler. These processes would need to be examined among other homeschooling populations to determine the extent of the applicability. The determination of this would allow the processes and theory to become universal to homeschoolers in general or develop and explain the educational processes for differing populations within homeschooling.

This study revealed several parents who had been teachers in a traditional school setting as well as a father who is a superintendent. Future studies could explore why teachers are leaving the traditional school system to homeschool their children. A phenomenological study of traditional school teachers who choose to homeschool would best describe this phenomenon.

Compelled homeschoolers mentioned the phenomenon of deschooling. Future studies could examine the process of deschooling among compelled homeschoolers through grounded theory or case study research. The studies could seek to determine the process of deschooling or share the participants rationale behind implementing this strategy.

Of the 15 female participants, 14 are highly educated. Highly educated women are defined as those "with post-secondary education" (Emery & Ferrer, 2009, p. 51). Winkler and Ireland (2009) narrowed it further as being "those with 4 years of college or more" (p. 298). Subsequent studies should explore why these women choose to homeschool their children. The study could be conducted using grounded theory or case study with a theoretical framework of

feminist theory. "The homeschooling movement cannot be understood apart from the dramatic rise in female education and political participation that the feminist movement has secured" (Gaither, 2009, pp. 334-335).

Several participants mentioned struggling to find a math curriculum to meet their child's needs. Research using a case study would be recommended to explore this phemonenon further. The research should examine the child's learning style in comparison to the types of curriculum that failed and succeeded.

Many participants noted the insistence on completing the curriculum, even if this required the school year to be extended into the summer months. This practice should be studied to determine why homeschooling parents insist on completing the curriculum. The study could be conducted using case study or phenomenology.

Lastly, some participants shared the negative experiences in traditional schools, with friends after choosing to homeschool, and raising a gifted or twice-exceptional child. Narrative research of these experiences would add to the literature the catalysts which caused families to choose to homeschool and the repercussions of this decision. The catalyst and repercussion may be present in one narrative, or a participant may only experience one adverse effect.

Summary

The purpose of this grounded theory study was to explain the educational processes implemented by homeschooling families of gifted and twice-exceptional children. The findings of this study confirmed and expanded existing literature. Moreover, the intent of this study was to develop a theory or model to explain how parents are able to meet the educational needs of these unique children in a home environment. Creation of a theory and four process models emerging from the data was unexpected.

Choice theory (Glasser, 1985, 1997, 1998), dynamic skills theory (Fischer, 1980, 2008), and the theory of successful intelligence (Sternberg, 1988, 2004, 2012) were integrated to form the new theory, personalized education theory of gifted and twice-exceptional homeschooling. This theory explains how intelligence, variations of ability, and individual needs lead to the necessity of a personalized home education plan. The models presented explain how parents choose to homeschool and choose each educational process. These processes include curriculum, instructional methods, and structure.

This study may assist stakeholders in traditional education settings, such as administrators and teachers, in developing a holistic approach to identifying gifted and twice-exceptional children. Administrators and teachers may develop personalized education plans for their gifted and twice-exceptional students capable of meeting these students' unique education needs. Furthermore, policy makers may use the results of this study to develop policies to protect gifted education programs and reduce the number of gifted and twice-exceptional children who leave the traditional education system.

The results of this study may assist homeschool advocates and consultants in their work within the homeschooling populations. Advocates may use the theory and models found in this study to advocate for policies allowing for more personalization of home education programs. Consultants may use the results of this study to assist families in creating a personalized home education plan for each child within a family.

The results of this study found four process models (a) the process of choosing to homeschool, (b) the process of choosing curriculum, (c) the process of choosing instructional methods, and (d) the process of choosing structure. A new theory, personalized education theory of gifted and twice-exceptional homeschooling, was also developed. The driving force behind

the process models and new theory was a personalized home education, which is defined as the whole-child pedagogical plan designed to meet an individual's academic, psycho-emotional, and social needs while taking into account his or her personal preferences.

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Appendix A

My Homeschooling Story

The decision to homeschool came to fruition after we met a family whose daughter attended a private school part-time and homeschooled the rest of the time. I liked how her education was customized to meet her needs. She was not limited to only the courses offered in her high school but was free to create an education which allowed her to follow her passions. I told my husband we were going to homeschool, because education could be faith-based, and it offered more freedom for customization.

