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How Parents, Teachers, Psychologists, and Educational Environments Influence Developmental Transitions of Preadolescent Twice-Exceptional Students

Abstract

The purpose of this collective case study was to examine the perceived developmental transitions of preadolescent, twice-exceptional students to understand both the supports and barriers from the perspective of parents, teachers, and psychologists. The case for this study, located in a western U.S. state, was a private school educating twice-exceptional students. The research questions guiding the study included the following: How do parents perceive growth in both academic and psychosocial development? How do educators perceive growth in both academic and psychosocial development? What are the supports that promote successful developmental transitions? What are the barriers that inhibit successful developmental transitions? The goal of this study was to provide the information necessary for parents, teachers, and administrators to determine appropriate goals, classroom placement, accommodations, and targeted interventions. Primary data sources included interviews with educators, parents, and a psychologist who works with twice-exceptional students and their families, a campus observation, and artifacts. Results of this study revealed that communication can act as both a support and a barrier to successful developmental transitions. Differentiating both process and product in the classroom, providing the appropriate physical environment, and explicitly teaching social and emotional learning language all contribute to successful development transitions.

Document Type

Dissertation in Practice

Degree Name

Ed.D.

Department

Curriculum and Instruction

First Advisor

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Keywords

ADHD, Asynchrony, Gifted, Identification, Preadolescent, Twice-exceptional

Subject Categories

Curriculum and Instruction | Education | Educational Psychology | Gifted Education | Special Education and Teaching

Publication Statement

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HOW PARENTS, TEACHERS, PSYCHOLOGISTS, AND EDUCATIONAL
ENVIRONMENTS INFLUENCE DEVELOPMENTAL TRANSITIONS OF
PREADOLESCENT TWICE-EXCEPTIONAL STUDENTS

A Dissertation in Practice

Presented to

the Faculty of the Morgridge College of Education

University of Denver

In Partial Fulfillment

of the Requirements for the Degree

Doctor of Education

by

Karen B. Arnstein

June 2020

Advisor: Norma L. Hafenstein, PhD

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Author: Karen B. Arnstein

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Keywords: twice-exceptional, ADHD, gifted, asynchrony, preadolescent, identification

Acknowledgements

Dr. Norma Hafenstein – Thank you for making this program possible. You demonstrated what differentiation looked like on day one, for you handed me the key to unlocking great secrets. I am grateful for your strength to push me to better than I thought I could be.

Dr. Scott Stevens, Dr. Nirmla Flores, and Dr. Gregory Hamilton – You saw my potential long before I did. Scott, my eternal gratitude for holding up the mirror.

Dr. Cassie Trousas – Your authentic feedback and friendship made me a better writer and pushed me to think bigger – for both I am indebted to you. I promise to pay it forward.

Pam and Roy Null – Endless nights of childcare, food prep, and urgent care runs. We would be lost without you. Thank you for everything.

Dr. James T. Webb (deceased) – You always put a book in my hands.

My Esteemed Community Partner – Thank you for your time, patience, and support to move the field forward for twice-exceptional students. Shangri-La does exist.

Mom – My wordsmith, cook, cheerleader, and home organizer – thank you for the million little things that made this dream possible.

Dad – The voice of reason who continues to believe I can take the world by storm.

The DU GT Cohort – My colleagues who became friends through many long nights. No task is too small to stay accountable. I remain in awe of your brilliance, love, and passion for GT kids. Thank you for the laughter, brilliant conversation, and contribution to my journey. In the words of Elle Woods, “We did it!”

Aaron – From the first moment, you have been by my side cheering me on. I love you.

Alex – My beautiful boy. You are my heart and my inspiration. I love you.

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Chapter One: Introduction

Parents and teachers of twice-exceptional students can provide insight into the patterns of social, emotional, and academic development. The purpose of this case study was to reveal the strengths and barriers that either contribute to or inhibit the developmental transitions of this most asynchronous population. Despite an abundance of literature on the developmental milestones and transitions of the typical student, there is a dearth of knowledge about the developmental transitions of twice-exceptional students. This information is necessary for parents, teachers, and administrators to determine the appropriate goals, classroom placement, accommodations, and targeted interventions. This study was a means to understand both the supports and barriers to successful developmental transitions of twice-exceptional students from the perspectives of the parents, teachers, and psychologists.

The community partner for this study was Three Pillars Lab School (pseudonym), which serves the academic and social-emotional needs of twice-exceptional students in Grades 4 through 12. The headmaster sent a letter to the parents of current students asking if they would like to share their stories by participating in this study. Identifying a significant number of preadolescent, twice-exceptional students presents a significant challenge within a public school system due to privacy protections under the Family Educational Rights and Privacy Act of 1974. The specialized educational environment of

Three Pillars Lab School made it the ideal place to examine the developmental transitions of preadolescent, twice-exceptional students from the perspective of the parents and teachers of current students.

Background of the Researcher

Considering the trajectory of my formal education, it appeared unlikely I would finish college, much less write a biographical reflection for a doctoral research project. I was the student categorized as “at-risk” who “experienced trauma.” Although my education began like that of most children, I endured multiple school changes due to family upheaval, divorce, and custody battles from Grades 6 through 12. I never thought of myself as a solid student, having a love/hate relationship with school. I adored diving deeply into a subject where time seemed to stop, but I detested the struggles I encountered due to poor social skills and immaturity. Adding to my asynchronous development was not receiving a diagnosis of attention deficit hyperactivity disorder (ADHD) until adulthood, which explained my difficulty with focus at work and in relationships.

These experiences have influenced my educational philosophy and shaped my purpose in improving the identification and education of twice-exceptional students. This research is important to me because of the challenges I faced in school as a twice-exceptional student. Those memories might be best left in the past if it were not for the immediate needs my son has today. A generation later, with more protective laws and codified curriculum, my twice-exceptional son encounters many of the same issues. I also now receive calls from friends about the challenges their twice-exceptional children face.

Parents and teachers are unclear how to provide appropriate support for the cognitive, social, and emotional developmental transitions of these asynchronous children.

Statement of the Problem

Like gifted youth, twice-exceptional students have an asynchronous developmental trajectory regarding their academic and psychosocial development (Silverman, 1997). It is this asynchrony that makes this population deviate (Terrassier, 1985) from the typical student population. For twice-exceptional students, academic success is closely tied to social and emotional development (Foley-Nicpon, 2016). In a mixed-methods study of twice-exceptional students, Willard-Holt et al. (2013) found that all participants demonstrated a need for resilience and perseverance. Similarly, Baum, Schader et al. (2014) conducted a qualitative study, finding that a strengths-based approach with both curriculum and instruction positively impacted both the academic and social and emotional development for this population. Although differences between academic and social-emotional development are apparent, both types of development are related. This study incorporated both domains to identify the supports and barriers for each one on the data collected from parents, teachers, and staff psychologists.

Several gaps are apparent between current research and practice as well as research and policy, making it difficult to provide this student population with an appropriate education (Baum et al., 2014). Foley-Nicpon (2016) identified the continued lack of comprehensive knowledge regarding twice-exceptionality among classroom teachers, gifted education specialists, school administrators, school counselors, school psychologists, and special education teachers, perpetuating the masking effect and preventing identification (Foley-Nicpon et al., 2013). Without data that indicate the

developmental trajectory of twice-exceptional students, parents, teachers, and administrators will struggle to identify appropriate goals.

Purpose Statement

The purpose of this study was to examine the perceived developmental transitions of preadolescent, twice-exceptional students. The twice-exceptional students in this study were those identified as gifted and having ADHD as the second exceptionality.

Problem of Practice

The persistent problem of practice is twofold. First is the lack of research regarding the developmental transitions of twice-exceptional students. There is no real body of scholarly literature outlining the developmental trajectory of gifted students compared to nongifted students. Without determining the baseline of how gifted students may or may not meet the same developmental milestones as outlined by Erikson (1968), a trajectory of developmental transitions and milestones emerges, making it even more difficult to identify twice-exceptional students. Second is the lack of a subsequent body of knowledge for professionals to reference regarding how to support successful developmental transitions. This study was a means to understand the supports and barriers to successful developmental transitions of twice-exceptional students from the perspectives of the parents, teachers, and psychologists.

This literature review serves as an evaluation of the extant research impacting twice-exceptional learners. The developmental theories of Erik Erikson (1968) and Kazimierz Dąbrowski (1964) served as the theoretical framework. A review of current definitions of gifted, special education, and twice-exceptionality follow. Finally, there

will be a review of the literature regarding supports and barriers evaluated from the perspectives of parents, teachers, psychologists, and twice-exceptional students.

Research Questions

What are the perceived developmental transitions of preadolescent twice-exceptional students?

Subquestions

1. How do parents perceive growth in both academic and psychosocial development?
2. How do educators perceive growth in both academic and psychosocial development?
3. What are the supports that promote successful developmental transitions?
4. What are the barriers that inhibit successful developmental transitions?

Study Audience, Outcomes, and Implications

The appropriate audience for this study is individuals seeking to understand when to refer a student for screening. This population includes school personnel, special education personnel, school psychologists, school counselors, advocates for both gifted and special education students, and teachers looking to best maximize their instructional time to promote student learning for the twice-exceptional student and the entire class. From the results of this study, educational leaders might better understand the need for expanded professional development and university preservice teacher programs to ensure that preservice teachers are providing equitable access to education for all learners. This study serves to inform and update the current understanding of preadolescent

development, developmental milestones, twice-exceptionality, and appropriate instructional practices.

Chapter Two: Literature Review

The purpose of this study was to examine the perceptions of parents, teachers, and psychologists regarding the developmental transitions of preadolescent twice-exceptional students, as well as the barriers and supports they encounter. A preadolescent is a youth aged 9 to 12 years. The persistent problem of practice is twofold. First is the lack of research regarding the developmental transitions of twice-exceptional students; second is the absence of a subsequent body of knowledge for professionals to reference regarding how to support the developmental transitions of twice-exceptional students. The goal of this study was to understand both the supports and barriers to successful developmental transitions of twice-exceptional students from the perspective of parents, teachers, and a psychologist. This literature review presents an evaluation of the extant research impacting twice-exceptional learners. The developmental theories of Erikson (1968) and Dąbrowski (1964) served as the theoretical framework. Chapter Two includes a review of the current definitions of gifted, special education, and twice-exceptionality. Also presented is a review of the literature regarding supports and barriers from the perspectives of parents, teachers, psychologists, and twice-exceptional students.

Theoretical Framework/Theorists

Erik Erikson

Erikson was an influential thinker in the field of psychology (Cross, 2010) who developed a stage-based theory of development still widely accepted and used

(Wiley, 2015). Most teacher training programs based their program around Erikson's (1968) stages of human development for preservice teachers to understand childhood development. Erikson's theory of psychosocial development is comprised of eight stages, with each requiring resolution of a crisis to advance to the next stage. These stages are trust versus mistrust (years 0–1), autonomy versus shame and doubt (years 1–3), initiative versus guilt (years 3–5), competence versus inferiority (years 5–10), identity versus role confusion (years 11–18), intimacy versus isolation (years 19–40), generativity versus despair (years 40–60), and integrity versus despair (years 60-plus; Cross, 2010). With the theory of psychosocial development, Erikson broke from the traditional thinking of development ceasing after adolescence, instead identifying development as continuing throughout the lifespan (Wiley, 2015). Each stage and its associated conflict arise from individuals' interactions with their environment (Cross, 2010).

Cross (2010) expressed that Erikson's view of identity development is of primary importance to overall individual development where "previous and subsequent stages of development (1–4 and 6–8) are influenced by this drive to establish identity" (p. 54). There are potential differences with the gifted population regarding the first five stages (those associated with the first 18 years of life), in which identity formation and crisis resolution may not follow the framework set forth by Erikson (Wiley, 2015). According to Cross (2001), identification of giftedness frequently follows early evidence of ability; however, the identification of giftedness in children is unlikely without resolution of earlier crises.

Wiley (2015) cautioned that applying Erikson's theory to the gifted population can have implications in the asynchronous development demonstrated by gifted children.

This asynchrony, in which children with uneven development can appear to be multiple ages simultaneously, may increase inner tension, resulting in an internal conflict of self-definition and identity (Tolan, 1998). If asynchronous development characterizes the gifted population, twice-exceptional children demonstrate the most asynchrony (Silverman, 1997, 2013).

Kazimierz Dąbrowski

Dąbrowski was a Polish psychologist and psychiatrist who proposed the theory of positive disintegration (TPD) to describe personality development based upon his clinical work with creatively gifted individuals. According to Dąbrowski (1964), the “strength of the theory of positive disintegration is in its integration of psychopathology with personality development” (p. xxviii). Disintegration is nothing more than the loosening of current structures that could appear as emotional disharmony or anxiety. There are three required conditions for TPD to occur: an endeavor to break off from the existing, uniform structure that the individual perceives as tiring or repetitious; a disruption of the existing personality structure; and a clear grounding of the new value that adopts an appropriate change in the structure of the personality on a new level (Dąbrowski, 1964). Individuals should not fear disintegration or view it as a negative process. Rather, as Dąbrowski asserted, “Disintegration is the basis for developmental thrusts upward, the creation of new evolutionary dynamics, and the movement of the personality to a higher level” (p. 6).

In contrast to Erikson’s stages, Dąbrowski viewed human development in terms of tension and inner conflict (higher and lower, good and bad) experienced within the self (Daniels & Piechowski, 2009). Wiley (2015) described TPD as a process whereby the

individual matures through periods of psychological disintegration based upon the response to internal or external conflict. This conflict can cause anxiety and neurotic behavior in response to the discomfort, but as Wiley explained, “Under the right circumstances, an individual undergoing this disintegration can experience ‘secondary integration,’ arriving at a ‘superior’ personality” (p. 9). This process of disintegration and secondary integration can create a distinct trajectory of personality development.

The foundation of Dąbrowski’s theory contains two concepts: developmental potential and multilevelness (Daniels & Piechowski, 2009). The developmental potential emerges through positive disintegration (Piechowski, 2013); multilevelness is best presented as a prism of levels that describes human emotions, motivations, values, strivings, and behaviors. Piechowski (2013) outlined Dąbrowski’s concept of developmental potential with three components: talents and abilities, the capacity for inner transformation and intensity, and sensitivity comprised of the five overexcitabilities (OEs). It is the developmental potential, specifically the OEs, that most overlaps with the characteristics of gifted children and adults (Daniels & Piechowski, 2009). Daniels and Piechowski (2009) identified the most obvious components of developmental potential to be talents, specific abilities, and high general intelligence.

The five OEs are psychomotor, sensual, intellectual, imaginal, and emotional (Daniels & Piechowski, 2009). Any of these OEs can potentially influence the timing of developmental transitions for twice-exceptional children. The psychomotor OE is characterized by a surplus of energy and psychomotor expressions of emotional tension (Piechowski, 2013). The sensual OE appears as an enhanced sensory (e.g., sight, smell, taste, touch, hearing, music, color, etc.) and aesthetic pleasure, with emotional tensions

expressed through such acts as overeating, shopping sprees, and the desire to be the center of attention (Daniels & Piechowski, 2009). A thirst for knowledge and curiosity characterizes the intellectual OE through intellectual activity, a strong sense of social justice, and a preoccupation with logic or moral thinking. The emotional OE incorporates intense feelings and emotions expressed physically (e.g., blushing, flushing, pounding heart, etc.) or conveyed through strong affective emotions (e.g., anxiety, inhibition, euphoria, and depressive moods). The imaginal OE comprises intense imagination and creativity, detailed visualization, poetic or dramatic sensitivity, and magical thinking (Daniels & Piechowski, 2009).

According to Tolan and Piechowski (2013), a small group of professionals known as the Columbus Group formed in response to the “push-pull between the external and internal perspectives, between an achievement focus and developmental focus” indicating the need to redefine gifted in a way that “reestablished balance between the internal and external views” (p. 10). As a member of the Columbus Group, Silverman (2013) asserted that Dąbrowski’s theory was “fundamental to the development of the definition of giftedness as asynchrony” (p. 27). By considering the types of development rather than levels or stages, individuals refrain from thinking about development as a sequential process (Piechowski, 2017). Dąbrowski’s TPD represents a “masterful effort to rescue from psychopathology the characteristics of gifted (OEs) and their developmental crises” (Piechowski, 2017, p. 87).

Giftedness Defined

Multiple definitions of giftedness have evolved over the years (Tannenbaum, 2000), thus requiring clarification. These changing conceptions have progressed from a narrow,

intellectually based meaning to a broader, more-inclusive definition recognizing talents in specific domains (McClain & Pfeiffer, 2012). The Marland Report (1972, as cited in Colangelo & Davis, 2003) defined gifted and talented children as those:

capable of high performance [including] those with demonstrated achievement and/or potential ability in any of the following areas, singly, or in combination:

1. General intellectual ability
2. Specific academic aptitude
3. Creative or productive thinking
4. Leadership ability
5. Visual and performing arts
6. Psychomotor ability (later removed). (p. 10)

The Marland Report recognized that 3% to 5% of the school population would be identified as gifted and talented using the criteria outlined (as cited in Assouline, Foley-Nicpon, & Huber, 2006). This report catapulted gifted education to a national level of prominence, as educators began to realize that failure to meet the academic needs would place gifted students at risk for psychological harm (Assouline et al., 2006); even so, there were no legal mandates enacted (Colangelo & Davis, 2003). Without legal mandates, the Marland definition was insufficient to compel states and school districts to implement gifted programming and services.

The No Child Left Behind Act provided a broad definition of gifted learners as those

who give evidence of high achievement capability in areas such as intellectual, creative, artistic, or leadership capacity, or in specific academic fields, and who need services or activities not ordinarily provided by the school in order to fully develop those capabilities. (U.S. Department of Education, 2002, p. 1959)

The National Association for Gifted Children (NAGC) is a leading national advocacy group that supports gifted and talented children and their families through education, advocacy, and research. The current NAGC definition states:

Gifted individuals are those who demonstrate outstanding levels of aptitude (defined as an exceptional ability to reason and learn) or competence (documented performance or achievement in top 10% or rarer) in one or more domains. Domains include any structured area of activity with its own symbol system (e.g., mathematics, music, language) and/or set of sensorimotor skills (e.g., painting, dance, sports). (NAGC, 2016b, p. 1)

The Columbus Group offered yet another definition:

Giftedness is *asynchronous development* in which advanced cognitive abilities and heightened intensity combine to create inner experiences and awareness that are qualitatively different from the norm. This asynchrony increases with higher intellectual capacity. The uniqueness of the gifted renders them particularly vulnerable and requires modifications in parenting, teaching, and counseling in order for them to develop optimally. (Tolan & Piechowski, 2013, p. 3)

The Marland Report of 1972 provided the first definition of giftedness accepted by the U.S. Department of Education, a definition later broadened and written into law with No Child Left Behind. The NAGC (2016) definition provided an even broader view of the gifted and talented by extending beyond demonstrated achievement to include the top 10% in one or more domains. The Columbus Group (1991) provided the most holistic definition addressing both high intellectual capacity and heightened inner experiences. In addition, the Columbus Group recommended modifications in parenting, teaching, and counseling, areas that encompass the whole child. The problem of practice—the lack of data delineating the developmental trajectory of twice-exceptional students—requires a holistic perspective of both the strengths and weaknesses of each student. Because the Columbus Group provided the most encompassing definition of gifted students, it served as the definition for this study.

Special Education and Disabilities Defined

The goal of both legislators and educators has always been to find a balance between the needs of the child, the needs of society, and the benefits created for everyone upon the

delivery of a successful education (Millman, 2007). These sweeping changes, through a series of Congressional Acts, began with the Rehabilitation Act of 1973 and evolved into the Education of the Handicapped Act, later updated to the Education for All Handicapped Children Act (Millman, 2007). The next federal initiative, Public Law 94-142, went into effect in 1975, renamed as the Individuals with Disabilities Education Act (IDEA) in 1990 (NAGC, 2016a). This piece of legislation was a major accomplishment, finally ensuring that all students with disabilities received a free and appropriate public education (U.S. Department of Education, 2010).

IDEA

Congress reauthorized IDEA in 2004 (Millman, 2007), defining special education as “specially designed instruction, at no cost to the parents, to meet the unique needs of a child with a disability” (U.S. Department of Education, 2004, §300.39). In 2006, the U.S. Department of Education made additional changes to IDEA and released regulations requiring schools to use research-based interventions to assist students with learning difficulties and learning disabilities. Schools were also to use research-based interventions to determine eligibility for special education (U.S. Department of Education, 2004).

Disabilities

IDEA (U.S. Department of Education, 2004) identified 13 categories under which a student may be eligible to receive services and protections. These categories included learning disability, speech/language impairment, intellectual disability, emotional disturbance, hearing impairment, visual impairment, orthopedic impairment, and other health impairment. Many disabilities comprise the “other health impairment” category,

including ADHD, autism spectrum disorder (ASD), traumatic brain injury, multiple disabilities, and deaf-blindness (NCSER, n.d.; Special Education Guide, n.d.; U.S. Department of Education, 2002). According to IDEA (U.S. Department of Education, 2004), a specific learning disability is

A disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, that may manifest itself in the imperfect ability to listen, think, speak, read, write, spell, or to do mathematical calculations, including conditions such as perceptual disabilities, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia. Specific learning disability does not include learning problems that are primarily the result of visual, hearing, or motor disabilities, of intellectual disability, of emotional disturbance, or of environmental, cultural, or economic disadvantage. (Specific Learning Disability Sec. 300.8 (c) (10), 2018)

Definitions of Twice-Exceptional

Twice-exceptional has only recently entered the educational lexicon to describe students who are intellectually gifted and have a coexisting disability (Assouline et al., 2006). It was not until IDEA (U.S. Department of Education, 2004) that students with a disability could receive simultaneous identification as being gifted and talented.

According to the U.S. Department of Education (2004), coexisting disabilities include ADHD, ASD, auditory and visual processing difficulties, dyslexia, or physical impairments.

The National Education Association (NEA; 2006) identified one common characteristic of twice-exceptional students: “They simultaneously possess attributes of giftedness as well as learning, physical, social-emotional, or behavioral deficits” (p. 5). Twice-exceptional students come from every cultural, socioeconomic, racial, and ethnic group. They may have a physical or sensory disability, ASD, emotional and/or behavioral disorders, or ADHD in addition to being gifted (NEA, 2006).

Twice-exceptional students are those who qualify for both special education and gifted education services (Vespi & Yewchuk, 1992). According to NAGC (2016a), twice-exceptional learners are “gifted children who have the characteristics of gifted students with the potential for high achievement and give evidence of one or more disabilities as defined by federal or state eligibility criteria” (p. 1).

The number of twice-exceptional students is unknown, but as of 2004, approximately 300,000 twice-exceptional students attended public schools in the United States (Baum & Owen, 2004). The NEA (2006) estimated the number of twice-exceptional students has increased to 360,000. More recently, Assouline et al. (2015) conservatively placed the number as closer to 385,000 students.

Although the language across the three definitions is similar, there are specific differences. The U.S. Department of Education’s definition specifies “intellectually gifted,” whereas the NEA identifies the same criteria but centers around populations where twice-exceptionality can occur. The NAGC (2016) provides a more precise definition of twice-exceptional students as “gifted children who have the *characteristics* of gifted students with the *potential* for high achievement and give evidence of one or more disabilities as defined by federal or state eligibility criteria” (p. 1; emphasis added). The potential for achievement, not the achievement itself, is what sets this definition apart. The twice-exceptional student may not be able to demonstrate achievement in one or more domains indicative of giftedness due to the disability. However, the holistic lens of the NAGC definition reveals both the potential and the disability without masking either. The potential for achievement combined with the inner experiences of the twice-exceptional student indicate how to respond to their needs. The twice-exceptional student

is characterized by the most asynchrony, with patterns of uneven development (Silverman, 2013). These uneven patterns can result in confusion regarding appropriate classroom environments, curriculum, and instructional strategies to meet the needs of students who can appear to be multiple ages simultaneously (Tolan, 1998).

Strengths That Support Developmental Transitions

Parents

For decades, educators and other professionals have perpetuated myths that disabilities and giftedness cannot simultaneously occur (Assouline et al., 2006; Brody & Mills, 1997; Colangelo, 1985). Parents have firsthand experience watching their children struggle to learn or not qualify for enrichment classes (Assouline et al., 2006). Before the passage of IDEA 2004, parents of twice-exceptional children were only able to advocate for services based on the work of several researchers in the field of gifted education (Assouline et al., 2006).

According to a study by Neumeister et al. (2013), primary caregivers play a crucial role in the academic success of their twice-exceptional children. Although the findings from their study could be perceived as influenced by sampling bias, the authors argued for the education and ability of the caregivers to provide time and financial support. The primary caregivers framed the disability as very matter of fact, with the intent to ensure that a disability would not overshadow strengths by either the child or school personnel (Neumeister et al., 2013).

Parents have traditionally been the most accurate first identifiers of a twice-exceptional child in terms of behavioral characteristics (Wormald et al., 2015). Upon examination of the history of special education in the United States, the role of parents

deserves esteem (Neumeister et al., 2013). Several studies and articles indicate parents' critical roles as advocates for twice-exceptional students (Neumeister et al., 2013). In a grounded theory study, Neumeister et al. (2013) highlighted the importance of the "mothers' sense of primary responsibility for developing their children's potential. These mothers were quick to recognize their children's intellectual capabilities, and they were the first to notice signs of a disability" (pp. 265–266). The sense of responsibility these mothers felt led them to carefully "shape their children's conceptualizations of their disabilities as areas of challenge that simply required alternate strategies and additional effort to overcome" (Neumeister et al., 2013, p. 266).

Neumeister et al. (2013) identified six prominent themes whereby parents, most notably mothers, were able to support their twice-exceptional child. These themes were (a) recognition of the child's intelligence, (b) recognition of a problem despite professionals' reassurance, (c) providing and seeking support despite cost/inconvenience, (d) framing the child's beliefs and expectations to normalize the disability, (e) maintaining high expectations for performance, and (f) handing off responsibility of their children's potential to the grown child.

Teachers

Seligman and Csikszentmihalyi (2000) asserted that "treatment is not just fixing what is broken; it is nurturing what is best" (p. 7). The literature is scarce regarding scaffolding to support twice-exceptional students, except for a single study of strengths-based strategies (Baum et al., 2017) integrated in a private school setting in Southern California. It is the strengths-based, talent-focused approach that allows for differentiation. Baum, Schader et al. (2014) defined "strengths-based" as "curricular and instructional

approaches that are differentiated to align with students’ cognitive styles, learning preferences, and profiles of intelligence” (p. 312). Differentiation has become common in the modern lexicon of Common Core State Standards; however, Baum et al. (2001) provided a more refined perspective of dual differentiation, defined as

The fulcrum that maintains the delicate balance between students’ strengths and limitations. It must be challenging enough to engage these students in their learning, provide alternate ways of accessing information, and offer options for communication that tap into their unique talents. (pp. 485–486)

Dual differentiation provides accommodations for advanced academic needs while modifying the curriculum for the disability (Baum et al., 2017).

Baum et al. (2017) outlined how to organize the intellectual, physical, and emotional environments to create a successful learning experience for twice-exceptional students.

The intellectual environment needs appropriate entry points to the curriculum, performance-based assessments with differentiated exit points, authentic problems for investigation, and opportunities for creative and critical thinking (Baum et al., 2017). The physical learning environment requires modification to help students struggling with hypersensitivity and distractions, accommodate the need for extra movement, provide flexible seating and grouping arrangements, and present resources so students can access the content with manipulatives, multimedia, picture books, and more (Baum et al., 2017).

Baum et al. (2017) described the need for a supportive emotional environment where students feel like valued members of the community without the threat of punishment, ridicule, or anxiety. Creating learning communities generates a positive environment where all students feel respected and valued. Educators need to teach executive function skills, such as time management and organization, for success. Self-regulation and coping

skills, such as stress management, conflict resolution, and anger management, are paramount for twice-exceptional students. Several studies have shown that twice-exceptional students face difficulty with social skills; in addition, their ability to pick up on social cues is weak (Assouline et al., 2006; Baum et al., 2014; Fornia & Frame, 2001; Omdal, 2015). Baum et al. (2014) suggested using authentic contexts for developing social awareness and social skills and building friendships.

Psychologists

Silverman (1993) recommended preventative rather than remedial interventions where counselors can “facilitate the emotional well-being of children and their families before a crisis occurs” (as cited in Fornia & Frame, 2001, p. 388). To develop a counseling program, counselors, school counselors, and psychologists must be able to recognize giftedness in early childhood within both the cognitive and adaptive skills domains.

Barriers That Inhibit Developmental Transitions

In addition to serving as strengths that support developmental transitions, some developmental components act to inhibit developmental transitions. These barriers include, but are not limited to, the masking effect that can lead to a lack of identification; inappropriate intervention; failure of implementation; lack of patience on the parts of parents, teachers, and school administration; unavailability of professional development; inconsistent and variable test scores; scarcity of literature for parents; prevailing myths; and current legal mandates.

Identification

Millman (2007) identified a potential problem with creating an individualized education program (IEP) for a twice-exceptional student to be the struggle with satisfying IDEA's "least restrictive environment" requirement while maintaining support for the student's challenges. The intent with the least-restrictive environment is to promote inclusion in the general education classroom (Millman, 2007). Inclusion is supposed to benefit children with challenges so they can model appropriate behaviors (Millman, 2007); in turn, nonchallenged students need to learn empathy and tolerate diversity. Based on their needs for both gifted programming and special education supports, twice-exceptional students should thrive in a segregated environment with other students with dual exceptionalities (20 U.S. Code § 1412—State Eligibility, n.d.). Unfortunately, this segregated, supportive environment conflicts with the goal of IDEA. It is precisely the need for both types of services and programming that puts the educational needs of a twice-exceptional student in the middle of the law. Research and history show that low expectations yield poor results (O'Donnell, 2005). The Jacob K. Javits Gifted and Talented Students Education program of the Elementary and Secondary Education Act specifically addresses the need for inclusion of special education children in traditional programming, recognizing the possibility of dual exceptionality (U.S. Department of Education, 2019).

Masking Effect

Identifying and supporting twice-exceptional students is more difficult due to a phenomenon referred to as the masking effect. The masking effect is a significant issue that hinders attempts to identify twice-exceptional students in order to provide

appropriate interventions (McCoach et al., 2001; Pfeiffer, 2013). Masking can occur in three groups of twice-exceptional students (Baum et al., 1991; Foley-Nicpon et al., 2011; Foley-Nicpon et al., 2013; Reis et al., 2014; Wormald et al., 2015). The first group is students already identified as gifted by demonstrating high IQ or high achievement; however, these students may have subtle learning disabilities not yet recognized (Brody & Mills, 1997). The second group includes those who are both gifted and have a learning disability, with neither quality identified because the gifts and disability mask one another (Fetzer, 2000). The third group of students are those with an identified learning disability who are also gifted, yet classified for what they are unable to do, with their potential not yet recognized (Brody & Mills, 1997; Foley-Nicpon et al., 2011; Vespi & Yewchuk, 1992; Weinfeld et al., 2013).

Inconsistent and Variable Test Scores

Twice-exceptional students display a wide range of variability in test scores, increasing the difficulty of establishing a specific profile for identification (Assouline et al., 2010). Suggestions for proper identification include using behavioral observations, measures of cognitive processing, batteries of achievement tests (Brody & Mills, 1997), and interactive evaluations (Wormald et al., 2015). These options support Foley-Nicpon's (2013) assertion that a comprehensive assessment is required to identify these students.

Parents

According to Neumeister et al. (2013), the primary barrier for parents to support developmental transitions is the lack of information and support. The authors suggested that

State and national groups that advocate on behalf of gifted children could create and/or customize guides for parents of twice-exceptional students, explaining the relevant laws, their rights, strategies, and sample role-playing scenarios for talking with teachers and administrators. (p. 269)

Advocacy, resources, and support networks for parents of twice-exceptional children are growing but have not yet reached critical mass (Neumeister et al., 2013).

Many parents struggle to contradict the education professionals assessing and caring for their children; as such, they report negative experiences when trying to convey their child's needs to school personnel (Neumeister et al., 2013). In an interview conducted by Neumeister et al. (2013), a mother recounted an experience with a principal who "kept arguing with me ... telling me that there was nothing wrong with Mitch, that all he needed was extra reading help, but I knew that Mitch need a little bit more than just extra reading help" (p. 267). From this exchange, the mother realized it was up to her to do what was best for her son. If parents do not know how to overcome such barriers, their lack of knowledge becomes yet another impediment to their child's growth and development, resulting in their twice-exceptional child not receiving the appropriate services.

Teachers

Teachers and administrators are caught in the struggle of how to best meet the unique needs of twice-exceptional students in accordance with the rules, statutes, and legislative policies currently in place (Baum et al., 2017). Higgins and Nielsen (2000) explained that the educational needs of twice-exceptional students differ significantly from the needs of most students. Access to services can be difficult for twice-exceptional students, as

special education and gifted education programming are typically considered mutually exclusive (Karnes & Shaunessy, 2004).

Scarcity of Literature

The scarcity of empirical literature on the social characteristics and needs of twice-exceptional students increases the difficulty in determining how best to provide the least-restrictive environment (Barber & Mueller, 2011). Additionally, the academic and psychosocial growth patterns are interwoven and complex, further muddling how to meet the needs of these students (Baum et al., 2017). As Baum and Owen (1988) and others have noted, the definitions of both gifted and disability do not overlap, leaving teachers and administrators with only a vague understanding of the profile of a twice-exceptional student (Wormald et al., 2015). This lack of clarity prevents teachers and administrators from moving forward with a collaborative plan for intervention (Baum & Owen, 1988).

Collaborative Attitudes

Parents do not want to be labeled as “that parent,” despite teachers and other professionals emphasizing the importance of parent advocacy for student success (Assouline et al., 2006; Neumeister et al., 2013). Parents fear that “school personnel may dismiss [them] as pushy or blame the struggling child for being lazy” (Assouline et al., 2006, p. 18). Collaboration with parents is not a typical component of the routine identification practices used by teachers for either gifted education or special education referrals (Assouline et al., 2006).

Prevailing Myths

Assouline et al. (2006) cited Colangelo (1985) regarding the myths and assumptions that continue to confuse educators about twice-exceptional students. The first myth

identified by Colangelo is that gifted students do not require any differentiated curriculum or special services because they are sufficient on their own. Since 1985, progress in the field has indicated the need for programming that addresses specific talent domains (Colangelo & Davis, 2003). The second myth is the idea of global giftedness (Assouline et al., 2006; Colangelo, 1985), also known as the “every child is gifted” myth. The impact of this myth has been far-reaching, where “schools continue to base entry into gifted education programs on global or composite standardized test scores ... continuing to deny the enormous diversity that exists among gifted students” (Assouline et al., 2006, p. 18). A third myth affecting twice-exceptional students is the concept that a student cannot be gifted and have a coexisting learning disability. One argument noted by Gordon et al. (1999) is that “the possibility of a learning disability label for some students who function normally in comparison to their peers is not valid, regardless of their ability, aptitude, and/or achievement test scores” (as cited in Assouline et al., 2006, p. 18). This myth has the potential to continue the discrimination against students, preventing them from receiving targeted interventions. According to Assouline et al. (2006),

Current efforts to eliminate misclassification increase the possibility that gifted students with learning disabilities will be precluded from receiving services, thereby leading to continuation of the incorrect assumption that exceptional academic ability and learning difficulties are mutually exclusive. (p. 18)

The expectation is that school psychologists and teachers have the most knowledge about growth and development for students in a school setting, research indicates otherwise. This lack of understanding was evident in the Foley-Nicpon et al. (2013) study. In a survey of 300 school psychologists nationwide, Foley-Nicpon et al. (2013)

found that only 39.86% reported moderate to considerable familiarity with twice-exceptionality, whereas 60.14% had little to no familiarity. Fornia and Frame (2001) identified the failure of professionals in the counseling field to acknowledge the needs of the gifted as a major obstacle to the development of counseling programs to, as noted by Alsop (1997), “facilitate the emotional well-being of children and their families before a crisis occurs” (p. 388).

Related Studies of Interest

There are multiple studies about the definition (Foley-Nicpon et al., 2011), identification, and academic needs (Baum, 1994; Baum & Owen, 2004; Baum et al., 2017; Baum et al., 2014) of twice-exceptional students. Only a few researchers, however, have focused on social and self-perceptions (Barber & Mueller, 2011) and self-esteem and self-concept (Foley-Nicpon et al., 2012). The bulk of studies that address the social and emotional needs do so from only two perspectives: gifted children and family counseling (Fornia & Frame, 2001) or practitioners (Omdal, 2015). A few scholars have attempted to bridge the gap between giftedness and specific learning disabilities (Wormald et al., 2015), and to identify effective pedagogical strategies (Baldwin et al., 2015; Baum, 1994; Baum et al., 2017; Baum et al., 2014) and effective learning strategies from the student perspective (Willard-Holt et al., 2013). These related studies show that although researchers are beginning to focus on the issues faced by twice-exceptional students and their families, there is still no clear profile of twice-exceptional students or how to meet their needs within a traditional school setting.

Gaps in the Literature

Most extant studies define student success in academic terms, but future research is needed to broaden the definition of success for twice-exceptional students. There is a lack of socioeconomic and racial diversity in much of the literature, indicating the need for increasing the presence of these criteria in future samples and studies. Although studies in the field of twice-exceptionality have been gaining attention over the last 2 decades, it is still an emerging field and more research is needed. Additional scholarly inquiry is necessary to inform parents, educators, and school psychologists about the nature and needs of twice-exceptional learners. This study was a means to discover the strengths and barriers to successful developmental transitions of twice-exceptional students from the perspectives of the parents, teachers, and psychologists. The information gleaned from this research will contribute to the body of knowledge for those who, according to participant Dr. Dan Peters, are “in the trenches, working with these families every day.”

Chapter Three: Methodology

Introduction and Rationale

The previous chapter provided the theoretical framework and the research supporting the need to explore how parents and teachers perceive the developmental transitions of preadolescent twice-exceptional students. This chapter presents a detailed description of the study purpose and the research methodology utilized in this qualitative case study. The research context, which includes the setting and participants, the author's role as researcher, intervention or innovation, instruments identified for data collection, as well as strategies for data analysis and threats to validity all receive discussion in this chapter.

Purpose of the Study

The purpose of this collective case study was to examine the perceived developmental transitions of preadolescent twice-exceptional students from the perspectives of both parents and educators. The central research question, as identified through the review of the literature, is What are the perceived developmental transitions of preadolescent, twice-exceptional students?

Subquestions

1. How do parents perceive growth in both academic and psychosocial development?
2. How do educators perceive growth in both academic and psychosocial development?

3. What are the supports that promote successful developmental transitions?
4. What are the barriers that inhibit successful developmental transitions?

Research Design: Collective Case Study

Qualitative research starts with assumptions incorporating a theoretical framework to “inform the study of research problems addressing the meaning individuals or groups ascribe to a social or human problem” (Creswell & Poth, 2018, p. 42). The research approach for this inquiry was a collective case study. This design was appropriate due to the selection of one particular issue, with multiple people, or cases, used to illustrate a phenomenon within a specific population (Creswell, 2013; Stake, 2011). The multiple people, or cases, are the parents, teachers, and psychologist who participated in this study. They were interviewed to examine the phenomenon of developmental transitions within the specific population identified as preadolescent twice-exceptional students. A collective case study design was necessary to examine the phenomenon with more depth and breadth that only multiple perspectives can provide. Each group of participants, as well as the school site, were identified as a case unto themselves, therefore a collective case study approach was required.

As Creswell and Creswell (2018) explained, a case study is a method of inquiry where “the case(s) are bounded by time and activity, and researchers collect detailed information using a variety of data collection procedures over a sustained period of time” (p. 241). In this study, the unit of analysis was the school. Creswell and Poth (2018) refer to Yin’s (2014) description of case study research as involving “the study of a case (or cases) within a real-life, contemporary context or setting” (p. 146)). Best and Kahn (2006) noted that case study enables the researcher to explore and analyze “interactions

between the factors that explain present status or that influence change or growth [as a] longitudinal approach, showing development over time” (p. 259).

The case study design presents the researcher with the ability to describe phenomena in both depth and detail (Yin, 2009). A case study researcher can “develop propositions for future inquiry” (Yin, 2009, p. 10) and identify best practices to address the needs of twice-exceptional students. A collective case study was a means to understand the perceptions of parents and educators about the developmental transitions and associated asynchrony with twice-exceptionality. The central phenomenon addressed by the research question and subquestions was the difference in the expected timeline for meeting developmental milestones, as defined by Erikson (1968), and the barriers that have hindered or supports that assisted twice-exceptional students to progress through developmental transitions, as perceived by parents and teachers.

Current research does not address the perceptions of parents and teachers regarding the supports and barriers that could scaffold or inhibit developmental transitions of twice-exceptional students. The extant research studies include quantitative (Foley-Nicpon et al., 2013), empirical (Foley-Nicpon et al., 2011), mixed-methods (Bianco & Leech, 2010; Willard-Holt et al., 2013), grounded theory (Neumeister et al., 2013), and case study (Baum et al., 2014; Forna & Frame, 2001; Wormald et al., 2015). Five studies were specific to teacher perceptions or the effects of teacher preparation programs (Baum et al., 2014; Bianco & Leech, 2010; Bracamonte, 2010; Foley-Nicpon et al., 2013; Nielsen, 2002). Only three studies pertained to parent perceptions, ranging from the influence of parents to foster success to the implications of family counseling (Forna & Frame, 2001; Neumeister et al., 2013; Wormald et al., 2015). In addition, just one study centered on

twice-exceptionality from the perspective of college students reflecting on their time in K-12 public education (Willard-Holt et al., 2013).

Role and Positionality of the Researcher

In qualitative research, the researcher is the key data collection instrument (Creswell & Poth, 2018). In a case study, the researcher collects the data, observes behavior and classroom environments, interviews participants, and engages through an in-depth analysis of the information (Creswell & Poth, 2018; Yin, 2014). Sharing the background of the researcher is essential, as qualitative research today “involves closer attention to the interpretive nature of inquiry and situating the study within the political, social, and cultural context of the researcher[s]” (Creswell, 2013, p. 45).

A researcher’s reflection on past experiences and biases is a critical piece of any study. This researcher has been immersed in the world of twice-exceptionality for 11 years as the parent of a twice-exceptional son. However, the experiences of twice-exceptional and asynchronous development extend back decades through her and her husband’s experiences in K-12 public education. Over this time and across incidences of self-discovery, she has found the misinformed decisions about academic and social placement in school to have become an area of passion, learning, and advocacy for all children who cannot yet advocate for themselves.