When we began to homeschool during the preschool years, I focused on a faith-based education with a freedom permitting structure for my children to explore the world around them. When it was time for my oldest to enter Kindergarten, we reviewed our options of public, private, and homeschooling available in our area. We decided that homeschooling, based on our desire to provide a faith-based education, was best at the time. However, we have chosen to continue to homeschool in order to provide a method of education not found in traditional formats.

In the early elementary years, we tried a traditional format of schooling with a schedule for each subject. This did not work well for our older two children because they would not want to move on from a subject when it was time. They started to hate the structured school environment. We tried a couple of other methods of homeschooling, but nothing seemed to fit their needs. Eventually, we found out these two were gifted and twice-exceptional. I also had a preschooler at this time with whom I was using a modified version of the Montessori method. My older two children expressed the desire learn what interested them, not what a book said. However, I wanted them to have an education with a focus on memorizing important facts,

critical thinking, debate, nature study, and a rich understanding of language, especially written language and Latin. Over time, we slowly developed the method we use now, which is an integration classical education with a mixture of Montessori, Charlotte Mason, independent study, and unschooling principles.

I provide opportunities for my children to set their schedule, with the exception of a few academic disciplines requiring my direct instruction daily. They are given learning objectives and assignments to complete each day. The rule is all assigned work must be completed by 2:00 p.m., so they can freely play in the afternoons and participate in sports and other cocurricular and extracurricular activities. The few times homework has lasted past the deadline occurred when they decided to extend the learning experience on their own volition, mostly to explore with science experiments or to continue with a topic that piqued their interest.

Just as our method of homeschooling has changed over the course of time, so have I in my attitude towards schooling. I had developed a negative attitude towards traditional school options. However, as I have matured, met homeschooling families, and studied education, I have come to realize the choice of schooling, whether it be public school, homeschool, or private school, is not an easy task. Children are uniquely different and each family must take into account the needs of each child in order to determine the best method of schooling for a particular child.

Appendix B

CONSENT FORM

A Grounded Theory Study of The Educational Process Implemented by Parents Homeschooling Gifted or Twice-Exceptional Children

Bridgette Whitlow-Spurlock
Liberty University
School of Education

You are invited to be in a research study on the educational processes used by parents who homeschool gifted or twice-exceptional children. This study seeks to understand how homeschooling parents create an educational experience for their gifted or twice-exceptional children. You were selected as a possible participant because you are 18 years of age or older, are a homeschooling parent with a gifted or twice-exceptional child, have at least two years' experience homeschooling, and are homeschooling currently or within the past year. Homeschooling must be parent funded, which excludes those who use virtual public schools. Additionally, you can provide evidence of your child's giftedness or twice-exceptionality by a) documentation by a professional, b) prior participation in a gifted program at a school, c) membership to an organization dedicated to intellectual ability, or d) test scores in the top 5%. Individuals with gifted, non-academic abilities will require identification by an expert, coach, or teacher who can attest that the child's abilities surpass one's peers. Please read this form and ask any questions you may have before agreeing to be in the study.

Bridgette Whitlow-Spurlock, a doctoral candidate in the School of Education at Liberty University, is conducting this study.

Background Information: The purpose of this study is to explain the educational processes used by homeschooling families of gifted and twice-exceptional children.

1. What are the educational processes that families implement within the homeschool environment in educating their gifted and twice-exceptional children?
    A. How are giftedness and intelligence defined within the families' cultural or national context?
    B. What was the process of families choosing to homeschool their gifted and twice-exceptional children?
    C. What is the process parents experience when choosing a curriculum?
    D. What is the process parents undergo when choosing instructional methods for differing academic disciplines?
    E. What is the process parents encounter when choosing the structure of the environmental setting based on the development of the child?

Procedures: If you agree to be in this study, I would ask you to do the following things:

1. Complete a questionnaire which will take approximately 10 minutes. This questionnaire serves demographic and screening purposes.
2. Participate in an interview about the educational processes used to homeschool a gifted or twice-exceptional child. The interview will last approximately one hour and will be video or audio recorded.

3. Write a letter of advice to a parent who has a gifted or twice-exceptional child. The letter will be based on your experiences with your child. The letter of advice should take approximately 30 minutes to complete.
4. Complete a journal entry daily for one week. The journal entry will elicit information about the day's activities, how the activities were chosen, if applicable, how the activities were adjusted to the child's needs, and how the environment affected the decisions. The journal entry will take approximately 30 minutes each day for one week.
5. After interviews have been transcribed, participants will also be asked to read the interviews for accuracy and to correct any misunderstandings. This procedure should take approximately 10 minutes to complete.