In 2017, the researcher received her K-8 Multiple Subject Teaching Credential. She has worked as both a part-time and full-time substitute teacher for the past 7 years to accommodate the special or medical needs of her twice-exceptional child. During this time, the researcher has gained immense experience observing and teaching in multiple classrooms spanning K-12 in a midsize school district in Southern California.

In these roles of parent and educator, the researcher is aware that some of her experiences leading to this research topic not only provide knowledge and insight but could also be a liability. Insider experience gives the researcher a comparative understanding between categories (Charmaz, 2014). Reflexivity entails making statements and observations about personal experiences and how they could shape interpretations (Creswell & Creswell, 2018). Based on the researcher's personal experience with twice-exceptional children, coupled with the review of the literature, several elements could potentially affect both research design and data analysis. First, the review of the literature showed the disability of twice-exceptional students addressed with the intent to remediate before embracing the academic strengths, requiring more challenging curriculum in the area of giftedness (Baum & Owen, 1988; Bianco & Leech, 2010; Foley-Nicpon et al., 2011; McCoach et al., 2001; Neihart, 2004; Neumeister et al., 2013). Secondly, the academic needs, although not consistently researched, emerged far more often than children's the social-emotional or developmental needs (Morrison & Omdal, 2000; Reid & McGuire, 1995).

As a parent, the researcher may have had experiences similar to the parents interviewed for this study. She has participated in IEP meetings, psychological and psychoeducational testing, and conferences for her child within the public school setting. Her son, identified as twice-exceptional at 5 years of age, tested in the Superior to Very Superior ranges on the Wechsler Intelligence Scale for Children-IV. He also tested as having clinically significant ADHD and mild ASD. Her experiences include navigating a school district that has neither the infrastructure nor training necessary to meet both his advanced academic needs and his delayed social-emotional skills.

Researchers' experiences have the potential to shape their interpretations, perhaps by expecting specific themes or actively looking for data to support their position rather than allowing the themes to emerge naturally (Creswell & Creswell, 2018). All of these combined experiences have transformed the researcher into a scholar and educator focused on finding the knowledge necessary to provide twice-exceptional students equitable access to an appropriate education independent of racial, class, gender, and disability bias.

Setting

Three Pillars Lab School is a small, private school located in a suburban neighborhood in a western U.S. state. It was an appropriate research site due to its design to meet the needs of twice-exceptional students, making it the ideal location to address the persistent problem of practice identified in Chapters One and Two. The teachers and staff work to meet the academic and social-emotional needs of twice-exceptional students enrolled in Grades 4 through 12. The specialization of Three Pillars Lab School qualified it to serve as the setting for examining the perceived developmental transitions of preadolescent, twice-exceptional students from the perspectives of parents of current students and teachers. For this study, students enrolled in fourth through seventh grades were preadolescent based on Erikson's (1968) theory of psychosocial development. Preadolescence spans two stages, competence versus inferiority (ages 5–10 years) and identity versus role confusion (ages 11–19 years; Cross, 2001). Students in the fourth grade typically range in age from 9 to 10 years; however, gifted students in the fourth grade could be as young as 8 years of age.

Participants

Participating parents had one or more children enrolled in a school designed for twice-exceptional students; teacher participants had experience working with twice-exceptional students. The recruited teachers, staff, and parents at Three Pillars Lab School qualify as what Creswell (2013) described as a purposeful sample because their interaction with the students can purposely inform the understanding of the research problem. The research question and subquestions, developed from the gaps in the literature detailed in Chapter Two, address the persistent problem of practice: Without data that outline the developmental trajectory of twice-exceptional students, determining appropriate goals and learning environments is even more difficult for parents, teachers, and administrators.

Eligibility for parents was that their child was identified as gifted based on the criteria used by the western U.S. state of study, where the student must have an IQ of 120 or above as well as a diagnosis of ADHD. The availability of the parent, teacher, and staff or clinical psychologist to participate in the study was another criterion used for participant selection (cf. Best et al., 2018; Creswell & Creswell, 2018; Yin, 2009). The age, educational background, gender, and experience teaching gifted or special education varied and did not affect the teachers' ability to participate in the study. Similarly, the age, educational background, and gender of the parents did not affect their ability to participate. The criteria for each group of participants were:

- Parents: Must have a son or daughter identified as twice-exceptional (gifted with another exceptionality) between the ages of 10 and 14 years.

- Teachers: Must have at least 1 year of experience teaching twice-exceptional students.
- Psychologist: Private clinical psychologist with experience working with twice-exceptional students.

Creswell and Poth (2018) deferred to Yin (2014), advising that qualitative case study data collection should be limited to four or five cases within a single research study. As Yin (2018) explained, the study of “a contemporary phenomenon within its real-world context” (p. 88) obligates the researcher to maintain important ethical practices.

With the exception of the psychologist, every teacher participant received a pseudonym. As shown in Table 3.1, parent participants and their children also received a pseudonym to protect their privacy and anonymity.

Table 3.1: Participant Pseudonyms

Participant Role	Parent	Child	Teacher
	“Kristy”	“Charlie”	“Mr. Clark”
	“Marie”	“Felix”	“Ms. Hanks”
	“Lisa”	“Ruthie”	
	“Katherine”	“Julia”	

Data Collection

The purposeful sampling included maximum variation and convenience sampling strategies. Creswell and Poth (2018) identified the purpose of maximum variation sampling as to “document diverse variation of individuals or sites based on specific characteristics” (p. 228). Although the participants in the study fulfilled the role of parent, teacher, and psychologist, they differed with respect to years of experience teaching,

years of experience working as a psychologist, and lived experiences of having one or more children identified as twice-exceptional.

Convenience sampling was another method utilized; according to Yin (2009), sampling can be voluntary and captive. The convenience sample for this study comprised teachers who work at Three Pillars Lab School and have experience with twice-exceptional students with ADHD. Parents of students enrolled in the upper elementary (Grades 4 through 6) were another convenience sample. The Head of School sent a letter and recruitment flyer to the parents of current students, asking if they would like to share their stories by voluntarily participating in this study.

After obtaining approval from the University of Denver Institutional Review Board (IRB), the researcher informed the Head of School at Three Pillars Lab School, who had received the study criteria for the parent and teacher groups. He assisted the researcher by narrowing the list to families with students having a diagnosis of ADHD (inattentive, hyperactive, and combined types). He collaborated on a letter sent to parents and teachers with information on the study, the recruitment flyer, and how to contact the researcher if they were interested in participating. The letter stated the criteria necessary for participation, as well as the time commitment and that the researcher would be sharing the findings of the study. The Head of School provided time and a quiet space for teachers' interviews, either in person or online during the workday. The recruitment letter provided participants with the following information:

- The researcher will use the information collected, including documents, as part of the research study to explore the perceptions of the developmental transitions of twice-exceptional preadolescent students.

- Study participants will agree to one 45- to 60-minute interview.
- Study participants will agree to one 45- to 60-minute follow-up interview.
- Participation in research is voluntary and participants may withdraw from the study at any time.
- Pseudonyms will identify participants in the data collection and research write-up to obscure identity and provide anonymity. All possible measures to maintain confidentiality will be in place before the beginning of the study.
- Interviews will take place one-on-one and focus on the participant's perspectives, perceptions, and language used to describe the academic, social, and emotional transitions regarding the twice-exceptional student. (See Appendices K and L for parent interview questions, Appendices I and J for teacher interview questions, and Appendices L and M for staff psychologist interview questions.)

The community partner letter appears as Appendix B. The introduction letters are in Appendix C (to teachers) and Appendix D (to parents). All participants received an informed consent to review and had ample opportunity to ask questions. Only individuals who agreed to participate and returned a signed consent form took part in the research study (cf. Creswell, 2014).

Data collection for a case study involves a wide range of techniques. Creswell and Creswell (2018) deferred to Yin's (2014) six forms of data suitable for case study: documents, archival records, interviews, direct observation, participant observation, and physical artifacts. In this collective case study, the unit of analysis was the lower school program at Three Pillars Lab School. Within this parameter, the researcher identified

which data to collect to maintain alignment in examining the perceptions of parents, teachers, and a psychologist regarding the developmental transitions of preadolescent, twice-exceptional students, as well as the associated supports and barriers. To gain a comprehensive understanding of the case, the researcher implemented semistructured, open-ended interviews, direct observation of classroom settings, and audiovisual materials to create artifacts for future analysis (cf. Greene, 2017).

Table 3.2: Examples of Data Types to be Collected

Data Type	Interviews	Observation	Audiovisual
Structure	Semistructured	Nonparticipant	N/A
Timeframe	60 to 90 minutes per interview	30 minutes per classroom	Ongoing
Types of data to be collected	Educators, parents, and psychologist perceptions, understandings, opinions, and real-life context through their lived experiences.	Extensive field notes with a focus on classroom setup, lighting, and sensory accommodations.	Photographs of the classroom environment and school environments, such as the playground, outdoor space, and green space.

Interview Procedures

The purpose of interviews in qualitative research is to learn about the perceptions and lived experiences. The use of open-ended interviewing is “not to put things in someone’s mind ... but to access the perspective of the person being interviewed” (Patton, 1990, as cited in Best et al., 2018, p. 278). Interviews are a means to gather individuals’ experiences, knowledge, opinions, beliefs, feelings, and demographic data (Best et al., 2018). The interview procedures followed the seven steps of the responsive interviewing

model, as described by Rubin and Rubin (2012). They are similar to Kvale and Brinkmann's (2009) seven stages of conducting a qualitative interview. However, the sequence is flexible, allowing the researcher to change questions asked or sites chosen, both of which are important to maintain flexibility and convenience for the participant as well as restate a question to provide clarity (Creswell, 2013).

The interview procedures followed a narrative inquiry protocol. First, participants received a recruitment letter and recruitment flyer asking if they would like to participate in the research study. Upon the receipt of responses from interested parties, by either telephone or e-mail, the researcher took a purposive sample to form the three groups of participants (parents, teachers, and psychologist). The researcher contacted all individuals expressing interest to ensure they met the inclusion criteria established in the study proposal; upon confirmation of qualification, the researcher provided participants with a letter of informed consent (see Appendices E and F) to sign and return. Next, participants received an interview guide (see Appendices H, J, and L) in accordance with their role. The researcher maintained transparency with participants via the recruitment letter and flyer, as well as through the informed consent letter that stated the purpose of the study and asked participants' permission to conduct and record interviews. Upon receipt of the signed informed consent forms, the researcher scheduled one-on-one interviews with participants at a date and time of their choosing.

Prior to the one-on-one interviews was a pilot interview to allow refinement of the interview questions. The pilot interview took longer than expected for several reasons. First, there were technical issues with the participant's Wi-Fi service such that the signal would drop, requiring a restart of the Zoom meeting. In retrospect, the researcher should

have suggested switching to a telephone call right away instead of trying to get the Zoom meeting to work. Finally, the first interview questions were specific to the research question, but the subquestions could be confusing for the participant when asked for examples of perceived developmental transitions. The flow of dialogue was smoother using the refined questions. The refinement process also showed the researcher that both audio and video were necessary to glean information through nonverbal facial expressions and body language.

All interviews, scheduled in advance, took place either online over Zoom for face-to-face interaction or by telephone to ensure participants' convenience. Each interview began with the participants identifying themselves by name and role (teacher, parent, or psychologist). Adequate recording procedures and equipment used during data collection were appropriate for the predetermined, distraction-free location, which ended up being the researcher's home office. Participants connected via Zoom for their interview from either their office, home computer, or cellular telephone. If the participant chose not to use video technology, a digital recording device was the sole means to record the interview while the researcher took notes and memos to ensure accuracy (cf. Creswell, 2013). A face sheet facilitated the collection of demographic data and the assignment of a pseudonym for each participant and locations to ensure privacy protection (cf. Creswell & Creswell, 2018).

The questions were such to invite participants to open up and talk about their experiences with twice-exceptionality. The seven steps of the responsive interviewing model, described by Rubin and Rubin (2012), follow a logical sequence that allows the

researcher to change the order of the questions, sites chosen, and situations to study, if needed (see Table 3.3).

Table 3.3: Seven Steps for Data Collection

1	Identify interviewees.	Parent participant identification came after an introduction letter the Head of School sent to parents on behalf of the researcher. Teachers' identification followed the distribution of an introduction letter from both the Head of School and researcher among staff. Identification of the psychologist was through e-mail contact.
2	Determine the type of interview to be used.	Semistructured, open-ended interview questions were a means to maintain the structure and conversational social interaction (Creswell & Poth, 2018).
3	Determine and use adequate recording procedures.	Zoom online meeting software facilitated the recording of either audio alone or audio and video for most of the interviews, although some participants opted for telephone interviews instead. Transcription of all audio files occurred before deletion.
4	Design and use an interview protocol or guide.	Interview guides created for the first interview (see Appendices G, I, and K), with the second set of interview guides created for the follow-up interview (see Appendices H, J, and L).
5	Refine interview questions through pilot testing.	Upon obtaining IRB approval, pilot testing to refine interview questions began. Yin (2009) recommended the selection of pilot cases based on convenience, access, and geographic proximity.
6	Determine the place to conduct interviews.	Teacher interviews occurred from the researcher's home office, with teachers calling from a location convenient to them. The Head of School committed a quiet space and time for each participant interview, making the same resources available for parents who desired privacy or a distraction-free environment for the interview.
7	Obtain consent form from participant and schedule interview.	Participants provided signed consent forms before scheduling a time and date for the online interview.

Observations

The classroom environment observations included classroom setup, flexible seating arrangements, adaptive furniture, lighting, and accommodations for sensory issues, all documented with photographs. Depending upon availability, the researcher collected other materials such as photographs, videotapes, and website home pages, in accordance with recommendations by Creswell and Creswell (2018). The goal of the observation was to capture and note the various learning environments created to accommodate twice-exceptional learners (see Appendix O).

Creswell and Creswell (2018) referred to Bogdan and Biklen (2016) when considering data collection, such as activities occurring at the site, the possibility for disruption at the site, potential gatekeepers, and the reporting of results. For this study, activities occurring at the site were minimal during the data collection period to reduce the potential impact on students and teachers. The first site observation took place on October 23, 2019, a date agreed upon by the researcher and the Head of School as the best time to visit. The students were on a field trip, resulting in the least amount of disruption for the student body. To ensure accuracy and fidelity, the researcher shared results with the site stakeholders at agreed-upon phases of the study. The Head of School reviewed all photographs and visuals to ensure no identifying information was visible and to provide approval for use in the study.

Audiovisuals

Documentation of the classroom environment, school environment, playground, outdoor space, green space, classroom setup, flexible seating arrangements, adaptive furniture, lighting, and accommodations for sensory issues appeared in photographs. The

researcher had access to three classrooms to take photographs of the classroom environment. Other areas photographed included outdoor spaces such as the turtle habitat, chicken coop, and chickens; a greenhouse; raised garden beds; a geodesic dome play structure; an oversized Connect Four game; the cafeteria; drop-off/pickup location; seating arrangements; and landscaping. The fourth classroom was not available at the time of the site visit due to a meeting currently in session. That teacher sent photographs of her classroom with the approval of the Head of School.

Data Analysis

Using the guidance of Charmaz (2017), the researcher analyzed the data inductively and holistically. According to Best et al. (2018), qualitative data analysis requires the use of inductive analysis, but the “holistic perspective taken by qualitative researchers is important for understanding the complex nature of many aspects of human and organizational behavior” (p. 233). The extant research on twice-exceptionality addresses how social and emotional development are relevant to learning; therefore, the holistic perspective could be necessary to incorporate during one or more stages of analysis (Assouline et al., 2006; Baum et al., 2001; Baum et al., 2017; Baum et al., 2014; Moon et al., 2001; Neumeister et al., 2013; Wormald et al., 2015).

Creswell and Creswell (2018) recommended that researchers provide a “detailed description of the setting or individuals, followed by analysis of the data for themes or issues” (p. 198). The researcher uploaded the data into NVivo, a qualitative data analysis software program. The determination was that using a combination of developing and predetermined codes would allow emerging themes to materialize.

As this was a collective case study, the researcher provided a detailed description of each case and themes within each case or within-case analysis. After completion of the within-case analysis, a thematic analysis across cases, also known as a cross-case analysis, allowed the researcher to search for patterns. Last was the interpretation of the meaning of the case (Creswell & Poth, 2018, p. 152). Continued collection and study of interviews, artifacts, documents, and observation notes added to the detailed description of the case.

Transcription of Interviews

Upon completion of each interview, the researcher downloaded the audio, video, and transcript files from Zoom, inspecting each for quality and completeness. Zoom artificial intelligence software served to create a numbered and time-stamped transcript of each interview, with each text document subsequently imported into Microsoft Word and edited to add the interview date and time and participant pseudonym. Listening to the audio file while reading the Word document led to editing for inconsistencies due to Zoom transcription creating a separate section whenever a pause occurred in the conversation, breaking a sentence into multiple pieces. With all data cleaned, the researcher uploaded all audio and updated transcript files to a secure Dropbox location for audio-only interview transcription and further cleaning by removing verbal connectors (e.g., like, you know, um). Once the transcriptionist completed the copy, the researcher downloaded the file from the secure Dropbox location, saving it along with the audio and video file to an external hard drive and placing it in a secure, locked storage unit. Upload of the final transcript to NVivo software enabled further analysis.

Trustworthiness

Creswell and Creswell (2018) recommended using multiple validity procedures to assess the accuracy of findings as well as reassure readers of the correctness of the study. The researcher established credibility through prolonged engagement, triangulation, member checks, thick description, peer review, recordings and transcription, and acknowledging researcher bias. Prolonged engagement allowed the researcher to develop an in-depth understanding of the phenomenon, in this case by conducting the study over 3 months. Prolonged engagement lends credibility to the study by increasing the accuracy of the findings through multiple experiences with the participants, enabling the researcher to provide a detailed, thick description of the setting and shared experiences. The prolonged engagement for this study began in September 2019 and concluded in December 2019.

Each participant provided consent for audio or video recording, which occurred using either a digital voice recorder or Zoom for online interviews. In addition to memoing, recordings help ensure the accuracy of participants' words and the emotional expression used in the response. Transcription software (Express Scribe) and a foot pedal provided the means to transcribe the audio-only interviews, with Zoom artificial intelligence transcribing the audio-visual recordings. Upon completion of the transcription, the researcher read the transcripts while listening to the recordings to check for errors. Interview transcripts provide rich data with vignettes, anecdotes, and chronology of events for data analysis.

The triangulation of different data sources occurs by examining multiple pieces of evidence, such as interview transcripts, documents and websites, photographs, and

observations (see Figure 3.1). Creswell and Creswell (2018) stated, “If themes are established based on converging several sources of data or perspectives from participants, then this process can be claimed as adding validity to the study” (p. 200). The researcher further ensured trustworthiness by e-mailing participants their interview transcripts to check for accuracy.

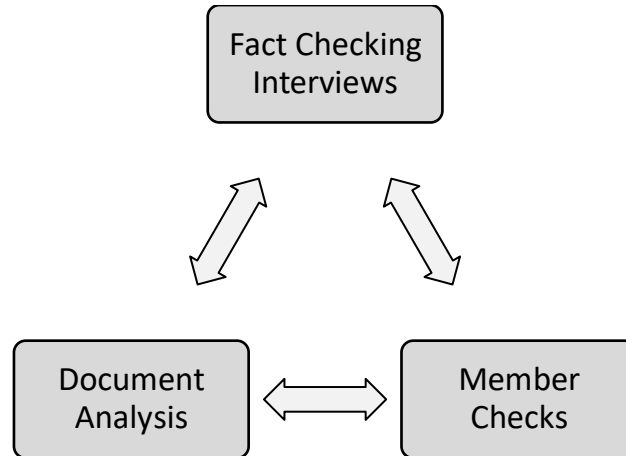


Figure 3.1: Data Source Triangulation

In addition to triangulation, the second most important method of establishing credibility is member checking (Creswell & Creswell, 2018). The researcher sent a transcript of the interview and executive summary to each participant to review for factual (fact-checking) accuracy. Participants also received an oral summary of the emerging theory to confirm that it accurately portrayed their perceptions and experiences. The researcher waited until after the follow-up interview before discussing an oral summary and emerging themes with the participant.

Peer review was a way to limit potential bias in this study, as the researcher has experience with twice-exceptionality with her son. Peer review remains an essential tool

to establish credibility. The researcher contacted two colleagues to review the questions for the parent, teacher, and psychologist participants to ensure the greatest degree of bias minimization. The researcher maintained contact with her advisor and committee chair to review coding and emerging themes.

Acknowledging researcher bias is critical in establishing credibility. All researchers have bias due to gender, age, race, class, socioeconomic status, and experience. Self-reflection creates the necessary reflexivity (Charmaz, 2014; Creswell & Creswell, 2018). The addition of comments regarding data interpretation helps the reader to delineate how the researcher's background may influence the findings. According to Creswell and Creswell (2018), "Good qualitative research contains comments by the researcher[s] about how their interpretation of the findings is shaped by their background" (pp. 200–201). To address concerns of potential confirmation bias, the researcher kept notes and personal memos to document thoughts and feelings during interviews and transcription.

Ethical Considerations

There are several stages in a study during which ethical issues can become a problem. Before conducting any data collection or research, it is necessary to obtain university IRB approval, thus ensuring the protection of participants' rights and confidentiality. Assigning participants pseudonyms is a way to protect their identity and privacy (Creswell, 2013). All aliases remained separate from collected and analyzed data, recorded only on the demographic face sheet and the informed consent.

The purpose of the study appeared in the community partner agreement, introduction letters, and informed consent. During data collection, interviews took place by telephone or online to respect the school site and prevent disruption to the students and staff. The

assigned pseudonyms created during the data analysis stage were a means to protect participant anonymity. Peer review, triangulation, and member checks throughout the study helped to ensure the capture of multiple perspectives.

During the final stages of the study, participants and stakeholders received draft copies of the report for review, in line with recommendations by Creswell and Creswell (2018). The researcher will maintain all collected data for 3 years upon completion of the study, with file deletion and hard copy shredding after that period. Any parts of the study published will be in the form of composite stories to illustrate themes, thus protecting the identity of participants.

Limitations

The chief limitations of this study included the observation schedule and the size of the sample. Because this was a small study focused on preadolescent, twice-exceptional students with a primary disability of ADHD, generalizations to other types of twice-exceptional students are not possible (Creswell & Creswell, 2018).

The original observation protocol called for two site visits during the period of engagement to ensure a comprehensive understanding of the setting. It was challenging to find a day and time to visit that would cause the least amount of disruption to students, with almost 2 months needed to agree upon a date. The staff members were generous with their time, allowing the researcher to visit an extra classroom as well as the entire grounds of the campus to take photographs and make drawings. School personnel agreed that finding a second date would be too difficult before the winter holidays and therefore provided extra time for the researcher to collect artifacts and take notes on a single visit.

This study took place in a suburban metropolitan area, so generalizations to twice-exceptional students in other environments, regions of the United States, or across the world might not be feasible. Because this study was qualitative, the researcher used self-reflection to create an honest interpretation while acknowledging that background, gender, culture, and other personal factors could create a bias (cf. Creswell & Creswell, 2018). Despite making all attempts to eliminate bias in this study, the understanding is that some bias could occur unintentionally.

Protection of Participants

The following precautions were ways to minimize potential risk:

- All participants knew that their participation was in no way an obligation of their employment with Three Pillars Lab School, an obligation of having their student enrolled at Three Pillars Lab School, or an obligation of any working relationship they might have had with the researcher. They could refuse to answer any question or terminate their participation in interviews at any time.
- All participants signed a detailed form specifying their consent for interviews and recording by both audio and video for this research. Their signature also gave permission for the researcher to publish the results of this doctoral research project (see Appendices E and F).
- Participants learned that their audio and video recordings were not archived but used only for the purpose of this research and then destroyed 3 years later.

Chapter Summary

For this collective case study, the research question and subquestions enabled a focus on participants' lived experiences and perceptions of the developmental transitions of

preadolescent, twice-exceptional students. These perspectives were the lived experiences that range from the parent, the teacher, and the psychologist to provide a deeper understanding of the supports that have promoted and barriers that have hindered growth and development in this population. The research question developed for this doctoral research project was: What are the perceived developmental transitions of preadolescent, twice-exceptional students? The subquestions were:

1. How do parents perceive growth in both academic and psychosocial development?
2. How do educators perceive growth in both academic and psychosocial development?
3. What are the supports that promote successful developmental transitions?
4. What are the barriers that inhibit successful developmental transitions?

The answers to these research questions could inform parents, educators, and psychologists on how to best support this asynchronous group of students while avoiding common pitfalls.

Chapter Four: Findings

“One school fixed its attention upon the importance of the subject-matter of the curriculum as compared with the contents of the child’s own experience. Not so, says the other school. The child is the idea starting point, the center, and the end. His development, his growth, is the ideal. Not knowledge, but self-realization is the goal.”

(Dewey, 1902, p. 11)

Introduction

The purpose of this collective case study was to examine the perceived developmental transitions of preadolescent, twice-exceptional students from the perspectives of parents, educators, and a psychologist who works with twice-exceptional students and their families. Three Pillars Lab School, a private school serving the needs of twice-exceptional students in fourth through 12th grade, served as the case in this study. Three Pillars Lab School provided access to teachers and families to illuminate emergent themes that identify the supports that promoted, as well as the barriers that have hindered, developmental transitions in preadolescent twice-exceptional students.

Chapter Four presents key findings based on the data gathered from in-depth, semistructured interviews. The lived experiences shared through these interviews allowed the researcher to determine patterns and emergent themes about both the supports and barriers that affect the developmental trajectory of this most asynchronous group of

learners. In addition to findings revealed through participant interviews, the physical setting, mission statement, and goals of Three Pillars Lab School merited analysis. The site visit at Three Pillars Lab School took place on October 23, 2019. A full discussion with accompanying photographic artifacts appears in the Research Question 3 section of this chapter.

Research Design

The research method was a qualitative collective case study approach utilizing purposeful sampling. This design is well-suited to examine a specific problem or issue by including multiple people to illustrate the issue (Creswell, 2013). In this study, the unit of analysis, or case, was the school itself. Yin (2018) advised the qualitative researcher to engage in the fourth portion of data collection, writing descriptive data about the case, before beginning the analysis phase. These descriptive data should provide the reader with a substantive profile about the case and participants. The Descriptive Data – Site section of this chapter provides the background for the school site, Three Pillars Lab School. The Descriptive Data – Participants section presents the background on all participants and participant groups.

The site was Three Pillars Lab School, with the participants divided into three groups: parents of twice-exceptional children, teachers of twice-exceptional students, and a clinical psychologist who works with twice-exceptional students and their families. The central phenomenon addressed by the research questions was the difference in the expected timeline for meeting milestones, as defined by Erikson (1968), and the barriers that might have hindered, or the supports that have assisted, these students to progress through developmental transitions.

Research Subquestions

1. How do parents perceive growth in both academic and psychosocial development?
2. How do educators perceive growth in both academic and psychosocial development?
3. What are the supports that promote successful developmental transitions?
4. What are the barriers that inhibit successful developmental transitions?

Descriptive Data – School

In this collective case study, the case was Three Pillars Lab School, a college preparatory school dedicated to educating twice-exceptional students in the fourth through 12th grades. The campus is located in a suburban neighborhood in a western U.S. state. The philosophy of Three Pillars Lab School communicates its commitment to a student-centered and strengths-based model in order to optimize each student's intellectual, academic, and social development. The school's mission statement presents the dedication to understanding and educating students who are gifted or highly gifted and have learning differences. The goals are to foster successful academic and social experiences for each student and the broader community.

In 2010, the student body engaged in multiple discussions about who they are as students and the school culture, leading to the creation of the school motto with the three pillars of Imagine, Persevere, and Achieve. The academic programs emphasize developing imagination, perseverance, and achievement through self-efficacy and engagement in personally relevant, meaningful work explicitly linked to potential college and career paths.

Throughout the campus, visitors and students see images of iconic figures such as Jane Austin, Charles Darwin, Abraham Lincoln, Mozart, Michelangelo, Marie Curie, Benjamin Franklin, Isaac Newton, and Leonardo Da Vinci (see Figures 4.4 and 4.18). These icons are useful in communicating with students and the public to promote a deep awareness of the extraordinary potential of twice-exceptional students. By today's standards, the combination of gifts and challenges endured by each of the posted writers, musicians, scientists, artists, and leaders would qualify them as twice-exceptional.

Three Pillars Lab School serves students in Grades 4 through 12. The upper elementary (Grades 4 through 6) provides a dual-differentiated curriculum, mixed-age learning groups, and a 5:1 student-to-teacher ratio. Enrollment for the upper elementary is 46 students. The middle school program serves students in seventh and eighth grades. This program works to build self-esteem and self-efficacy on the journey to self-discovery, with activities designed for teachers and students to identify interests, talents, and potential strengths. The 9:1 student-to-teacher ratio enables teachers to get to know their students and help them advocate for their intellectual, academic, creative, and social-emotional needs. The high school program serves students in ninth through 12th grade. The teachers and staff help students develop self-efficacy and self-esteem in the high school through student engagement in personally relevant, meaningful work linked to possible college and career paths. The high school program differs from traditional high school offerings, as Three Pillars Lab School can provide a greater level of individualization than most public and independent schools to maximize student engagement and achievement.

The demographic makeup of Three Pillars Lab School represents multiple ethnicities. The student body population is 193 students, 82% of whom are White. The next largest student groups are Hispanic/Latino (7%), Asian (5%), and Black/African American (4%; see Table 4.1).

Table 4.1: Race/Ethnicity of Student Population

	Total	Percentage
Black or African American	7	4%
Hispanic or Latino	13	7%
American Indian or Alaska Native	2	1%
Multi-race	2	1%
Native Hawaiian or Pacific Islander	2	1%
White	158	82%
Asian	9	5%
Total Student Population (Grades 4–12)	193	100%

The largest group (84%) of students identified as male, with 14% of the student population being female. Other gender identification categories did not receive consideration during the design phase of the study but emerged as potentially significant during data collection. As shown in Table 4.2, four other categories served to represent all students.

Table 4.1: Gender Self-Identification of Student Population

	Total	Percentage
Male	162	84%
Female	27	14%
Transgender	2	1%
Gender neutral	0	0%
Nonbinary	1	0.5%
Gender fluid	1	0.5%
Total Student Population (Grades 4–12)	193	100%

Although every student at Three Pillars Lab School is identified as gifted, the percentage of represented disabilities varies. Multiple comorbid disabilities (42%) have the highest representation; ASD (26%) is the next highest, followed by ADHD (15%) and general anxiety (12%; see Table 4.3).

Table 4.3: Represented Disabilities (as listed in IDEA 2004)

	Percentage
Autism (ASD) only	26%
ADHD/ADD only	15%
Dyslexia only	0%
Dysgraphia only	0%
Auditory or visual processing only	5%
General anxiety only	12%
Multiple disabilities	42%
Emotional disturbance	1%
Deaf/blindness	0%
Deafness	0%
Hearing impairment	0%
Intellectual disability	0%
Orthopedic impairment	0%
Speech or language impairment	0%
Traumatic brain injury	0%
Visual impairment (including blindness)	0%

A breakdown of the percentage of families receiving financial assistance or scholarship was necessary to understand the socioeconomic distribution of the student population. Traditional identification classification, such as upper class and middle class, were considerations in this study. The yearly tuition is \$43,435. As shown in Table 4.4, the majority of students (63%) attending Three Pillars Lab School are not receiving tuition reimbursement by their home school district. The percentage of families reimbursed in full or in part by their home school district (37%) was very close to families receiving financial aid (35%).

Table 4.4: Socioeconomic Distribution of Families Receiving Tuition Assistance

	Number	Percentage
Families reimbursed in full or in part by school district	72	37%
Families not reimbursed by school district	121	63%
Families receiving financial aid	67	35%

Note: The total number of families in this table may exceed the total student population, as families might receive assistance in more than one form, or they could have multiple children attending the school.

Descriptive Data – School Site

The observation protocol took place on October 23, 2019, at 11 a.m. PST. Despite the IRB granting approval for two observations, it was only possible to schedule one observation time during a student field trip to prevent disruption at the site. The length of observation activity on the Three Pillars Lab School campus was 1 hour and 20 minutes.

The intent was to visit four classrooms; however, it was only possible to observe three that day, as a meeting was in progress during the time of observation. Two of the classrooms observed and photographed belonged to teachers in the upper elementary (Grades 4 through 6); the other two represented the teacher participants in this study, Mr. Clark and Ms. Hanks. The meeting held in the fourth classroom did not prove to be a limitation, as Ms. Hanks e-mailed photographs to the researcher, which the Head of School approved. A staff member met the researcher at the front desk and accompanied the researcher on the tour of the campus. As shown in Table 4.5, the full observation protocol, as approved by IRB, comprised four sections. For the purpose of analysis, each section of the observation protocol receives discussion by category and labeling as a separate table.

Table 4.5: Observation Protocol for Physical Space/Classroom Environment

Location of Observation: _____ Date: _____

Time of Observation: _____ Length of Activity: _____

Classroom Setup	Evidence Observed	Researcher Reflections
Flexible seating (Baum et al., 2017) Seating (wiggle seats, therapy balls, etc.) “Walking corridor” (students can stand or pace, lectern/podium, etc.)		
Accommodations for Sensory Issues	Evidence Observed	Researcher Reflections
Lighting Sensory tools (fidgets for hands/feet) Plants or other living creatures Colors and patterns		
Productivity Supports	Evidence Observed	Researcher Reflections
Clearly written directions Posted rules, procedures, and expectations Timetable/schedule Frequent water/snack breaks Multimedia resources		
Outdoor Environment	Evidence Observed	Researcher Reflections
Noise/sounds Natural environment Playground structure(s)		

Descriptive Data – Participants

The participants in this sample were in one of three groups, separated by role. Detailed descriptions of each group follow, with the rationale for inclusion criteria in this study. All names of parents and teachers are pseudonyms to protect their privacy and the privacy of their children or students. The parents and their children are “Marie” and her son “Felix,” “Kristy” and her son “Charlie,” “Lisa” and her daughter “Ruthie,” and “Katherine” and her daughter “Julia.” The only person not assigned a pseudonym was Dr. Dan Peters, a private clinical psychologist who gave his express, written permission to use his name for this study.

Parents

Four parents participated in this study. All were mothers of twice-exceptional children who attended Two Pillars School. Parent and child pseudonyms appear in Table 4.6, along with a list of each child’s exceptionalities.

Table 4.6. Parents, Children, and Exceptionalities

Parents	Exceptionalities
“Marie” and “Felix” (male, age 9)	Gifted, ADHD , Auditory Processing Disorder, Sensory Processing Disorder, Ehlers-Danlos Syndrome – Hypermobility, and Crohn’s Disease
“Kristy” and “Charlie” (male, age 9)	Gifted, ADHD , mild ASD, dysgraphia, delays with fine motor and executive functioning, and slow processing speed
“Lisa” and “Ruthie” (female, age 12)	Gifted, ADHD – Inattentive, Dyslexia, Autism, Dysgraphia, and Auditory processing disorder
“Katherine” and “Vivian” (female, age 13)	Gifted, ADHD , OCD, Anxiety, Tic disorder (downgraded from Tourette’s Syndrome), mild auditory processing delay, secondary enuresis

Marie

Participant Marie is married and works as an artist. Her only child, Felix, is 9 years old, identified as gifted when he was 3 and a half years of age. Felix demonstrated being out of sync in his development when he started talking at 4 months; by 12 months, Marie stopped writing down his words because his vocabulary was so extensive. When Felix was 14 months old, the family flew to Hawaii, which was first time Marie realized Felix was different. “He had only just started walking and he was saying ‘sand, waves, fun, ocean,’ but he had never been to the beach or Hawaii before.”

By age 2 years, Felix began to read on his own and when he started preschool, Marie reported that his sensory problems made him miserable. The preschool director called Marie in for a meeting where the director expressed concern that she was “hothousing” (APA Dictionary of Psychology, n.d.), or hurrying him in a maladaptive way that is not developmentally appropriate. Marie recalled the meeting: “Because he was showing so much anxiety and the inability to conform to a school environment on top of the reading, [the preschool director] just assumed that he was autistic.” The director told Marie and her husband that Felix was unable to comprehend the social expectations in a classroom. At age 9, Felix is very tall compared to his peers but appears to be 2 to 3 years behind emotionally. He prefers to play with stuffed animals and imagination games yet can dive deeply into a topic of interest and hold a discussion that his similarly age peers do not comprehend. He still struggles with toileting, which Marie said continues to be a major issue.

Marie had no idea Felix was out of sync with his age peers until the preschool director recommended testing. The family took Felix to a private neuropsychologist for

testing and other assessments at 3 years of age, with a follow-up at age 7. Wechsler Intelligence Scale for Children-V results showed that Felix tested in the Very Superior range in verbal and visual-spatial areas. His strengths lie in the areas of visual-spatial, math, verbal, science, and video games. Other testing indicated that Felix was struggling with inattentive ADHD, dysgraphia, social communication disorder, obsessive compulsive disorder (OCD), anxiety, auditory processing disorder, sensory processing disorder, Ehlers-Danlos syndrome hypermobility, and Crohn's disease. Marie shared that the neuropsychologist believed Felix has a social communication disorder rather than autism, although another psychologist asserted that Felix was autistic, so "he's a little mushy."

During the first interview, Marie reported that she saw her role as being an expert on her child. "There is no room for just 'fun mom.' I haven't been able to work this year because he's been a full-time job," she said, identifying "an urgency to be on top of everything all the time and several steps ahead." She expressed that, in order to support her son, she needs to open herself up to a larger view because societal norms do not apply. Marie believes that parents of twice-exceptional children need therapy to cope with the stress. She explained, "I do this to myself. I can't tell you, every day, I'm like, 'Oh, well how come he's not doing this or that?' I go through these mental spirals and have to step out and say, 'No, no, no ... it's okay; he's fine.'" Acceptance and adaptation are important for Marie to survive day to day. She shared, "You've [got] to ride the wave or you're going to drown ... and you're going to pull that kid down with you."

When asked if she or her husband would be considered twice-exceptional, Marie laughed, stating, "Like, so bad!" She said her husband is a genius but suffers from severe

OCD. She wonders what her exceptionalities are but self-identifies as having ADHD and wants to get a formal assessment.

Kristy

The second parent participant, “Kristy,” holds a Master’s degree in English and works as a physician’s assistant. Kristy is married with three children in a blended family. Her older son is from her previous marriage and does not have ADHD; her stepdaughter is the biological child of her husband. “Charlie” is the youngest at 9 years, the only biological child between Kristy and her spouse and the only child identified as gifted. Kristy’s husband has been formally diagnosed with ADHD.

Kristy reported that Charlie began identifying letters at age 18 months. By age 2, he learned right from left from the GPS in the car as well as identified sight words on billboards and signs. Kristy said, “I really didn’t see the exception, the nongifted side, for a while. ... I just chalked it up to ‘oversensitivities.’ He was very reactive, easily upset, super sensitive to loud noises ... and refused to go into public bathrooms.” Kristy said she and her husband did not notice much outside of their son’s emotional outbursts and difficulty toileting; he went only in his underwear and did not fully potty train until second grade. She used the Zones of Regulation (Kuypers, 2011) skills-building curriculum in an attempt to help Charlie manage his emotions.

Although Charlie was struggling with sensory issues and toileting, Kristy and her husband were not aware of issues at school until Charlie was in the first grade. Kristy is a working mother and Charlie went to an afterschool program that grouped students by age and academic ability to finish homework. Kristy reported, “He would have these really big outbursts. One day, he locked himself in a bathroom and he would be yelling,

screaming, and crying. There was always something every time I picked him up.” At this point, Kristy decided to homeschool Charlie for 6 months before trying a charter school. Both his public school teacher and the afterschool program director communicated that they suspected Charlie was gifted and should be tested.

The first professional who formally identified Charlie as gifted was a friend of the family when he was in the first grade. She provided the family her report, recommending a full evaluation through the school district. “I remember thinking, ‘My kid is gifted and something is going on,’” Kristy said. “‘Let me make sure he gets the education that he needs.’” Kristy took the report to the school district and was refused testing because Charlie was meeting grade-level standards. The school told her they had kids who needed the services more than Charlie, even though he had fine motor delays. When Kristy expressed her concerns to the school psychologist about Charlie not being able to tie his shoes or use scissors, the school psychologist told her, “Oh, that’s probably motivational.” Kristy expressed her frustration because every teacher in the meeting was in support of testing for Charlie, but she did not yet know about her rights.

Kristy found a private neuropsychologist through a coworker who has a child with similar issues. The psychologist tested Charlie and identified him as “highly gifted”; however, due to his delayed processing speed and ADHD, his overall Full Scale IQ was lower. She also determined Charlie had ADHD, mild ASD, dysgraphia, delays with fine motor and executive functioning, and slow processing speed. When asked about Charlie’s areas of strengths, Kristy laughed, declaring, “Where are they not?!? He is 2 years advanced in math, easily reads at the high school level, has strong writing skills, and tested as Very Superior in verbal” at the 99.9th percentile.

During the first interview, Kristy related seeing her role as being the person with whom Charlie can feel safe when he is dysregulated. She spends a lot of time learning as much as she can about the science of the brain, listening to podcasts, and attending online meetings with experts in parenting twice-exceptional children. She is trying to absorb everything she can so she can regulate herself in the moment when he needs her the most. Kristy explained, “My role as a parent is to make sure he has everything he needs academically, socially, emotionally, and physically ... so he can be a very productive, happy adult. That’s our goal.”

Neither Kristy nor her husband has been formally identified as gifted, but they are both quick learners. Her husband has been diagnosed with ADHD, but since Charlie was also identified as having mild ASD, her husband said, “Yeah, I think I’m autistic, too. I think I’m like Charlie. ... I don’t like looking people in the eye.” Kristy expressed that she and her husband both struggle with managing their emotional regulation.

Lisa

The third parent participant was “Lisa” and her daughter “Ruthie.” Lisa and her husband have four children aged 31, 25, 14, and 11 years, with Ruthie being the youngest. Lisa is a stay-at-home mother and runs an in-home daycare to allow her to be with her children; her husband works outside the home in the legal field. Ruthie has been formally diagnosed with dyslexia, inattentive ADHD, ASD, dysgraphia, and some auditory processing issues.

Lisa knew that Ruthie was out of sync and different from her older siblings since infancy. During her first interview, Lisa explained, “Seeing as how she’s my fourth kid, it was pretty obvious from the get-go that she was different as an infant.” Ruthie was very

clingy and would not allow anyone, including her father or siblings, to hold her. She was extremely sensitive to sounds and bright lights and refused to make eye contact, even during her toddler years. Ruthie spoke early and formed complete sentences with advanced vocabulary much earlier than any of her siblings. She seemed behind socially, something that Lisa chalked up to her daughter being extremely shy. Ruthie struggled with transitions of any kind and appeared anxious and cranky during major developmental transitions, such as learning to talk or to walk. In contrast to her high verbal skills, Ruthie could not identify basic words and struggled with physical coordination by the time she entered kindergarten. Lisa suspected that something else was going on because all three of her other children were reading independently by that age.

Lisa reported that Ruthie displayed school refusal as early as preschool. She and her husband decided that maybe Ruthie was not quite ready and removed her to try again the next year. Ruthie was successful in Pre-K because there were only eight children in the class. She became great friends with another child identified as profoundly gifted. By the time Ruthie was in kindergarten, teachers noticed changes such as perfectionistic tendencies that had, until that time, only occurred at home. Lisa explained,

Perfectionism started early. When she was learning to walk, if she didn't do it right, she just wouldn't do it until she had it down and then she would show you. She learned to walk and talk in secret and when she was good at it, she would show us. In kindergarten ... if she didn't get a picture perfect on the first time, she would crumble it up, throw it out, and refuse to try again.

Ruthie's kindergarten teachers held certifications in Gifted and Talented Education (GATE). A few years earlier, the same teachers had taught Ruthie's older siblings when they had the Grade 4/5 GATE Combo class at the same elementary school. These teachers were also Supporting the Emotional Needs of the Gifted (SENG) liaisons and suggested Ruthie's parents look into the Summit Center. Lisa took Ruthie to Summit Center for a full evaluation, recalling, "She flummoxed them. Her scores were so variable that it looked like a mountain range; it was up here and down there. She'd test gifted in this range and borderline bottom of the scale in another."

During the first interview, Lisa said she takes responsibility for supporting Ruthie and helping her find ways to more easily live her life. Lisa reads and tries to educate herself on ADHD and dyslexia and talks to professionals and others in Facebook groups for support on parenting. As Lisa explained, "That's my job and I'm her mom. I have to make sure that she's going to be ready for the outside world at some point, but I do that gently and carefully because, otherwise, there's going to be pushback." Lisa loves to do crafts and other art projects with Ruthie and reads as much as possible on each new interest so she can participate fully in her daughter's life.

Asked if she or her husband were twice-exceptional, Lisa laughed and said, "Yeah, absolutely! Yeah, we're fun that way!" Both she and her husband received gifted diagnoses in elementary school. Her husband, Ruthie's father, has been identified as profoundly gifted with mild ASD. In addition to her own identification as gifted, Lisa has ADD inattentive, anxiety, and auditory processing issues. She has also self-diagnosed as having mild ASD.

Katherine

The final parent participant was “Katherine” and her daughter “Julia,” the eldest of two girls. Katherine is currently a stay-at-home parent, as her husband has to travel overseas for up to a year at a time. Julia has been formally diagnosed with ADHD, OCD, anxiety, a tic disorder downgraded from Tourette’s, a mild auditory processing delay, and secondary enuresis. Katherine and her husband worried that Julia might have delays due to being just 4.5 pounds at birth as a result of Katherine’s intrauterine growth retardation, which caused the fetus to stop growing for about a month.

Katherine conveyed that, as an infant, Julia was difficult to soothe and edgy and seemed anxious all the time. She would get overwhelmed in crowds and would shut her eyes and cover her ears. Her walking was a little delayed, but still within the normal limits of development. In preschool, Julia would keep to herself, engaging only in individual art projects and refusing to join in group play. Before Julia became comfortable with verbal refusals, she would yell at other children or throw something at them. The preschool director noticed this delay in Julia’s social behavior, as she seemed behind her age peers in perceiving and navigating social nuances, executive functioning, and planning.

In 2015, Julia was formally diagnosed with Tourette’s, ADHD, OCD, and anxiety in a study at the UCLA Semel Institute for Neuroscience and Human Behavior. The neuropsychologist’s evaluation revealed the auditory processing disorder, identifying her visual organization as being “off the charts.” Since that first diagnosis, Julia’s doctors have now downgraded the Tourette’s disorder to a tic disorder. She did not receive a formal identification as gifted by her public school district or elsewhere until the Three

Pillars Lab School evaluation, which indicated she was gifted in the area of creativity.

Katherine shared about her daughter:

She is very creative in the visual-spatial [realm] and tends to think big picture about a lot of things. She has visions for the way the world should be. She has an activist streak in her, more than other kids, that started very early. She was always concerned about justice and would take things and expand them out to the world at a very young age. She is a visionary and really connects things on a societal level.

Julia uses objects such as boxes and sticks to make birdhouses and play structures for people's pets. Her chief areas of strength are sculpture and art.

During the first interview, Katherine explained that she sees her role as comprised of multiple facets. She is an advocate for her daughter in both the medical and educational systems. She tries to listen to Julia and her concerns with full attention. Katherine sees her role as scaffolding Julia, when possible, "to facilitate but not force her to grow faster than she's ready." Katherine strives to accept her daughter just the way she is, giving Julia space to develop on her own timeline.

Asked if either Katherine or her husband would be considered twice-exceptional, she said she did not see that in herself. She was never tested for giftedness or any particular learning differences. Her husband might be considered twice-exceptional because he is very bright, and a psychiatrist once said he might have ADD. Katherine also related that her husband used to have tics when he was younger, but she does not see it now; however, she conceded, "He is definitely very bright."

Teachers

The two teachers interviewed for this study were “Ms. Hanks” and “Mr. Clark.” They teach twice-exceptional students in upper elementary (fourth through sixth grade).

Excited about the study, both teachers contacted the researcher to participate.

Ms. Hanks

“Ms. Hanks” holds a BA in psychology and linguistics and is currently working toward her teaching credential. For the past 5 years, she has taught upper elementary students at Three Pillars Lab School. In her first years as a teacher, she thought she was supposed to get through as much curriculum as possible; over time, however, she learned that a teacher has greater impact than she first expected. Ms. Hanks stated,

For me, growing up as a neurotypical [student], teachers were just teachers. Some inspired me and some I didn’t like, but I moved on with it. I don’t think I realized the role that a teacher [has] until I had conversations with parents who tell me that, for the first time, their child is happy.

Ms. Hanks learned the importance of listening to her students because “they will show me ... where they need to go, and my job is just to get them excited about learning again, to make them happy [about] school again.” Her current class consists of mostly fourth graders and a few fifth graders who need more support and fewer transitions in their day. Ms. Hanks presented with a bubbly personality and expressed concern for the success of each of her students. Asked if she was ever identified as gifted, the teacher laughed and firmly replied, “No.”

As Ms. Hanks sees it, her role in supporting her twice-exceptional students is to help them through developmental transitions by giving them the tools they need to feel better prepared. In the second interview, Ms. Hanks elaborated on her role, addressing several needs her students have. She believed that giving her students a chance to discuss their challenge areas and to feel understood allows them to comprehend and cope with their asynchronies. Ms. Hanks talks with her students about what they can do in the moment when they are upset and dysregulated, while acknowledging the feelings the student is experiencing. She discusses and models how students can advocate for themselves. Ms. Hanks also addresses the gifted side of her students and sees herself as “a facilitator so [my students] can be successful from this point forward. As a facilitator, I’m cheerleading and coaching.”

Mr. Clark

The second teacher participant, “Mr. Clark” holds an MA in humanities and has been teaching for 9 years, beginning with second grade in a public school. Mr. Clark now teaches humanities at Three Pillars Lab School for the upper elementary (fourth through sixth grades). When he first began teaching twice-exceptional students at Three Pillars Lab School, he thought his role was to develop appropriate curriculum. When that was successful, Mr. Clark redefined his role to create the environment and develop relationships with students. Now with a well-developed humanities curriculum that embeds social and emotional education, Mr. Clark can devote more time to social and emotional instruction in his advisory group.

Mr. Clark described having distinct roles when teaching twice-exceptional students defined by whether or not the giftedness aligns with the subject matter. If there is

alignment, his role is to help his students acknowledge the good work they are doing, the gift they have, and all the possibilities available to them. Mr. Clark seeks to guide his students into a zone of proximal development such that they continue moving forward while being challenged. Mr. Clark explained, “It’s like a coach working with a gifted athlete: You’re pushing them forward, but just the fact that you’re working with them is recognition of their dedication to this particular thing.”

When a student’s gifts do not align with humanities, Mr. Clark said his goal shifts to one of understanding, acknowledging that this subject matter may not be the most fun or comfortable, and then helping them find a general sense of value in the subject. The more he knows about his students’ strengths and interests, the more he can help make connections and “demystify a subject or topic that has been challenging or even triggering [a student] in the past. Helping them look at the work with different dimensions becomes a big part of the job when they are working in their area of need.”

Asked if he thought he was gifted, Mr. Clark paused before affirming that he was, but with the caveat that it was only in the broadest definition. He explained his hesitation as having more to do with *gifted* being a loaded term due to its history in education. He acknowledged having definite strengths with organization, a passion for the subjects he teaches, and collaboration with the entire team. Mr. Clark stated:

I think it would be impossible not to turn that lens back on ourselves sometimes and recognize where we each have our greatest strength, our biggest challenge, and what it’s like to live with that asynchrony, the same way that our students are dealing with their asynchronies. Hopefully, that makes us a little more understanding and empathetic, or at least gives us a context to do some analysis

when we are planning instructional strategies, behavioral interventions, or just new things we want to implement in school.

Psychologist

Dr. Dan Peters holds a PhD in Psychology and is a licensed psychologist. He has worked with twice-exceptional children and their families for the past 19 years. Dr. Peters and his wife are parents of three twice-exceptional child themselves, each child was diagnosed with dyslexia in addition to being gifted. His depth of knowledge and experience with this population made him a value to this study. Dr. Peters is the host of the *Parent Footprint Podcast with Dr. Dan*, a regular contributor to the *Huffington Post* and *Psychology Today*, a contributor to several book chapters, and an author of several books about anxiety and dyslexia. Dr. Peters speaks regularly at national conferences and to the media on a variety of subjects, including giftedness, education, special needs, learning differences, and family. He serves on several editorial boards, among them SENG and Twice-Exceptional Newsletter, and on the advisory boards of the Twice-Exceptional Center for Research and Professional Development at Three Pillars Lab School, NAGC Gifted Definition Task Force, and the NAGC's Assessments of Giftedness Special Interest Group ("About Dr. Dan Peters," 2019). In addition to his private practice, Dr. Peters is the Cofounder and Executive Director of Summit Center, with offices in both Northern and Southern California. Summit Center provides educational and psychological assessments, consultations, and counseling for children who are gifted, have learning challenges, or both (twice-exceptional), as well as for their families ("About Summit Center," 2019). Dr. Peters specializes in working with children

and adolescents in areas related to giftedness and twice-exceptionality, as well as overcoming fear, worry, anxiety, and learning differences such as dyslexia (“About Dr. Dan Peters,” 2019).

Early in his career, Dr. Peters worked at Aldea Children and Family Services, a community-based nonprofit, in addition to heading up a private practice in Napa, California. Due to the demands of a growing family, he transitioned to working full-time in his private practice but found it was isolating and less fulfilling than expected. He received a call from a licensed clinical social worker inquiring about him being a “local expert” who said, “The reason I got your name is that I was told ... you have been successful in helping the school district understand that a lot of behavior and behavioral problems that were diagnosed as behavior disorders ... [were] the result of anxiety.” Dr. Peters agreed to be the local expert to work with Dr. Ed Amend in administering IQ assessments. As people in the gifted community learned that Dr. Amend would be in Northern California, the number of families requesting testing for their children far surpassed his ability to complete all those assessments during the week. At the time, there were no gifted experts in the area; accordingly, Dr. Amend asked Dr. Peters to meet for training because there was a need in that area.

As Dr. Peters continued to administer IQ assessments, he began to notice a pattern of gifted children with challenges and realized he had been overly focused on pathology, leading him to question the entire field of psychology due to misdiagnoses. Dr. James T. Webb, a friend and mentor of Dr. Amend, was also the founder of SENG and is recognized as one of the 25 most influential psychologists nationally on gifted education (The Global Center for Gifted and Talented Children, n.d.). When he referred to what is

needed to be a good psychologist for the gifted, Dr. Amend shared a catchphrase of Dr. Webb's: "In the land of the blind, the one-eyed man is king."

After this experience working with Dr. Amend, Dr. Peters became passionate about learning everything he could, relating it to his experience working with kids at ADHD camps. He recalled being taught to focus on the pathology where

They're bright, but ... [I] realized that these were the kids who didn't make sense ... who are misunderstood, and ... the kids about whom we are telling them and their parents everything that's wrong with them instead of everything that's right with them.

Around the same time, Dr. Peters and his wife had three young children under the age of 4 years "who were very intense, very sensitive, very challenging, and very asynchronous." A close friend tested his children, visiting their home to give them the findings. This was the psychologist's first personal experience with twice-exceptional children, with his daughter diagnosed first as having dyslexia and processing issues, an experience Dr. Peters viewed as a learning situation. The friend presented the findings in accordance with Dr. Peters' own training. Dr. Peters and his wife reported they felt devastated at being on the parents' receiving end of the clinical presentation of test results. He recalled,

All the ways that I've been taught: how I've been giving people feedback, how I've been writing reports in the usual way about all of their kids' deficits, and how devastating it is when the information is presented in that way. Not that that

information doesn't need to be presented—it's real—but there's just so much more ... that can be done.

Dr. Peters realized he needed to rethink the way he had been taught to present feedback and testing results to parents—by focusing on the deficits—instead, positively reframing his approach.

As the parent of twice-exceptional children, Dr. Peters has lived experience similar to many of his clients. He explained,

As [my wife and I] went along in life, it turned out [we had] not only one dyslexic or two dyslexics, but three dyslexics who all have their own profiles—again, getting to live with three different twice-exceptional profiles. When our third [child] was diagnosed [with dyslexia], our dyslexic specialist turned to me and said, “Hey, well, basically if you have three out of three, that means both of you genetically are loaded with it and likely have it.” At the time I was probably in my late 30s, or close to 40 probably, and my whole schooling just crashed before me. I'm thinking, “Oh, my goodness!” So here I am, I have been doing this work in twice-exceptionality and dyslexia became then a newer specialty, so [now children who were] gifted with dyslexia. I've been literally compartmentalizing and getting through my whole life by compensating, the way folks do. But the first time—and, actually, I told this in a client session yesterday and today—the first time that I felt smart was when I found out that I was dyslexic.

One professional goal of Dr. Peters' is to help parents realize the impact a learning difference can have on one's identity if the profile is misunderstood. He works with

parents and children to normalize the learning difference, which he explained as “helping children understand that they may feel ‘dumb,’ but scientifically, it’s not accurate.”

Social-Emotional Decoupled

To answer the first two research questions, it is imperative to provide a framework to decouple social-emotional. Dr. Peters noted mini-stages of growth necessary to make the larger leaps to full developmental transition in each domain. Both social and emotional domains with an explanation of the mini-stages are necessary to understand the perceptions provided by parents and teachers. This framework is also an emerging theme explored later in this chapter.

Social

Twice-exceptional kids can be unaware of what happens in a particular situation as well as the environmental or social demands of that situation. This lack of awareness could be the result of being focused on their own needs, getting across their point of view, or playing or explaining their own game. Socially, twice-exceptional children may not pick up on developmentally appropriate cues.

Based on Dr. Peters’ professional experience, social development has three distinct phases that apply to gifted and twice-exceptional children, with each step a social developmental transition. The steps are:

1. Awareness: An awareness of what is expected, or the awareness of other, is required.
2. Reflection: Introspection about one’s own behavior that would be considered “appropriate.”
3. Incentive: Motivation and readiness to engage in that “appropriate” behavior.

Emotional

When it comes to the emotional side of development, being able to understand one's emotions is different from being able to regulate while concurrently maintaining the desire to do so. Similar to social development and the three distinct phases required to move to a new developmental pattern, the same structure applies to emotional regulation.

1. Awareness: Becoming aware of the differences between each emotion and how they feel.
2. Management: Managing emotions in a situationally appropriate manner.
3. Choice: Readiness to choose how to manage emotions in a new and different way.

The research questions in this study aligned with this framework of both the social and emotional sides of development to provide further depth and clarity.

Research Question 1: How Do Parents Perceive Growth in Both Academic and Psychosocial Development?

The four parents interviewed for this study have children enrolled at Three Pillars Lab School who have been identified as gifted and with a learning difference that qualifies them for an IEP. Parents discussed how they perceived their child's academic and social and emotional development. Parents shared stories of the types of giftedness their child exhibits, such as math, verbal, creativity, leadership, and social justice. They discussed learning differences including ADD, ADHD, auditory processing disorder, sensory processing disorder, Ehlers-Danlos syndrome hypermobility, Crohn's disease, ASD, dysgraphia, fine motor delays, executive functioning delays, slow processing speed, OCD, oppositional defiance disorder, anxiety, tic disorder, and secondary enuresis. Each

parent shared the sense of loss and the process of grieving they experienced that redefined their role and how they currently perceive their children's developmental transitions. Vignettes of social and emotional awareness follow to illustrate the stage of each child during this study.

Expressions of Asynchrony

Each parent described ways their children have expressed asynchrony in a range of behaviors, including eating different foods, physical development, and toilet training. Lisa described Ruthie's eating habits as consistent with ASD, saying, "There will be runs where she will only eat one kind of food. Then one day she will switch that off and go to another food and we'll do that for 5 or 6 months. She doesn't have very much of a sense of smell and even mint is just too strong for her." As Lisa explained, Ruthie is averse to trying new things due to their different textures and flavors.

Lisa and Katherine described their daughters' physical abilities. Lisa shared that Ruthie had never been a climber and is not comfortable moving in her own body, saying, "She has had a hard time crossing midline. There are a lot of things that she cannot do. She is a little bit of a stranger in her own body." Lisa related that swinging was not as much fun as spinning, as Ruthie struggles to coordinate her legs to pump the swing back and forth. She said her daughter "really likes to lie flat on [a swing], and I would twist her all the way up and then let go, and she would spin and spin and spin, and then it would go back in the other direction."

In comparison, Katherine described Julia's ability to climb as "incredible." She remembered that Julia was a little late walking, probably around 18 months of age, but

now she will climb trees and go so high as to make other people nervous. Katherine, however, is not anxious because Julia has never fallen. She related:

She is like a little monkey and she has been doing that for years. She won't do it if it's planned, controlled, or mediated in any way. She won't do a climbing gym or anything like that, but she wants to climb trees because she wants the control of doing it herself.

Although Julia climbs trees with ease, at 13 years of age she still cannot ride a bicycle. Julia can swim and ride a scooter, "but she still won't do it; she still won't get on a bike."

Aside from physical expressions of asynchrony, consistency with age-appropriate toileting has been a struggle for Charlie, Felix, and Julia. Tina explained that transitions were a tremendous problem for Charlie, including those related to potty training, going to preschool, moving from preschool to kindergarten, and altering after-school care. About Charlie, Tina explained, "Those were all rough patches and he expressed his struggle by pooping in his underwear." Charlie seemed to handle transitions better by first grade and although Tina hates to think of the humiliation he endured when his classmates found out, saying, "He never pooped in his underwear again."

Felix is still behind his age peers with toileting and continues to have accidents almost every day and several times a week at night. Marie shared:

I genuinely can't tell anymore if that's from Crohn's or what the problem is, but it has been one of the major struggles of raising him. Until he was diagnosed with Crohn's, it was just this constant source of stress. That was another reason we

were scared to send him to kindergarten. He was still having daily accidents of all varieties and we didn't know where he could go or if that would be okay.

Marie believes the toileting issues arose from an incident that occurred when he was 2 and a half years old and had finished potty training. They went to visit extended family and Felix was already showing consistency with potty training. Her husband's parents offered to watch Felix and suggested Marie and her husband go out to the movies. That evening, Felix either got food poisoning or ate something that did not agree with him and he had diarrhea. Marie remembered:

He kept running to the bathroom. I guess they used language and terminology that freaked him out about poop and that he was dirty and messy. They kept saying, "You're messy!" and every time had to go to the bathroom, they'd make him hose off in the shower and put a diaper back on him. After that day he kept saying, "I'm messy. I'm messy. I'm messy." And he developed encopresis where he started holding it in, and I mean bad, really bad encopresis.

Felix continues to have significant toileting issues, making Marie wonder if that event could that have changed the course of his development. She said, "I don't know, but I think that's an example where, if you add to an OCD kid an element of shame or extra fear, it's going to build like a snowball effect. When you introduce a shame or fear element to something ... I think that could do it."

As Katherine related, Julia did not struggle with potty training other than occasional bedwetting until she was about 4 or 5 years old. By then, she was completely dry at night

without any issues. Around age 7, Julia started to show signs of struggle in school and she began to wet the bed again at night. Katherine stated:

They consider that secondary nocturnal enuresis, if you stop and then you go back to it, but nobody really knows why. We still struggle with bedwetting, even now at almost 14 years old. That is an issue and that definitely has that feeling of asynchrony. She stopped wetting her bed years ago, when she was small, and then it started again, and it's on and off. ... It's almost completely gone, but then she'll still do it sometimes.

Gifted Expressions

Parents spoke about their children's gifted expressions to include cognitive, creative, leadership, and social justice.

Cognitive

The parents listed several areas in which their children were identified as gifted or as having unusual strengths. Some of the children, like Felix, started to say words as early as 4 months, and Ruthie was forming sentences far earlier than her siblings at less than 1 year of age. Marie recounted telling the preschool director that Felix had started to read on his own when he was 2 and a half years old. Kristy reported that Charlie started identifying letters at 18 months of age, something she first attributed to him watching Nickelodeon with his older siblings until he began to identify his left and right from the car GPS. Charlie is easily 2 years advanced in math and reads at a high-school level with no trouble. Kristy explained:

Cognitively, it's going to depend on the subject matter. If we are looking at reading comprehension, written or verbal language innuendos and literature interpretation, he's probably a 9th [grade], 10th [grade], or maybe even adult level. It's actually kind of scary because he's a fourth grader, so that's about 5 years ahead. In math, he's about 2 years ahead.

Protecting Charlie from adult jokes or advertisements can be difficult. Kristy reported, "Nothing gets by him as far as advertisements, and those little adult jokes that are supposed to be adult jokes in the kids' cartoons are not hidden jokes for him." When Charlie was 3 or 4 years old, the family went to see *Charles Dickens: A Christmas Carol*. Kristy said, "We were not expecting him to understand the play. I expected that he would be entertained by the colors and the people on stage and the movement. After the show, he critiqued it like a high school English paper, and that's weird." According to Kristy, Charlie's cognitive prowess extends beyond math and reading. She recounted a story about an essay he had to write for a first-grade assignment:

He wrote something on Jacques Cousteau last year while sick on the couch with pneumonia. We kept asking, "What's taking you so long? You know, it's only a little first grade essay ... 10 sentences and you're good!" He took 2 days ... and when we looked at it, we thought, "This can't be his [work]. He couldn't have written this. He only copied and pasted it off the Internet." So my husband put it through a plagiarism program and it was 98% unique. ... We realized he didn't copy it. It was incredible and it was four pages long. He had pneumonia and he just sat in the house doing that.

Cognitive gifts for the twice-exceptional children highlighted in this study ranged from exceptional mathematics skills and abstract reasoning to superior verbal skills with both reading and reading comprehension. As these examples indicate, cognitive gifts can appear when least expected. Other gifts participants' children exhibited included superior visual-spatial skills and visual organization expressed by artistic and creative endeavors, leadership, and social justice through activism at a young age.

Creative

Visual-spatial skills may be another area of excellence for twice-exceptional children. Julia scored extremely high on her visual organizational skills. Katherine explained her daughter's abilities in art, drawing, and creating, saying,

She would construct things all the time. She would work with anything ... finding objects to make birdhouses and play structures for people's pets out of boxes and sticks. She was constantly pulling in objects and constructing these huge sculptures. Sculpture, art, and big ideas would be her areas of strength.

With regard to Julia's recent focus on creating spa products, Katherine explained,

She gets tons of supplies, like jojoba oil, shea butter, essential oils, and beeswax, and we get them shipped in boxes in bulk. She makes creams and lotions and scrubs and lip balms and deodorants. We have big flats of glass containers and she gives them to everybody. They are all natural and she is truly into using natural ingredients. That is her thing that she has been into for the past year and a half. Her room looks like a laboratory.

Ruthie loves to build, draw, and do crafts, with a current creative focus on clay and cardboard boxes. Lisa discussed Ruthie's ability to visualize three-dimensional images:

She can rotate them in her mind, so she can see all different sides, full color, and if she is picturing something, she has actually seen the picture. I had no idea that was a thing. She's gifted in visual-spatial stuff and I guess that people who are visual-spatial actually have that ability to rotate things in their minds.

Leadership

Lisa shared a story of Ruthie's first year at Three Pillars Lab School. It was close to Halloween, she said,

So I got her one of those miniature pumpkins at the grocery store. This thing took on a life of its own. She took it to school, and she named it "Punkaboo." Lo and behold, pretty much everybody in the fourth grade, by the following week, had a miniature pumpkin, and they had a club with their miniature pumpkins. It was actually a cult. She would hold up Punkaboo over her head and all of the other kids would bow to Punkaboo.

The teachers interviewed for this study also provided examples of their students' gifts in natural leadership, which appear in the discussion of Research Question 2.

Social Justice

Sometimes leadership appears an act of social justice or fairness, often by standing up for one's beliefs. Lisa and Katherine identified their daughters as having a strong sense of right, wrong, and fairness. Julia tends to think big picture about many things, Katherine said.

She has an activist streak in her, more than other kids, that started very early. Julia was always very concerned about justice and she would take things and expand them out to the world at a very young age. If there was something unjust that was happening on the playground, she would take it very seriously and connect that with the idea of justice and fairness in general and expand it out ... connecting things on a societal level.

In early elementary school, Julia would talk about saving nature and how to help bees while other girls her age were talking about gymnastics or other after-school activities.

Lisa spoke about Ruthie having a strong sense of social justice. Recently, a homeowner in their town wanted to cut down very large trees located on public property.

Lisa related,

Ruthie and her older siblings made signs depicting the Lorax that said, “We speak for the trees.” They stood right up against the trees and got into the argument with the homeowner. They said, “You can’t cut these trees down because they’re part of nature and that’s not acceptable.” He got kind of cranky ... but they held their ground and they ended up in the paper. She will stand up for something and fight you tooth and nail if she thinks it’s the right thing. . . . It doesn’t matter if it’s a social construct. *Legal or not legal* doesn’t matter as much to her in her mind as much as “Is it right?” or “Is it just?” She has a strong sense of fairness, which doesn’t really have anything to do with the social constraints of laws.

Parent Experience

Parents of twice-exceptional children are important, not only as the primary caregivers, but as advocates in the medical and educational systems. Understanding their perceptions of the developmental transitions these children experience required viewing the stories of their children through each parent's lens. The Grieving section focuses on the parents' initial reactions when they learned why their child was out of sync and/or struggling. The Roles and Responsibilities section centers on how these parents view their role now, how their role has changed over time, and where they are in the acceptance process.

Grieving

Every parent interviewed expressed feeling some sort of shock, loss, regret, confusion, fear, and even denial upon hearing about the health issues and learning differences of their children. Lisa felt regret for not knowing about twice-exceptionality when her older children were younger and struggling.

If I had known early on with my other kids what I know now, I think things would have been a little different for them ... maybe a lot different. When [Ruthie] was little, I couldn't figure out what the difference was. She was always frustrated, and she always wanted to be bigger than she was. I couldn't figure out what was going on with that.

Lisa and her husband suspected Ruthie might have ASD because of the typical avoidance and social behaviors she exhibited, but they never expected ADD. Testing using the Autism Diagnostic Observation Schedule confirmed their suspicions. Lisa expressed

having confusion about the ADD diagnosis because “everything you look at online is for boys who are ADHD. The symptomology is so much different. [Ruthie] would check out instead of being hyper and I didn’t know how to deal with that.”

Marie was heartbroken when she learned Felix would never be able to attend public school kindergarten. The diagnostic team told her he could not handle a public school setting, especially because he did not qualify for any services. Marie shared, “To be honest, it was really hard because I come from a massive family of public school educators and administrators. I always expected that for us, too.” Not only did Marie need to explain the situation to extended family, but she had to handle the constant negative feedback from his previous school. She recalled getting phone calls and being told in meetings about everything that Felix was doing wrong. “[The school] fully believed that he ‘enjoyed being bad and wanted to be disruptive and relished it’ ... and that his actions with other kids were on purpose! I can tell you 100% that they weren’t.” Marie identified her first step in the acceptance process as grief, saying, “You go through grieving first. But then after acceptance, you have more compassion for your kid. At least, it was [like that] for me.”

Kristy felt it was most important for Charlie to assimilate with his classmates. She said, “The academics were there so we could lose a year academically and he still would not fall behind. I was so focused on social issues and helping Charlie try to get along with these kids, I put schoolwork on the back burner.” Later, however, Kristy realized how important academics are for a twice-exceptional student to have an area of strength on which to focus. Her priority was helping Charlie manage his emotions. “We started going

through the Zones of Regulation and nothing I did was helping or making anything any better.”

The ADHD diagnosis was no surprise for Kristy and her husband; however, she shared, “It was the autism diagnosis that really set me on a path of a grief reaction, for lack of a better term. I had depression for a few weeks and went through that stage of denial and feeling sorry for myself. ... [I was] grieving.” Kristy admitted to still having a little bit of denial at times. “Sometimes I think ADHD [and ASD], they overlap. ... It probably doesn’t help that his psychologist said, ‘I don’t see the autism.’”

Before getting Julia’s diagnosis, Katherine did not know what was happening to her daughter. She shared,

The grieving for the child you thought you were going to have happened with me right away, immediately, from the time she was born. Because she was really small, four and a half pounds at birth. I had IUGR [intrauterine growth retardation] so she had stopped growing for about a month, as she wasn’t eating. It was traumatic from the beginning, and then she was just wired higher than everybody. She was high strung from the very beginning and I knew, I could tell, that it wasn’t all okay.

In 2015, Julia was formally diagnosed with Tourette’s, OCD, ADHD, and an anxiety disorder through her participation in a tic study at the Semel Institute for Neuroscience and Human Behavior. Recalled Katherine,

It was shocking, because they just sent me a letter with [the diagnosis]. ... What you get out of it, is ... a formal document of your child. They get the research out

of you and then you get the assessment. They just sent a letter to us, and it said, “Your child has been diagnosed with Tourette’s syndrome,” et cetera, and it was all just there on the paper. ... There was a phone number printed at the bottom of the letter to call if I wanted to speak to someone.

When Katherine received the letter, she recalled, “It was terrifying and upsetting because I didn’t know anything about [Tourette’s].” Although the prediagnosis was scary, she felt relief when they got answers. “It’s useful because you can find where to go for resources, like getting an IEP. You need diagnoses for that.” Katherine did come to a point of acceptance for Julia’s diagnoses; she stated, “I knew I couldn’t fix it. There is no fixing this; it is what it is.”

Each parent offered a glimpse into their process of grieving. They also provided a snapshot of their personal journeys to the acceptance of their child. Lisa perhaps best summed up the experiences of the four parents: “The easy things are hard, and the hard things are easy, and everything is upside down.”

Roles and Responsibilities

Several themes emerged from the interviews with parents, including how they had to view and modify their own parenting, how they saw their role changing, and how they found understanding by educating themselves as deeply as possible. An exploration of each of these themes follows, with excerpts from the interviews.

The first step all four parents took upon receiving the diagnosis was to educate themselves, which they found to be a way to take back some control. Katherine expressed that it took her a while to really understand what the diagnosis meant, how it manifested for Julia, and what it was going to mean for her life. Because of Julia’s low birth weight,

Katherine never thought about her progress and development compared to other children, saying, “I see it as a parallel track that is different.” Educating herself became a series of steps. She stated,

My guiding mantra from the time she was born was that I wanted her to be comfortable in her own skin, and I knew that she wasn’t from the beginning. . . .

That was the only thing that was important to me at that time. What therapies does she need? What doctors does she need? What do I need to know to parent her better? What do I need to understand to be the right kind of parent for her?

Realizing that common parenting methods would not work for Julia, Katherine focused on what she deemed important: finding an approach “based on who she is rather than what I wanted her to be. . . . My job is to accept her exactly the way she is.” As a parent, Katherine is focused on Julia’s self-concept and she works to indulge in areas where her daughter is gifted, focused, and has high interest. She shared, “I try to suggest things like parkour, climbing gyms, art classes, and different things which she may want to do, but would show that I am hearing her and honoring the areas where she feels competent.”

The process of acceptance for Katherine came through time, advocacy, and self-education. She admitted that there were definitely differences in her perception in the beginning compared to today, when she has come to a place of acceptance. Julia’s diagnoses transformed into “that’s just a name and it is just an observed phenomenon. It is just a syndrome and not a disease.”

Katherine has found herself needing to advocate for Julia in educational settings and, at times, with health care providers who might see Julia through a pathology lens.

Katherine explained that, over time,

These diagnoses are arbitrary to a certain extent. They are so compartmentalized and there are rubrics that help people talk about things, but your child is a whole person, and everything is connected. It is a totally holistic thing and there is stuff that is not accounted for and stuff that is observed and named something but none of it adds up to equal your child. They are lenses to kind of organize things that are observed. I think that I am a lot more relaxed about those kinds of diagnoses, like the psychiatric ones now, than I was in the beginning. I was pretty scared about them in the beginning.

Katherine's experiences parenting Julia have inspired her to go back to school and pursue a graduate degree as a licensed marriage and family therapist to work with parents of atypical children and the specific set of challenges they face, which she identified as

Support and ... deep emotional work to be done. A lot of times, parents don't allow themselves to do any kind of self-care when they have kids with challenges because there is such an urgent need right there that they have to deal with.

Sometimes it's like triage all the time. I relate and I sympathize and empathize, and I want to help to support them ... with the specific emotions that we all go through.

She elaborated:

My perception of my role has changed because my perception of my child's place in the world has changed and that has come through experience and self-education. ... I see her as having a place in the world just as she is that can be valuable, and she can thrive. However, it is actually the systems around her that

needs to be changed. I really didn't feel that way in the beginning. They really do and there is a growing awareness of that now, more than there was.

Kristy strives to educate herself on all aspects of Charlie's needs. She admitted to feeling overwhelmed in the beginning, but as she began to actively educate herself, she began to feel like her family could "take this on and tackle it." She has to remind herself that when she goes into denial about Charlie's diagnoses, she takes notice of how he avoids looking people in the eye and tells herself, "He still needs these supports, so let's keep going!" Kristy works to be "the parent he needs to get through his struggles so he can be a successful adult."

Some of Kristy's self-education includes listening to podcasts, attending online meetings with experts, participating in an online class called Smart & Quirky, and reading books and articles. She views it as her responsibility to learn as much as she can as fast as she can, because if she does understand the problem, she cannot help Charlie. She said,

If I don't know there's a problem, I can't solve it, either. I have to always be aware or thinking about what the obstacle might be right now because it's not always obvious. Then I have to figure out the best way to solve it with all of the supports we have in place. ... My role as a parent is to make sure he has everything he needs academically, socially, emotionally, and physically. This includes the other supports we provide for him, like the occupational therapy [OT], speech therapy, talk therapy, and applied behavior analysis [ABA] therapy. I feel like that's my role in making sure he can be a very productive, happy adult.

In addition, Kristy navigates both the educational system and medical insurance.

Kristy identified self-regulation as the biggest struggle in their household. She works hard so Charlie feels safe, teaching him that “when we’re dysregulated, we can’t think through things to solve problems, so we need to learn to calm ourselves.” Kristy sees herself as a shepherd, guiding Charlie through the obstacles while ensuring the necessary supports are in place. She enlists the help of teachers, staff, and his therapist to provide different perspectives and keep open communication, saying, “I think that gives me so much more information than I would have had on my own. But it would have been impossible to accomplish ... what we have without supports.”

Kristy had definite ideas about parenting from raising her older child and her stepdaughter. She views parenting as

Having fun, because you get to be a kid again and play with them and see things through their eyes. I never really thought of parenting in this way before this kid. I mean, parenting was teaching your belief systems and instilling your values. You make sure they learn what they need to learn to be productive people in society, and that’s the goal as a parent. Then, along the way, of course, you love and enjoy your kid.

She laughed as she admitted that she still does parent in this new way, but she feels like she has “a really big, heavy, heavy layer” on top of parenting.

Marie had to educate herself by doing a lot of research, personal reading, and deep diving to understand the diagnoses and the giftedness. Conducting that research was important, she felt, to understand why children are acting in a particular way or why they are asynchronous in the first place. She saw her role in supporting Felix as “needing to

open yourself to a larger view. The societal norms just don't apply. In a traditional sense, they just don't." Marie elaborated, "I do this to myself. I can't tell you—every day I ask myself, 'How come he's not doing this or that?' I go through these mental spirals." She has to remind herself that everything is okay and that Felix is fine at his new school. She works each day to broaden her perspective on what is "normal," which is why she believes parents of twice-exceptional children need therapy. "It's a circus in there," she laughs. "It's a mental circus. Any parenting is going to be a marathon, but holy smokes, this feels like a lot of extra work!"

Marie and her husband agreed that acceptance and adaptation are the two most important elements to parenting a twice-exceptional child. She said, "It's almost like you have to adapt [your life] around the kid. What if he makes a choice that wasn't a good choice at the moment? What if he makes a mistake because he's a kid?" She wonders how to help her son work through mistakes and missteps without him having an extreme response.

When Marie first received Felix's diagnoses, she felt like she had to fix him. Over time, however, her role has evolved from fixing to supporting her son. She stated, "Your role is to support them. But, man, having a support for you is game changing." The neuropsychologist who did Felix's testing helped Marie understand her son. She told Marie, "No, no, no, no. Marie, this is how he's supposed to be." Hearing that from an expert helped Marie shift her thinking from "How do I fix this person?" to "This is how he's built. Fixing as opposed to adjusting [my perspective] are two very different viewpoints." Over time, Marie has moved into different roles as a parent:

You're a supporter, you're an expert, you're a researcher, you're a cheerleader.
You're a scaffold, but you're not a fixer. ... Not to get too poetic on you, but
you're supposed to be the bow and your child is the arrow that moves out beyond
you, but you got to have the right bow ... for your child.

Lisa also feels like all the responsibility is on her and that it is her job to support
Ruthie and help her find ways her daughter can live her life. A voracious reader, Lisa has
made a tremendous effort to try to educate herself. She shared,

I've talked to people who know about these things and I have a fair amount of
knowledge. Now I can spout different things, percentages and statistics and some
verbatim from the books on twice-exceptionality. I'm in the Facebook group for
twice-exceptional kids and I'm pretty active.

Lisa feels she prepared Ruthie for a positive experience at Three Pillars Lab School
during the two and a half years of unschooling Ruthie while simultaneously educating
herself. Lisa worked with Ruthie on social situations and priming her daughter for what
school might be like. She shared, "I think my knowing exactly what she needed, or at
least some strategies for what she needed, was crucial."

Lisa and her family watch for signs that some aspect of Ruthie's asynchrony is
holding her back and causing her frustration. Lisa tries to find ways to "help her mitigate
that frustration without making her feel 'less than.'" For example, if something is going
on at school that is getting in the way of Ruthie's social development, Lisa finds creative
ways to help Ruthie come to a conclusion on her own. She explained that, from her
experience, "You can't just tell them 'You can't do this at school.' You have to ease into

it gently and give a really good reason for something. If you just tell them something, they are not going to believe you.”

With four children, Lisa might have the most experience out of all the parent participants in this study. She shared, “You learn more about yourself as an adult when you have to find stuff for your kid.” She spent two and a half years unschooling Ruthie and shared the excitement of going down a rabbit hole on one topic, doing everything they could until Ruthie was ready to move on to the next interest. Lisa believes the deep learning Ruthie did during that time helped her daughter to understand that not only did she need to learn, but she was entirely capable of learning. Lisa and her husband do as much as they can to support Ruthie and focus on her strengths and her interests.

Lisa sees her role as Ruthie’s mom as her job. She works to ensure Ruthie will be ready for the outside world. But she also knows that this has to be done “gently and carefully because otherwise, there’s going to be pushback.” She explained,

I always tried to be really intuitive with my kids. I’ve realized that each of them needs a different mom, so instead of treating everybody equally, I try to make sure that everybody gets fair [treatment]. I try to level the playing field by shoring up where they need some help and noticing when they have done something awesome and making sure they know it.

All four parents provided their perspectives on how they learned about twice-exceptionality, the grieving process they went through, and how their role as a parent and advocate has changed over time. The mothers shared their insight and wisdom on how to parent their own twice-exceptional child, focusing on the strengths while trying to scaffold the areas of challenge.

Social Awareness and Development

The parents in this study reported different scenarios and perceptions of the social awareness and development of their children. Only one of the four children was beginning to show signs of social awareness. The following sections include excerpts and examples provided by the parent participants that demonstrate awareness, reflection, and, potentially, motivation to make changes in social behavior.

Having an awareness of others and knowing what is expected in a social situation is necessary for a child to progress socially. The question is whether the child is aware that people are listening to others and sharing ideas. Dr. Peters provided a benchmark measurement with a question his young clients might ask: “Do I care to engage in any of these behaviors?”

Katherine described her daughter during preschool as preferring to hang back and play by herself rather than join in group play. By third grade, Julia was “out of step with her neurotypical peers. ... She didn’t speak the language. The things that she would talk about would go over the heads of the girls.” Julia is very social and wants to connect but struggles with joining in group play unless it is her idea and everyone else follows. Julia has recently begun to show social awareness now that she attends Three Pillars Lab School, for which she thanked her mother. Katherine reflected, “That was kind of an awareness on her part that she realized, looking back, that the school she was in was wrong for her. It was the wrong place and she was marveling at how bad it actually was, and how she felt like, ‘I can’t believe I went through that.’”

When Kristy moved Charlie to a new school for third grade, she had no idea that his ability to make friends was a problem. She soon learned he was missing a lot of social

cues and was impulsive. Charlie is already emotionally closed off to her and others; however, he did not demonstrate an awareness other than that he was lonely because he never “found anyone near the same level who could understand him or what he was talking about half the time, or even get his jokes.”

Kristy described a situation that demonstrated her son’s lack of social awareness of what is expected. When Charlie was in the first grade, he struggled with potty training, which she figured had more to do with him not wanting to get his hands dirty. She explained, “With defecation, he really didn’t potty train without having accidents in his underwear until the middle of first or second grade.” His attitude at home and at school was, she said, “Oh, I just went in my underwear and here now I’ll deal with this poop I put in my underwear.” His social awareness occurred when he had an accident while wearing shorts at Greek school. Kristy recalled, “It [the poop] actually came out and all his friends saw in the classroom and laughed and made fun of him for it. It never happened again after that.”