Risks: The risks involved in this study are minimal, which means they are equal to the risks you would encounter in everyday life. The researcher is a mandatory reporter for child abuse and child neglect in Arkansas and Indiana.

Benefits:
Participants should not expect to receive a direct benefit from taking part in this study.

Benefits to society may include a better understanding of the educational processes used by homeschooling parents of gifted and twice-exceptional children to help other homeschooling families in educating their children. Additionally, this study may assist stakeholders in traditional school settings in understanding the unique needs of gifted and twice-exceptional children to positively impact advocacy and education policies.

Compensation: Participants will not be compensated for participating in this study.

Confidentiality: The records of this study will be kept private. In any sort of report I might publish, I will not include any information that will make it possible to identify a subject. Research records will be stored securely, and only the researcher will have access to the records. I may share the data I collect from you for use in future research studies or with other researchers; if I share the data that I collect about you, I will remove any information that could identify you, if applicable, before I share the data. The findings of this study may be used in presentations and publications, but identifying information will not be used.

Participants will choose a pseudonym. Participants will be encouraged to remove identifying information from documents. However, if identifying information is obtained, only I will have access to this information, which will remain confidential.

I will conduct interviews via online video chat software. The interviews will be conducted in a location where others will not easily overhear the conversation. Interviews will be recorded and transcribed.

Data will be stored on a password-protected computer and an encrypted external hard drive. The external hard drive and any paper documents will be locked in a fireproof safe in which only I have access. Digital recordings of the interview will be stored on the encrypted external hard drive. Data will be kept for three years after which paper documents will be burned and the external hard drive will be erased and reformatted.

Voluntary Nature of the Study: Participation in this study is voluntary. Your decision whether or not to participate will not affect your current or future relations with Liberty University. If you decide to participate, you are free to not answer any question or withdraw at any time without affecting those relationships.

How to Withdraw from the Study: If you choose to withdraw from the study, please contact the researcher at the email address/phone number included in the next paragraph. Should you choose to withdraw, data collected from you will be destroyed immediately and will not be included in this study.

Contacts and Questions: The researcher conducting this study is Bridgette Whitlow-Spurlock. You may ask any questions you have now. If you have questions later, **you are encouraged** to contact her at bwhitlowspurlock@liberty.edu or 719-238-3443. You may also contact the researcher's faculty advisor, Dr. Lucinda Spaulding, at lsspaulding@liberty.edu .

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher, **you are encouraged** to contact the Institutional Review Board, 1971 University Blvd., Green Hall Ste. 1887, Lynchburg, VA 24515 or email at irb@liberty.edu.

Please notify the researcher if you would like a copy of this information for your records.

Statement of Consent: I have read and understood the above information. I have asked questions and have received answers. I consent to participate in the study.

(NOTE: DO NOT AGREE TO PARTICIPATE UNLESS IRB APPROVAL INFORMATION WITH CURRENT DATES HAS BEEN ADDED TO THIS DOCUMENT.)

☐ The researcher has my permission to audio-record or video-record me as part of my participation in this study.

_____

Signature of Participant Date

_____

Signature of Investigator Date

Appendix C

Demographic Questionnaire

This questionnaire will be used to gather demographic data about the participants. Additionally, this will be used as a screening tool to ensure that participants are able to meet the minimum requirements for participation.

Parent/Guardian #1 Information

1. Name:
    a. Chosen pseudonym:
2. Age: 20-29, 30-39, 40-49, 50-59, 60+
3. Sex: Female or Male
4. Race/Ethnicity:
5. Highest education level:
    a. If applicable, list all post-secondary education received and title of diploma/degree earned:
6. Occupation:

Parent/Guardian #2 Information

7. Name:
    a. Chosen pseudonym:
8. Age: 20-29, 30-39, 40-49, 50-59, 60+
9. Sex: Female or Male
10. Race/Ethnicity:
11. Highest education level:
    a. If applicable, list all post-secondary education received and title of diploma/degree earned:
12. Occupation:

Family Information:

13. Approximate Family Income:
14. Family size:
    a. Family size living in the household:
15. Marital status:
16. Family Type: Nuclear, Cross-generational, Blended, Grandparents as parents, Single-parent, Never-married, Adoptive, Foster, Same-sex

Contact Information for Interview and Communication

17. Which parent will be participating in the interview? Mother, Father, Both, Other
18. Email:
19. Video conferencing app preference: Google Hangouts, Skype, Zoom, or WebEx
20. Username or contact information for the app selected above:

Homeschool Questions

21. How many children do you have who are currently homeschooled?
22. How many of these children are gifted?
    a. How many of these children are twice-exceptional?
23. What age was your gifted or twice-exceptional child when you decided to homeschool?
24. How many years have you homeschooled?
    a. If applicable, how many total years of schooling has your child had?