During the time Lisa was homeschooling and unschooling Ruthie, they spent a lot of time working on social awareness and cues. While she was educating herself, Lisa would also talk to Ruthie about social situations they typically encountered. Lisa explained, “There is a lot of scaffolding with [social awareness] so that she is able to figure out where she lost control of something and how to get that back.” They would talk about what Ruthie did not like in a particular situation, with Lisa pointing out, “Okay, in this situation, this is what the other kid did. Is that what you wanted to have happen or what would you do differently?” Ruthie struggled to make eye contact or to know how to act in a group of people. She was more successful when her mother pulled back and gave her

additional time to mature. Although Ruthie will still cover her eyes walking through a roomful of people, she is developing an awareness of social expectations.

Marie believes that sensory overload, ADHD, and a social communication disorder prevented Felix from noticing social cues when he was younger. Before he transferred to Three Pillars Lab School, he struggled to work in groups or collaborate with classmates. Marie noted, “If you’re having to collaborate in a group in a classroom and you’re not picking up on the social cues that somebody is losing interest, then they’re not contributing. Then the balance is off.” Marie said Felix is entering a new phase of awareness in terms of facial expressions and changes in tone of voice. She explained,

He’s been extremely aware of people’s emotions. Now he’s asking, “Why did you have your face like that?” “Why is your lip going that way?” or he’s grilling me all day long about my feelings, asking, “Are you mad at me? Are you mad at me? Are you mad at me?”

More recently, Felix has begun to ask her:

“Did this ever happen to you?” or “Is that something you’ve ever experienced?” at least two or three times a day. I’ve noticed that now we’re starting to have in-depth, honest talks about stressful things and about the world and about what we experienced when we were young.

Marie is encouraged that Felix is beginning to “figure this stuff out now with other kids.”

The three mini-stages of social development serve as a frame to understand where children are in their own maturation process. These stages are:

1. Awareness: An awareness of what is expected, or the awareness of other, is required.
2. Reflection: Introspection about one's own behavior that would be considered "appropriate."
3. Incentive: Motivation and readiness to engage in that "appropriate" behavior.

Other disabilities such as a social communication disorder, ADHD, and ASD can slow down the social awareness process. Just as social awareness is important for development, so, too, is emotional awareness, something the parent participants reported during their interviews.

Emotional Awareness

Of Julia's struggles with school, Katherine said, "They weren't struggles of understanding material. They were related to focusing on task and self-regulating—just really bad self-regulation and managing what was going on in her head." As long as someone was interested in what Julia was doing, she was "totally happy." Julia has cousins the same age, yet, said Katherine, "She feels very strongly that they just railroad her and don't listen to her ideas or they don't understand her and don't get her." During the second interview, Katherine shared that Julia expressed her feelings about her previous school:

It was the wrong place and she was marveling at how bad it [her previous school] actually was, and how she felt like, "I can't believe I went through that." She was wondering how she got through it. She said that, "At the time, it didn't seem that bad because I was in it, but now, looking back, I was really miserable. Mommy, thank you so much for sending me to Three Pillars."

Charlie's emotional outbursts and self-regulation have been a stressor on Kristy's entire family. At his previous school, Charlie would get frustrated due to his ADHD and yell obscenities at others, even though he was aware that such behavior was not acceptable. When Charlie was younger, baths and showers would prove contentious.

Kristy shared,

He used to have these really big temper tantrums when he was younger, and I just thought it was normal. You know, a child that's young that has a temper tantrum because they are still nonverbal; that's their way of expressing their emotions.

[But] they never went away, even when he was verbal.

Charlie has slammed doors so hard they have come off the hinges and easily reacts to anything. Kristy shared an example:

Yesterday, it was about his hair and he wanted his best picture hair. He wanted to do it himself, but it's really messy without the part and it's stuck down to his head. I said, "Let me fix your hair" and he flies off the handle and stomps away. It was this big reaction over this little "Charlie, let's fix your hair" comment.

At his previous school, Charlie would have enormous outbursts. Kristy recalled, "There was one day where he locked himself in a bathroom and he'd be yelling, screaming, and crying. There was always something every time I picked him up." She talked to him about managing his emotions and they started using the Zones of Regulation, but nothing she did was helping or making anything better. Charlie is better able to control his emotions around older kids and adults, which, Kristy suspects, is because they are "more forgiving of the little mishaps and the little missed social cues. I

think they let it go, whereas the younger kids will tease and pick on him, making it worse.”

Marie believed Felix was experiencing anxiety around the idea of whether someone is upset. He asks her multiple times a day if she is angry with him and she has to provide constant reassurance. Although he is not very aware of how other people perceive him, he tells Marie that believes “everybody is wonderful and that he’s always great and doesn’t do things wrong.” At some point, Felix has equated that “doing things wrong would mean he’s a bad person. He’s not a bad person!” Marie is constantly working to reassure him while also discussing social situations so he can see different perspectives.

Lisa believes Ruthie’s perfectionism and sense of control are holding her back from growth, which may have also made toilet training was more difficult. Lisa mused,

She wasn’t really happy with the loss of control that she felt and didn’t really want to give up her diapers, as they were pretty predictable. ... I actually think it’s mostly her. She wants everything to be perfect, but she also wants things to stay the same and be routine, so she undermines herself. I think that being in her own head is what is inhibiting successful transitions. She’s not too keen on wanting to grow up, yet she really thinks she’s an adult.

Despite wanting to be treated and spoken to like an adult, Ruthie needs reminders to take care of her hygiene and take showers.

Summary

Research Question 1 pertained to how parents of preadolescent twice-exceptional children perceive growth in both academic and psychosocial development. The types of giftedness the children exhibited included math and verbal areas as well as creativity,

leadership, and social justice. Parents described their child's learning differences or disabilities, including ADD, ADHD, and ASD. All parents related experiencing a sense of loss upon receipt of their child's diagnosis, leading them to go through the grieving process to redefine their role and current perceptions their children.

Research Question 2: How Do Educators Perceive Growth in Both Academic and Psychosocial Development?

The teachers interviewed for this study work at Three Pillars Lab School and have a minimum of 5 years' experience teaching twice-exceptional students. Both taught in the upper elementary program with students in fourth through sixth grade. Ms. Hanks has a self-contained classroom for the incoming fourth graders and a few students in fifth grade who need more continuity and fewer transitions. Mr. Clark teaches humanities for the upper elementary school but his class periods are more similar to a middle-school structure, where students may rotate in and out of his class through the day. The two teachers provided their perspectives and experiences with student expressions of asynchrony, highlighting both the gifts and learning differences or areas of challenge. It would be impossible to separate their students, as every child at Three Pillars Lab School is twice-exceptional. Teachers identified signs that a student might be struggling with a developmental transition. Lastly, the teacher participants described how they see their role as a teacher and how it has evolved over the years.

Expressions of Asynchrony

Gifted Characteristics

According to Ms. Hanks, asynchrony for her students occurs in the social and emotional areas. She said, "They could be really gifted in science but have a hard time

understanding when it's another student's turn to talk. They might not understand that they shouldn't be laughing or commenting if there is another student who [does not] understand the topic." One of her students has advanced levels of vocabulary and scientific terms but struggles with communicating what and how he is feeling. Many students are highly gifted with math and number fluency. Despite being in fourth grade, her students have mathematics skills at two or more grades above and are able to apply a concept immediately after learning it.

Other gifted expressions come from "builders," or students who are very gifted with regard to visual-spatial awareness and building. Ms. Hanks has students who express their gifts through creativity and other who are highly gifted with regard to linguistics and reading comprehension. She said, "They are big talkers and they have a vocabulary that backs them up. They might be highly gifted, but they might have a hard time when it comes to actually producing."

Many students at Three Pillars Lab School are gifted in terms of number sense and math ability or in their ability to do calculations. Some students can remember large amounts of information, with others whose gifts are in the area of higher-level cognitive skills able to make thoughtful comparisons. Mr. Clark knows his perspective is limited by teaching only one subject, humanities. He explained,

Even in a class like humanities, which is so interdisciplinary and brings together reading, writing, history, language, philosophy, art and all these other domains, I really don't necessarily see what that student is like when they're doing something like a math problem or a science experiment.

Of a student who was 2 or 3 years ahead of his same-age peers in math, Mr. Clark related,

He used his interest in numbers to learn about everything from other cultures to scientific topics. He could memorize 300 digits of Pi without much effort, but really struggled to start a conversation with somebody who was a potential new friend. He didn't really know what words to say or how to approach that person to engage in an appropriate social way.

Despite having advanced number sense and being highly verbal, that student struggled to write a basic composition. He needed a fair amount of one-on-one support to record his ideas or use speech-to-text technology. Mr. Clark leveraged the student's interest in numbers—specifically, Roman numerals—to complete the assigned project for the unit on ancient Rome. Mr. Clark related, “Knowing that he would have to write about this project was intimidating but writing about something like numbers which he was interested in made it something he was willing to put the effort into.”

Another student was a very gifted writer. As Mr. Clark described, she was “extremely creative, and could sit down and write five or 10 pages of text with a very consistent voice dialogue for characters and it was grammatically nearly perfect.” She could work very quickly but struggled with receiving feedback on her work. Mr. Clark identified the student as a very concrete thinker, but with writing,

The evaluation of the work would be subjective. Different people might enjoy it and other people might not, or they might get different things out of it. In her mind, it was perfect, because I think it matched her vision of what she originally

wanted to do and there was nothing to be gained by going back and making changes.

Although this student clearly exceeded her grade level for writing, Mr. Clark worked to challenge her within her zone of proximal development. He recalled:

I was trying to teach her that writing is a process that we build [over] time to make revisions or to step away from our work and come back [with] fresh eyes. These concepts were really difficult for her because she wanted it to be like a math assignment where, when you get the correct answer, it's perfect objectively and therefore there's no point in doing anything else with it.

The student would have meltdowns in class when Mr. Clark pushed her to revise, consider changes, or add something to her work. He recalled,

The [moment] I remember the best was when she stood up in her chair, slammed into the desk, and said, ““You can't improve work that's already perfect. You're a terrible teacher and a scumbag!”” Then she ran out of the room and down the hall to the counselor's office.

The student applied this thinking to all areas of her life, including friendships. Her thinking was that once she acquired a friend, that area of her life was complete and required no further input from her. This concrete thinking affected her ability “to understand that relationships changed, or people's attitudes changed, and that was very difficult.”

Some students express their gifts in creative areas. Both Mr. Clark and Ms. Hanks gave examples of their students creating stories, with Mr. Clark sharing that students created

Their own version of a story or their own take on events from history. They bring together things that they're familiar with from their own lives, personal experiences, popular culture, and other things they've been exposed to in school to identify trends and patterns. These students have a gift for going in-depth on a topic.

Other exceptions might be related to social or emotional development or productivity skills such as writing. Mr. Clark related,

They might understand the culture that we study in humanities in great depth. They might really feel what it would be like to have lived in that time and place, and yet to try to write about it or turn it in to some kind of product that expresses what they know is really difficult.

Both teachers related their commitment to finding the right accommodations for individual students to be successful and demonstrate their learning.

Mr. Clark expressed that leadership skills can be both a gift and a challenge with twice-exceptional students. Some students really need to be in charge and to feel validated. Their selection as a leader depends on whether they are in the habit of being chosen because of an element of personal charisma or because they are academically advanced in a particular area. It can be a new experience, Mr. Clark shared, when a student is not in that familiar leadership role and they need to "cede to someone else or

work with a peer who is at their level, if not even ahead. It can be a challenge to move in and out of that.”

Mr. Clark had a student for 2 years who would find a way to lead, even in things that did not necessarily need a leader. This behavior would emerge during playground activities, structuring how a group of friends would share their time with each other or creating games that occurred as the students came into the building from breaks. Mr. Clark recalled one student walking into an activity specifically so he could lead it:

It was a challenge when people didn't want to follow, but he was also able to be accountable for projects and get people to work together. He was able to develop the skills that we think of as being the traits of effective adult leaders, like in a workplace, for example. We imagine that is where he will express his gifts and talents in the future. But as a 12-year-old, it creates challenges, as well.

Mr. Clark noted that his public school colleagues had different definitions of giftedness:

My perception is that when someone exhibits giftedness in a particular area, it's easy for anyone else to assume that the giftedness would touch on all areas. A student who has an amazing vocabulary might be expected to do well in all of their subjects, because if they're not labeled gifted through some sort of an analytical process, they might just be labeled smart or advanced or sharp, or whatever it is. These anecdotal terms come to define them very broadly.

Mr. Clark admitted that his 9 years of teaching have broadened his concept of giftedness as well as twice-exceptionality. Ms. Hanks commented that her students' asynchronies,

and what they have told her, impacted how they received services before they came to Three Pillars Lab School.

Learning Differences

Information acquired through interviews with teachers yielded insight into how learning differences for twice-exceptional students can take multiple forms. Some of these differences are manifestations of ADHD, ASD, oppositional defiance disorder, or anxiety; others affect students' ability to collaborate with peers by way of group work or sharing. If students do not trust a teacher, their collaboration and ability to accept feedback is compromised.

Some students have a very high level of interest in a specific area. Mr. Clark observed,

They will demonstrate giftedness and remarkable motivation when they can connect what they're learning to that area of interest. But if that connection isn't made, they might have much less energy or much less perseverance and they might produce far less than the end.

The example of the gifted writer indicates a learning difference when an emotional or social challenge is paired with an academic gift. Mr. Clark has several students who are highly verbal, at ease when speaking to adults, giving presentations in class, and having spontaneous conversations; however, asked to take notes or write anything "results in sort of paralysis." He said that there may be an issue with dyslexia or dysgraphia, or maybe they have anxiety and when they see that blank page in front of them, they do not know what to write. Mr. Clark explained,

The challenges in terms of the academic content or the productivity or the skills are only visible when they're in a certain context. However, in day-to-day interactions, they might seem neurotypical or it might even seem that their vocabulary is at a much higher level than their age, and yet there are these other challenges that come up in certain contexts.

Mr. Clark thinks that the learning differences and the many forms in which they materialize transforms a difference into something that blocks twice-exceptional students' learning or their ability to demonstrate what they know.

Ms. Hanks believed that learning differences show up "in their wiring. It's just how their brains work, but it can create a lot of issues. Some of these issues span from inflexible thinking to distorted perception of what is happening, usually due to an underlying issue." By way of example, she discussed one student struggling with social situations, whose perception tended to be quite different from reality.

Many students at Three Pillars Lab School require a specific environment to do their best work reflective of their ability and understanding of a specific topic. Mr. Clark explained,

It might be that half the class is working outside at a picnic table and half the class working inside of the glass door, sitting at desks. It could be students who need noise, wearing headphones to listen to music or white noise. The others are sitting in a silent classroom, so the differences manifest that way and we work to try to meet those needs at the same time in the same space.

Some learning differences manifest physically. Ms. Hanks has a student with a visual difficulty who requires written directions nearby in size 24 font so she can see and refer back to it. Other students need more visuals and videos due to auditory processing issues, such that they might misunderstand verbal directions. She has a few students with dysgraphia who need to type their work on a laptop, whereas other students prefer to write their ideas by hand. Ms. Hanks shared, “I have one student right now who has a lot of difficulty expressing his ideas on paper and is really intimidated by that. He does a lot of verbal sharing with myself and my assistant.”

Physical growth can be a challenge for students, especially if they struggle with poor body sense. Sometimes this might be because they grew a few inches yet are unaware how much clearance they need under a desk for their knees or when they walk past another student. Other times, poor executive functioning skills due to ADHD contribute to a lack of awareness of personal space when one student’s materials creep into the work area of another.

Ms. Hanks explained that poor body sense may be the result of not getting enough sleep. She believes the lack of internal awareness manifests through their words, movements, body language, and actions. She said, “I’ve had students who say their heart is racing and they don’t know why. So they have a little bit of an awareness, like something is off, but they don’t really know why.” Ms. Hanks helps her students become aware of personal space, volume, their movement, or body language. Her students with ADHD “need to be engaged [physically], need to move and have the freedom to do so in the classroom.” She continued, “I have space for them to move, seats that can move, and [students] don’t have to sit at their desks to do work. I have pillows and they can stretch

out on the floor.” Ms. Hanks also relocates students throughout the classroom for different subjects.

Teachers’ Experience

Early Perception of Their Roles

Mr. Clark reported having different perceptions during the first few years of his teaching career. He recalled, “I was focused on developing a curriculum that was engaging and aligned to the outcomes I was trying to assess. My focus was how the curriculum fit with the scope and sequence of what we were trying to do with our humanities program as a whole at the school.” Over time, he continued to revise and refine his curriculum so that it does not demand as much attention. As a junior teacher, he felt like “communication [was] so time consuming and ... communicating with other teachers were things I didn’t have as much comfort with or as much time for.”

Ms. Hanks takes a different perspective about her role due to having a self-contained classroom of the youngest students. She admitted that “the teacher has a greater impact than I had expected.” When she first started at Three Pillars Lab School, she thought her role was to “teach them as much as I could and get through as much [curriculum] as I could. I learned that [my students] will show me where they need to go, and my job is just to get them excited about learning again and get them happy again.” As a new teacher, Ms. Hanks would split her class into three homogenous group—no understanding, some understanding, and advanced—with the latter rotating between the groups for small-group instruction. These days, she does not use homogenous groupings for small-group instruction as much as she did before.

Current Perceptions of Their Roles

Mr. Clark said his primary responsibility is to emphasize that every person has strengths and challenges. He works to create an environment and relationship with his students in which they can recognize their own asynchrony. He believes that it is important for students to be honest with themselves about their strengths and the limits of those strengths, understanding their needs along with the things they find challenging. He does not want his students to “feel ashamed of the challenges and to try to hide them, but to own them and to be willing to talk about them.” Mr. Clark was proud of working to “be honest about [a difference to] normalize [it] and to be honest that it is going to take extra work and extra effort”; as such, he recognizes that developing these skills will be a long-term process for his students. Mr. Clark strives to be supportive, saying,

Our role as teachers here is to help them grow in that area at whatever rate is achievable. We want to be focused on their goals and we have our own goals for them. We’re working on these things all at once. Creating that [honesty and normalization] and creating those relationships is the number one role.

He spends much time reaching out to families. In addition, he said, “I’m proactive about communicating with other teachers. Now that I know that all those things are [in place], it’s really just a shift of emphasis.”

Another role Mr. Clark identified is contributing to the ongoing body of knowledge about his students. He strives to conduct accurate, thorough assessments of student work so that next year’s teachers will have anecdotes, work samples, and current information. One strategy at Three Pillars Lab School occurs at the end of the year, when upper

elementary and middle school staff meet to discuss each student moving up. Mr. Clark related,

We will discuss everything regarding their social-emotional challenges, their social-emotional skills, their academic interests, their personality traits, and what their family is like. Their new teachers will have the information they need to be successful with creating the environments and forging those relationships.

Ms. Hanks uses PowerPoint presentations to “address the needs of my students who learn through words and conversations as well as those who need visuals or videos. I can cover all of those [accommodations] in one presentation.” In speaking with her students about their areas of challenge, she said, “We talk a lot about what we can we do right now in this moment. ‘I’m seeing that you’re having a tough time with this. How can we advocate for another way to do our project?’” She gives her students the opportunity to feel understood so they can learn how to cope with their asynchronies. “My role is to help [students] through those transitions and give them the tools [they need] so they feel better equipped.”

Ms. Hanks recalled,

Growing up as neurotypical, teachers were just teachers. Some inspired me and some I didn’t like, and I moved on with it. I don’t think I realized the role that a teacher can have until I had conversations with parents who state that for the first time their child is happy. I think that I see more when it comes to my goal of making a child more open to learning, making him happy again as well as being more open to exploring the world around them.

She serves as a facilitator to support her students with both challenges and giftedness “so they can be successful from this point forward. As a facilitator, I’m cheerleading and coaching.” She is continually reviewing her instructional practices, saying, “I want to grow and change so I can be a better teacher for my students.”

When Giftedness Does Not Align with the Subject

Not all gifted students, especially twice-exceptional youth, will demonstrate giftedness in all domains. Mr. Clark articulated his experiences with the perceptions of giftedness when he taught second grade in a public school setting. He began with empathy, acknowledging that his class might not be their favorite class or the most fun or comfortable activity. He said that he worked to

Help them find more of a general sense of value in the subject that I teach and the topics that I include in my curriculum. I help them make connections between what we’re doing in my class and what their area of interest or strength might be, so that they can start to demystify a subject or a topic that has been challenging or even triggering them in the past.

Students may have dysgraphia or fine-motor issues, making writing by hand cumbersome. Mr. Clark helps students see they can tell a story verbally or by drawing a picture. He said he tells them, “‘First of all, no more excuses. You’re no longer going to get out of this,’ but also removing some of the barriers that might create anxiety around it.” He has eliminated the length requirement for writing assignments, such that within the same class, he may have students writing three pages and students writing four or five sentences in the same amount of time. “I’ve been telling them both that they’re successful

and I'm looking at the quality of the ideas, which might not align with quality of the production." He continued,

Somebody who writes three pages that's just repetitive or based on something they read and not especially original is doing very different work from somebody who struggles through four or five really thoughtful sentences on a topic. Helping them look at the work with different dimensions becomes a big part of the job when they are working in their area of need.

He found the quality of production is more likely to align with whether a student perceives this as an area of strength.

Mr. Clark also expressed a need to stay open-minded as a teacher, especially when a student does not demonstrate any gifts or strengths in a particular subject. He shared,

Maybe they're not a very productive writer, they're not an avid reader, they don't have an obsession with the culture or time period from history. But as we work together in the class, they demonstrate some kind of giftedness that has to do with understanding depth and complexity, such as identifying themes in a story.

He has been surprised when students without an obvious talent or interest in humanities recognize the need to stay open to emerging gifts and abilities. Mr. Clark gave an example of a student who has dyslexia and ADHD:

He might not strike me as someone who would demonstrate gifts in my class, but he loves movies and he can talk about the history of cinema and about the career of actors, the business, and the politics of Hollywood. He can talk about the complex themes of stories and the history of how movies have been censored and

why the public responds the way they do. He really has a sophisticated, often adult-level understanding of these complex ideas that we can definitely apply to stories from history or novels or short stories. But his way of demonstrating it is almost always through movies. My job becomes about helping him recognize what those skills are and then apply them to a more conventional school context of reading about an ancient culture.

Mr. Clark helped this student identify trends in history, “just as he might have identified a trend in the way movies were made in a particular decade or the body of work of a particular director or actor.”

When Giftedness Aligns with the Subject

When giftedness aligns with the subject matter, a teacher might need to find creative ways to meet students’ needs. This year, all of Ms. Hanks’ students are gifted in math, necessitating a different approach to the subject. She recalled, “Last week, we were talking about the coordinate plane: How you can find the distance between points on the axis? I showed them examples where they said our distance was three here and over here it’s five. What is our rule?”

Both teachers work to help students shift from basic knowledge acquisition and rote memorization to a more mature perspective of the subject matter. Concrete thinkers with significant prior success can find it challenging when asked for more nuance and depth for the first time. Mr. Clark explained,

It takes a lot of development to move from black-and-white thinking to somebody who can see the shades of gray and be comfortable with that tension. My students participate in debates and, of course, they always want to know who won the

debate. The answer is we all learned more about the topic because we considered these two different points of view, but that is very unsatisfying to them. I think we provide a lot of opportunities for them to stretch and grow ... [by] asking them to live with that ambiguity and nuance and go home without being a winner or loser.

Mr. Clark helps students acknowledge the good work they are doing and to recognize their gift. He works with his students to transition to more depth and complexity in their area of strength, especially when the strength could lead to a college major or career. He explained, "We are definitely pushing them in those areas that may have been the things that were easiest for them in the past [and] suddenly become challenging."

How teachers perceive their students provides a glimpse into why they differentiate for their students and how they can implement this differentiation in the classroom. Both teachers provided examples of expressions of asynchrony they have observed, as well as examples of gifted characteristics and learning differences their students exhibit. They are keenly aware of when a student is struggling and focus on communication with the parents and the other teachers to determine the means of support. Both teachers shared a view of themselves as new teachers and how they perceived their role has changed over time. Mr. Clark summarized,

I think it would be impossible not to turn that lens back on ourselves sometimes and recognize where we each have our greatest strength and our biggest challenge and what it's like to live with that asynchrony, the same way that our students are dealing with their asynchronies. Hopefully, that makes us a little more understanding and empathetic, or at least gives us a context to do some analysis when we are planning instructional strategies or behavioral interventions or just

new things that we want to implement in school in general. We should think about how we would engage in this before we think about how our students will engage.

Summary

Research Question 2 enabled an exploration of how teachers of preadolescent twice-exceptional students perceive growth in both academic and psychosocial domains. Both teachers provided their perspectives and experiences with student expressions of asynchrony, highlighting both the gifts and the learning differences. The teachers shared signs of a student struggling with a developmental transition. The last part of this research question focused on how teachers viewed their role when they were a new to the profession and how that perception has evolved over the years. The social and emotional domains with an explanation of the mini-stages clarified the perceptions of parents and teachers.

Research Question 3: What Are the Supports That Promote Successful Developmental Transitions?

All participants—four parents, two teachers, and one psychologist—discussed what they considered to be a support to help a twice-exceptional child grow and succeed. Five themes emerged from participant interviews to answer this research question: communication, appropriate environment, accommodations, parent actions, and the roles and responsibilities of each member of the team.

Communication

Communication comprised five elements: receiving the diagnosis, between teachers or team, between school and parents, between school and student, and classroom setup.

Receiving the Diagnosis

Receiving a child's diagnosis can be a positive or negative experience depending on the presentation to the parent. Speaking from the perspective of a parent, Dr. Peters noted that even under the best of conditions—a family friend discussing the test results in their home—he and his wife were devastated. Katherine first heard about twice-exceptional from her then-6-year-old daughter's therapist; several years later, the doctor who conducted neuropsychiatric evaluations told Katherine, “[Julia] is off the charts in these ways and here are her challenges.” She learned of her daughter's giftedness through the lens of a deficit.

Katherine and her family received a letter from the UCLA Semel Institute informing them of Julia's Tourette's diagnosis. Recalled Katherine, “It was pretty harsh, and we were in New York, away from home, and the whole thing was scary.” No one called her, but “the letter said, ‘You can call and discuss this if you want.’”

After months of struggling to get Charlie's school to assess him, Tina found a private psychologist through a coworker's recommendation. She was able to get an official diagnosis of ADHD for Charlie just before he started third grade. The psychologist, she said, “identified him as gifted but with a lot of deficiencies, so she recommended the neuropsych evaluation and that's how we found out everything.”

Marie explained that, for her, having an experienced evaluator

Dramatically affects your perception of your child. We have somebody who was significantly helpful. This so important in the twice-exceptional or disability world where everybody needs their quarterback. . . . It changes everything about

your perception of your kid. I wish to God that everybody could have that kind of person backing them up because it makes all the difference.

Between Teachers or Team

Mr. Clark identified his strengths as organization, passion toward the subjects he teaches, and collaboration with other teachers. He acknowledged that other teachers bring different strengths to teach this population. Before meeting her students for the first time, Ms. Hanks reviews their IEPs, psychological reports, and IQ test results, information she supplements with parents' anecdotes.

Mr. Clark shared the Three Pillars method to gather necessary student information:

As a team, we administer these questions in a consistent way to collect that information for all of our students. Once we have this information, we can move on with our curricula. This allows us to make adjustments and differentiate based on what we learned about them when they were new to the school or to the class or returning from a summer when they may have changed in some ways.

Teachers use parents' goals to prioritize students' goals. Mr. Clark explained, "It's a ... good way to take a lot of different perspectives on the student and learn about how this information we already have from their assessments ... are going to manifest in our environment" to determine the most appropriate and beneficial accommodations. Ms. Hanks concurred that the teachers frequently meet to discuss students, strategies, skills, and possible instructional strategies they can try in the classroom.

Teacher preparation is necessary for the incoming students. In a new environment, behaviors and attitudes can change, which affects a student's ability to show cognitive

skill or demonstrate knowledge of the subject. Mr. Clark stated that communication among the team is important

To understand why some of those differences are present and investigate a little bit further when it's not necessarily obvious. You need to have to make even a greater effort for communication with the other staff and teachers because you're in your own silo. We see such radically different behavior from one hour to the next, depending on what's happening in the class that day.

Teachers need to be proactive about their communication. By example, Mr. Clark discussed a gifted writer who struggled in science class when required to collaborate with her table group:

Whereas the independent work in math and the independent writing and humanities came so easily her, I only became aware of [this issue] by talking to her science teacher and hearing the science teacher's reflections on what was going on in class, looking at her assessment from science and understanding that it was a very different experience from what was happening in humanities.

Other times, communication is necessary due to student anxiety. For example, an upcoming math test might impact how much a student is willing to participate in the discussion. Mr. Clark said, "It makes it that much more important that we keep in touch about what's going on in our classes and how each individual student is doing. We also spend a lot of time talking about grouping."

As a team, the teachers also discuss issues such as how many classes students can handle, how many transitions they can manage in a day, and whether it is appropriate for

them to spend their time in self-contained classrooms with in-class transitions. As students approach sixth grade, other topics of conversation include whether they can adapt to a typical middle or high school schedule, carrying their materials from class to class without a home base. Mr. Clark questioned, “Can they go through these different environments or can they do something in between where they’re alternating or spending half a day with each teacher that can be determined based on their maturity and social and emotional readiness?”

Missing social cues is frequent among twice-exceptional students. When this happens, Mr. Clark explained,

It puts [the teachers] in a position of being the ones who are expected to notice because the students might not even notice it about themselves. Other people around them might not notice it, so it could it could easily be overlooked. That’s one reason we spend a lot of time as a team talking about our students’ social and emotional experiences.

Together, the teachers can create the different environments to meet students’ needs. They can also produce varying scaffolds based on the goals and what kinds of needs the students have when they start at Three Pillars.

Just before the end of the year, the upper elementary and middle school staff will spend a full day talking about each student who is moving to the middle school. “We will discuss everything regarding their social-emotional challenges, their social-emotional skills, their academic interests, their personality traits, and what their family is like,” related Mr. Clark. The time invested in discussing each student provides the middle

school teachers the information they need to be successful in creating the right environments and forging those relationships.

Between School and Parents

Having an open line of communication with the school can help parents know what to expect or where to look for resources. This open communication came early for Kristy, when Charlie was in the first grade in public school. A former special education instructor, Charlie's teacher told her one week into the school year, "I think your kid is gifted." That same week, the afterschool program director told her, "Kids aren't good in math and reading at the same time. They're either good in math or they're good at reading. They don't usually have two areas where they're really good. I think your kid is gifted." During a meeting with the school district and school administration, Charlie's teacher said, "I'm not a diagnostician, but he probably has ADHD." Kristy recollected, "Looking back, ADHD and giftedness is twice-exceptional right there, but I didn't know what it was. I don't even remember how I learned about it." This communication helped her understand that Charlie needed an evaluation and she started to look for resources.

Charlie tends to be emotionally closed, but, shared Kristy, "This is where Three Pillars Lab School comes in really handy for me. All the elementary school teachers blog every week about what they're doing in class," allowing Kristy to see what they did that day and ask Charlie a specific question to open a conversation. "I get a better sense of what's going on with him through the communication with the teacher, [who] is really open with me."

Lisa did not have as many anecdotes about public school communication, but she did share her thoughts with Three Pillars Lab School. She sent an e-mail to the teacher

regarding Ruthie showing anxiety about an upcoming math test. The teacher responded right away, saying, “Yep. I worded that wrong. Everybody freaked out and it’s not a test; it was just to look at skills and we’re going to do that [assessment] a different way.” Because Lisa was able to communicate to Ruthie’s teacher about her daughter’s anxiety, the teacher was open and responsive to her concerns and Ruthie was able to more calmly return to school the next day.

Marie is appreciative of the positive communication she now has with Felix’s school. Her son and a classmate had a “friend breakup” and Felix no longer wanted to be friends. Marie contacted Three Pillars so they could be aware of the situation. She said,

The [staff] were so incredible about supporting and helping him and the other kid through it that now the kids are back to being friends again. I don’t think that—I know that would not have happened at his previous school. He would have been blamed for whatever happened and it would have been a real fractured situation. The [staff at Three Pillars] had the attitude of “Oh, let’s figure out how to support both of them because they’re here to learn.” This is part of what they’re here to learn. It’s like, that’s part of the curriculum, how to practice [having friends].

The staff member told Marie that, by sharing with his mother what was going on, Felix knows she is a safe person to talk to. The staff member explained, “He doesn’t know us well enough yet to feel safe to have this kind of discussion and that’s perfectly natural at this time.” Marie recalled her surprise when the staff member told her, “Regardless of what he thinks happened or not, it’s still his perception and it is still valid and worthy. Let us talk to the kids and work on this. Whether he wants to be friends again or not is fine.”

Teachers find the meetings with parents held early in the school year invaluable for gathering information. Ms. Hanks shared, “We do a lot of early-on meetings when the school year begins, so I am privy to a lot of information.” She views parents as an important resource, especially when it comes to development. Students may have growth spurts that can affect the efficacy of current medications.

Teachers want to have as much data as possible about students when they start at Three Pillars, including parents’ anecdotal and observational accounts. Mr. Clark shared, “Our students come to us with all kinds of assessments and information from things their parents have provided, like recommendation letters from teachers, et cetera.” Mr. Clark explained that when parents set goals for their children, the teachers know what to prioritize, giving each student a more detailed profile. The teachers talk with families in the beginning of the year about what kinds of development they would like to see, which enables educators to identify key areas to target for growth. Shared Mr. Clark,

Sometimes we need to have a team meeting with parents where all the teachers sit down together in one room and start telling our stories about that student and what we’ve observed. We start to look for patterns about what might have changed and then circle back and talk to the student again.

He said the staff and teachers are consistent in the way they use language through the materials they share with families learning about the school and in the professional development materials shared with staff.

Between School and Student

Teachers at Three Pillars spend time getting to know their students through discussions, advisory groups, and in-class projects. Ms. Hanks said she spends time

talking to each student as much as possible to build relationships with the youngest and newest students. Students complete a survey to indicate their interests and preferences before the teachers begin to create groups for different projects.

Mr. Clark understands that, for many students, getting comfortable at school means learning the routines, finding a teacher they like, and having a friend. He related,

For twice-exceptional students, it's probably those things, plus learning what options are available to you as accommodations in a difficult class and finding a positive way to manage the challenge of being pushed and accelerated in an area of giftedness.

Some students come to the school "very knowledgeable about their own diagnosis. They may come in and tell us all about their learning difference or learning disability, what it means, and what accommodations they need," stated Mr. Clark. He likes that he has the ability to say to a student, "Okay. We will stop this lesson, back up, and figure out where the sticking point is," helping them feel more comfortable and trusting.

Part of the communication between the student and the school comes in the form of assessments. Three Pillars teachers and staff and utilize a suite of tools to encourage students to talk about their learning style and interests. Also administered is a personality inventory in which students answer questions about things they enjoy. Mr. Clark explained,

We ask them to reflect in another survey on their preferences in terms of environment. Some of these include whether they like to work in a quiet room or a noisy room. Do they like a dark environment or brightly lit environment in which they can work outdoors? We ask about all these things to see if they're

very forthcoming or if they tend to share the minimum amount of information. There are questions that we ask in the first few days of school about things that they do with their family. Sometimes they write “none of your business” and other times they write this amazing list of vacations they have taken or family traditions. We learn a lot from what they write and from what they don’t write.

The teachers also ask students to set goals for themselves. Mr. Clark related, It’s always very interesting to see if they tend more toward social-emotional goals, such as wanting to make a friend or learn how to get along with people better or become less anxious about school, or if they go directly to academic goals, like, “I want to prove my multiplication skills or read five books this year.”

Another means of communication between the school and students are posters around campus of famous figures believed to be twice-exceptional. Mr. Clark said the posters are a way to “help students feel like there are successful people out there, living good lives, who have some of the same challenges as you and [are] managing some of the same kinds of asynchrony.”

Communication was one of the most talked-about supports by both parents and teachers. Parents expressed gratitude for receiving the diagnosis about their child in a positive, caring manner.

Appropriate Environment

Psychologist Dr. Peters defined the appropriate environment for twice-exceptional students as “needing to support and challenge the advanced abilities, because that’s the life force. That’s where you’re going to see the self-confidence. That’s where you are

going to be training on what is pre-vocational, what that person might end up doing.” He explained that teachers and educators become pivotal in helping a child feel understood or misunderstood. This section addresses the classroom setup, accommodations for sensory issues, productivity supports, outdoor environment, and understanding needed for twice-exceptional students to be successful.

An appropriate environment includes nontangible components such as placement, social skills development, and a whole-child perspective. Julia was scheduled for the seventh grade when she began at Three Pillars; however, for her emotional development, the staff felt it was better to start her in a mixed program, which is fourth through sixth grade. The staff explained to Katherine that the switch to a new school and having to manage the multiple transitions required in middle school could add to her anxiety, yet they could still provide her with the work and instruction needed to meet her academic needs.

Marie expressed her surprise at how differently Three Pillars approaches social skills development, helping the students identify how to learn social skills within an authentic setting. Marie believes Three Pillars has been life-changing not only for Felix, but also for her and husband, because “they don’t see him the way the rest of the world sees him. They are looking at him as a whole person and they don’t mind if he hasn’t hit these benchmarks yet.”

Katherine expressed fear over Julia’s physical maturation into puberty because she is still dealing with bedwetting issues. She said,

We have a child with barely any executive functioning skills and managing a period means planning and executive functioning skills. You have to plan longer

term for the day, plan what you bring with you, and have a kind of physical awareness or sensitivity of what is happening. You have to be in touch with your body, and often, when she is hyperfocused, she is not at all in touch with her body. She will ignore hunger or a desperate desire to go to the bathroom, thirst, cold, heat, everything, if she is hyperfocused on something. Her sense of her body just shuts down.

Katherine talked to Julia about speaking to the people at school about her forthcoming menstruation, subsequently e-mailing the psychologist, her primary teacher, and her advisory teacher. She wanted to let them know that Julia “might need a little support getting herself organized and getting a routine. Of course, they were very warm and wonderful about it.”

Time was an accommodation to which Katherine repeatedly referred. She believes the best way to help Julia is to allow her time to develop at her own pace, not “force her to be different than she is, and to not try to force her to get to a place where she’s not ready to get.” The things that worked occurred when Julia was allowed the time necessary to move through a stage while focusing on her strengths. Katherine said, “Anything that was trying to force, manipulate, trick, or push doesn’t work with her.”

As a teacher, Mr. Clark needs to know if a student’s area of strength or giftedness has been identified to enable placement in the appropriate class. This information helps teachers “to decide if they need to design a curriculum or differentiate topics for projects and classes that will be interesting to the students and be something that they can achieve.”

Classroom Setup

The first category of the observation (see Table 4.7) is comprised of three areas specified in the literature: flexible seating, seating, and a walking corridor (Baum et al., 2017). In an observation at Three Pillars, the researcher noted how the school strives to provide a supportive classroom setup. Numerous studies have shown that physical movement stimulates the four key chemicals of serotonin, dopamine, endorphins, and cortisol (Blackmer, 2018). Students with ADHD have lower levels of dopamine, a neurotransmitter that facilitates communication of nerve impulses throughout the brain, explaining their need for constant motor activity (Armstrong, 2010). This nonstop motor activity is also referred to as hyperactivity, with the high activity level confirmed across multiple situations and domains (Barkley, 2018). According to the U.S. Department of Education's National Center for Education (2012), the average classroom size in a public elementary school ranges from 26 to 28 students. The classroom must also accommodate a laptop cart, extra bookshelves, storage cabinets, and room for student backpacks, leaving minimal space for movement. Students diagnosed with ADHD require extra space for movement to maintain focus (Armstrong, 2010; Baum et al., 2017; Forgan & Richey, 2012; Schilling et al., 2003).

All the classrooms observed either during the site visit or through photographic artifacts had flexible seating. These seating options included traditional classroom seating (see Figure 4.1), table groups (see Figure 4.3), single desks (see Figure 4.4), conference-style table groups (see Figure 4.5), and tables where students could stand (see Figure 4.6) to do their work. Each classroom had a clear area to act as a walkway if students needed to pace or move freely about the room (see Figures 4.1, 4.4, 4.5, and 4.6). Other desks

included blacktop laboratory tables (see Figure 4.3) and two-person elongated tables (see Figure 4.5, 4.8).

Seating options ranged from a typical four-legged chair, the same chair with a rocker bottom rather than four legs, a rolling office chair, and bean bags (see Figures 4.1, 4.2, 4.3, 4.4, and 4.5). Ruthie uses the rocker chairs at school when working on assignments; as such, she now has a rocker chair for use at home. Lisa explained, “She has used exercise balls to sit on, but she actually likes the rocking back-and-forth motion instead.”

During the tour, the researcher asked about other evidence-based seating options such as wiggle seat cushions, fitness balls, or TheraBands tied around chair legs to provide more opportunity for movement (cf. Armstrong, 2010; Baum et al., 2017; Forgan & Richey, 2012; Schilling et al., 2003; Webb et al., 2016). The staff member was unaware of these other occupational therapy devices but said she would look into them for a few students she had in mind. Armstrong (2010) provided examples of teachers assigning two desks to a student so he has another desk to move to when needed. The desks at Three Pillars were large enough to accommodate a teenager and were also available in middle and high school classrooms.

The researcher observed a walking corridor in two hallways and within the classrooms. It was not possible to take photographs during site observation due to students using the hallway as a walking corridor; however, the seating arrangement allowed space for movement, walking, or circuits in the classroom (see Figures 4.1 and 4.4). The neocortex can absorb more information when the body is moving in a repetitive pattern, such as rocking or pacing, compared to sitting still (Forbes, 2012). The teachers work to create a circuit or loop around the outer edge of the classroom for students to

walk laps to discuss a topic. Baum et al. (2017) suggested modifying the traditional “pair-share” strategy where students are typically seated and turn to their elbow partner to discuss the lesson content, instead having students “walk with their partner around the periphery of the room while responding to a prompt or just reviewing the main elements of the lesson” p. 206). This movement during a lesson stimulates the hippocampus, the part of the brain associated with memory, making information storage more efficient (Blackmer, 2018).

During interviews, Ms. Hanks and Mr. Clark reported reorganizing the seating almost weekly to accommodate projects or student needs. Ms. Hanks explained that her students

Need to be engaged; they need to move and have freedom to move about the classroom. If those tools are not in place, it becomes more of a challenge where they are a distraction for other students and themselves. I have flexible seating, a large space, different manipulatives for math and other subjects.

Baum et al. (2017) recommended minimizing whole-group instruction, as twice-exceptional students achieve greater success learning in small groups. For large-group or whole-class discussions, twice-exceptional students are more successful when seated near the teacher and away from distractions, such as windows and doors (Baum et al., 2017).

Table 4.7: Classroom Setup

	Evidence Observed	Researcher Reflections
<p>Flexible seating (Baum et al., 2017)</p>	<ul style="list-style-type: none"> • No evidence of a throw rug or other delineating floor space for floor seating was observed. • All observed classrooms had flexible seating that included a beanbag and rocker chairs. 	<ul style="list-style-type: none"> • May be better suited for lower elementary classrooms.
<p>Seating (wobble seats, rocker chairs, fitness balls, TheraBands, etc.) (Mulligan, 2001)</p>	<ul style="list-style-type: none"> • No wobble seats or fitness balls were observed in the three classrooms visited. • Rocker chairs were observed in every classroom. • Individual desk area – student choice. 	<ul style="list-style-type: none"> • The staff member was unaware of other seating options. She was open-minded to other ideas and would do further research. • Traditional seating observed in one classroom.
<p>“Walking corridor” (students can stand or pace, lectern/podium, etc.) (Blackmer, 2018; Mulligan, 2001)</p>	<ul style="list-style-type: none"> • Walking corridor both in and outside classroom. • Only one classroom had a standing desk/worktable area. 	<ul style="list-style-type: none"> • Inside the classroom: enough space to prevent bumping into other desks and chairs. • Outside the classroom: located in main hallway.



Figure 4.1: Traditional Style Seating



Figure 4.2: Beanbag Chair



Figure 4.3: Table Groups and Rocker Chair (right)

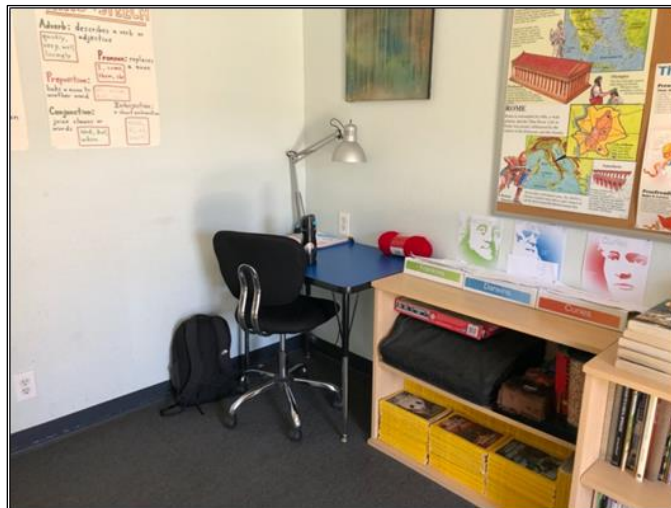


Figure 4.4: Single Desk

Note. A single desk facing the wall can reduce visual distractions for some students.



Figure 4.5: Conference Table Grouping
Note. Several chairs on the right have the rocker-style legs.



Figure 4.6: Standing Desk

Accommodations for Sensory Issues

Sensory issues and the related accommodations are the second category of the observation (see Table 4.8) and comprise four components: lighting, sensory tools, plants or other living creatures, and colors and patterns (see Table 4.9). Aware of Ruthie's sensory issues as early as kindergarten, Lisa noted that her daughter's teachers

“nursed her through kindergarten because the teachers were SENG trained and they made modifications for her very quietly.”

Table 4.8: Accommodations for Sensory Issues

	Evidence Observed	Researcher Reflections
Lighting (Forbes, 2012, pp. 96–97; Mulligan, 2001)	<ul style="list-style-type: none"> • Minimum of two windows per classroom to allow for natural lighting. 	<ul style="list-style-type: none"> • Most classrooms did not have overhead lights on due to students attending a field trip. • Mr. Clark uses the picnic table outside his classroom for students to work outside if necessary.
Sensory tools (Baum et al., 2017; Mulligan, 2001)	<ul style="list-style-type: none"> • Sensory tools, fidgets, pencil grips, and headphones were observed in all three classrooms and photographic artifacts. • Items included small, squishy fidgets and fidget cubes. • No TheraBands tied around chair legs observed. • No tactile fidgets observed. 	<ul style="list-style-type: none"> • Each classroom had assorted fidget tools • Teachers and staff member remarked that the instructional strategies, pacing, and teacher “check-ins” are what help facilitate a calm body in the classroom (staff member). • Staff member explained that some productivity supports were stored cabinets.
Plants or other living creatures (Forbes, 2012, p. 96)	<ul style="list-style-type: none"> • Chickens and chicken coop, garden, greenhouse, fruit trees, turtle and turtle habitat, and dogs were observed. 	<ul style="list-style-type: none"> • No plants observed inside classrooms. • Each window had a view of trees or plants. • Dogs can be brought to a classroom to help a student self-regulate; not observed on this visit.
Colors and patterns (Forbes, 2012, p. 96; Mulligan, 2001)	<ul style="list-style-type: none"> • Observed classrooms had muted colors and minimal decoration on the walls and windows. • Each classroom was painted a pale, pastel color. 	<ul style="list-style-type: none"> • The classrooms had matched furniture, pillows, and minimal border décor. • Noticeable lack of wall decorations (compared to public school classrooms) to reduce visual stimuli.



Figure 4.7: Glass Door and Window



Figure 4.8: Natural Lighting Without Overhead Lights



Figure 4.9: Outdoor Seating, Natural Light, Vegetation



Figure 4.10: Traditional Classroom Setup with Rocker Chair

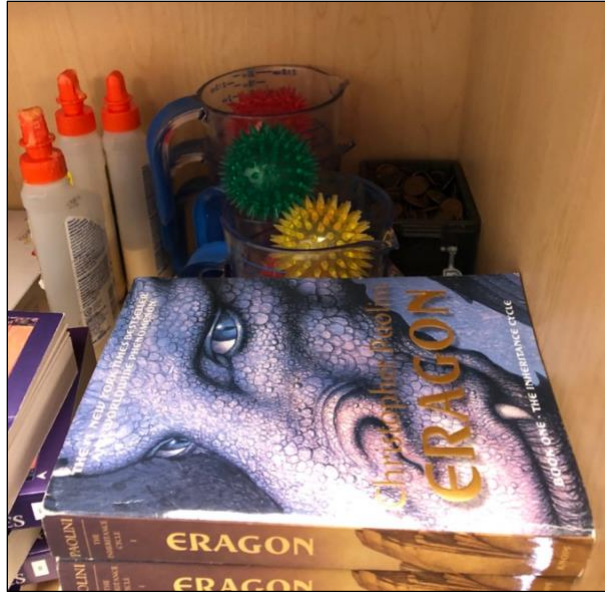


Figure 4.11: Sensory Tools and Fidgets

Lighting, especially the glare and hum of fluorescent lighting, can often be a distraction for hypersensitive students (Baum et al., 2017). Forbes (2012) suggested warming the lighting in the classroom by using incandescent bulbs (see Figure 4.7) or natural lighting to reduce the stress and anxiety that can increase with intense lighting. Each classroom observed had at least two windows and some had a glass door (see Figures 4.7, 4.8, and 4.9). Most classrooms observed did not have all the overhead lights on, as they were not in use due to a student field trip on the date of observation (see Figures 4.4 and 4.7). If overhead lights were on, only half of them were used (see Figure 4.8). Three Pillars has not yet converted overhead fluorescent lights to LED fixtures.

Sensory tools such as fidgets, fidget cubes, squishy balls, rocker chairs, and headphones were visible in every classroom (see Figures 4.10 and 4.11). These sensory tools act as sensory modulation strategies, as children with ADHD can sometimes overreact or underreact to certain forms of sensory stimulation in the tactile or auditory

domains (Mulligan, 2001). Strategies to increase a student's level of arousal and attention in the classroom include chewing gum or sucking on a sour candy, periodically jumping, or sitting on a Disc'O'Sit, a special seat cushion providing for added movement.

Strategies used to decrease hyperactivity and increase attention include using small, handheld fidgets such as a fidget cube, squishy ball, or chewable item (Mulligan, 2001).

No tactile fidgets, such as the soft and rough sides of Velcro or velour (Schaaf & Lane, 2009), were visible in any classroom or photographic evidence during the observation. Teachers may employ them for some students, but they were not visibly on display. Headphones were in each classroom for students who were distracted by random sounds or those who needed to listen to soft music to focus and stay on task (Baum et al., 2017; Forbes, 2012).

Lisa reported that Ruthie has been far more focused because she can use a fidget at school. She also said that teachers “try to keep things short and to the point so they don't lose the kid's attention, so that works out really well.” Mr. Clark explained students who need noise can wear headphones to listen to music or white noise. Felix uses headphones at school, which he told Marie is an incredible relief and life-changing for him.

Plants and other living creatures comprise the third component of accommodations for sensory issues (Forbes, 2012). There were no plants spotted inside the observed classrooms, but each classroom had windows with a view of trees and plants (see Figures 4.1 and 4.8). Three Pillars has a tortoise habitat with tortoises (see Figures 4.12 and 4.13), as well as chickens and a chicken coop (see Figures 4.15 and 4.16) and a dog named Gilligan who works as an emotional support animal (see Figure 4.14). Forbes (2012) found “animals that are soft and cuddly ... can help create a calming atmosphere for

children” (p. 96). The students care for the chickens by collecting, washing, and packing the eggs for sale to the families; they also feed and care for the tortoises.



Figure 4.12: Tortoises at the Geodesic Dome



Figure 4.13 Tortoise Habitat



Figure 4.14: Gilligan



Figure 4.15: Chickens



Figure 4.16: Chickens and Chicken Coop

A few of the teachers bring dogs, including Gilligan, a three-legged dog who comes to campus during the day and goes home with his owner each afternoon. Gilligan will stay in the classroom with his own dog bed until needed in another room to help a student self-regulate. Lisa stated that Ruthie gets along with animals well and “is very empathetic with plants and animals and very aware of nature and the world around her.”

Colors and patterns are the fourth component of accommodations for sensory issues. Although most classrooms are highly stimulating with many materials, books, games, and student work surrounded by colorful bulletin boards, Baum et al. (2017) and Forbes (2012) recommended simplifying and reducing visual stimuli. High amounts of visual and auditory stimuli pose tremendous distractions for a student with ADHD.



Figure 4.17: Contained Visual Stimuli



Figure 4.18: Borders and Bright Colors Kept to a Minimum

Classroom décor can also influence student focus and self-regulation; thus, it is necessary to reduce the number of papers and posters attached to the walls and ceiling

and to paint the walls with a soft, warm color (Forbes, 2012; Mulligan, 2001). One classroom had a large bulletin board (see Figure 4.18) with the borders and bright colors kept to minimum. Figure 4.17 shows the organization of materials, keeping most of the visual stimuli low to the ground and out of sight for most students.

Productivity Supports

The third category of the observation was the five components recommended to support productivity for twice-exceptional students (Baum et al., 2017; Forbes, 2012). Components outlined in the literature include clearly written directions, posted rules and procedures, timetable/schedule, frequent water/snack breaks, and multimedia resources. These components are indicative of an educator who communicates with students and sets expectations; they are even more important for twice-exceptional students to stay focused and self-regulate (Baum et al., 2017). Jones and Jones (2015) explained that students need to know and be taught the behaviors expected in the school setting so they understand why those behaviors will lead to later success in the work environment (Jones & Jones, 2015). These same supports encourage the maturity of executive functioning skills (Baum et al., 2017).

When grouping students for cooperative learning, Baum et al. (2017) recommended assembling students by talent or interests rather than age or ability. An effective way to keep a group on task is to place a small timer on the group table. Because twice-exceptional students may struggle to work in a collaborative setting, teachers should provide clearly written directions, expectations of productivity for each student, and a timetable for work completion (Baum et al., 2017).

Table 4.9: Productivity Supports

	Evidence Observed	Researcher Reflections
Clearly written directions (Montague & Warger, 1997; Mulligan, 2001; Mulrine et al., 2008)	<ul style="list-style-type: none"> Clearly written or printed directions on the whiteboard. 	<ul style="list-style-type: none"> Cleaned whiteboards due to students attending a field trip. Posters were clear and prominent.
Posted rules, procedures, and expectations (Baum et al., 2001; Montague & Warger, 1997; Mulligan, 2001; Mulrine et al., 2008)	<ul style="list-style-type: none"> Every classroom had posted rules, procedures, and expectations. 	<ul style="list-style-type: none"> “Ten Commandments”: Commandments with examples of “Thou shalt respect thy neighbor’s personal space.”
Timetable/schedule (Baum et al., 2001; Montague & Warger, 1997; Mulligan, 2001; Mulrine et al., 2008)	<ul style="list-style-type: none"> Timetable/schedule observed in each classroom. 	<ul style="list-style-type: none"> The timetable/schedule was clearly posted and color-coded.
Frequent water/snack breaks (Baum et al., 2017; Forbes, 2012)	<ul style="list-style-type: none"> Observed in one classroom. 	<ul style="list-style-type: none"> All students can bring their water bottles to class and take nutrition breaks when needed.
Multimedia resources (audiobooks, video, websites, podcasts, picture books, etc.) (Baum et al., 2014; Mulrine et al., 2008)	<ul style="list-style-type: none"> Resources included video, DVDs, laptops, headphones, graphic novels, board games, and manipulatives. 	<ul style="list-style-type: none"> Resources were observed in every classroom and differed by subject matter and student needs.

Each classroom had clearly posted classroom rules (see Figures 4.19 and 4.23), an agenda (see Figure 4.20), directions, daily schedules (see Figures 4.21 and 4.22), and strategies for success (see Figures 4.23 and 4.24). One classroom had a list of

expectations that reflected the upcoming Halloween holiday with the “Ten Demandments” and cutouts of skeleton hands (see Figure 4.25).

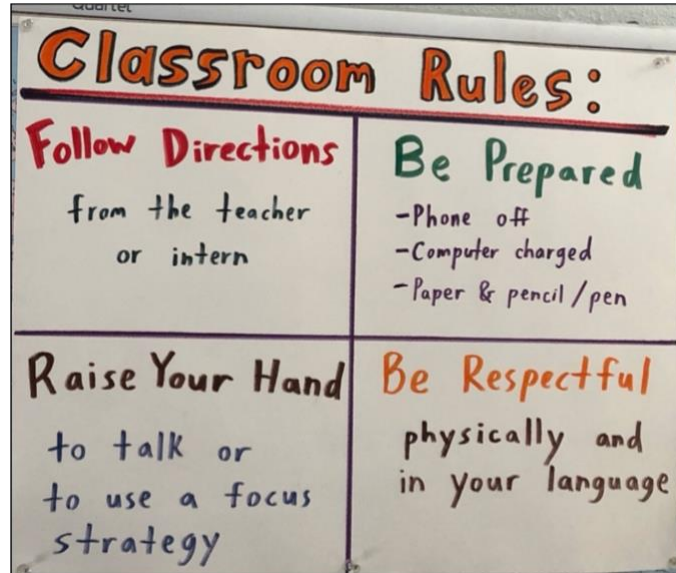


Figure 4.19: Mr. Clark’s Classroom Rules



Figure 4.20: Mr. Clark’s Agenda.

Note. Depth and complexity icons along the bottom of the whiteboard.

M, T, W, TH schedule

08:35-09:30 - Block 1
09:30-09:40 - Break
09:40-10:30 - Block 2
10:30-10:40 - Break
10:40-11:30 - Block 3
11:30-12:17 - Lunch
12:17-01:00 - Specials
01:00-01:10 - Break
01:10-02:00 - Block 4
02:00-02:20 - Recess
02:20-02:55 - Advisory
02:55-? - Carpool

Figure 4.21: Color-Coded Daily Schedule #2

SCHEDULE

Block 1	8:35 - 9:30
Break	9:30 - 9:40
Block 2	9:40 - 10:30
Break	10:30 - 10:40
Block 3	10:40 - 11:30
Lunch	11:30 - 12:17
Specials/ Electives	12:17 - 1:00
Break	1:00 - 1:10
Continuum	1:10 - 2:00
Recess	2:00 - 2:20
Advisory	2:20 - 3:00

10/17/19

Figure 4.22: Color-Coded Daily Schedule

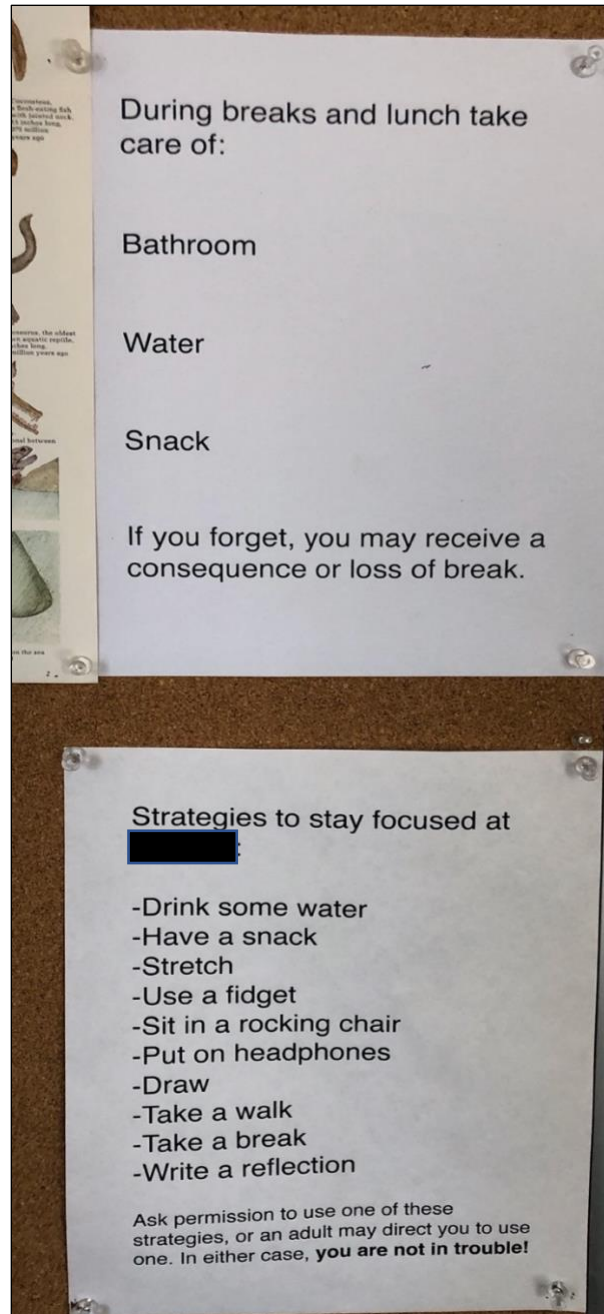


Figure 4.23: Strategies and Reminders



Figure 4.24: Nonverbal Hand Signals

Simple things such as thirst or hunger can prevent a student from staying on task or maintaining the ability to self-regulate (Baum et al., 2017; Forbes, 2012; Webb et al., 2007). Students with trauma or ADHD can exhibit difficulty self-regulating, especially if they are hungry or thirsty (Forbes, 2012). Signage reminding students to take care of

themselves during breaks by using the restroom, having a snack, or drinking water was visible in every classroom (see Figure 4.23).

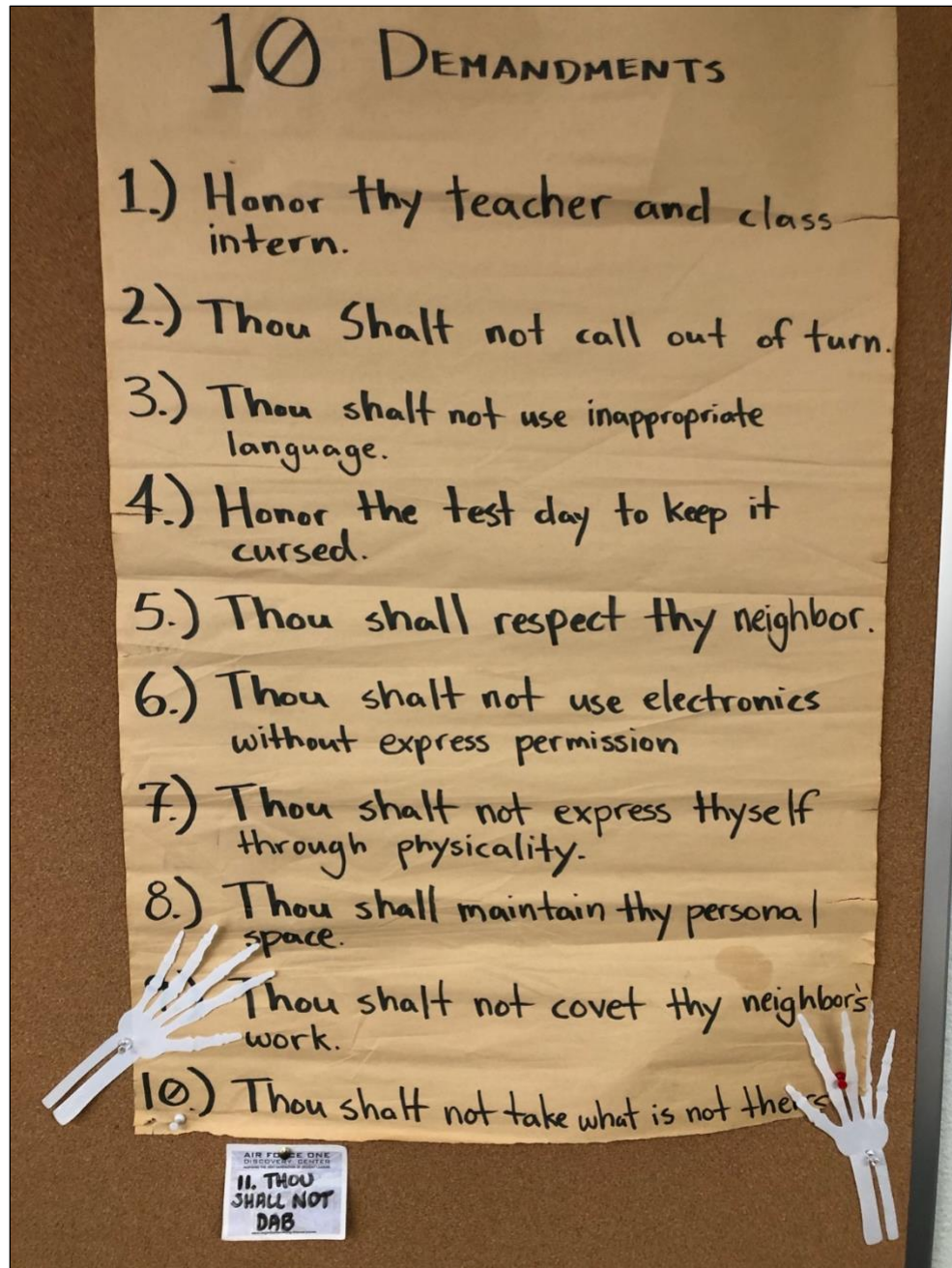


Figure 4.25: "10 Demandments"

Note. Demandment #11 reflects a playfulness and understanding of upper elementary students.

Differentiation

Ms. Hanks reported giving her students options for how to approach a task and demonstrate learning, including having opportunities to build with different materials. She recalled, “One student was gifted in engineering but had a lot of difficulty when it came to anything else. That was his asynchrony. It meant a lot of building activities for him and a lot of showing his knowledge through building.”

Another student was better at communicating through images. Ms. Hanks recalled, “He could create a story and show his understanding of a story line through images. He draws, he builds, he is your STEAM [science, technology, engineering, art, and mathematics] kid.” Lisa expressed providing similar accommodations for Ruthie, saying, “When she sees something in her head and she wants to build it, we work quickly to get her the materials and give her the support she needs to make it happen.”

Several students need to use a keyboard to express their ideas, but others prefer to write with pencil and paper. Ms. Hanks said students get used to seeing their classmates doing different activities or doing the same things but in a different way. This differentiation occurs for both learning and demonstrating their knowledge, as she explained, “Most students don’t have a problem with [differentiation] because if one kid is doing it in a certain way, they all have the opportunity to do it in that way, as well, as long as they can still showcase their knowledge.”

Tailoring a student’s schedule is another way teachers and staff can provide an appropriate environment for a twice-exceptional student. Sometimes, students would take the class that presents the most challenges, either academically or with social and

emotional skills, at a different time of the day. Mr. Clark recalled the student identified as a gifted writer:

In her case, it was really helpful for her to have humanities first so that she could be in the class where she was very comfortable and confident. She would take science later in the day when she already had some academic success behind her and could hopefully address some of those social and emotional issues that came out when she was asked to work with another person in a subject that wasn't positive or easy for her.

Utilizing differentiation with materials, providing options and choice for accommodations, and tailoring a student's schedule are options teachers and staff can use to provide an appropriate environment for the twice-exceptional student. Asked how accommodations might impact the class when offered to one student but not another, Mr. Clark said the influence was positive. Students, especially those who come from a public school background, have to get past the initial stage of why things are done differently, Mr. Clark explained, because these are the students who are used to everyone producing something similar. He said, "If they stay [at Three Pillars] for 2 or 3 weeks at the beginning of the school year, they start to see that's just how things work for us and how we choose to manage this population of students." He and the other teachers "hope that students begin to make requests and decisions where they are empowered to make decisions about their own learning."

Over time, students see examples of accommodations offered, and the positive impact on the class is noticeable. Mr. Clark related,

I asked them to analyze a myth. Many of my students went to classical myths from Greek and Roman culture or Native American myths. I told him that superhero films are the myths of our culture, [asking], “Would you like to analyze one of those?” This previously reluctant student became engaged and willing to persevere in the writing process.

When students hear him using outside-the-box examples to engage a classmate, Mr. Clark related, they might say, “If he’s going to write his project that way ... could I analyze this TV show that I enjoy?” Mr. Clark says yes “as long as they could find a theme, identify symbols, and make inferences about what the author is trying to teach us about the world.” The teacher emphasized that students might not have asked for that option if they had not heard the offer to another student. As Mr. described that unit to the class, he noticed that the students got an opportunity to advocate for themselves. They were better engaged and produced additional work because they found a more interesting topic for their project.

Sometimes the differentiation does not occur with the subject matter itself, but in students’ engagement with it to maintain the zone of proximal development while still meeting their social and emotional needs. Mr. Clark described one of his former students, an 11-year-old boy who was new to the school:

He had huge anxiety about the concept of growing up and, in fact, we were cautioned never to tell him that he’s getting taller or getting big or developing in any way because this was a serious concern of his, a serious fear. He would act

out these childish behaviors as a way of staking claim to [remain] a child, such as bringing stuffed animals to school.

The student was doing work that was academically appropriate, if not advanced, for an 11-year-old, but he was struggling to let go of some childhood symbols. The teachers at Three Pillars did have some success in finding ways to embrace his need for childhood symbols. Mr. Clark recalled,

He would act out performances with sock puppets. This is probably more likely to be a first-grade or second-grade type of activity and here he was doing it in a sixth-grade class. One of the sock puppets was Socrates and he was having a debate with somebody. He was accessing the content that we were hoping our gifted fifth and sixth graders would be able to access, but the activity itself was something that you might be surprised to see.

Affirming the things that made this student comfortable at school—his toys, his stuffed animals, and his puppets—worked. He was enthusiastic about participating and engaging with the content. The boy’s giftedness was in creative areas, as he loved to draw, tell stories, and produce comic books. He could create a character and use it to tell a story with illustrations. Mr. Clark recalled, “He was really enthusiastic about all sorts of story writing we would try to include in the class.” Mr. Clark and the other teachers did not discourage these childish behaviors because “they weren’t disruptive or negative. It was part of what we understood about his learning profile before he came to the school. It turned out to be primarily a positive thing because he found acceptance and belonging.”

Outdoor Environment

The last category of the observation is the outdoor environment, which comprises three elements: noise/sounds, natural environment, and playground structure. Table 12 presents how the school strives to provide a supportive outdoor environment, as observed by the researcher. The street of a campus is lined with large trees, a fence, and hedges.

Table 4.10: Outdoor Environment

	Evidence Observed	Researcher Reflections
Noise/sounds (Baum et al., 2017; Forbes, 2012)	<ul style="list-style-type: none"> • Street/traffic noise observed near chicken coop and turtle habitat. • None observed when inside building or quad/playground area. 	<ul style="list-style-type: none"> • Large evergreen, fruit trees, and hedges helped mitigate street noise. • Green space provides a buffer for most street noise and visual stimuli.
Natural environment (Faber Taylor & Kuo, 2011)	<ul style="list-style-type: none"> • Grassy field area • Natural area • Garden area • Greenhouse 	<ul style="list-style-type: none"> • Natural environment has both an open grassy area with mature trees and a swing, as well. • Quad area has patch of artificial grass to handle student foot traffic. • Most benches made from wood or plastic. • Half basketball court near greenhouse and garden beds.
Playground structure(s) (Baum et al., 2017)	<ul style="list-style-type: none"> • Oversized Connect Four game • Geodesic climbing dome 	<ul style="list-style-type: none"> • Six to eight students observed sitting inside dome with friends to eat lunch.

- Tire swing located in larger open space with chicken coop
-

The front of the school had a sign that included the name and school colors (see Figure 4.27). The grounds were well-manicured with ample parking and a security guard (see Figure 4.26). Clean and free of debris, the walkways had bricks with etched names of donors or other notable persons whose research has contributed to the field of giftedness and twice-exceptionality (see Figure 4.28).



Figure 4.26: Front of School Entryway



Figure 4.27: Signage at Entrance

The seating area for pickup/drop-off each day is shaded by mature trees (see Figures 4.29 and 4.31) and grouped to encourage eye contact and conversation among students.



Figure 4.28: Entrance to Main Building



Figure 4.29: Seating at Pickup/Drop-Off Area
Note. Seating is arranged to promote conversation.



Figure 4.30: Pickup/Drop-Off Area



Figure 4.31: Open Space and Lunch Area at Southwest Corner of Campus



Figure 4.32: ADA-Compliant Ramp and Elevator in Middle and High School Building



Figure 4.33: Open Space, Picnic Area, and ADA Ramp (left)

The back of the school faces the main street to mitigate noise from traffic and people. On the campus, the chicken coop, tortoise habitat, greenhouse, and garden boxes were closest to the fence separating the campus and the street. There were mature evergreen and deciduous trees (see Figures 4.29, 4.30, 4.32, 4.33, and 4.39) throughout the campus and two separate areas of green space for students (see Figures 4.26, 4.30, 4.32, 4.33, 4.34, and 4.38). No street noise was audible in the quad area, play structure, lunchroom, or drop-off/pickup area or at the entrance of the school (see Figures 4.26 through 4.30).

The second category, the natural environment, included a grassy field area with Ultimate Frisbee (see Figure 4.36), picnic tables and benches (see Figures 4.30, 4.33, and 4.38), a tire swing (see Figure 4.37) near the chicken coop (see Figures 4.15 and 4.16), garden beds, and a greenhouse (see Figures 4.34 and 4.35). Other open spaces included picnic tables with shade trees (see Figure 4.33 and 4.37). In a qualitative study, Faber Taylor and Kuo (2011) explored the idea of green space as a possible tool for managing

ADHD. They found that, overall, green play settings were consistently linked with milder ADHD symptoms than were non-green play settings (Faber Taylor & Kuo, 2011). For children who need large gross motor movement, the authors found the most supportive environment to be a mix of open, grassy areas and green play settings. Three Pillars, with both the open grassy area and the green space, has met these requirements to help mitigate symptoms for children with ADHD.

The only area without natural grass, the quad is located between the main building that houses the upper elementary and office and the building that houses the middle and high school. The quad was where many students congregated during lunch or free play on the geodesic dome (see Figure 4.39). Adjacent to the garden area and greenhouse on the southwest corner of the campus is the ADA-complaint ramp and elevator inside the building that houses the middle school (first floor) and the high school (second floor; see Figure 4.32).



Figure 4.34: Garden Boxes



Figure 4.35: Greenhouse and Garden Boxes

The garden boxes and greenhouse are located on the southwest corner of the campus (see Figures 4.34 and 4.35). There are two areas of garden boxes to allow different fruit and vegetables to thrive based on the sunlight hours needed to grow. Strawberries, artichokes, and mint were visible but there were several other plants growing that the researcher did not recognize. The school was in the process of cleaning the greenhouse; thus, it was not in use at the time of the site visit (see Figure 4.35).

The last category of outdoor environment addresses playground structures. The northwest corner of the campus that houses the chicken coop and tortoise habitat also has a large, open grassy area with an Ultimate Frisbee goal (see Figure 4.36). Students can check out Frisbees from the main office during their break time. This same area has a tire swing (see Figure 4.37) attached to a large shade tree and near a picnic table. The tire swing differs from a regular swing in that students can receive a greater variety of proprioceptive input from swinging and spinning (Barkley, 2018). Proprioceptive input is a part of a sensory diet that enables children with ADHD, ASD, and other diagnoses to self-regulate (Schaaf & Lane, 2009).

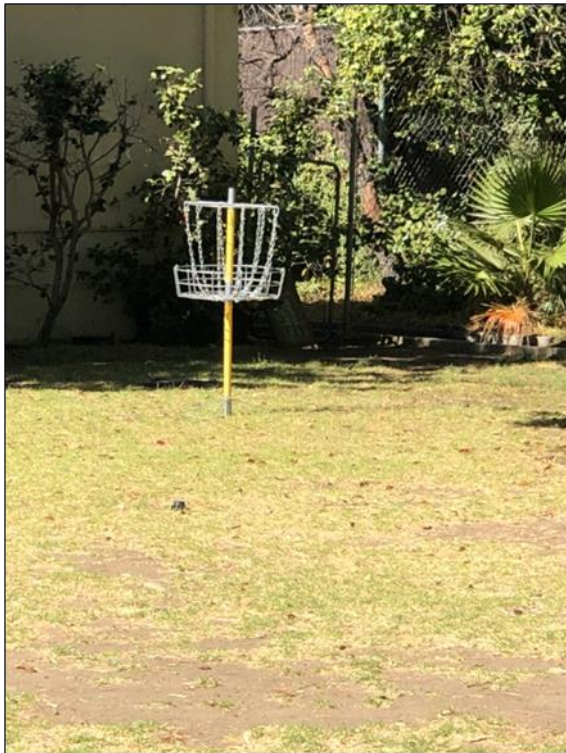


Figure 4.36: Ultimate Frisbee



Figure 4.37: Tire Swing and Picnic Table

The central structure in the quad area is the geodesic dome climbing structure (see Figure 4.39). The researcher obtained photographic artifacts at a later date because

students were using the structure during lunch. During the site visit, six to eight students from the upper elementary who did not attend the field trip were sitting inside the dome to eat lunch and chat. To the right of the main office building was the oversized Connect Four game (see Figure 4.38).



Figure 4.38: Oversized Connect Four Game



Figure 4.39: Geodesic Dome Climbing Structure

Interventions

In addition to physical supports, interventions can also be a powerful support. Based on his professional experience, Dr. Peters asserted that the parent is the most pivotal person for the twice-exceptional child and thus the one to spearhead interventions. The parent is the person “who is advocating, getting the resources, fighting for the accommodation, fighting for the intervention, paying [for the intervention] outside of school, and getting the ABA therapy,” he explained. He has found that twice-exceptional students had a different trajectory when the parents fought for the social skills groups, the dyslexia intervention, and the executive functioning support and training compared to the parents who were unable to so.

Parents

Dr. Peters related an experience from his work that illustrated the power parents have to support their child. He met with a family to reassess their seventh-grade child and update the accommodations needed for school. This boy was gifted, had an initial diagnosis of ASD, and had received early intervention through the regional center that included ABA therapy, speech, and OT. Dr. Peters recalled the situation, which he said he would never forget:

[The boy] had been doing so well in life that people were wondering, “Does he have— ... is he still on the spectrum?” He was sitting right over there and he said this so eloquently. I’m thinking, “Wow, this kid is relating really comfortably and carrying himself really well as seventh grader now,” and I said, “Do you ever find yourself in situations where you don’t really understand what’s going on

socially?” He said, “That only happens when I am exposed to a situation that my mother has not prepared me how to deal with.”

Many of the parents discussed interventions they provide outside of school, including ABA therapy, OT, speech, cognitive behavioral therapy, medication, and sleep. Katherine said Julia already sees a psychiatrist to manage her medication and they are in the process of locating a psychologist for CBT. Another support Katherine found was a tutor who worked with students with learning differences, about whom she said, “She is not actually a registered educational therapist ... but she was wonderful. That is largely how [Julia] got through fifth and sixth grade at all, because of that woman. She was an absolutely amazing tutor.”

Lisa hired an educational therapist when Ruthie was struggling in a first-grade class of 30 students. Lisa described,

The breaking point happened right before spring break. She came home from school and it was a rainy day. She was having meltdowns every day after school anyway because she was trying to hold it together at school. She had just a horrible meltdown and ran out the front door, standing the neighbor’s yard in the rain, screaming and crying, “I can’t do this. I hate myself. I want to die.”

Lisa spoke to both a therapist and a psychologist, who told her to “pull her out immediately! *Immediately!*” The psychologist wrote a letter stating that Ruthie had severe anxiety and he was putting her on medical leave from school for 6 weeks.

Another outside support for Ruthie was an educational therapist. Lisa said,

She and Miss Paula were the best of friends for over 3 years. She loved her sessions with Miss Paula, who, of course, treated her as if she were in charge of herself, like she was a competent human being instead of a little kid. They would discuss different things like logic puzzles. [Miss Paula] was ... teaching her what her strengths were through games and word puzzles where they could really stretch Ruthie's brain. I think that really started her off well. They would play different board games and Ruthie was able to find out what her educational strengths were.

Lisa reported doing a lot of bibliotherapy with Ruthie, looking for books on different subjects if it was a social situation she believed Ruthie needed to work on. She explained that using story form is more interesting compared to "just laying it out and it's dry. You have to keep their interest or they are not going to learn it." Recently, Ruthie has returned to reading books such as *The Kid's Survival Guide*. Lisa tries to role-play with her daughter how different social situations could happen and how to be prepared.

For Kristy, starting Charlie on ADHD medication changed everything. "All of a sudden, those bad days and horrible comments changed. [The teachers] started saying, 'We had a great day today. Today was wonderful, there was no emotional outburst today! He got his work done today!'" Even on a low starter dosage of medication, she says, "It was like a switch and it was helpful."

At home, Kristy explained that support came more in the moment when her son was having a meltdown. "When he was younger, he would take a timeout in his room. I'd hold him and he'd cry. ... We would just do a lot of holding." During times when Charlie would not allow his mother to hold him, she "would put on a song and dance it out. He

would dance with me and have fun and when it was over, he was better. It was like distraction or just letting him be in his space” was helpful. These days, the meltdowns are less frequent.

Another coping strategy Kristy used was to teach Charlie deep breathing. Although he was resistant to the idea when he was younger, he “keeps getting better and I can see him using that [coping] skill now.” Kristy believes that people other than his parents suggesting deep breathing to Charlie has helped him. Now, when he is dysregulated, she shared,

He will go and take 5 minutes in his room. He has a walk-in closet that he goes in to and sit on his stepstool. I don’t know what he does in there but if I disrupt him too soon, he’ll yell at me to go away. So, I just go away and give him his space.

Eventually he’ll come out and say, “I’m sorry I yelled at you.”

Other interventions Kristy has implemented include ABA and speech therapy that utilizes social thinking skills, OT, and talk therapy.

Kristy found that sleep was an important factor for Charlie. They also discovered that seasonal allergies were a big reason he was not getting quality sleep, which reduced his ability to self-regulate. They took Charlie to an allergist and learned he has very severe, year-round nasal allergies and a high reaction to dust mites. Kristy put dust mite-free coverings on his mattress and bedding, placing the covers in the dryer once a week. The family put him on a daily allergy medicine a few years ago; as the allergies improved, so did his sleep. Charlie has an air purifier in his room that he likes to use on the highest fan

setting, creating a lot of white noise. They continue to maintain a very set bedtime. They do not use blackout curtains, but he does wear a sleep mask to shield his eyes.

Marie found that having a good therapist has been a big help for their family. Felix sees the therapist weekly and “having that other voice bringing perspective” is great. They also have a psychiatrist they like and trust who checks up on Felix and provides the perspective necessary to keep expectations realistic. Although Felix graduated out of OT after a couple of years, Marie is not convinced that he does not still need it. Felix now attends a swimming class recommended by the neuropsychologist because it provides him good, full-body proprioceptive input, which is important because of the Ehlers-Danlos.

Another positive intervention Marie discovered was in her communication with Felix: Failure to adopt a light tone leads to a meltdown. She shared,

I’ve had to make things really light most of the time. I’ve had to adopt this joking way of telling him things to help him know that this isn’t a big deal. I’ve had to say, “I can’t believe you did that!” as a joke, so that he sees that, hey, he shouldn’t have done that but he’s not in trouble. I’m having to show a smile and exaggerate it with my voice. But, don’t do that again.

Felix has a stuffed animal he calls “Rainboonicle” who has similar issues to his. Marie said that, when issues do arise, Rainboonicle will come to him and have talks about what is bothering her, and he will talk to her freely.

Most recently, incorporating social stories has been helpful. Marie and Felix rehearse situations that are going to happen as well as use the stuffed animals to reflect on events

that have occurred. Felix's therapist also uses stuffed animals to talk about social stories. Felix typically brings Rainboonicle to therapy, where Marie thinks they talk through the stuffed animals for a lot of the session.

Marie tries to point out success stories and find positive role models for Felix. She shared, "We went to go see Dav Pilkey speak. He writes the *Captain Underpants* and *Dog Man* books. He was incredible. He led with, "I have ADHD" and he gave this glorious, beautiful talk about how to turn weaknesses into strengths and it was so amazing."

Schools

Interventions at school can take multiple forms depending on the needs of each student. Ms. Hanks found that dictating ideas, either to the intern or through a speech-to-text program, eased one student's anxiety. This student is able to continue learning and producing his ideas and work without worrying about writing by hand. Both teachers in the study reported taking the time to explain to their students why some classmates have a specific accommodation and others do not. Mr. Clark elaborated, "We talk to our students about 'Your differences are A, B, and C; this person's differences are X, Y, and Z, and that's why they need to sit under the table while we ask you to sit upright in the chair.'"

The teachers at Three Pillars explained the reasoning behind accommodations when teachers have a different set of expectations based on the needs of one student that may not apply to another. Mr. Clark suggested the students accept that reasoning because they can compare other differences to themselves:

In some cases, we talk about limits in terms of where students can be and how much flexibility they can have in terms of doing the work in their own way or pursuing their own interests. We need to make sure that they're aware of the limitations. We don't have a program where they are just choosing all of their own topics and creating their own curriculum. But there is a lot of flexibility within the structure that we've created and that we provide.

Getting to know each student is another way a teacher can provide an appropriate environment. Mr. Clark conducts one-on-one check-ins with his students. He shared, "One of the big benefits of teaching a small class with a second adult as a full-time intern ... [is that] I can step out with a single student who needs a check-in and the class can continue with adult supervision."