25. Has your gifted or twice-exceptional child graduated high school or stopped homeschooling?
    a. If so, when did homeschooling for this child end?
26. Do you use a full-time online public or private school, also known as virtual school?
27. Can you provide documentation* of your child's giftedness or twice-exceptionality?
    *Academic and intellectual abilities criterion will include (a) identification by a professional, such as a psychologist; (b) prior participation in a public school gifted and talented program; (c) membership of an organization, with rigorous membership guidelines, dedicated to intellectual ability, such as Mensa or Triple Nine Society; or (d) test score performance is in the top 5%.
    * Non-academic ability will require identification by an expert, coach, or teacher that the child has abilities that surpass one's peers, which may be submitted as a letter from said expert.

Appendix D

Interview Questions/Guide

Semi-Structured Open-Ended Interview Questions

1. Please tell me about yourself as a homeschooling parent.
2. Please tell me about how giftedness is defined in your location.
3. How did you determine that your child was gifted or twice-exceptional, if applicable?
4. What was your reaction to this identification?
5. If applicable, what are the differences, based on your experience, in homeschooling a gifted or twice-exceptional child?
6. What challenges do you face in homeschooling a gifted or twice-exceptional child?
7. If applicable, what was your child's education experience prior to homeschooling?
8. Why did you choose to homeschool your child?
9. How did you come about this decision?
10. What homeschooling approach do you use? Why?
11. What type of curriculum do you use for each subject taught?
12. What factors led you to choosing this curriculum for these subjects?
13. How do you adjust curriculum for your gifted or twice-exceptional child?
14. How do you teach your children the various subjects?
15. Please tell me about any changes you have made since you began homeschooling.
16. How do you incorporate community resources into your child's education?
17. How do you choose these resources for your gifted or twice-exceptional child?
18. Please tell me about your daily routine with your gifted or twice-exceptional child.
19. How did you develop the structure of your homeschooling day and year?
20. What opportunities are provided to promote independent interests and time management throughout the day for your gifted or twice-exceptional child?
21. Please tell me about any changes that you have made to the structure of your day since beginning homeschooling?
22. As an experienced homeschooling parent, what advice would you offer someone who is considering homeschooling their gifted or twice-exceptional child?
23. Based on your experiences, what should I, as a researcher, understand about the process of homeschooling gifted or twice-exceptional children?
24. Please share with me anything else that you would like to add.

Appendix E

Letter of Advice Prompt

Another parent has reached out to you to gain advice about homeschooling a gifted or twice-exceptional child. Based on your personal experience with your child, please write a letter to this parent explaining:

1) How to begin the homeschooling process with respect to your current area.
2) What homeschooling approach do you use to meet your child's specific needs?
3) Where did you acquire your curriculum?
4) How do you adjust the curriculum to meet the interests or learning differences of your child?
5) How did you establish a daily schedule or routine?
6) What other resources do you use?
7) What factors are most important throughout the process of homeschooling a child that is gifted or twice-exceptional?

If your child is gifted, please write the letter to a parent whose child is gifted, including specific resources you use for your child's giftedness. If your child is twice-exceptional, please write the letter to a parent with a twice-exceptional child, including resources addressing your child's giftedness as well as disability.

Appendix F

Journal Entry Prompt

Please write a reflective journal entry daily for one week to share your daily activities. Please use the following prompts:

1) What homeschool activities were completed today?
2) How were these activities chosen?
3) Were the activities adjusted for different children's needs?
4) If so, how were the activities adapted to meet the needs for each child?
5) If applicable, how did the environment affect the decisions?

The journal entry can be sent to me one of two ways: (a) typed in a Word document and sent to me via email at the end of the week or (b) a daily email that will serve as a journal entry.

Appendix G

IRB Approval

LIBERTY UNIVERSITY.
INSTITUTIONAL REVIEW BOARD

February 27, 2018

Bridgette Whitlow-Spurlock
IRB Approval 3140.022718: A Grounded Theory Study of the Educational Processes Implemented by Parents Homeschooling Gifted or Twice-Exceptional Children

Dear Bridgette Whitlow-Spurlock,

We are pleased to inform you that your study has been approved by the Liberty University IRB. This approval is extended to you for one year from the date provided above with your protocol number. If data collection proceeds past one year, or if you make changes in the methodology as it pertains to human subjects, you must submit an appropriate update form to the IRB. The forms for these cases were attached to your approval email.