The staff at Three Pillars utilize another strategy to build relationships with students. At the beginning of the school year, they gather information from the students through conversations and personal inventories. Mr. Clark said, "We invest the time [having] students tell us about themselves, especially when they're new to the school, but with returning students, too. [We want] them tell us about their preferences, needs, interests, and how they perceive their strengths." If students have been at Three Pillars for more than a single school year, the comparison of responses from a year or 2 years prior "can be very illuminating." The teachers return to this information, an investment that reaps rewards. It might be difficult to devote the time initially, but Mr. Clark has never regretted that investment. Students will be more successful with teachers who they think care about and know them or with whom they have a connection.

Mr. Clark and Ms. Hanks both expressed the goal of accommodating whatever the social-emotional needs are when students come to Three Pillars Lab School. They work to prepare students for a more traditional schedule and higher expectations when they go to middle school.

Summary

Answering Research Question 3 entailed exploring the supports that promote successful developmental transitions. These supports covered areas as broad as communication, appropriate environment, and interventions. Parents perceived their child and their role as a parent when they received the diagnosis in a positive, supportive manner. When communication is open and productive between the teachers, school, and parents, all parties were able to support the student. An appropriate environment included classroom setup, accommodations for sensory issues, productivity supports, differentiation, and outdoor environment. Participants discussed the interventions undertaken by parents and the schools, along with what types of interventions proved helpful and productive.

Research Question 4: What Are the Barriers That Inhibit Successful Developmental Transitions?

All seven interview participants discussed what they considered barriers that inhibited or prevented their child or student to grow and succeeded. Answering this research question entailed collecting participants' feedback, organized into primary themes that continued to appear across interviews. These themes were communication, environment, lack of accountability, lack of identification, lack of patience, and negative school experiences.

Communication

As discussed with Research Question 3, communication can also act as a barrier in both obvious and obscure ways. This section presents how parents received the diagnosis about their child in a negative way that acted as a barrier to growth and developmental transitions. Parents and teachers discussed how communication, or the lack thereof, between the school and parents and the school and the student also acted as a barrier to growth for twice-exceptional children.

Receiving the Diagnosis

Although Marie received Felix's diagnosis from a private neuropsychologist in a positive, supportive manner, Kristy did not have the same experience when she learned of Charlie's diagnosis of high-functioning autism. She explained, "The evaluation was done through the charter school last year because he was having so many big emotional outbursts that were disruptive to [the classroom] and the playground." As Kristy explained, the school psychologist approached the testing with the concern that Charlie was not accessing the curriculum when he was dysregulated. "If you have ADHD, you're not reading the room well anyway, as well as being super impulsive," she explained. "Charlie doesn't understand people's emotions or thoughts outside of himself." He would only become dysregulated during the afterschool program, not during the school day. Kristy faced resistance when she told "the first [public] school that he is having these problems in the afterschool program; they said, 'Yeah, well it's not happening here.' Thanks. Thanks a lot." The school psychologist thought Charlie's struggle was due to a lot of missed social cues and nonverbal communication that occur with students with ADHD; they did not discuss ASD with her. Kristy suspected there was more going on

with Charlie, which is why she contacted the private neuropsychologist for a full evaluation.

Between School and Parents

Communication between prior schools and parents has proven to be difficult, as highlighted by three of the four parents in this study. Kristy expressed frustration with her public school district. She had documents that revealed Charlie's deficits and asked the administration to explain them to her. Looking back, she regrets not recognizing the deficits for what they were. She recalled, "They wouldn't test him, and at that time I remember I was focused on the cognitive and I didn't realize the other issues at play. It was just so frustrating that I couldn't get help from the people who were supposed to help me." Kristy expressed that the public school was "anti-communication" with the parents. Last year, when Charlie became dysregulated at school, he ran out of the classroom and the aide followed him. Kristy related,

He told the aide, "Everyone hates me. Everyone yells at me. Everyone yells at my face. Nobody likes me, even at home. Nobody likes me. Everyone yells at me." They called [Child Protective Services] on us because we were "abusing" him, because "we were yelling at his face." So we had the whole social worker evaluation and the social worker said, "This is obviously not a child is who is being abused."

She explained that when Charlie is dysregulated, he says things that are not necessarily true. "I mean, it's true to their experience at the time, but it's not always reality and it's so frustrating."

Kristy was referring to the charter school that Charlie attended for third grade, which had not communicated anything to her at that time. The only phone calls Kristy received were from the school psychologist who told her, “Oh, by the way, Charlie made a comment today that he wanted to hurt himself, so I had to do an evaluation. He’s low risk.”

Another situation revealing strained communication between the school and parents was when Kristy met with the administration near the end of the previous school year. They expressed the need to evaluate Charlie for a Section 504 Plan, which would provide him with the support he needed. It was not until this meeting that she learned

He was yelling obscenities when he would get frustrated. I thought, “This has been going on for months! Why is this the first time I’m hearing about it?” He doesn’t yell obscenities at home. He doesn’t even use cuss words at home. I could have addressed [the problem] at home if they had told me about it.

For Marie, the communication issues with Felix’s school began when he started preschool. She admits that he was miserable and had a lot of sensory issues trying to cope with his environment. At the time, she did not know why he was struggling with preschool, but it was before his evaluation and diagnosis. Marie stated, “The teachers thought he was a disaster and told me he was miserable. He wouldn’t do any of the things [they] asked him to do.” Marie tried to find out why, but it was difficult to get information. In addition, she explained, it did not help that the preschool director thought she was pushing Felix to read before he was developmentally ready to do so.

Lisa was adamant that the teachers were not to blame for the struggles Ruthie encountered in her public school. She explained, “It was all the administration; they refused to do anything, including the head of Special Ed. The principal of the school was horrible, horrible, horrible, horrible.” Lisa continued,

The district was gaslighting anybody who had twice-exceptional kids, saying, “There is nothing wrong with your kids.” Obviously, they knew about it because head of Special Ed had a side gig helping parents get IEPs for their kids in the district. Our district has always been really bad about accommodations. They’re really good if you’re an average, high-achieving, middle-of-the-road kid, but if you’re [at] either or both ends of the bell curve, they have nothing for you.

Lisa was able to provide perspective about the GATE program in her school district. “When my two older ones were there, they had a combined Grade 4/5 GATE classroom and those were the two happiest years of the oldest kids’ schooling. Then [the school] stopped doing that because people complained that it was elitist.” Now that Ruthie is school age, Lisa noted that her district trimmed down the gifted program to be nonexistent.

Although Ruthie is enrolled at Three Pillars Lab School, Lisa has to go back to their home school district to discuss issues with IDEA and FAPE. “Last week, she did some of their testing and she’s got more psychosocial and their educational testing coming up. . . . All the things they refused to do in first grade they now want to do because they got in trouble.” The district wants to see if Ruthie can come back to public school but Lisa is adamant that will never happen.

Mr. Clark discussed communicating with families and the amount of time it takes to do it well. He identified a barrier that could occur in the way the staff and teachers at Three Pillars collaborate and communicate with families. He stated, “We may have strong feelings about what a student is ready for and what they need to be accountable for or how they should be accommodated, but if the family fundamentally disagrees, it can be really difficult.” He noted that this was especially true in terms of behavioral issues, continuing, “When there isn’t follow through at home, such as consequences for behavior at school, it really limits how much we can expect to achieve with development of certain skills.” When parents are willing to invest the time in helping their student get together with friends from the school, Mr. Clark found, it is easier for students to build those relationships with their peers.

Between School and Student

The communication between the school and student can be between teachers and the student or the broader culture the school is conveying to the twice-exceptional student. Marie had firsthand experience, stating, “When educators around you believe the worst for you, then that is a barrier because it stops so many processes from going right. [Felix] was literally spending hours in the hall crying.” The teacher and administrator thought keeping Felix crying in the hallway was good. She recalled them telling her, “Well, he’s dramatic, and if we leave and we ignore him, then he will still stop eventually.” The way they treated Felix was a barrier to learning, as he was not spending time in a classroom where he could see other students model appropriate interactions. She reflected,

I think that if adults are not on your side, then you are not going to progress. If they’re [adults] seeing you in a bad light, then you’re going to see yourself in a

bad light and not be able to grow. I really believe when you have teachers who are actively against a kid, then they're not going to have this successful developmental transition.

She shared having faced a constant struggle of knowing when to push and when not to within their family.

Lisa had a different experience, in that Ruthie's kindergarten teachers were SENG trained and very supportive, playing to her strengths. The problems began in first grade when the class size increase from eight students to almost 30. The loud boys, repetition, and rote learning did not work for Ruthie. Lisa believes the first-grade teachers and staff frustrated Ruthie because they were focused on remediation rather than her strengths. She explained, "That made her feel like she was less than or defective in some way. If I had to do it again, I probably wouldn't" enroll her in a large class or a school that emphasized rote learning.

Mr. Clark discussed communication from a school culture and the broader culture to the individual students. Students are always receiving messages about "what success looks like, what giftedness looks like, and this what being a smart kid looks like." He explained that teachers and parents perceive, "I know that you know this, or you know you're a smart kid; why can't you just finish this assignment or follow these directions?" For him, such statements indicate that a deep understanding of a student's profile is missing. Mr. Clark stated,

It's inadvertent communication. For example, I only recognize part of what's going on with you, but not why something else might be so difficult. Or why you

might need to slow down and back up and have a conversation about how this is going to work for you. Or what exactly it is that's making this challenging, because it might be something that you've been successful at before.

Mr. Clark referenced the icons displayed around campus, such as Isaac Newton and Benjamin Franklin, people suspected to be twice-exceptional in some way. He explained that, without those examples,

It's hard for them to see a successful path. It becomes a lack of perseverance and maybe emotional problems that compound. We have students with depression just because they don't really see it getting better. The barrier for many students occurs when we don't have role models of success and understanding.

Environment

The environment for students can serve as either a support or barrier to success. As discussed, the lack of identification for their children has forced many parents to seek outside help in the form of educational, psychological, and medical evaluations. Another contributing factor is the lack of professional development, identified by Dr. Peters, whereby teachers do not realize the impact a learning difference can have on identity development. The appropriate environment for a twice-exceptional student is one that challenges advanced abilities while simultaneously scaffolding areas of need.

Lack of Accountability

The issue is not whether teachers may not be motivated to do the right thing for their students; rather, there may be a lack of accountability in ensuring that accommodations are implemented with fidelity. When Ruthie was in crisis, the psychologist and

educational therapist at Summit Center advised Lisa to take her out of school. By law, the school is supposed to contact the parent when a student is removed for medical leave and offer in-home classes. Lisa hand-carried the note from the psychologist to the administration at her school. She described the response as, “We heard nothing. Zero, zilch, nada.” She thought, “She can’t go back here. She can’t go back.”

Lack of Patience

The topic of lack of patience and understanding for the developmental trajectory of twice-exceptional students yielded several responses from parents in this study. Marie recalled asking herself, “How do I scaffold the weaknesses?” instead of “How do I bolster the strengths?” She was emphatic, stating:

I’ve had to explain, and I hate having to explain; I just get mad or have to leave the playground. Felix wants to play developmentally appropriate games or with younger kids, but the other parents don’t know what to do when a larger boy is still playing younger, imaginary games.

Marie thinks “the problem is that a lot of the world has been set up to focus on the deficiencies, not the strengths.” She admitted this was the case even within her own family structure.

Katherine shared that she sometimes feels a sense of isolation and loneliness. She said, “When you’re with parents of typical kids, they don’t understand the experience and they don’t understand what everyone is going through because, how could you?” She described the emotional stress Julia feels when others cannot understand what she is enduring, making her ability to connect with others even more challenging. Katherine

remarked that Julia's emotional stress "adds to everything else because that stress can hold her back. It makes her feel hopeless and like she wants to isolate more. She wants to avoid social situations sometimes ... and doesn't want to deal with it." Katherine observed all those things and family that add to her stress, acting as a barrier for Julia.

She said:

I strive to be the perfect advocate for her and the perfect parent for her. ... As parents, we fail daily to do those things, so it's a constant process. There are times when I have screwed up in the way that I handled something, and I see immediate results that were my fault.

She concluded, "There is always human error or parental error that happens that inhibit successful developmental transitions."

Kristy took a wider view of barriers that can inhibit successful developmental transitions. Lack of understanding was the primary cause she has experienced firsthand. She commented,

This is such a niche-y population. You know, this whole special education piece has existed in America forever. I feel that kids, even with just a diagnosis of ADHD or some other diagnosis, their emotional needs are misunderstood and unfortunately not usually determined to be that important. I think that, as adults, we just expect kids to march in this line and follow these directions and do what we say, just because we're the adult in the world and we're in charge.

The problem, she explained, is that the attitude of "We're in charge and you do what we say" doesn't work with these kids who have so much internal richness." Kristy brings her

perspective of parenting two older children to her answer regarding neurotypical kids, stating, “Even the normal cognitive kid has a whole layer of dysregulation that they have to get through to be able to perform what you want them to perform.”

She expressed a need for adults to understand that “no kid, at least no preteen, is trying to misbehave. They really want to please people they care about and adults in their lives. They just have a level of stuff to get through that is getting in their way.” Kristy believes that adults fail to understand this because people do not openly speak about feelings and beliefs. Accordingly, such ignorance poses a tremendous barrier for children such as Charlie to grow.

Before Diagnosis: Comparisons to Others

Every parent interviewed recalled having had an image of what childhood and school experiences should be like for their children. When Kristy took her family to see *Charles Dickens: A Christmas Carol*, she never expected her three-and-a-half-year-old child to pay attention to the dialogue and characters of a professional show, let alone critique it as if he was writing a high school English paper. She related, “I’m thinking this is not normal. It’s just not normal!”

Katherine said that Julia experienced pressure to conform from her family, her school, her teachers, and the culture at large. She expressed regret for her frustration when she and her husband would hold unrealistic expectations of Julia. But, she said, “You do it and then realize that, ‘Omigosh, this is the absolute wrong way to go about this!’ And then you back off and allow her to” grow at her own pace.” Very often, Katherine said, the process is trial and error.

Lisa described Ruthie being similar to her older siblings: “They were always all frustrated with the limitations of their bodies because their minds were so far ahead and their bodies just couldn’t keep up.” As she explained, most of her realizations were in hindsight because she did not figure out any of this with her children until Ruthie. With her two oldest children, she also subscribed to “Oh, they’re gifted; they’ll be fine,” but learned that they were not “fine” just because they were gifted. She shared, “I couldn’t figure out why they did crummy in their schools and didn’t turn in papers and assignments.” Now that Lisa has a better understanding of twice-exceptionality, she is more patient with Ruthie.

The most vocal of the parent participants regarding comparing a twice-exceptional child to other children was Marie. She recalled that Felix was miserable when he started preschool, where his sensory issues were preventing him from being able to handle that environment. She explained how frustrated she was at the time because she did not know why these things were occurring, but she thought, “Why can’t he just enjoy this?” On good days, she has a lot more perspective and feels that she can treat him with compassion and respect. Her greater understanding of Felix allows her to remember, “Hey, this is how you’re built.” Other times, she recognizes that the bad day is a product of her thinking “‘Why can’t you just be neurotypical?’ or ‘Why can’t we just do this thing?’ or ‘Why can’t you be like them?’ You go through a lot of comparing.”

Asked if she still compares Felix to others, Marie replied, “I still do, but it’s with less judgment upon him. I still look at his neurotypical peers ... but I don’t have as much grief around it as I used to.” She admitted believing his diagnosis is unfair and feeling bad about it, but said she is getting to a place of greater acceptance where “it is what it is.”

She explained that having a twice-exceptional child is “a process, but it’s also super fun just looking at it as science. I love that aspect of it.” Her understanding of Felix allows her the space to realize, ““Oh, you’re doing that because your brain does this’ . . . and that’s kind of fun.”

Negative School Experiences

Each parent participant shared examples of how negative school experiences influenced their child and acted as a barrier, inhibiting potential developmental transitions. Kristy recalled that Charlie would make conflicting statements that ranged from “School’s fine” or “I hate school” to “I want to die.” Charlie has a birthmark on his face, which he would sometimes say he wanted to burn off. Kristy explained that he was being teased but he would not open up and talk about school. He told her multiple times, “Mom, I want to do more complicated math. Math is stupid. I’m doing this again; I’m so frustrated.”

Ruthie had a negative experience when she needed help from a yard duty monitor in her elementary school. She came home and told her mother, ““You told me they were there to help me if I needed help, but they’re not. They’re just there to make sure that we follow the rules and be good.’ She equated [school] to a prison.” Lisa explained that Ruthie would avoid the yard duty monitors because she understood they were not there to help her.

Marie believes that the negative feedback she received on a daily basis had a tremendous impact on Felix and the family. Every communication she got was about what Felix was doing wrong or the ways he was disrupting the class. She found it difficult to calculate how much of an impact the negative perception his teachers had.

Felix began to avoid participating in tasks that would affect or support his social-emotional growth because “if you feel like you can’t do it, then you’re just going to avoid doing it.”

Katherine spoke about how Julia’s OCD behaviors escalated to where she was

Chewing on her fingers to the point where she was really hurting herself, or her feet. She would bite her nails or pick at her face. She once pulled her thumbnail out of her thumb and she dug it out—really bad things. Those were happening in class, or she would [want to] hide so she would just pull herself inside her shirt and stay there in a ball for the whole class.

Julia felt compelled to engage in these OCD behaviors but also realized she was hurting herself. Katherine shared, “She had no way of stopping it, but she was very vocal and articulate about how hard it was to be in her own brain and she would cry and wish that there was a pill that could fix it.”

Both teachers contributed their knowledge of what students have told them about previous school experiences and how it compared to Three Pillars. Many of the statements Ms. Hanks has heard from her students have been very negative. Often, her highly gifted students tell her, “Oh, I’ve never learned something new in school.” Other statements have included “I learned nothing,” “My teacher didn’t know anything,” “My teacher was mean,” “My teacher hated me,” or “I got in trouble all the time.”

Ms. Hanks recognizes that many teachers do not have the resources to curriculum compact and accelerate students. She explained, “It ends up as a difference between being gifted and just given more work versus being gifted and doing higher-level types of

activities.” Most of the experiences her students have shared have been negative and Ms. Hanks works to change these to more positive experiences.

Mr. Clark related that some students have spoken to him about past instances of bullying because of their interests, because of a learning difference, or simply because there was something they just could not do. Sometimes they were bullied because they were exhibiting their giftedness in a particular way that drew attention to themselves. Mr. Clark shared that being bullied “can be a huge, huge discouragement.”

Summary

Answering Research Question 4 required exploring the barriers that can inhibit developmental transitions in preadolescent twice-exceptional students. All participants in this study discussed their thoughts and experiences regarding what they considered barriers that constrained their child or student in growing and being successful. Feedback from every participant underwent review and analysis, resulting in themes that included communication, environment, lack of accountability, lack of identification, lack of patience, and negative school experiences.

Chapter Summary

Chapter Four included a restatement of the introduction for the research and its design. Data from two areas of this study, school site observation and participant interviews, facilitated developing a description of the case. The descriptive framework, according to Yin (2018), is one of the general analytic strategies used to “organize the case study analysis ... [where] a descriptive approach may later help to identify the appropriate explanation to be analyzed (p. 171). The descriptive data, school site, and participants presented in this chapter served to answer the central research question.

The researcher obtained the school site descriptive data through observation, utilizing an observation protocol rubric. The participant descriptive data provided context and background information that included the individuals' role (parent, teacher, or psychologist) and background experience. In qualitative research, participants' perceptions of the phenomenon are at the center of the study, with their perception of developmental transitions of preadolescent twice-exceptional students quoted and analyzed. The presentation of findings, through the voices of the participants, allowed the researcher to view the reality of the perceptions of twice-exceptional children's developmental transitions through the lens of the lived experiences. Finally, the themes that emerged from data analysis received discussion.

Following data analysis and triangulation, two themes emerged across all three participant roles. There was depth in participants' perceptions of the need for explicit social and emotional language instruction from the teachers and the psychologist. Also notable was the level of honesty and the sensitive nature of the lived experiences the parent participants shared about their twice-exceptional child.

Chapter Five is a summary of this study with an in-depth discussion of the implications based on these findings. First will be a descriptive narrative summary for each research question. Emergent themes and assertions based on those emergent themes will follow. The chapter includes the limitations of the study design and findings, followed by implications for practice and research. Recommendations for future research will complete the chapter.

Chapter Five: Discussion

“As a kid ... I remember vividly (and painfully) what it was like to grow up with a dual identity.” (Kaufman, 2018, p. 13)

Introduction

The purpose of the study was to examine the perspectives of parents and educators of the perceived developmental transitions of preadolescent twice-exceptional students. In Chapter Five, the researcher connects data collected throughout this study to the research questions and the theoretical framework. The chapter also presents personal and practical lessons learned, limitations of the study, and implications for practice as well as areas of future research.

The purpose of the study was to fill the identified gap in the literature regarding the lived experiences of individuals working to parent and educate this asynchronous population. The lack of research regarding the developmental transitions of twice-exceptional students and the body of knowledge for professionals to reference served as a barrier for social growth and maturity, the two factors identified as having the most impact on academic achievement (Foley-Nicpon et al., 2011; Neumeister et al., 2013; Weinfeld et al., 2013; Wormald et al., 2015).

The themes that emerged from the collected data receive examination in relation to the primary and secondary research questions. The primary research question was, What are the perceived developmental transitions of preadolescent twice-exceptional students?

The four subquestions were as follows:

1. How do parents perceive growth in both academic and psychosocial development?
2. How do educators perceive growth in both academic and psychosocial development?
3. What are the supports that promote successful developmental transitions?
4. What are the barriers that inhibit successful developmental transitions?

A discussion of themes occurs within the framework of Dąbrowski's (1964) OEs and Erikson's (1968) theory of psychosocial development, when appropriate.

Theoretical Framework Revisited

Dąbrowski's (1964) construct of OEs, as part of his TPD, served as part of the theoretical framework for this study. Aronson (1964) explained Dąbrowski's TPD and the accompanying OEs as something not to fear or view as a negative process. Rather, Dąbrowski asserted that "disintegration is the basis for developmental thrusts upward, the creation of new evolutionary dynamics, and the movement of the personality to a higher level" (p. 6). This theory aligns closely with twice-exceptional students, as Dąbrowski based the description of personality development on clinical work with creatively gifted individuals. The scholar identified three occurrences necessary for a disintegrative process to occur. First, there must be an endeavor to break off the existing, uniform structure the individual perceives as tiring or repetitious. Next is a disruption of the

existing personality structure, followed by a clear grounding of the new value that adopts an appropriate change in the structure of the personality on a new level (Dąbrowski, 1964).

Erikson's (1968) theory of psychosocial development was the second framework used to analyze data. The theory is helpful in understanding the current baseline against which to evaluate students' their maturity and development. Although using Erikson's theory was useful, application to the gifted population requires caution (Wiley, 2015). The participants in this study all commented about what they had observed regarding different stages and development of their children and students.

Theory of Positive Disintegration and Overexcitabilities

According to TPD, "Certain prerequisites are needed for the journey from egocentrism to altruism. One is familiar to us, namely, a facilitative social environment; the other, developmental potential, is unique to TPD" (Mendaglio, 2011, p. 2). Necessary for teachers and parents to consider when working with gifted and twice-exceptional students is to provide a positive social environment that nurtures developmental potential. Mendaglio (2011) asserted that "our interventions should be aimed at helping people understand their emotions in the context of TPD principles" (p. 17). Parents interviewed for this study identified OEs by either explicitly naming them or presenting anecdotes that clearly demonstrated OEs.

Psychomotor

Julia has demonstrated strong psychomotor OEs with her uncanny ability to climb trees. She can climb other structures but prefers to climb in the nature environment. She is impulsive and has several nervous habits such as motor tics, nail biting, and pulling the

skin on her face. Felix also demonstrates high psychomotor OEs with his preference for high-contact play, pretend battle, and wrestling. He, too, has demonstrated nervous behaviors with pulling and folding the skin on his face.

Sensual

Charlie, Felix, Ruthie, and Julia all demonstrate sensual OEs. Charlie and Felix show this OE by their response to sensory stimuli. Although they do not always seek sensory stimulation, they have a high OE reaction that includes outbursts, tantrums, slamming doors, and screaming in response to unfavorable situations. Julia and Ruthie both demonstrate this OE with the aesthetic pleasure they get from all aspects of nature.

Intellectual

All four children showed intellectual OEs. Marie reported that Felix seems to spend 9 months out of the year “stuffing his brain” and learning as much as he can, and then suddenly stopping over the summer months to focus on his social and emotional skills. Similar to Felix, Charlie showed intellectual OE as early as 18 months when he began to identify letters and their corresponding sounds. He loves math and diving deep into areas of interest such as World War II or paleontology. Ruthie demonstrated intellectual OE early in life when she began to form new concepts about the universe. She exhibited tenacity in her problem-solving skills by staying up all night to teach herself to read a graphic novel that sparked her imagination. Ruthie has a preoccupation with moral thinking and social justice, as evidenced by her protesting against a private landowner attempting to cut down a tree on public property. Julia has also demonstrated intellectual OE with her independence of thought and moral compass, in addition to her ability to

make a significant number of original connections between concepts to form abstract ideas long before her peers.

Imaginational

Katherine identified Julia's strengths as being in the areas of imagination, visual processing, storytelling, and art. Felix has a high imaginational OE shown by his continued play with "stuffies," or stuffed animals, with his favorite being Rainboonicle. Ruthie demonstrated high imaginational OEs with the pumpkin she named Punkaboo, who was the leader of all the other pumpkins at Halloween and gathered a cult-like following of other students' pumpkins that would bow down before him. During Pre-K, kindergarten, and the beginning of first grade, Ruthie decided she was going to be a puppy. Lisa reports that in awkward situations, Ruthie would go into puppy mode, finding an imaginary place where she was safe. Lisa supported Ruthie's imagination, buying a pink, rhinestone-studded collar and an engraved nametag.

Emotional

Although Charlie tends to be "emotionally closed," as reported by Kristy, his responses and depth of feeling indicate high emotional OE. Charlie experiences emotions deeply to the point where he once stated that he wanted to die rather than go on with life as he knew it in his previous school. Katherine reported that, when Julia was younger, she would yell or throw things at people when she was upset or if they disturbed her while she was engaged in a project. Her emotions would run high from frustration with her lack of attention or OCD.

Each of the children discussed here demonstrated two or more OEs. As reported by parents, teachers did not perceive these OEs to be an annoyance. Each parent expressed

the desire to support her child by listening and providing the space and materials for projects at home. The parents communicated pride in their child by the anecdotes they provided and how they encouraged originality in thinking.

Theory of Psychosocial Development

Because of current literature in parenting books and college psychology courses, the parents in this study had expectations of the typical social and emotional developmental milestones most children demonstrate. Most of the information based on Erikson's (1968) model did not appear to be accurate for these families. Parents shared several examples where their child appeared to be experiencing either multiple stages at the same time or when the stages did not match Erikson's timeline. Further discussion on this topic appears in this chapter.

The disconnect between expected and actual milestones caused significant cognitive dissonance for each parent, as evidenced in their frustration before receiving the diagnosis and the grieving they experienced afterward. Some parents had always thought their child would attend public school, with one relating that several family members were public school teachers. Others found the negative feedback received from teachers and administrators about their child's immaturity to be incredibly stressful. This stress caused further frustration, often increasing parents' inclination to compare their child to neurotypical children.

All of the parents reflected on how much their roles had changed since receiving their child's diagnosis. They suddenly had to advocate in both the educational and medical systems, which may have given them less time for role transition. Participants reported having to modify their parenting style to be the parent their child needed, not the parent

they envisioned themselves to be. Such an adjustment can be difficult even with support from family, who might not understand what the twice-exceptional child needs, causing increased stress.

Parents acknowledged a period of grieving but admitted first needing to take a deeper look at themselves and their expectations of their children. They had to do deep, emotional work on themselves before they were capable of modifying their parenting. Marie spoke about the psychological and introspective work necessary to open herself to a larger view of her son and his challenges, thus broadening her view of “normal.” This study’s findings regarding participants’ struggles in changing parenting methods can provide educators, professionals, and parents with guidance on where informational resources and support are still needed.

There are likely differences among the gifted compared to the typical population regarding the five psychosocial developmental stages Erikson (1968) associated with the first 18 years of life: trust versus mistrust (years 0–1); autonomy versus shame and doubt (years 1–3); initiative versus guilt (years 3–5); competence versus inferiority (years 5–10), and identity versus role confusion (years 11–18; Wiley, 2015). In the context of the asynchronous development demonstrated by gifted children, an increase in inner tension results in the inner conflict of self-definition and identity (Tolan, 1998). Gifted children often do not meet the milestones on the expected timeline outlined by Erikson. Without a more comprehensive developmental trajectory, asynchronous development in twice-exceptional children can be mistaken for pathology, mental illness, or delay. A gap in the research shows the inability to set expectations of gifted and twice-exceptional children’s identity development. As a professional, Dr. Peters considered the possibility of a twice-

exceptional student experiencing two psychosocial stages simultaneously. Conceptually, he explained, it makes sense that twice-exceptional students could experience multiple stages at the same time, such as trust versus mistrust alongside industry versus inferiority. The data yielded from interviews provides examples of where twice-exceptional students were not skipping stages, as defined by Erikson, rather they were experiencing multiple stages simultaneously. Erikson asserted that children would resolve the crisis of each stage, but twice-exceptional children appear to be working to resolve multiple crises at the same time, potentially slowing their developmental transitions. Further research is needed to examine how twice-exceptional children experience Erikson's stages to understand their developmental trajectory.

Ms. Hanks, a teacher at Three Pillars Lab School, reported that many of her students came to her class saying they had never learned anything in their prior school. Kristy recounted a story of Charlie asking for more difficult mathematics in school, but his teachers would not provide any assignments above the third-grade level. If the academic work is too easy, little to no effort is required, leaving the student without an opportunity to develop a sense of competency over inferiority (Cross, 2001; Wiley, 2015).

Ms. Hanks also found that the search for independence can play a role in her students' development. She saw the social component of development occurring in fourth and fifth grade, with her students seeking independence from family as their identities continued to develop. This search for independence, autonomy versus shame and doubt, is associated with the first 3 years of life. As students continue to seek greater independence, they also struggle with the need for social acceptance. McLeod asserted that if students have been "criticized, overly controlled, or not given the opportunity to assert themselves ... they

may become overly dependent upon others, lack self-esteem, and feel a sense of shame or doubt in their abilities” (p. 3).

The final stage of Erikson’s (1968) theory appropriate to address with this student population is identity versus role confusion (years 11–18). Although identity formation is most closely associated with adolescence, the data collected in this study contradicted that idea. Mr. Clark reported that several students in his fifth and sixth grade classes had already begun to struggle with issues related to identity and gender. Based on data analysis in this study, the researcher would argue that identity development begins earlier for some gifted and twice-exceptional students; thus, the topic could need further research. Their asynchronous development, level of awareness, and high sensitivity to messages about themselves and their role in society may be a factor in twice-exceptional children’s identity formation earlier than previously thought. Identity formation, already a tumultuous period for adolescents, can be more confusing when coupled with mixed messages about their role in society as gifted students (Cross & Frazier, 2009) and possibly even more so for twice-exceptional students.

The aforementioned examples stemmed from the data collected and analyzed in this study. The asynchrony twice-exceptional students experience, from the perceptions of parents and teachers in this study, appears to be broader and deeper than the extant research indicates. Based on the rich data emerging from parent and teacher interviews, the researcher believes that continued attention to this endeavor will contribute to developing a more accurate profile of twice-exceptional students.

In sharing his professional experiences, Dr. Peters demonstrated the possibility that children can simultaneously experience one mini-stage in their emotional development

and a different mini-stage in their social development. For example, children could manage their emotions in a situationally appropriate manner in public but may not yet have the ability to reflect on their own behavior and how it is perceived by others.

Connections to the Research Questions

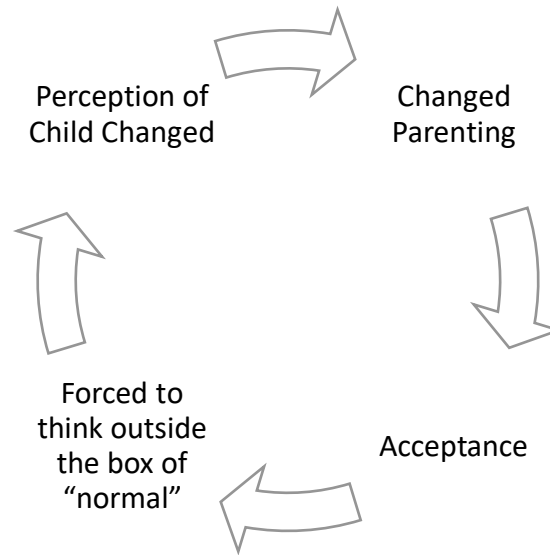
As noted by Buss and Zambo (2010), data collected through photographs, observations, and interviews “demonstrate complementarity, thus providing a broader and more enhanced interpretation allowing for greater confidence in inferences made from [a] study” (p. 67). In this section, each research question receives exploration, with supporting data addressed and elements of theoretical frameworks used to help create the themes (cf. Creswell, 2014). The themes discovered within each research question follow.

Parent Perceptions

Changing Perceptions Changed Everything

Each parent interviewed for this study communicated the same idea about how their parenting changed. Change did not come because they received advice or support or found relevant materials on how to parent twice-exceptional children. Parents expressed their desire to receive support or materials to learn how to modify their parenting; however, they had to obtain this information through trial and error. Their parenting style changed over time as their perception of their child changed, forcing them to parent in new and different ways. Figure 5.1 shows the ongoing cycle of parental perceptions.

Figure 5.1. Cycle of Parental Perceptions



As discussed in Chapter Four, the four parents had notions of how to parent their twice-exceptional child. These ideas were either from their own experiences as a child or based on the parenting style used with their older children. The tempering change agent came from the experiences of challenges in securing the right educational environment, struggling with eating or potty training at home, and finding help to understand what was going on with their child. Each parent interviewed confessed to being forced to think outside the box of “normal” and find alternatives during those dark and difficult times. Educating themselves and finding a group of people living the same experiences provided the impetus to change their perception of their child into what it is today.

In the beginning, Marie felt she had to “fix” her son, leaving no time for “fun mom.” Katherine was focused on medical issues. Kristy compared Charlie to her older children and his classmates. Now that the parents have found a school that works to meet the needs of their children, they all related having a sense of calm. They know Three Pillars will educate their children at their academic level, and also help them grow as people.

Katherine never saw her daughter as being behind; rather, she always viewed Julia's progress as a parallel track that is different from her age peers. Although she has to maintain a focus on medical issues, they no longer dominate her life. "I see my role as a job to accept her exactly the way she is," she said. "My job is [to] scaffold [for] her whenever I can."

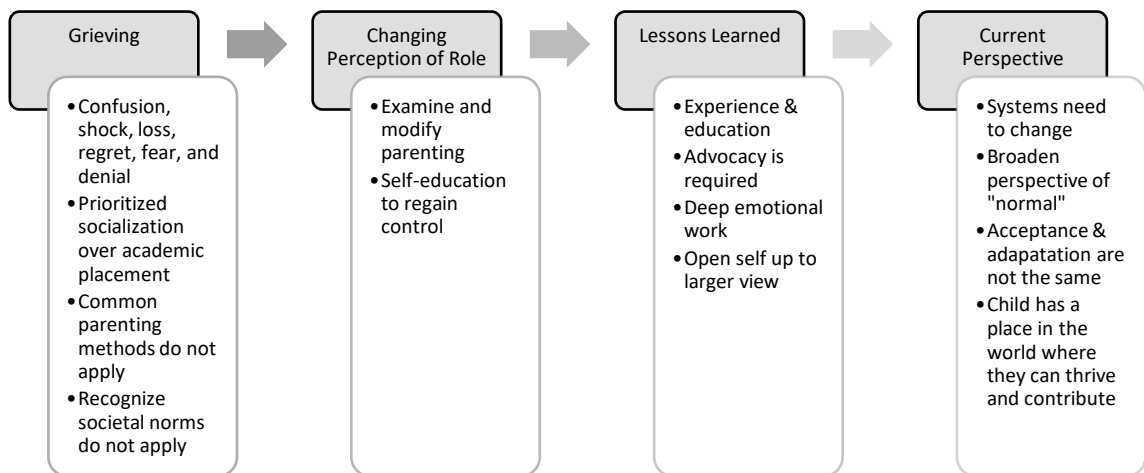
All the parents have come to a level of acceptance, working to facilitate growth in their children without forcing them to mature faster than they are able. They have let go of the expectations of public education, but only because they had a more appropriate educational option. The overarching implication is that traditional education for twice-exceptional children need to change. The methods used within the traditional system that force twice-exceptional children to mature faster than they are ready can cause psychological harm, backfiring and potentially inhibiting growth and developmental transitions.

From Isolation to Support

The experiences of the parents in this study differ significantly from parents of gifted or neurotypical preadolescent children. Parents of twice-exceptional children do not just fulfill the role of parent, instead serving as both the primary caregiver and as an advocate in both the medical and educational systems. The four parents in this study experienced a period of grieving upon receiving their child's diagnosis. Some of the feelings they shared include confusion, shock, loss, regret, fear, and denial. Kristy regretted that she prioritized assimilation and socialization over Charlie's academics. Katherine realized early on that common parenting methods did not work with Julia and she had to find alternatives. Marie shared being frustrated with Felix before they received his diagnoses,

as the constant negative feedback from his teachers and school administrator began to affect her. Each parent described the grieving process, which included crying and depression that spanned several weeks. Figure 5.2: Parental Experience of Grieving shows the process parents went through to get to their current perspective.

Figure 5.2: Parental Experience of Grieving



Parents who receive an unexpected diagnosis without any assistance may struggle to support and parent their twice-exceptional child. Parents reported that teachers were even less informed when it came to understanding ADHD, slow processing speed, or the accommodations necessary for their child to be successful in school. The tool critical for each parent to progress from grieving to acceptance was self-education. Sometimes knowledge started with a Facebook group or a SENG liaison; other times, it began with the psychologist or neuropsychologist who took the time to explain twice-exceptionality.

Marie recommended that all parents of twice-exceptional children get support and therapy to do the “deep emotional work” necessary to move toward acceptance. She explained that once she got to a point of acceptance, she was able to have more

compassion for Felix. Katherine's acceptance of Julia's diagnoses and needs came through time, advocacy, and self-education. She admitted there were "definitely differences in her perception in the beginning, where things were difficult as compared to today." She has gotten to a point where she recognizes a diagnosis is "just a name and it is just an observed phenomenon. It's just a syndrome, not a disease." Many parents expressed similar feelings but also experienced frustration with the way others see their children.

Marie explained that societal norms do not apply to twice-exceptional children. Most of the time, the term "neurodiversity" is a common reference for individuals with ASD; however, it is not always applied to gifted children outside the realm of gifted education. The concept of "other" can be threatening, whether the difference is in race, class, ethnicity, or sexual orientation (M. Greene, 1988; Lorde, 2007).

Parents of twice-exceptional children might more easily gain outside acceptance with the incorporation of giftedness or learning differences within societal norms. The effects of viewing twice-exceptional children as "other" are great and far-reaching. If educators do not learn about neurodiversity in all of its forms, the masking effect will continue, preventing gifted and twice-exceptional children from receiving the supports and educational challenges they need. If psychologists and school counselors are not aware of twice-exceptionality, they may pathologize twice-exceptional children for not reaching Erikson's (1968) developmental milestones on the same timeline as neurotypical children.

Parents' lack of supports for themselves when receiving the diagnoses, combined with the inability to easily access comprehensive information, can extend the time parents

spend in the grieving process. The longer they are grieving, the more likely they are to experience depression and withdrawal as well increased frustration with their child. The research is clear that depressed parents are not responsive parents. Twice-exceptional children need more from their parents, especially in terms of advocacy in the educational and medical systems. When the twice-exceptional child was not their firstborn, parents were even more surprised that they needed a different parenting approach than that used with the older siblings. In-person or online support groups for parents can be very useful to gain perspective and learn about local resources.

Parents said that educating themselves as much as possible enabled them to regain control over their lives. Each parent expressed the drive to continue learning not only to support their child, but as a support for themselves. Self-education came in many forms, including seeing an educational therapist or a psychotherapist, attending conferences, listening to podcasts, and reading as much as they could find. Not one parent had learned about twice-exceptionality from their school district, indicating the chasm between research, the reality of lived experiences, and practice within an educational environment. This is an area that is ripe for development in the form of professional training.

Individual Advocacy

Beyond educating themselves, the parents shared the need to work to broaden their perspective of “normal.” Studying the learning differences, medical issues, and educational needs of their twice-exceptional children empowered parents to advocate for their children. Individual advocacy proved enlightening when the parents realized that the systems designed for typical children did not fit their own. Half of the parents in this study were influenced by individual advocacy. Marie decided to take her knowledge and

experience of raising a twice-exceptional child and change her career. Along with other parents, Marie said she has to constantly learn, read, and stay current on the research. She recently started a job related to the field of twice-exceptionality, working with and supporting families with disabilities. For every parent interviewed, advocacy and self-education paved the way to acceptance.

The educational system needs to change to provide equitable access to all learners. Sometimes the change is not in the number of teachers, the curriculum, or attendance within a high-ranked school district. The change may be as simple as a different perspective of a student and a level of patience practiced by a teacher. Educators' perspectives will not change without education through professional development to learn about how to use strengths-based instructional strategies and differentiated assessment. In addition to professional development, teachers require support from their administrator, which could come in the form of reducing the class size when a teacher has two or more twice-exceptional students. Lastly, systemic change needs to address the problem of special education and general education continuing to operate as separate entities.