Thank you for your cooperation with the IRB, and we wish you well with your research project.

Sincerely,

G. Michele Baker, MA, CIP
Administrative Chair of Institutional Research
The Graduate School

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Appendix H

Code System

Code System

- **Core Category: Personalized Home Education**
  - Becoming a Homeschooler
    - Catalyst
      - Acting differently than peers
      - Critiquing Traditional Schools
      - Failing to Meet Medical Needs
      - Meeting Medical Needs
    - Choose Homeschooling at Beginning
      - Homeschooling from Beginning
      - Remembering
    - Exploring Education Options
      - Decision Making
      - Educating Before Homeschooling
      - Researching Options
    - Start Homeschooling
      - Advising
      - Attending (Conferences/Conventions)
      - Beginning Homeschooling
      - Individualizing of Homeschooling
      - Providing Legal Requirements
      - Socializing Needs
      - Suggesting
  - Uniqueness of Giftedness and Twice-Exceptionality
    - Advice to Others Considering Homeschooling Gifted & 2e Children
      - Encouraging
      - Finding Others
      - Focusing on Character
      - Having Fun and Exploring
      - Sharing Viewpoints
      - Understanding Uniqueness
    - Identification of Giftedness and/or 2e
      - Defining
      - Identifying: General
      - Identifying: High Academic Tests

- Identifying: Public School Formal Screening/Testing
- Identifying: Psychologist Formal Testing
- Identifying: Twice-Exceptional
- Reacting
- Parental Experiences and Wisdom
  - Accepting
  - Challenging
  - Improving
  - Lacking
  - Losing
  - Perceiving
  - Understanding Differences
- Parental Experiences
  - Career Information
  - Learning with Children
  - Teaching Experience
- Personalized Instructional Methods
  - Adjustments Based on Ability and Preferences
    - Accommodating
    - Modifying
  - Learning through Cocurricular and Extracurricular
    - Adapting Cocurricular & Extracurricular
    - Including Religious Activities
    - Selecting Extracurricular
    - Sporting
    - Volunteering
  - Learning Environments Outside the Home
    - Enrolling in Higher Level Learning
    - Researching Options
    - Using Community Resources
    - Using Cooperatives
  - Teaching Methods
    - Blending Teaching
    - By Parents Guiding
    - Child-Directing
    - Direct Instructing
    - Discussing
    - Facilitating
    - Independent Learning
    - Individualized Teaching

- Kinesthetic Learning
- Online/Video Learning
- Tutoring/Private Teaching

Personalized Curriculum

- Approach
  - Choosing an Approach
  - Modifying an Approach
- Curriculum Changes
  - Accommodating
  - Adjusting Curriculum
  - Adjusting for Life's Needs
  - Beginning Choices
  - Changing for Child's Needs
  - Changing for Parent's Needs
  - Dropping
  - Evaluating
  - Finding the Right Fit
  - Limiting Changing
  - Modifying
  - Struggling with Math
  - Trying Different Curriculums
- Research and Planning
  - Considering Child's Reaction
  - Deschooling
  - Researching
  - Planning for Future
  - Seeking Advice
  - Planning Life Skills
  - Testing
- Selection of Curriculum
  - Choosing Based on Approach/Teaching Style
  - Choosing Based on Learning Style
  - Choosing by Subject
  - Choosing Child's Interest
  - Choosing Math
  - Dual Enrolling
  - Exercising Parental Judgment
  - Focusing on Faith
  - Integrating Subjects
  - Meeting State Requirements

- Outsourcing Online
- Outsourcing to Cooperatives
- Subject by Child's Choosing
- Supplementing with Cocurricular
- Using Non-Traditional Methods
- Using the Library

Personalized Structure and Schedule

- Creating A Schedule/Structure
  - Developing and Changing
  - Encompassing Family Dynamics
  - Managing Goals
- Customization of Structure and Schedule
  - Accommodating
  - Adjusting
  - Modifying
  - Pacing
  - Tailoring
- Scheduling Options
  - Scheduling: Annual
  - Scheduling: Daily
  - Scheduling: Weekly
  - Scheduling: Activities
  - Scheduling Options: Family Needs
- Structure Types
  - Flexible Structuring
  - Strict Structuring