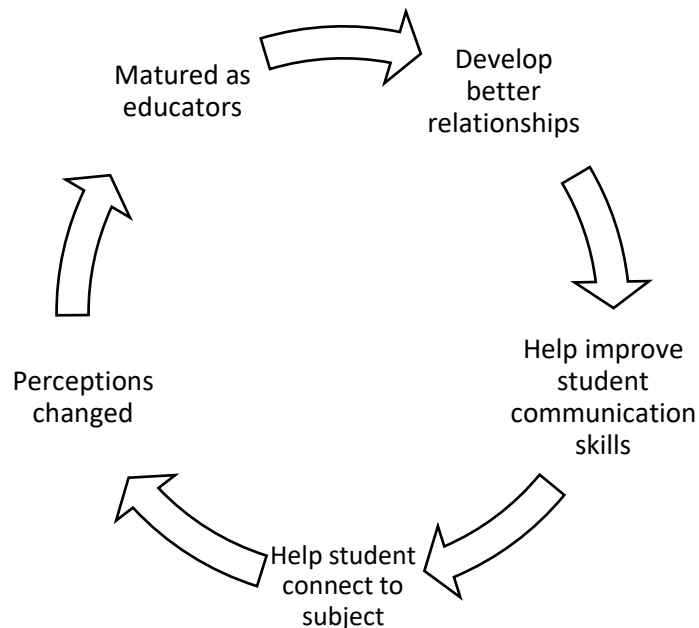
Teacher Perceptions

Teaching the Whole Child

Both educators interviewed for this study communicated the same idea about how their pedagogy changed as a result of teaching twice-exceptional students. It did not change because they received advice or simple professional development on how to teach twice-exceptional children; rather, change came from the teachers' desire to develop better relationships with their students, helping students make connections to the subject matter and improve their communication skills. Their teaching style changed over time

because the perceptions of their students grew as they matured as educators. Figure 5.3 shows the cycle of teaching the whole child.

Figure 5.3: Teaching the Whole Child



As discussed in Chapter Four, each teacher had definite ideas of how to teach upper elementary children. Neither had received any gifted training in their preservice education, which shaped their pedagogy in an effort to meet the immediate academic needs of their gifted students. Both teachers provided examples of gifted characteristics their students expressed, ranging from writing to mathematics and leadership to creativity. Giftedness does not guarantee success, as many highly gifted twice-exceptional students struggle to produce work commensurate with their ability. Both teachers expressed their commitment to finding the right accommodations for all students to be successful and demonstrate their learning.

Educating twice-exceptional students extends beyond finding appropriate accommodations in instruction and assessment. Trust, safety, and acceptance are paramount for the twice-exceptional student to persevere and produce work. Sousa (2009) stressed the importance of acceptance in the classroom where gifted students have a greater propensity toward perfectionism and may not want to persevere through difficult tasks. Both teachers noted that learning about every student and developing those relationships was fundamental to student growth and success. If they have a connection with their teacher, students demonstrate their giftedness and remarkable motivation when they connect learning to their area of interest. Relationships take time to build and trust is not established overnight; accordingly, staying with the same teacher for more than a year can benefit the twice-exceptional student. To develop the relationships between teacher and student epitomized by safety and trust, Noddings (2012) recommended teachers work with the same students for 3 years. Taking the time to develop relationships aligns with the four major components of care: Modeling, Dialogue, Practice, and Confirmation (pgs. 237-238). Three Pillars practices this curriculum, looping in the upper elementary program of Grades 4 through 6, where students maintain the same primary teacher until they demonstrate readiness for transition.

General education teachers who do not have the increased communication of teachers at Three Pillars might miss some of the challenge's students encounter. Mr. Clark noted that academic or productivity challenges may only be visible in certain contexts and in day-to-day interactions where the twice-exceptional student might appear neurotypical. Twice-exceptional students' vocabulary may be at a much higher level than their peers,

indicating giftedness in some areas with challenges appearing in others. These challenges can block learning or the ability to demonstrate what they know. It is the increased communication between teachers and the entire staff at Three Pillars that enables one teacher who may not at first see that challenge to support the student to grow and develop resilience.

Experienced teachers at Three Pillars Lab School lead advisory groups consisting of nine to 10 students who meet once a week to discuss challenges and successes. They work on explicit social and emotional instruction, including social skills, conflict management, taking perspective, and problem solving. The teacher acts as a mentor, introducing terms students will use when collaborating or negotiating with somebody else in a project. The new phrases could pertain to needing personal space or asking someone to respect their learning differences. Students assess these topics, such as self-advocacy, in class, receiving a grade alongside content area knowledge, writing ability, research skills, and note-taking skills. Mr. Clark noted that the assessment includes a section on perseverance, resilience, self-advocacy and self-awareness, subjects students see on their report cards, right next to subject grades.

The social skills automatically learned by neurotypical students require explicit instruction and opportunities for practice in an authentic setting. Once thought of as soft skills, these abilities have proven to be more important for success in work and life than is subject matter proficiency. Social skills include effective communication, responsibility, teamwork, work ethic, flexibility/adaptability, and interpersonal abilities (Moreno-Luna & Barco-Alzate, 2019). The interpersonal skills incorporate subsets of skills, such as reading body language, nonverbal cues, vocabulary, expressive language,

conversational turn-taking, problem solving, conflict resolution, and self-regulation. The focus on both academics and social and emotional development indicates Three Pillars Lab School's focus on the growth of the whole child. As COVID-19 has spread across the globe, forcing schools to close, teaching social skills will become increasingly important with regard to social distancing from one other.

Paradigm Shift in Pedagogy

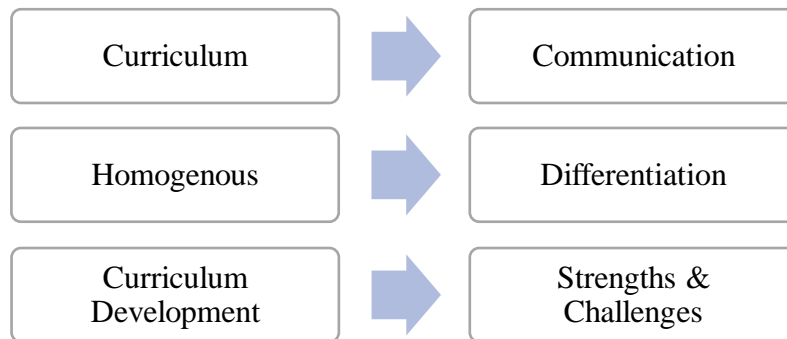
Both teachers reported having a high focus on designing engaging curriculum aligned with Common Core State Standards outcomes at the beginning of their careers. Scope and sequence, as well as pacing, were necessary to meet the needs of their gifted students. At the beginning of her career, Ms. Hanks defined her role as delivering as much curriculum as possible. She admitted to significantly underestimating the impact a teacher has on her students. Ms. Hanks explained that, as a neurotypical person, she did not give much thought to the idea of a teacher being more than “just being a teacher.” Some teachers inspired her, yet she had the ability to move on from the ones she did not like. Mr. Clark reported that, as a junior teacher, he did not have the time or comfort to put effort into communication with other teachers and parents.

Grouping was another area in which both teachers reported having made significant changes since the early years of their career. In the beginning, Ms. Hanks would split her class into three homogenous groups—no understanding, some understanding, and advanced understanding—rotating the advanced group between the other two to provide support during small-group instruction. Ms. Hanks reported that she rarely employs homogenous groupings for small-group instruction in this manner anymore. She has

grown as an educator with more pedagogical tools in her “toolkit” and has shifted her focus to learning about her students to provide differentiation.

Almost a decade of teaching has broadened Mr. Clark’s concepts of giftedness and twice-exceptionality. His primary responsibility has shifted from curriculum development to emphasizing that every student has strengths and challenges. He works to create the environment and relationships with his students where they can recognize their own asynchrony and feel safe to talk about it without shame. Mr. Clark sees his role as helping students grow at an achievable rate while normalizing cognitive neurodiversity. It is an interesting concept, a pattern of growth through which most people progress as an educator. Mr. Clark feels more successful as an educator by focusing on each student’s needs and processes of growth. The student feels safe to take risks, potentially producing more work than when the teacher was focused on curriculum development, assessment, and alignment with standards. The focus on preservice teacher programs is heavily weighted on curriculum development rather than balanced with the development of the whole child. Figure 5.4: Paradigm Shift in Pedagogy illustrates the shift in focus from the early years of teaching to the current perspective.

Figure 5.4: Paradigm Shift in Pedagogy



Whole child development should be the focus of preservice teacher programs and professional development for general education teachers rather than just curriculum development and classroom management. A balanced approach emphasizing both curriculum and social and emotional learning would solve many of the problems that lead to high attrition rates among educators. Several benefits will emerge from focusing on the whole child, where students would not feel the need to dominate or bully others because they would feel seen and heard. Classroom management would no longer include bribery, shame, or threats. Teachers could create an inquiry-based classroom as the “guide on the side” rather than the “sage on the stage” (Stanton, 2019) because knowing all students and their unique interests would guide the curriculum. The whole-child perspective enables teachers to identify the strengths and challenges of each student to differentiate assessment.

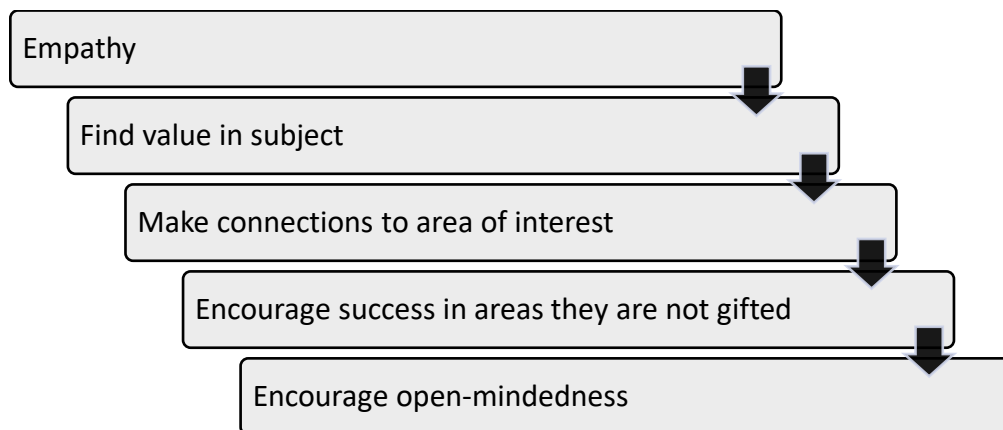
Masters of Differentiation

The one consistent element at Three Pillars Lab School is differentiation. When students are gifted in a particular subject, the teachers acknowledge their gifts and the good work they are doing. This is not an easy task, as students may compare themselves to their peers or hold extremely high standards for what they consider to be acceptable work. Mr. Clark noted that it takes a significant amount of growth and development to move from black-and-white thinking to seeing the shades of gray. The teachers at Three Pillars help students shift from basic knowledge acquisition and rote memorization to a more mature perspective of the subject matter during their tenure in the upper elementary grades and beyond. This differentiation does not typically occur at a public or charter school for gifted upper elementary students without highly specialized teachers. The

teachers at Three Pillars understand that a gifted student is not gifted at everything; therefore, teachers understand the need for differentiation between and among students to support and challenge their advanced abilities that could one day become career choices.

Both teachers reported beginning with empathy when a student in their class worries about not being gifted in a particular subject. Mr. Clark tells students that although humanities might not be their favorite class, they can find value in the subject. Based on the student's areas of interest, Mr. Clark will help that student make connections to the subject matter to demystify the content and make it relevant. His attitude is "no more excuses"; he encourages each student to believe they can be successful in areas in which they are not gifted. Along with this attitude, Mr. Clark encourages open-mindedness that a student could reveal abilities that had not yet emerged. Knowing their students and their students' interests allows each teacher at Three Pillars to effectively differentiate, finding ways to make connections to student interests, enabling the discovery of value to subject matter and the creation of additional strengths. Figure 5.5 illustrates the process the teacher utilizes to differentiate for a student who is not gifted in a particular subject.

Figure 5.5: Differentiation for Student not Gifted in a Subject



Supports That Promote Growth

Communication Is the Key

Even without a whole-child approach to education, communication is critical for team members to support the student in making the most growth during the school year. Often lauded and promoted yet rarely practiced, communication has proven to be the underlying key to success. Communication can begin with receiving a diagnosis from either a private or school psychologist who conducted testing for learning differences. As Dr. Peters attested based on both personal and professional experience, even under the best of conditions, receiving a diagnosis about one's child can be devastating. Every parent in this study went through a period of grieving and had difficulty finding resources. Receiving a diagnosis can be positive or negative depending upon the presentation to the parent; accordingly, professionals require training and should positively reframe the diagnosis in addition to providing resources.

At Three Pillars Lab School, the whole-child approach to education is the reason communication takes priority. The Three Pillars method is to gather the student information necessary to move forward with curricula. In public school settings, the researcher found that curricula take precedence, with the teacher learning about the students as the school year progresses. Mr. Clark noted that the information gathered about each student at the start of the school year allowed teachers at Three Pillars to make adjustments and differentiate with more agility.

The administrators and teachers at Three Pillars consider parents to be an integral part of the team. Parent participants said they had heard the same message at previous schools their children attended; however, it was not put into practice. Mr. Clark explained that

teachers used parents' goals to prioritize student goals, as the parents provided additional perspectives on their children. A new environment can affect behavior or attitude, dramatically affecting a student's ability to demonstrate cognitive skills. Mr. Clark reflected that, in his early years of teaching, he thought that communication was overly time-consuming and did not see the value. Today, he stresses the need for teachers to be proactive about communication with parents and other teachers. Twice-exceptional students frequently miss social cues, putting teachers and parents in the position of having to notice those cues. Frequent communication between the team gives teachers the ability to create an environment for scaffolding individual students based on their needs. Other topics of conversation pertained to student anxiety, grouping, transitions, whether a student is ready to adapt to a typical middle-school schedule of carrying their materials from class to class, and social and emotional readiness. Parents are a critical resource at Three Pillars in terms of prioritizing goals, providing a detailed profile of the student, and identifying key areas to target for growth.

Communication often does not extend beyond the adults during the elementary years. The teachers at Three Pillars spend time learning about their students through discussions, weekly advisory groups, and in-class projects. In addition to information provided by these scheduled opportunities, students indicate their interests and learning style preferences through surveys. Assessments are another form of communication between the student and school, whereby teachers can gather information such as environmental preferences and student-determined goals. During the site observation, the posters of famous figures were prominent around campus. These posters were of individuals suspected to be twice-exceptional, Mr. Clark noted, which was a way to

communicate that other people have lived the same challenges and faced the same types of asynchrony yet lived successful lives. Three Pillars communicates the message that twice-exceptional students have a place in the world and that they, too, have the opportunity to be successful.

Seeking Shangri-La

The psychologist, Dr. Peters, identified an appropriate environment for twice-exceptional students as one “to support and challenge the advanced abilities, because that’s the life force. That’s where you’re going to see the self-confidence. That’s where you are going to be training on what is prevocational, what that person might end up doing.” He explained that teachers and educators play a pivotal role in helping a child feel understood or misunderstood. Sousa (2009) recommended a team approach utilizing a comprehensive educational plan to address the cognitive, social, and emotional needs of gifted and twice-exceptional students.

An appropriate environment includes nontangible factors such as placement, social skills development, and the whole-child perspective. In this study, the environment was one specifically designed for twice-exceptional students; however, it would be beneficial for both gifted and nongifted students. Three Pillars provides students an authentic setting to learn social skills. Twice-exceptional students are also gifted and do not always require time spent on repetition. Public schools often do not have the time needed or scaffolding present for twice-exceptional students to practice emerging skills. Mr. Clark noted that identification of a student’s area of strength or giftedness was critical to enable placement in the appropriate class with differentiated curriculum.

The physical environment is just as crucial for success as the nontangible factors. These physical components include classroom setup, accommodations for sensory issues, productivity supports, and outdoor environment. Upon first glance, the classroom setup at Three Pillars is strikingly different, with fewer desks, flexible seating options, and a walking corridor. The gap between research and practice is glaring and well documented in public schools, yet at Three Pillars, that gap is minimal. Studies have shown that physical movement stimulates the four key chemicals of serotonin, dopamine, endorphins, and cortisol (Blackmer, 2018). Students with ADHD have lower levels of dopamine, the neurotransmitter that facilitates communication of nerve impulses throughout the brain, indicating the need for constant motor activity (Armstrong, 2010). Forbes (2012) noted that the neocortex is able to absorb more information when the body is moving in a repetitive pattern, such as pacing or rocking, as compared to sitting still. Rapport et al. (2009) revealed that working memory in children with ADHD may be enhanced during movement.

Findings from prior twice-exceptional research over the last decade were not yet put into practice in the general education public school classrooms the students in this study attended before transferring to Three Pillars. Most of the students with ADHD did not have the appropriate classroom environment or the ability to move. Parents reported that teachers from the previous schools struggled to find appropriate accommodations for the ADHD behaviors their children exhibited.

The outdoor environment at Three Pillars has a few similarities to a public elementary school, with a climbing structure, shade trees, and grassy open spaces. One difference was a tire swing for students to receive greater proprioceptive input from swinging and

spinning, both part of a sensory diet that enables children with ADHD and other ASD diagnoses to self-regulate. Among other researchers, Schaaf and Lane (2009) found that active participation in movement that provides proprioceptive input is vital in promoting brain plasticity and motor control.

Additional outdoor differences were the chicken coop and tortoise habitat with live animals. Students are responsible to care for them as well as for Gilligan, the dog who visits students in the classroom. Natural environments, including animals, are shown to help students with ADHD to self-regulate and refocus when they are overwhelmed with stimuli.

Interventions were powerful supports for the families interviewed in this study. The parent is the most pivotal individual spearheading interventions for the twice-exceptional child. From his work with children and families, Dr. Peters affirmed that twice-exceptional children often had a different trajectory when parents fought for interventions compared to parents who were unable to do so. Interventions included ABA therapy, OT, speech, cognitive behavioral therapy, medication, tutors, meditation, allergy medication, swimming, bibliotherapy, and utilizing an educational therapist. Looking for positive role models, Marie brought Felix to hear Dav Pilkey, author of the *Captain Underpants* and *Dog Man* books, who spoke about his experiences growing up with ADHD.

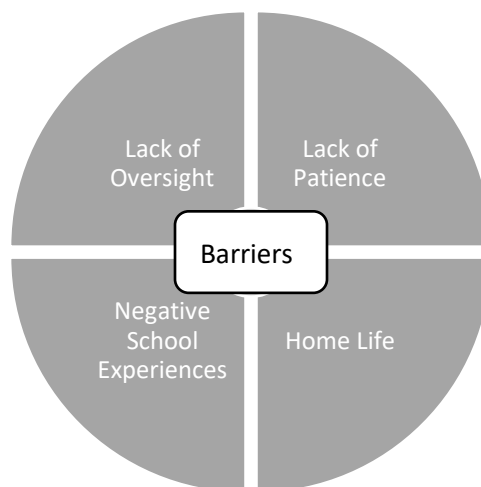
Interventions at school can take multiple forms that range from dictating ideas to an intern or through a speech-to-text software program to differentiated assessment. The intervention extends beyond the tool to the discussion with the teachers about how “your differences are A, B, and C, and this person’s differences are X, Y, and Z, and that’s why they need to sit under the table while we ask you to sit upright in the chair.” Explaining

the reasoning behind accommodations and varied expectations based on the needs of each student brings diversity into the open. Students are not removed from class for remediation; rather, differences become the norm and the acceptance of differences becomes commonplace rather than the exception. Mr. Clark said he has never regretted the investment of time devoted to getting to know his students in the beginning of the school year. He sees the payoff all year, as he is able provide the appropriate environment for each student to be successful. Mr. Clark observed that students are successful with teachers who care about them.

Barriers That Inhibit Growth

Four factors emerged as barriers that inhibit developmental transitions: lack of oversight, lack of patience, negative school experiences, and home life. Overcoming these barriers requires accountability on the part of both the school and the family. The levels of maturity of twice-exceptional children often do not match those of their peers. Figure 5.6 shows these components as part of a comprehensive whole.

Figure 5.6: Barriers to Developmental Transitions



Altogether, the three overarching themes regarding barriers that inhibit growth were communication, desert versus oasis, and primary roles people play.

Communication

Communication can act as a barrier in both obvious and obscure ways. Neumeister et al. (2013) established that many parents struggle with contradicting educational professionals who assess and care for their children. The parents in this study corroborated the findings of Neumeister et al., citing negative experiences they faced in trying to convey their child's needs to these professionals or to garner information to better support the teachers or administration. Three of the four parents expressed frustration with their child's past school or district. Kristy said Charlie's public school was so "anti-communication" with her that she had no idea her son had been running out of the classroom, screaming that everyone hated him. The only telephone call she received from the school was from the school psychologist, who said Charlie commented that he wanted to hurt himself and she had to evaluate him for risk. Kristy only learned of the severity of his behavior at school when Child Protective Services arrived at her home.

Marie tried to get information about why Felix was struggling and miserable at preschool, attributing the difficulty to the attitude of the preschool director assuming she was pushing Felix to read. Lisa called out the administration at Ruthie's school for refusing to evaluate her daughter, even after she had made formal requests. The head of Special Ed knew what was going on with the administration and had a side business assisting district parents get an IEP for their student. These barriers encompassing willful attitude and negligence indicate a lack of professionalism and accountability across

multiple school districts, from private preschools to public elementary schools, as experienced by the parents in this study.

Sometimes the barriers are concealed in messages students receive from the broader culture in which they live. These messages about what success, giftedness, and smart kids look like are embedded in U.S. culture and displayed each day through media and in the classroom. Mr. Clark explained that a teacher or parent saying, “I know that you know this, or you know you’re a smart kid; why can’t you just finish this assignment or follow these directions?” indicates the absence of knowing the student profile. This inadvertent communication shows gifted and twice-exceptional students that part of them is unrecognized and misunderstood. Three Pillars Lab School heralds as role models successful people throughout history believed to be twice-exceptional. Without those role models, it is difficult for twice-exceptional students to see a successful path, leading to a lack of perseverance, emotional problems, and depression.

Desert Versus Oasis

A description of the ideal environment, or oasis, for a twice-exceptional student to thrive appeared in Chapter Four: Research Question 3 and the Seeking Shangri-La section in this chapter. The oasis is a place for challenging twice-exceptional students in their areas of strengths while simultaneously working on their areas of challenge in an authentic setting. The desert, however, is characterized by nontangible issues that have more to do with attitude, accountability, and oversight.

The environment can serve as either a support or barrier to successful developmental transitions. A key barrier for the children in this study is identification, or the lack thereof. Dr. Peters acknowledged that the absence of appropriate professional

development has only exacerbated the problem of identification for gifted programming or support services for a learning difference. The psychologist stated,

Teachers often do not realize the impact a learning difference can have on identity development. In fact, I did not realize the impact a learning difference can have on identity development until I faced this situation as a parent. I did not know how a learning difference could impact identity development in my preservice teacher education program; now, I see the need to make changes to the curriculum.

The lack of oversight can have significant ramifications beyond a single student. In Ruthie's case, accountability to ensure the implementation of accommodations with fidelity was nonexistent. Ruthie was to receive in-home classes during the time she was on medical leave from her public school. Although Lisa hand-carried the medical note and forms to the school, where administrators told her to expect a call to set up the in-home support, she was never contacted.

The lack of patience for twice-exceptional students to exhibit the same level of physical, social, and emotional levels of maturity as their age peers can be difficult for many educators and family members. Marie expressed frustration that other people could not understand that twice-exceptional kids do not have the same developmental trajectory as neurotypical children. Katherine shared her sense of isolation and loneliness within her own extended family structure. She described how Julia avoids social situations with her cousins because they cannot understand her, and that stress acts as a barrier for Julia.

The lack of understanding Kristy experienced firsthand was the primary barrier to successful developmental transitions for Charlie. She expressed frustration that even with a diagnosis as common as ADHD, her son's emotional needs continued to be misunderstood and dismissed as unimportant. Kristy believes that twice-exceptional children have an internal richness that does not respond to the typical classroom management style. This lack of understanding goes back to professional development and priorities. If assessments, scores, and standards are the priority for a school or district, then providing professional development for teachers to understand the whole child will fall by the wayside. These neurodiverse children, with their strengths, gifts, and talents, will continue to be pathologized, neither receiving access to appropriate curriculum nor reaching their full potential with the necessary scaffolding due to a system overloaded with other needs. Teachers must do more with less time and support each year.

Home life can be a barrier for successful developmental transitions when the family is struggling with pressures to conform to societal expectations. This pressure can come from family, teachers, and society, where asynchrony is not acceptable. Every parent interviewed recalled having an image of what childhood and school experiences should be like for their children. In the beginning, Marie repeatedly asked herself, "Why can't he just enjoy this?" and "Why can't you just be neurotypical?" As each parent found support with other parents of twice-exceptional children, they could minimize comparing their child to others, allowing space to grow.

Negative school experiences can act as a barrier to successful developmental transitions for twice-exceptional students. Charlie received incessant teasing for a birthmark on his face while experiencing frustration with mathematics not advanced

enough to meet his needs. Ruthie learned to mistrust adults at school from her experience with the yard duty monitor, who had said to come to her for help; however, when Ruthie did, she was turned away. Ruthie came to understand that adults were not there to help her; they were there to make sure children followed the rules. Marie shared that Felix received so much negative feedback from his teachers that he began to avoid participating in tasks that would support his social and emotional growth. Ms. Hanks said that many of her students start Three Pillars with negative experiences from their previous schools, ranging from bullying to feeling like they had never learned anything. Mr. Clark related that his students have spoken to him about how they were bullied because of their interests or learning differences or because of something they could not do, all of which were negative experiences from their previous schools. Public school teachers were either unaware of the bullying or unaware of the learning difference, leading back to the lack of professional development.

Primary Roles People Play

Dr. Peters finds his work with twice-exceptional individuals and their families highly rewarding. He identifies his primary role in supporting twice-exceptional children as helping the “adults and systems in their lives to understand them while also helping them understand themselves. From there, it is helping to come up with plans that take mental health, academic development, and social development into account to help them grow.”

Dr. Peters posed the question: “How do [professionals] help [the adults and systems] understand the social and emotional needs and the needs of the twice-exceptional?” His answer is to understand the social-emotional needs of all gifted individuals, including

those who are twice-exceptional. Dr. Peters is compelled to help individuals fully realize their potential, which is why he has the profession that he does. He stated:

Twice-exceptional people have a lot of those [potentials], which are often unrealized and misunderstood. I've seen over the years that, when you can help with that understanding and that realization and help—with just a little bit of this and a little bit of that—how people can just take off and be their full selves.

As an example of how he helps his clients close the gaps of asynchrony, Dr. Peters discussed a client he reassessed for seventh grade to see if he would still qualify as being on the autism spectrum:

I get the chills because he developed a template. He had so much training with his mom [who] was very involved and from all the social therapies and communication therapies. He had so much training that he had a template for how to [socialize]. It turned out that he no longer met the criteria for ASD. He literally did not meet the criteria! Did he still have some social processing weaknesses and some deficits? Yes, but that's a great example of closing that asynchrony.

This client was fully on the autism spectrum when he was younger, yet with growth, development, and significant support, he developed the necessary skills to close the gap of asynchrony. Imagine if all students could accomplish this goal with the right supports at the appropriate time, including patient adults willing to provide the scaffolding necessary for success.

Additional Emergent Themes

Two themes repeatedly surfaced from the interviews with participants: language and decoupling social-emotional. The emergent theme of language was twofold: specifically, teaching language and vocabulary to twice-exceptional students was a support for developmental transitions, whereas the lack of descriptive vocabulary served as a barrier. The second theme was decoupling the social and emotional aspects of developmental transitions. Each theme follows with a discussion and implications.

Language

Three of the four parents discussed language as a struggle for their child, especially in the early years. Katherine explained that when Julia was in kindergarten, she would tell other children that she was not interested in joining their play. This communication could take various forms, with Julia either throwing something or yelling at them before she became comfortable with verbal refusals.

Lisa shared a story that illustrated Ruthie's early language skills. Ruthie is physically small for her age, which can confuse people who have just met her. During a trip the public library when Ruthie was 4 or 5 years old, a well-meaning older librarian approached. As Lisa recalled, the woman knelt in front of Ruthie and said, "Hi! What can I help you find today? How old are you? Let's find you some picture books." Ruthie turned to her mother "with a leveled gaze and said, 'Why is this woman speaking to me like I'm an idiot?' at which point, the librarian got really red and left." Although Ruthie was not yet able to read, "she could tell when somebody was talking down to her." Lisa had to explain to her daughter that many people speak like that to children and that "they

don't realize that a lot of little kids don't like it, especially the gifted ones. [Gifted kids] know.”

Marie does talk with Felix about his areas of challenge, but she does so gently and with more frequency now that he is older. She and her husband had never spoken to Felix about why he was moving schools before, yet they sat down with him to explain why Three Pillars was different. She admitted, “We might have emphasized a little too much of the disability and not enough of the good part because he has been going around saying, ‘Did I do that because of my disorder?’ so that’s a little tricky.” She worries they may have shared too much but said she is actively trying to maintain balance and perspective when talking to her son.

Ms. Hanks said her students demonstrate a mixture of language skills. Sometimes they will ask her for a quiet space to work or to go outside; other times, they require prompting and modeling with a sentence frame such as, “I need…” to communicate those needs. With the prompting, her students often then ask for what they need and communicate their feelings or thoughts.

From his work with families and children, Dr. Peters has found that individuals with the ability to be social can observe and see what is going on around them. Even without having words for the action, they can copy the social behavior without language. Dr. Peters asserted that “language often helps to give form to all of these abilities, which is why so many of the interventions are based in language-based [therapy or] interventions.”

Supporting Transitions Through Consistent Language

Mr. Clark looks for examples to make the content relatable to his students. He said, “We can start to have a conversation about the challenge and how they’re feeling” about it. The counseling staff at Three Pillars works with students about these challenges, their feelings, and how to express them appropriately so others can help. Mr. Clark has the same conversations with the students in his advisory group. The team meets to discuss the language they use with each student and what has proven effective. Because communication must be kid-friendly and thus not be considered “clinical language,” the teachers have to identify what the student understands to determine the level of language to use. In the beginning, said Mr. Clark, “The student may start to pick up on a phrase or they may have their own way of describing something that’s difficult or the way something feels that they may use, so we can adopt their language a little bit.” The students still have other teachers for art, music, and physical education as well as lunchroom supervisors, so it is important to use the language consistently. This is true even with students in a self-contained classroom.

Explicitly Teaching Self-Advocacy

During Ruthie’s early years, communication was difficult. Lisa did a lot of research at the time and has since found that “now that she has gotten a little bit older ... we can model language for her to use to let us know what she needs. She is a lot better at explaining things and ... her feelings and how she sees things.”

Ms. Hanks described how she teaches language to her young students, asking if they need to take a break before they lose the ability to self-regulate. Other times, she will prompt them, saying, “Do you want to ask me if you can take a break?” She provides her

students with two choices or will give them idea of what they might be experiencing. Ms. Hanks recalled helping students who could not identify how they were feeling, either by naming the sensation happening in their body or their feelings. This exploration allows her to help by giving the student language to describe what is happening. She will ask her students, “What does that feel like to you? What does that look like?”

One example Ms. Hanks provided was when a student was yelling while shouting, “I’m not mad!” She responded, “Well, let’s look at your voice.” She believes in taking a moment to examine how a student is feeling and giving them the language to express themselves, asking, ““Why do you feel that you need to take a break every 10 minutes in the classroom?” At my level [fourth and fifth grade], they’re not aware, so my job is to bring awareness to them.” She expressed that her prompts and explicit teaching of language has a cumulative effect over time.

Talking about the future in a meaningful way is the primary reason Mr. Clark teaches social and emotional vocabulary to his students. He explained,

I introduce terms that they might use when they’re collaborating or negotiating with somebody else in the project, phrases they could use about needing personal space or asking someone else to respect their learning differences—things that we assess in class, like self-advocacy.

The use of social and emotional language in class provides for opportunities for students to advocate for a particular topic they want to study. Students can request time to meet with Mr. Clark by asking, “Hey, you know, can I talk to you during the next break? I would like to advocate for a different way to do this assignment.” Mr. Clark has seen

students take the new vocabulary and extend it to ways they interact with friends. For example, if they are discussing conduct, the topic transforms into a conversation about how

You needed to leave class because your behavior was not model citizenship and it was disruptive, and it was disturbing to other people. You're taking a break now so that you can self-regulate and come back to class when you're ready. That can be an example of resilience, that I can talk about how resilient you were when I write your next report. So the language is a big, big [component].

Occasionally Mr. Clark will provide the student with a script. He offers scenarios, such as how a student is going to apologize to a classmate during a particular club meeting. He also helps his students understand how they can let another know about a change they want them to be aware of, explaining why the student cannot do something that they used to do with a friend.

Some students require continuous prompts because they are already set in a particular pattern, which could be just trying to meet expectations, whether it is their own of the expectations of others. Mr. Clark thinks the students who are more creative or more aware of their own learning needs and differences are better equipped to ask for accommodations. He clarified:

As soon as they start working with us and learn some of this language ... to say things like, "I'm having a hard time self-regulating today. I need to ask for a focus strategy, maybe I need a break and then I can make this a productive break so I

can come back to class when I'm available for learning." If they learn that lingo, it might help them make sense of what they're already experiencing.

At times, learning the specific language and "lingo" used at Three Pillars is helpful; other times, students need to learn to phrase something in a positive way. Rephrasing their communication allows individuals to understand that the activity may be challenging, but they do not need to judge themselves with negative self-talk. Therefore, the student can use the accommodation to be successful, even in the face of a challenge. Explained Mr. Clark, "It's not that you can't do this; it's that you need certain support so that you can do it." He acknowledged that rephrasing may "take a little longer for some than for the student who was just waiting for the language to express what's hard for them or how they feel." When students need to manage an ongoing problem, the language is helpful for the teachers to be able to talk to them about it. "It may not have any kind of an immediate impact," Mr. Clark said. "It may just be giving them a tool that they will use in their young adult life."

From Barriers to Transitions

Students come to Three Pillars Lab School because they have experienced challenges in their prior educational setting. Mr. Clark stated, "Sometimes the thing that they were missing was the language or the opportunity to reflect on their challenges with teachers, advisors, and counseling staff." Three Pillars provides advisory groups for every student to have opportunities to reflect on their challenges, change the way they think about these challenges through positive language, and support them by developing resilience.

Communication: Two-Way Street

Marie shared that Felix could not previously articulate his feelings about school. “He would say, ‘I love school!’ every day when I would pick him up; it was ‘Today was the greatest day ever!’ He’s very not clued into what was happening, which is probably a blessing.” Since he started at Three Pillars, Felix has been saying, “I had no idea that school could be this great!” Recently, he blurted, “I don’t ever want to go back to my old school!” She mimicked how he put his hands over his mouth and said, “I’m so sorry. I’m sorry. I’m sorry!” Marie responded, “Honey, it’s okay, I’m glad to hear that you’re happy!” Felix is now developing a vocabulary to describe his thoughts and feelings.

Ms. Hanks gave examples of her students’ lack of descriptive language. “I have one student now whose vocabulary and understanding of scientific terms is really high, but he has a hard time communicating what and how he is feeling.” Sometimes the issue is not that students lack the words to describe what or how they are feeling; it may be that other students do not have the language or vocabulary to understand those students who can express themselves. Ms. Hanks believes that the brain’s wiring and the lack of social and emotional language skills contribute to the frustrations and challenges her students experienced in prior educational environments.

The most common scenario, Mr. Clark asserted, is when the teachers become aware of a student struggling with a developmental transition due to a lack of language to talk about it. At times, the lack of vocabulary can become a major problem for students. He said,

There are small challenges that occur daily that [students are] able to manage and we may never notice those, but it’s when they don’t have vocabulary to talk about

it or the self-awareness to really understand what the source of the problem is that we become aware of it.

The lack of social and emotional vocabulary and language skills can act as a barrier for many twice-exceptional students. Some may not understand what it means when a classmate does use the appropriate vocabulary. The teachers and parents work together to maintain consistency between the school and home environment, so students have the opportunity to practice new communication and language skills in different environments.

Decoupling Social-Emotional

To answer the first two research questions, it was imperative to provide a framework to decouple social-emotional. Dr. Peters provided a professional's viewpoint when he explained that mini-stages of growth are necessary to make the larger leaps to full developmental transition in the social and emotional domains.

Social

Dr. Peters works with gifted and twice-exceptional children and their families in his private practice and through the Summit Center in Los Angeles, California. He explained that twice-exceptional kids are unaware of what can be happening in a particular situation, or of the environmental or social demands of that situation. The reasons for this lack of awareness include being closely focused on their needs, getting across their point of view, or playing or explaining their own game. Socially, they are not picking up on developmentally appropriate cues.

Based on his experience as a psychologist, Dr. Peters believes that an increase of social awareness is a developmental transition within the social domain. He stressed the need to be aware of children's current stage while observing and taking note of the areas they are moving toward. He equated a developmental transition to evolving into another zone, stage, or phase, which occurs in multiple domains of functioning.

The psychologist defined social development as having three distinct phases that apply to gifted and twice-exceptional children: awareness, reflection, and incentive. Each step constitutes a social developmental transition, as Dr. Peters described.

1. Awareness: An awareness of what is expected, or the awareness of other, is necessary. Dr. Peters suggested the following questions: "Is there an awareness that people are listening to other people and sharing ideas?" and "Do I care enough to engage in any of these behaviors?" as well as the sentiment that "I'm aware that it is not okay to interrupt people any time I have an idea that I think is better than theirs."
2. Reflection: The next requirement is introspection about one's own behavior that would be considered appropriate. This awareness of self is described as "I realize that I don't listen to people. I just always interrupt people and say what I think is the most important thing in the moment."
3. Incentive: Motivation and readiness to engage in that "appropriate" behavior.

Emotional

When it comes to the emotional side of development, Dr. Peters rationalized that being able to *understand* one's emotions is different from being able to *regulate* them, while concurrently maintaining the *desire* to do so. He provided an example of this idea

from his work with children at younger ages who tell him that they know they are getting mad. He asks them,

Is there any reason for you to not have a meltdown or throw something when you are upset? They're like, "No, I feel better afterward." So we make this assumption that once someone understands how to regulate their emotions, they're always going to want to. I feel these are all different mini-stages along the way to a major developmental transition.

Similar to social development and the three distinct phases required to move to a new developmental pattern, Dr. Peters applies the same structure to helping clients master emotional regulation:

When twice-exceptional individuals become aware of their different emotions and the difference between sad and mad and worried, they become aware that they have a tendency to act out in behaviors whenever they feel them. "Social" and "emotional" are different developmental tasks in terms of having social awareness and then being motivated to engage differently at a new developmental stage emotionally, as well.

When learning to regulate those emotions, children have to choose whether they would damper that down, manage it, or take a timeout. The last stage is having the motivation and desire to want to manage those emotions before they become a negative behavior. The revised transitions then become:

1. Awareness: Becoming aware of the differences between each emotion and how they feel.

2. Management: Managing the emotions in a situationally appropriate manner.
3. Choice: Readiness to choose how to manage emotions in a new and different way.

Research Questions 1 and 2 utilized this framework of both the social and emotional sides of development to provide further depth and clarity of the mini-stage each child is currently experiencing during this study as described by the parents and teachers.

Findings Summarized

Research Question 1: Three themes emerged regarding parent perceptions of the developmental transitions of their twice-exceptional child. Themes identified include how parenting adjusted in response to changing perceptions, isolation, support, and individual advocacy. Parent perceptions are rarely examined or discussed in the literature, yet parents shared great insight from their own experiences. Findings indicate that parents experienced a cyclical process where grieving changed the perception of their role to one of acceptance that adapts to their child's changing needs.

Parents expressed differing levels of frustration and sadness during the isolation they experienced resulting from their child's asynchrony. When the diagnosis was positively framed and resources were provided, parents were able to advance through the grieving process faster.

Research Question 2: Three themes emerged with regard to educator perceptions around the developmental transitions of their twice-exceptional students. Teachers reported the various ways they have grown in their pedagogy; now focusing on the whole child. They reported greater satisfaction with teaching when the focus shifted to

emphasize communication, differentiation, and the development of relationships with students to better understand their individual areas of strengths and challenges.

Teachers interviewed communicated the differentiated approaches they take with students who are gifted. This level of differentiation for twice-exceptional students is not discussed in the literature, however, these educators creatively developed a more humanistic approach. Student gifts were acknowledged by teachers that subsequently supported their transition to a more mature perspective on subject matter. For those students not gifted in a particular subject, teachers recognize that they need to begin with empathy. Teachers also experienced a process of growth in which better relationships fostered trust and safety improving student communication skills. This relationship building changed the perceptions teachers held about giftedness and disability.

Research Question 3: Communication, Tangibles or Physical Environment, and Non-Tangibles emerged as the major themes. Communication was the one theme that emerged as both a support and a barrier to developmental transitions. Some of these areas are easier to implement while others may require professional development.

For parents, receiving a diagnosis can be devastating, however emotional stress can be mitigated when professionals positively reframe the conversation and provide resources. Teachers expressed that communication between the team enables them to use a whole-child approach. When parents are treated as an integral part of the team, they help the entire team work more efficiently. Assessments allow teachers to gather environmental preferences for learning styles and student-led goals. Finally, posters and other media are used to display role models of individuals suspected to be twice-exceptional.

The physical environment or tangibles is comprised of four categories: classroom setup, accommodations for sensory issues, productivity supports, and outdoor environment. Classroom setup might include grouping desks to create a walking circuit. Sensory issue accommodations include the use of fidgets, natural lighting, and flexible seating. Productivity supports incorporate differentiation in both process and product. The outdoor environment should take into account noise/sounds, the natural environment, and playground structures (Baum et al., 2017). The non-tangibles include appropriate academic placement based on cognitive levels rather than age, social skills development in an authentic setting, and utilizing a whole-child perspective.

Research Question 4: Four factors emerged that inhibit developmental transitions: lack of oversight, lack of patience, negative school experiences, and home life.

Overcoming these barriers requires accountability on the part of both the school and the family. The levels of maturity of twice-exceptional children often do not match those of their peers. Communication appeared to be a barrier in both obvious and obscure ways that leave the student feeling as if part of them is unrecognized and misunderstood.

The lack of oversight, critical for accountability, has significant ramifications beyond a single student. The lack of patience for a 2e student who does not exhibit the same level of physical, social, and emotional levels of maturity as their age peers can be difficult for educators and family members. The lack of understanding is a consequence of schools and districts underestimating the importance of professional development. Teachers, required to do more with less time and support, often fail to realize the impact a learning difference has on identity development. Negative school experiences act as a barrier when students begin to avoid participating in tasks that would support social and

emotional growth. Home life can also act as a barrier when the family struggles with pressures to conform to societal expectations that does not recognize asynchrony.

Personal Lessons Learned

The experiences of my educational journey, as well as those that come from navigating for my son, continue to be my driving force for change. Decades later, parents and teachers still struggle with to how to provide the appropriate support for the cognitive, social, and emotional needs of twice-exceptional children. The resources are scattered and piecemeal, making it difficult to adopt a comprehensive approach. I still find it challenging to locate resources for myself, even with the completion of a doctoral program and intensive research. As much as I want to pursue additional research and a career in academia, I recognize that the need for comprehensive resources is glaring, demanding my attention.

I did not begin my career in education. Two decades ago, I had my first encounter with geographic information systems (GIS) during graduate school on a dare from a meteorology professor. Over 3 days, I discovered that my natural visual-spatial skills, once used for ballet, were an asset I could leverage into a career. Many colleagues spent years in college to attain a career in cartography and GIS, but it was never my goal. GIS was something I could do well without much effort. It allowed me to develop a framework of analytic problem-solving, which served me well during the past 3 years of coursework and research. In addition, this analytic framework of thinking provided me the opportunity to improve my writing and speaking skills. Conducting this research study honed my ability to filter my intuition through disciplined methodology. More importantly, my visual-spatial skills reemerged.

During my first summer of coursework, Dr. Hafenstein asked me to read an article by Vuyk, Krieshok, and Kerr (2016) entitled “Openness to Experience Rather than Overexcitabilities” instead of the articles on Dąbrowski (which I read anyway) by Tillier (2002) and Mendaglio (2011). One afternoon, while working on a paper in the library, I experienced an electrifying moment where a new, three-dimensional model of development formed in my mind. I gulped as I watched Erikson’s (1968) stair-step model, Dąbrowski’s (1964) vertical model, and Vuyk et al.’s description of openness to experience through the five-factor model form and reform in my mind’s eye as an accurate representation of how gifted and twice-exceptional children grow in the cognitive, emotional, and physical domains. Just like making maps, perspective is key: It all depends on where you are standing.

This conceptual model and accompanying hypothesis turned over and over in my mind, not allowing me to rest. I returned from Colorado to scour hardware stores to build a physical model of what I could not draw and only clumsily describe. Over the succeeding years in this doctoral program, my conceptual model has continued to evolve, along with my strengthening writing skills to describe it. As I began data collection and analysis, I noted how participants described their struggle to understand their child, their student, or their client. Each person had the perspective of a twice-exceptional child based on their role; perspective is everything and nothing, all at once.

Several lessons learned from this study will carry into my practice (Buss & Zambo, 2017). What I learned from this research is that we need a new approach, a new model or lens for teachers to see their students, for parents to find alternative ways to parent their children, and for psychologists to have a more accurate model to provide services and

insight to their clients. We need a new approach because education is more than lesson plans and assessments. We need a new perspective that broadens our view of children to identify them and stop the continuation of the masking effect (McCoach et al., 2001; Pfeiffer, 2013), which keeps children from reaching their full potential.

Lessons Learned Through Implementation

This study provided feedback to the researcher on multiple levels. As a professional striving to conduct research in the future, maintaining a positive attitude and being mindful of the time people are giving to participate in a study are critical. The community partner, teachers, parents, and psychologist were appreciative of the efforts made to be respectful of their time, working around their schedules, and adhering to the interview time limits set forth in the informed consent. Staying within the boundaries of the allotted time required refinement of interview questions and practice conducting the interview with a friend or colleague in advance.

Recordkeeping was the next element essential for success. Collected data, transcripts, recordings, consent forms, and e-mails can accumulate faster than expected. The researcher created an Excel spreadsheet to keep track of the dates of forms sent and received, interviews conducted, and member checks completed. In addition, a Word document was a means to log all contact with the community partner, which the researcher updated upon any contact via telephone or e-mail or in person. The date, time, method of contact, and a short description of the topic were components noted in the log. Lastly, the researcher created a reminder in a calendar application to stay consistent with community partner contact, whether it was to request assistance or provide a status update.

Patience was required, sometimes in abundance. This is not a strong trait for the researcher, so it took faith and organization to wait for more participants to respond while finding other work to complete during the waiting period. The advisor provided a voice of reason to stay the course and wait for a female teacher or more parent participants, explaining that research does not always work in a linear manner. This was helpful advice to maintain patience during a data collection period that extended past the researcher's self-imposed deadlines.

Self-care became critical as interviews commenced. There were some days when the researcher would conduct one to two interviews before needing to pick up her child from school. Some interviews, like those with the teachers or psychologist, were straightforward. Although these interviews were tiring, the researcher only needed time to rest from note-taking and listening intently throughout the interview. The interviews with parents were markedly different. Listening to the stories each parent shared led the researcher to experience a roller coaster of emotions throughout the interview and for days afterward. The researcher went through emotions that ranged from sadness to anger to laughter and learned quickly not to schedule interviews with parents without a day or two in between. Recovery time and processing of the stories was necessary to for the researcher to stay neutral and refrain from injecting bias, asking leading questions, or expressing emotional reactions during the interview. Self-care included taking a break from research for a day to spend time with friends, walk the dog, check in with out-of-town family, watch a movie, go out to dinner, or binge-watch a favorite program.

The IRB approval process was not unnecessarily long for an expedited review, with approval granted in approximately 4 weeks. The recruitment process took longer due to

several external factors. First, it was necessary to create a recruitment flyer for approval by the IRB. Second, recruitment could not commence until the school year began in late August. The Head of School sent out the recruitment flyer once every 2 weeks in the bimonthly parent newsletter for 3 months, with announcements made to parents at Back-to-School Night meetings until enough potential participants contacted the researcher. This process meant that participant interviews occurred in clusters over a few days or that no interviews took place for several weeks.

Obtaining gender representation for the teachers was the first obstacle encountered, as two male teachers first volunteered to participate. The researcher interviewed both teachers, using the first interview as a pilot to test the questions for further refinement while waiting for a female teacher to volunteer. Fall brought success in garnering participants for the study with the help of a staff member who worked closely with the researcher. This same staff member also provided the tour and answered questions during the site visit in October 2019.

Initially, there were to be two site visits for the observation protocol. Due to student field trips, school holidays, and teacher professional development days, a longer site visit replaced the two shorter ones planned. Prolonged engagement was still met through the longer site visit, contact through e-mail and telephone calls with staff, and meetings with other staff on the same day. Future studies should incorporate at least one site visit with language to represent that accommodations to ensure prolonged engagement might be through Zoom calls or online tours.

Limitations of the Study

This research study, as with any other, had limitations of note. A purposeful convenience sample to include maximum variation was sufficient, but still limits the generalizability of the findings. Only two of the educators in the school's upper elementary program participated in the study, which may have affected the outcome. Ideally, all upper elementary program educators would have participated, allowing the researcher to analyze every classroom to create a more comprehensive view of the case.

Another limitation of the study might have been the researcher's bias. As much as the researcher tried to remain neutral to the participant responses during interviews, she may have unintentionally sent signals to the participants, indicating bias toward answers (cf. Creswell, 2014). To maximize validity, the researcher analyzed interview recordings to monitor for leading questions or implied vocal bias (cf. Yin, 2018). In cases where the researcher identified potential bias, participants' answers were not part of the presented data or analysis (cf. Creswell, 2014).

Although the researcher addressed gender, race, class, and ethnicity were not components within the scope of this study. As Andersen and Collins (2016) noted, "Race, class, and gender operate, not alone, but within a system of simultaneous, interrelated social relationships and engage with other social realities such as ethnicity, sexuality, age, disability, and region where you live" (p. 51). Racial diversity was a limitation of this study. The case, the school itself, had a racial makeup of 18% non-White students within the student population during the data collection period.

A thick, rich description of the setting allows for some transferability; however, because this site is a small private school located in a western U.S. state, findings specific

to the case overall are not generalizable. It is up to readers and their positions within the United States and the public or private school where they work to determine if this study is generalizable for their situations.

Another limitation is the learning difference, ADHD, identified for this study. ADHD is typically found to be comorbid with other disabilities, such as ASD. It can also be comorbid with learning differences, such as auditory processing disorder, sensory processing disorder, executive functioning delay, ODD, and anxiety. It would be difficult to isolate ADHD, as the disorder does not appear that way in children.

The ability to access and observe students within the school setting was another limitation of this study. Observing students would have required a more comprehensive IRB review. A full review could have extended the time needed to conduct the study beyond the academic school year.

Implications for Practice

During the writing of this chapter, the outbreak of COVID-19 began to multiply exponentially around the globe. Schools and other places where people gather have been forced to close or go online in an effort to slow down the effects of this worldwide pandemic, something referred to as “social distancing.” As public, private, and charter schools struggle to find a way to deliver curriculum, connect with students, and define the new normal, several shifts will occur in the educational system and how schools deliver curriculum and services.

Both Vygotsky and Piaget established that children learn through social context. Where Piaget focused on the subject-object orientation for learning, Vygotsky emphasized social interaction as primary avenue for learning (Lovecky, 2013; Noddings,

2012). Constructivism—described as a philosophy, a pedagogical alignment, or an epistemology—is premised on the idea that knowledge is actively constructed and not passively received (Noddings, 2012). With Piaget’s version of constructivism, the scholar sought to identify the structures of the mind and connect those cognitive behavioral characteristics to each stage of mental development; educators later adopted and modified this idea. Educators began to differentiate developmental learning (active with real-world application) from rote learning (categorized as temporary and useless information). Educators often find that most children learn more from one another through interaction than through the direct manipulation of objects (Noddings, 2012). Teachers, administrators, school districts, and researchers need to work together to determine best practices for children to learn through social context while socially distancing for unknown periods of time.

Gallagher (2013) stated, “Education policy; including rules, regulations, and financial allocations reflect social policy” (p. 458). For example, active shooter plans did not exist until mass murderers started killing children in their schools. If the epidemiology models are correct, COVID-19 will cycle for close to 36 months, until every person has received a vaccine. Districts will need to devise preparedness plans during this period, before the 2020–2021 school year begins. Until this time, schools and districts have had to develop an evidence-based, proven, locally responsive online learning plan that can be immediately activated. This plan includes how students will have access to the curriculum, Wi-Fi, computers, and food delivery. IEPs will have to incorporate contingencies to determine how to deliver services and through what medium. Students will need instruction on how to use Google Classroom, Google Calendar, Flipgrid, Zoom,

and other technologies to assist them during the virtual learning period. Just as fire drills require consistent practice, so, too, must digital literacy and safety to ensure equitable access for all students. In 1958, the threat of Sputnik became the mechanism to force action and create change. This pandemic, exposing a multitude of institutional inequalities, may prove to be the modern-day force necessary to change the current U.S. educational system.

In addition to training students, district officials will need to take a broader perspective than ever before. Professional development for teachers must extend beyond state assessments and newly adopted standards. As is evident, teachers are far behind the technology curve, struggling to use 21st-century tools with a 20th-century pedagogical mindset.

How do neurotypical children see neurodiverse children, or *others*, reflected? Are they learning about cognitive neurodiversity as a strength to contribute to society? The curriculum and scheduling of pull-out for remedial services reinforces notions of “less than” stereotypes. For Felix, his barrier to reaching appropriate developmental transitions was due, in part, to being sent out of the classroom and excluded from seeing other students model appropriate behavior. Sadly, his classmates did not see Felix as a part of the class, but as *other*. Ruthie was aware that her teachers were focused on remediation rather than on her strengths, making her feel ashamed and somehow defective. Her classmates in her former school never got to see her incredible leadership skills and creativity; therefore, they will always remember Ruthie as *other*.

Lorde (2007) stated, “History conditions us to see human differences in simplistic opposition to each other: dominant/subordinate, good/bad, up/down, superior/inferior”

(p. 15). I agree with Lorde in that “it is the responsibility of the oppressed to teach the oppressors their mistakes” (p. 15); as a professor of preservice teachers, I, too, carry the burden of responsibility. This obligation includes consistently reflecting and checking my own bias and helping my students become aware of their inherent bias and potential for future oppression. Freire (2018) stated, “Education as the exercise of domination stimulates the credulity of students, with the ideological intent (often not perceived by educators) of indoctrinating them to adapt to the world of oppression” (p. 78). I believe that it is vital to ask the question of myself and my students for each class: What happens when someone with the authority of a teacher describes our society and you are not in it? Would it cause a disorienting “moment of psychic disequilibrium” (Rich, 1986)?

Areas for Future Research

Although gender was a factor, race, class, and ethnicity were not within the scope of this study. As Andersen and Collins (2016) noted, “Race, class, and gender operate, not alone, but within a system of simultaneous, interrelated social relationships and engage with other social realities such as ethnicity, sexuality, age, disability, and region where you live” (p. 51). Racial diversity was a limitation of this study. The case, the school itself, had a racial makeup of 18% non-White students within the student population during the data collection period. An area of future research would be to widen the sample size and maximize the variation of race, class, and ethnicity to achieve greater representation.

Observing students within the school setting is another area for future research. By observing students and teachings in real time over multiple dates, a researcher could observe distinctive instructional and assessment strategies, noting how teachers work

with students in real time to scaffold social skills in an authentic setting. This research could be useful to develop trainings or to replicate the model at Three Pillars for other schools interested in training teachers to work with twice-exceptional students.

A longitudinal study with the same families to review progress and growth is another potential area for future research. Two of the four parent participants had children enrolled in their first year at Three Pillars Lab School. A longitudinal qualitative or mixed-methods study with the same parents could prove extremely valuable to measure the growth of the students and the parents and to note changes and new challenges. Researchers could conduct this study annually at the end of a school year, or twice a year to ensure prolonged engagement, following these students until graduation.

How does virtual learning affect student growth in both the social and emotional domains for twice-exceptional students who already struggle with social cues? One area to examine would be to measure whether students' newly acquired skills regress or slide back due to lack of practice or social settings caused by social distancing. Such an examination could occur using a qualitative, quantitative, or mixed-methods approach. The results of this study can inform school districts to shape social skills curriculum for twice-exceptional students as well as to determine the best model for delivery (e.g., online one-to-one, group chat, etc.).

How does social distancing change the social skills for both gifted and twice-exceptional students? During the fourth week of social distancing mandated by the researcher's state of residence, she noticed several occasions where twice-exceptional, middle school-aged preteens unconsciously moved away from others to keep the required

six-foot distance while maintaining a conversation. How will long-term social distancing orders, virtual schooling, and fear change the perceived social order for preteens?

Another area of future research involves program evaluation. What would it take to replicate the successful model at Three Pillars Lab School in a public school setting? Would a school-within-a-school or micro-school model be the ideal fit? What type of training, space, and resources would be required to replicate this model, and could it be done within a general education population?

The stages of grief and cognitive dissonance experience by parents is another area for future research. Although the focus was on the perspectives and perceptions of parents, the experience of grieving was expressed by every parent participant in this study. Future research will examine both the stages of grieving parents experience and the length of time needed for parents to move to a stage of acceptance. The parent experience upon receiving a diagnosis, without support, has not been examined in the literature. Other questions will address how parents perceived the diagnosis as well as the identification of giftedness in their child. Do parents feel they can express pride in their child or does the educational system force them to remain focused on the deficits?

Nodding's Ethic of care or Care theory was found to be a conceptual framework that can be used for future research. Discovering how care is perceived by parents and teachers can illuminate where resources are needed for parents and potential needs in teacher education to create and maintain high levels of engagement in the classroom. The first study would examine how teachers who work with General Education (GenEd), Special Education (SpEd), Gifted, and Twice-exceptional students conceive of care. This would be a comparative study to determine if teachers equate effort with caring from a

student. The second area of future research utilizing this conceptual framework would focus on learning how care is conceived by parents. If parents are practicing the four components of Care theory, i.e. Modeling, Dialogue, Practice, and Confirmation (Noddings 2012, p. 237-238), how do they perceive each component as being a support for their twice-exceptional child? The questions explored in this study would examine if parents are practicing these components, their level of awareness of the components, discovering what components they struggle with and why, and finally what resources parents of twice-exceptional children need to be successful.

The examples provided in the Theory of Psychosocial Development section came from the data analyzed in this study. The examples of asynchrony given by the parent and teacher participants begs the question as to whether children can experience multiple developmental stages at once. Could children go through simultaneous stages due to their asynchrony, or can the asynchrony be the cause? Based on the rich data these interviews produced, the researcher believes that continued attention to this endeavor will contribute to developing a more accurate profile of twice-exceptional students.

Conclusion

The purpose of this collective case study was to examine the perspectives of parents and educators on the perceived developmental transitions of preadolescent twice-exceptional students. Research questions guided the study, with data collected for analysis to address them. The researcher sought to examine the perceived developmental transitions of preadolescent twice-exceptional students. Parents and teachers of preadolescent twice-exceptional children participated in interviews to provide insight into their lived experiences and perceptions. A psychologist with 20 years of clinical

experience working with twice-exceptional children and their families also took part in an interview, allowing the researcher to gain his perspective. Finally, the researcher observed the case—the school itself—during a site visit to gather artifacts such as photographs and other documents to provide a thick, rich description.

This study took place within the theoretical framework of by Dąbrowski's (1964) TPD and OEs and Erikson's (1968) theory of psychosocial development. In addition to this foundation, the constructivist approach included work from both Piaget and Vygotsky. The four parent participants provided vignettes highlighting multiple OEs for their child. Teacher participants described multiple instances of the tensions Erikson described in the theory of psychosocial development.

The themes that emerged from parent interviews revealed a depth of feeling and growth the parents had to undergo to support their twice-exceptional child. In some instances, that growth changed their professional trajectory to support families of twice-exceptional children. The grieving period each parent experienced should not be minimized, as it was intense and acted as a catalyst. More research is needed in this area of parental support.

Educator perceptions were both enlightening and surprising. The researcher expected potential paradigm shifts in pedagogy as teachers matured in their careers. After years of observing and interviewing teachers, the themes that emerged were completely original, tempered by experiences teaching twice-exceptional students. Communication can act as a support or a barrier and is dependent upon the professionals and their ability to positively reframe language, as well as their level of experience and professionalism. Three Pillars was the oasis in this study and met all the criteria for the ideal environment

for twice-exceptional students. This school is the model for future programs and school sites.

Additional emergent themes included language and the decoupling of social and emotional concepts of growth. Every participant spoke about language, vocabulary, nonverbal cues, pragmatics, and the need for explicit instruction. Social-emotional decoupling is an area unexplored in research with twice-exceptional children. As schools continue to transition between in-person and virtual learning environments, this area of inquiry will prove even more significant and relevant for all students and society at large.

Based on this research study and as a parent of a twice-exceptional preadolescent student, I hope to continue to recognize my son's daily struggle and have more compassion when he feels things so intensely that he wants to hide. I have learned from the parents interviewed that I am not alone in this journey to adapt, accept, and maintain patience. I want to take this research and what I have learned from this experience to enlighten other parents and teachers about the struggle twice-exceptional students experience each day. Although some resources are available, there is no one source telling parents what they most need to hear: "It's going to be okay. You will be okay. Your child will be fine." There are days parents of twice-exceptional children do not know if they can make it to bedtime; these are the darkest days, the days when, as a parent, people need the most support. Those were the memories that came back to me with utter clarity, reminding me of the times I wished I had something to read to help me hang on for the next day. I want to take this research and participants' voices to other parents of twice-exceptional children so that they, too, can have hope for the next day.

In my burgeoning role in higher education, I am fortunate to have the opportunity to teach a course I took as a graduate student several years ago. I have discovered how much I did not know and how little I was prepared for the classroom at the time. I have since learned a great deal about curriculum for gifted and twice-exceptional learners but, more importantly, about myself. I have a gift for communication, humor, synthesis, and the ability to translate difficult ideas into relatable concepts through storytelling. Before starting my doctoral program, I knew about twice-exceptional learners from my experience as a parent. What I have learned from both my program and this research study was how to identify the gaps in the literature, the places where research and practice diverge, and where I can potentially make a difference for these students. I can be a highly effective middle-school science teacher. As a professor, I can help preservice teachers become aware of inherent bias, learn about terminology, engage in differentiated instructional practices, and identify with real-world scenarios they will encounter so they can support their twice-exceptional students in the future. This is where my talents lie, and I know that I can make a difference. I plan to write curriculum for my university's School of Education and present my findings to my colleagues.

Finally, as suspected and later confirmed through this study, the timeline or model of developmental expectations does not align with reality with regard to the gifted and twice-exceptional populations. This model of development, based on Erikson's (1968) stages of development, is linear and taught across universities, medical schools, and teacher education programs around the world. Erikson's model was groundbreaking at the time; these days, it is common knowledge that people are multifaceted, with work on the five-factor model of personality as just one example. It is my hope to continue my

research to develop a new model representative of the multifaceted aspects of asynchrony of the gifted and twice-exceptional population throughout the lifespan. For me, this is important enough to dedicate my future.

We should seek, as Greene (1988) eloquently described, “how to open spaces for persons in their plurality, spaces where they can become different, where they can grow” (p. 56) and those are the spaces between.

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Appendix A: Definition of Terms

Asynchrony/asynchronous development: The mismatch between cognitive, emotional, and physical development of gifted individuals where development occurs unevenly across skill levels. In addition to uneven development, asynchrony includes “complexity, intensity, heightened awareness, risk of social alienation, and vulnerability” (Silverman, 1997, p. 36). For example, a gifted child may be excellent in math, but below grade level in reading or vice versa. The intellectual skills can be quite advanced while fine motor or social skills are delayed (Morelock, 1995; Silverman, 1997; Webb et al., 2007).

Dąbrowski’s theory of positive disintegration: Kazimierz Dąbrowski was a Polish psychologist and psychiatrist who proposed the TPD to describe human development based upon his clinical work with creatively gifted individuals (Silverman, 2012). Dąbrowski viewed human development as a series of opposing tensions (higher and lower, good and bad) experienced within the self (Daniels & Piechowski, 2009). The TPD is a process by which the individual matures through periods of psychological “disintegration” based upon the response to internal or external conflict (Wiley, 2015, p. 9). This conflict can cause anxiety and/or neurotic behavior in response to the discomfort, but as Wiley (2015) explained, “under the right circumstances, an individual undergoing this disintegration can experience ‘secondary integration,’ arriving at a ‘superior’ personality” (p. 9). This process of disintegration and secondary integration can create a distinct trajectory of personality development.

Disability: The IDEA 2004 defines special education as “specially designed instruction, at no cost to the parents, to meet the unique needs of a child with a disability”

(U.S. Department of Education, n.d.). In 2006, additional changes were made to IDEA as the final regulations were released. These regulations required schools to use research-based interventions to assist students with learning difficulties and learning disabilities. They were also required to use research-based interventions to determine eligibility for special education (U.S. Department of Education, n.d.)

There are 13 categories under the IDEA 2004 legislation where a student may be eligible to receive services and protections. These categories are learning disability, speech/language impairment, mental retardation, emotional disturbance, hearing impairment, visual impairment, orthopedic impairment, other health impairment that includes many other disabilities, ADHD, ASD, traumatic brain injury, multiple disabilities, and deaf-blindness (NCSER, n.d.; Special Education Guide, n.d.; U.S. Department of Education, 2002).

According to the Office of the Federal Register (2005), specific learning disabilities are defined as one or more of the basic psychological processes involved in understanding or using language (including spoken or written language). This may manifest itself in the imperfect ability to listen, think, speak, read, write, spell, or do mathematical calculations. The Office of the Federal Register clarified that a specific learning disability “does not include learning problems that are primarily the result of visual, hearing, or motor disabilities; of mental retardation; or emotional disturbance; or of environmental, cultural, or economic disadvantage” (pp. 35836–35837). The IDEA (2004) defines a learning disability as “a disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken, or

written, which may manifest itself in an imperfect ability to listen, think, speak, read, write, spell, or do mathematical calculations” (p. 13).

Gifted or giftedness: NAGC is a leading national advocacy group that supports gifted and talented children and their families through education, advocacy, and research.

The current NAGC (2016b) definition is:

Gifted individuals are those who demonstrate outstanding levels of aptitude (defined as an exceptional ability to reason and learn) or competence (documented performance or achievement in top 10% or rarer) in one or more domains. Domains include any structured area of activity with its own symbol system (e.g., mathematics, music, language) and/or set of sensorimotor skills (e.g., painting, dance, sports).

Overexcitabilities: Dąbrowski (2013) described OEs as one of three primary ideas comprising developmental potential (p. 104). The five OEs are psychomotor, sensual, intellectual, imaginal, and emotional (Daniels & Piechowski, 2009). Any of these five OEs can influence the timing of developmental transitions for twice-exceptional children (Piechowski, 2013):

- **Psychomotor:** A surplus of energy and psychomotor expressions of emotional tension.
- **Sensual:** An enhanced sensory (seeing, smelling, tasting, touching, hearing, music, color, etc.) and sense of aesthetic pleasure where emotional tensions can be expressed as overeating, shopping sprees, and the desire to be the center of attention.
- **Intellectual:** A thirst for knowledge, curiosity intellectual activity, a strong sense of social justice, and a preoccupation with logic or moral thinking.

- Emotional: Intense feelings and emotions that can be expressed physically (blushing, flushing, pounding heart, etc.) or conveyed through strong affective emotions (anxiety, inhibition, euphoria, and depressive moods).
- Imaginational: Intense imagination and creativity, detailed visualization, poetic or dramatic sensitivity, and magical thinking.

Twice-exceptional: The NAGC (2017) defines twice-exceptional as:

Students who give evidence of the potential for high achievement capability in areas such as specific academics; general intellectual ability; creativity; leadership; AND/OR visual, spatial, or performing arts AND also give evidence of one or more disabilities as defined by federal or state eligibility criteria such as specific learning disabilities; speech and language disorders; emotional/behavioral disorders; physical disabilities; autism spectrum; or other health impairments, such as ADHD. Twice-exceptional students represent a unique group of learners with diverse programming and emotional needs due to the fact that they may have both gifts and disabilities.

Appendix B: Community Partner Letter

[REDACTED]

April 15, 2019

To Whom It May Concern:

I am pleased to announce that [REDACTED] will participate as a community partner for the doctoral research study being conducted by Karen Arnstein titled: Understanding the Developmental Transitions of Preadolescent, Twice-Exceptional Students [REDACTED]. As the Head of School for [REDACTED] and someone who believes in the talent development for all of our twice-exceptional learners, it is my hope that this study will help us determine how to better serve our learners based on research findings.

As the community partner as well as a participant, I have been assured by Karen Arnstein that [REDACTED] and all those participating will remain anonymous and given pseudonyms. As the community partner, I will help Karen by giving her time to speak to the staff and provide an introduction with rationale to parents that may be interested in participating. I will also counsel Karen in communications with the teachers as well as allow the teachers to have time to go interview. I will also review the final write-up of the research project and lend my lens and provide feedback as needed.

I look forward to the findings of the study to help move [REDACTED] forward in providing quality programming and support to our twice-exceptional learners.

[REDACTED]

[REDACTED]
Head of School
[REDACTED]

[REDACTED] + [REDACTED]

Appendix C: Introduction Letter to Teachers



Dear Three Pillars Lab School Teachers,

My name is Karen Arnstein and I am a doctoral student from the Morgridge College of Education at the University of Denver. I write to invite you to participate in my doctoral research project, “The Space Between: Examining the Perceived Developmental Transitions of Preadolescent Twice-Exceptional Students.” Participation in this study is completely voluntary and your involvement will not affect your employment with Three Pillars Lab School regardless of your agreement to participate or not. This is a qualitative collective case study. The purpose of this study is to examine the developmental transitions of twice-exceptional students through parent, teacher, and psychologist perceptions and experiences as well as identifying supports and barriers to these transitions of this most asynchronous population.

If you decide to participate in this study, I will e-mail you the consent form and questions in advance of the interview. I will contact you to schedule an online interview at a date and time convenient for you and review the consent form together to answer any questions. In order to provide to most flexibility in scheduling, we will use Zoom, a secure online video conferencing tool, to conduct face-to-face online interviews.

At the beginning of each interview, we will review the consent form together to allow sufficient time to answer any questions you may have. I will ask you about some of your twice-exceptional students and to describe examples of asynchronous development. Describe gifted characteristics and learning differences of your students as well as how they impact learning for the student and the class and how these characteristics were addressed before you worked at Three Pillars Lab School. When have you noticed a student struggling to transition through a developmental stage due to their asynchrony and the comparison to their friends and classmates? Other questions will include how you know your student is struggling with their social-emotional growth, the scaffolding you use to help promote successful developmental transitions for your student, barriers this student encountered, as well as your past experiences before you came to Three Pillars Lab School. Finally, I will ask how you see your role in supporting twice-exceptional students close the gaps due to asynchronous development and how your perception of your role has changed since you began working with twice-exceptional students.

I expect to conduct two interviews which will last 60 to 90 minutes. You will be audio and video recorded for the purpose of transcription, memos, and to check for transcription accuracy. All your information will be confidential, and a pseudonym will be used in the study. I will provide you with a copy of the completed transcription to check the validity of the narrative and approve the final transcription details.

This is a completely voluntary research project. If you would like to participate or have any questions about the study, please contact me at (909) 648-3060 or by e-mail at karen.arnstein@du.edu. You may also contact the faculty advisor, Dr. Norma Hafenstein, with any questions. She can be reached at (303) 871-2527 or by e-mail at norma.hafenstein@du.edu.

Thank you for your interest in this study!

Warmly,

Karen B. Arnstein, MA
Karen.arnstein@du.edu
(909) 648-3060

Appendix D: Introduction Letter to Parents



Dear Three Pillars Lab School Parent,

My name is Karen Arnstein and I am a doctoral student from the Morgridge College of Education at the University of Denver. I write to invite you to participate in my doctoral research project, “The Space Between: Examining the Perceived Developmental Transitions of Preadolescent Twice-Exceptional Students.” Participation in this study is completely voluntary and your involvement will not affect your relationship with Three Pillars Lab School regardless of your agreement to participate or not. This is a qualitative collective case study. The purpose of this study is to examine the developmental transitions of twice-exceptional students through parent, teacher, and psychologist perceptions and experiences as well as identifying what has acted as a support or barrier for your child and their development.

If you decide to participate in this study, I will e-mail you the consent form and questions in advance of the interview. I will contact you to schedule an online interview at a date and time convenient for you and review the consent form together to answer any questions. In order to provide to most flexibility in scheduling, we will use Zoom, a secure online video conferencing tool, to conduct face-to-face online interviews.

At the beginning of each interview, we will review the consent form together to allow sufficient time to answer any questions you may have. I will ask you about your twice-exceptional child and to describe examples of their social, emotional, and academic development. I will ask about your child’s gifted characteristics and learning differences as well as how they may have impacted learning and growth. Other questions will address focus on when you noticed your child struggling with their social skills or emotional regulation in comparison to their friends and classmates. Other questions will include how *you* know your child is struggling with their social/emotional growth, the supports you use to help promote growth for your child, barriers your child encountered as well as your past experiences before you came to Three Pillars Lab School. Finally, I will ask how you see your role in supporting your twice-exceptional child to close the gaps in their development and maturity and how your perception of your parental role has changed since you learned your child was twice-exceptional.

I expect to conduct two interviews which will last 60 to 90 minutes. You will be audio and video recorded for the purpose of transcription, memos, and to check for

transcription accuracy. All your information will be confidential, and a pseudonym will be used in the study. I will provide you with a copy of the completed transcription to check the validity of the narrative and approve the final transcription details.

This research project is completely voluntary. If you would like to participate or have any questions about the study, please contact me at (909) 648-3060 or by e-mail at karen.arnstein@du.edu. You may also contact the faculty advisor, Dr. Norma Hafenstein, with any questions. She can be reached at (303) 871-2527 or by e-mail at norma.hafenstein@du.edu.

Thank you for your interest in this study!

Warmly,

Karen B. Arnstein, M.A.

karen.arnstein@du.edu

(909) 648-3060

Appendix E: Introduction Letter to Psychologists



Dear Dr. _____,

My name is Karen Arnstein and I am a doctoral student from the Morgridge College of Education at the University of Denver. I write to invite you to participate in my doctoral research project, “The Space Between: Examining the Perceived Developmental Transitions of Preadolescent Twice-Exceptional Students.” Participation in this study is completely voluntary and your involvement will not affect your employment with Three Pillars Lab School regardless of your agreement to participate or not. This is a qualitative collective case study.

The purpose of this study is to examine the developmental transitions of twice-exceptional students through parent, teacher, and psychologist perceptions and experiences as well as identifying supports and barriers to these transitions of this most asynchronous population. You are eligible to participate in this study as a psychologist who either works with twice-exceptional children in a clinical setting or because you have published on the topic of asynchrony and twice-exceptionality in a peer reviewed journal.

If you decide to participate in this study, I will e-mail you the consent form and questions in advance of the interview. I will contact you to schedule an online interview at a date and time convenient for you and review the consent form together to answer any questions. In order to provide to most flexibility in scheduling, we will use Zoom, a secure online video conferencing tool, to conduct face-to-face online interviews. I will ask you about why you are interested in twice-exceptionality, what motivated you to work with these children or do research, how you define “developmental transitions,” and whether the gaps due to asynchronous development ever really close over time. Other questions include supports that promote and barriers that inhibit these transitions as well as the perception of your role in the field and where the field of gifted education is going in the future.

At the beginning of each interview, we will review the consent form together to allow sufficient time to answer any questions you may have. I will ask you about your twice-exceptional students and to describe examples of their social, emotional, and academic development. I will ask about their gifted characteristics and learning differences as well as how twice-exceptionality may have impacted learning and growth. Other questions will focus on when students are struggling with their social skills or

emotional regulation and different approaches you have utilized to help students with their growth and development.

I expect to conduct two interviews which will last 60 to 90 minutes. I will forward the list of questions in advance so that you may have time to prepare for the interview. You will be audio and video recorded for the purpose of transcription, memos, and to check for transcription accuracy. All your information will be confidential, and a pseudonym will be used in the study. I will provide you with a copy of the completed transcription to check the validity of the narrative and approve the final transcription details.

This is a completely voluntary research project. If you would like to participate or have any questions about the study, please contact me at (909) 648-3060 or by e-mail at karen.arnstein@du.edu. You may also contact the faculty advisor, Dr. Norma Hafenstein, with any questions. She can be reached at (303) 871-2527 or by e-mail at norma.hafenstein@du.edu.

Thank you for your interest in this study!

Warmly,

Karen B. Arnstein, MA
Karen.arnstein@du.edu
(909) 648-3060

Appendix F: Consent Form for Participation in Research - Parents



Consent Version: 09/01/2019

Consent to Participate in Research

Study Title: The Space Between: Examining the Perceived Developmental Transitions of Preadolescent Twice-Exceptional Students

IRBNet #: 1452852-1

Principal Investigator: Karen Arnstein, MEd, Adjunct Professor, University of Redlands

Faculty Sponsor: Norma Hafenstein, PhD, Professor, University of Denver

Study Site: Online interviews (Zoom teleconferencing), School site observations at Three Pillars Lab School, 3921 Laurel Canyon Blvd., Studio City, CA 91604

You are being asked to participate in a research study. Your participation in this research study is voluntary and you do not have to participate. This document contains important information about this study and what to expect if you decide to participate. Please consider the information carefully. Feel free to ask questions before making your decision whether or not to participate.

The purpose of this form is to provide you information that may affect your decision as to whether or not you may want to participate in this research study. The person performing the research will describe the study to you and answer all of your questions. Please read the information below and ask any questions you might have before deciding whether or not to give your permission to take part. If you decide to be involved in this study, this form will be used to record your permission. Your decision to participate in this study will in no way affect your relationship with Three Pillars Lab School.

Purpose

You are being asked to participate in the research study, The Space Between: Examining the Perceived Developmental Transitions of Preadolescent Twice-Exceptional Students. The purpose of this study is to examine, through the lived experiences of parents, teachers, and psychologists, factors that contribute to supporting or inhibiting developmental transitions of preadolescent, twice-exceptional students.

If you participate in this research study, you will be invited to sit for two audio-recorded, semistructured interviews which will be scheduled at your convenience. Interviews will be conducted either in person or through teleconferencing using Zoom. The interview will last approximately 60 to 90 minutes. In addition, you will be asked to participate in a follow-up interview that will require an additional 60 to 90 minutes. The follow-up interview will be scheduled at your convenience.

Interviews will require individuals to discuss aspects of their experiences that address questions such as *Please describe the gifted characteristics and learning differences your child has demonstrated? When have you noticed your child struggling with a developmental transition due to being “out of sync” with their age peers? What supports have you or your child encountered that helped promote their growth? How do you see your role in supporting your child?*

Participating in this research study is entirely voluntary. If you decide to participate, you are free to change your mind and stop at any time. You may choose not to continue with the interviews, not to answer a question, or not be recorded for any reason. Your decision to participate in this study will in no way affect your standing or employment with Three Pillars Lab School.

Participants will be given the opportunity to read interview transcripts for accuracy. Any information that is deemed inaccurate will be addressed, corrected, or deleted.

Risks or Discomforts

Potential risks, stress and/or discomforts of participation may include the possibility that discussing certain issues about your experience may be upsetting. In the event that issues arise, participants may contact the following for support.

MentalHealth.gov: SAMHSA 1-877-726-4727

Audio and video recordings, all paper records, and all transcripts will be retained for a minimum of three years following the end of the study as per federal regulations and the University of Denver (DU) Institutional Review Board (IRB) policy.

Benefits

The benefits which may reasonably be expected to result from this study is that you will help inform communities of professionals that span across education and psychology about issues related to preadolescent, twice-exceptional students. We cannot and do not guarantee or promise that you will receive any benefits from this study. Your decision whether or not to participate in this study will not affect your relationship with Three Pillars Lab School.

Confidentiality of Information

The researcher will ensure that information is secure and unidentifiable throughout the duration of the study and following the completion of all research. In order to keep

personal information confidential during this study, all data will be stored in a password-protected secure computer. Your individual identity will be respected and kept private. Any and all personal information collected will be deidentified and each participant will be assigned a pseudonym to maintain privacy and confidentiality. Audio- and video-recorded interviews and transcriptions will be stored and password-protected. Audio- and video-recorded files and transcripts will be destroyed after three years once this research study has concluded as per federal regulations and University of Denver IRB policy. The link between your identifiers and the research data will be destroyed after the records retention period required by state and/or federal law.

Limits to Confidentiality

All of the information you provide will be confidential. However, if we learn that you intend to harm yourself or others, including, but not limited to child or elder abuse/neglect, suicide ideation, or threats against others, we must report that to the authorities as required by law.

Your name will not be used in any report. Identifiable research data will be encrypted, and password protected.

Your responses will be assigned a code number. The list connecting your name to this code will be kept in an encrypted and password protected file. Only the research team will have access to the file. When the study is completed and the data have been analyzed, the list will be destroyed.

With your permission, I would like to audio/videotape this interview so that I can construct an accurate transcript. Your name will not be in the transcript or my notes. Research data will be destroyed after the records retention period required by state and/or federal law.

Because of the nature of the data, it may be possible to deduce your identity; however, there will be no attempt to do so and your data will be reported in a way that will not identify you.

Information collected about you will not be used or shared for future research studies.

The information that you provide in the study will be handled confidentially. However, there may be circumstances where this information must be released or shared as required by law. Representatives from the University of Denver may also review the research records for monitoring purposes.

Government or university staff sometimes review studies such as this one to make sure they are being done safely and legally. If a review of this study takes place, your records may be examined. The reviewers will protect your privacy. The study records will not be used to put you at legal risk of harm.

Consent to Video/Audio Recording/Photography Solely for Purposes of This Research

This study involves video/audio recording, and/or photography. If you do not agree to be recorded, you can still take part in the study.

_____ YES, I agree to be video/audio recorded/photographed.

_____ NO, I do not agree to be video/audio recorded/photographed.

Questions

For questions, concerns, or complaints about the study or your participation, please contact Karen Arnstein, MEd, at (909) 648-3060 or karen.arnstein@du.edu. Dr. Norma Hafenstein, advisor on this project, may be contacted with questions at Norma.Hafenstein@du.edu.

If you are not satisfied with how this study is being conducted, or if you have any concerns, complaints, or general questions about the research or your rights as a participant, please contact the University of Denver (DU) Institutional Review Board to speak to someone independent of the research team at (303) 871-2121 or e-mail at IRBAdmin@du.edu.

Signing the consent form

I have read (or someone has read to me) this form, and I am aware that I am being asked to participate in a research study. I have had the opportunity to ask questions and have had them answered to my satisfaction. I voluntarily agree to participate in this study.

I am not giving up any legal rights by signing this form. I will be given a copy of this form.

Printed name of subject **Signature of subject** **Date**

Please take all the time you need to read through this document and decide whether you would like to participate in this research study.

If you decide to participate, your completion of the research procedures indicates your consent. Please keep this form for your records.

Appendix G: Consent Form for Participation in Research – Teachers and Psychologists



Consent Version: 09/01/2019

Consent to Participate in Research

Study Title: The Space Between: Examining the Perceived Developmental Transitions of Preadolescent Twice-Exceptional Students

IRBNet #: 1452852-1

Principal Investigator: Karen Arnstein, MEd, Adjunct Professor, University of Redlands

Faculty Sponsor: Norma Hafenstein, PhD, Professor, University of Denver

Study Site: Online interviews (Zoom teleconferencing), School site observations at Three Pillars Lab School, 3921 Laurel Canyon Blvd., Studio City, CA 91604

You are being asked to participate in a research study. Your participation in this research study is voluntary and you do not have to participate. This document contains important information about this study and what to expect if you decide to participate. Please consider the information carefully. Feel free to ask questions before making your decision whether or not to participate.

The purpose of this form is to provide you information that may affect your decision as to whether or not you may want to participate in this research study. The person performing the research will describe the study to you and answer all of your questions. Please read the information below and ask any questions you might have before deciding whether or not to give your permission to take part. If you decide to be involved in this study, this form will be used to record your permission. Your decision to participate in this study will in no way affect your standing or employment with Three Pillars Lab School.

Purpose

You are being asked to participate in the research study, The Space Between: Examining the Perceived Developmental Transitions of Preadolescent Twice-Exceptional Students. The purpose of this study is to examine, through the lived experiences of parents, teachers, and psychologists, factors that contribute to supporting or inhibiting developmental transitions of preadolescent, twice-exceptional students.

If you participate in this research study, you will be invited to sit for two audio-recorded, semistructured interviews which will be scheduled at your convenience. Interviews will be conducted either in person or through teleconferencing using Zoom. The interview will last approximately 60 to 90 minutes. In addition, you will be asked to participate in a follow-up interview that will require an additional 60 to 90 minutes. The follow-up interview will be scheduled at your convenience.

Interviews will require individuals to discuss aspects of their experiences that address questions such as *Please describe the gifted characteristics and learning differences your student has demonstrated? When have you noticed a student struggling with a developmental transition due to being “out of sync” with their age peers? What scaffolding have you used to help promote successful developmental transitions for your student?*

Participating in this research study is entirely voluntary. If you decide to participate, you are free to change your mind and stop at any time. You may choose not to continue with the interviews, not to answer a question, or not be recorded for any reason. Your decision to participate in this study will in no way affect your standing or employment with Three Pillars Lab School.

Participants will be given the opportunity to read interview transcripts for accuracy. Any information that is deemed inaccurate will be addressed, corrected, or deleted.

Risks or Discomforts

Potential risks, stress and/or discomforts of participation may include the possibility that discussing certain issues about your experience may be upsetting. In the event that issues arise, participants may contact the following for support.

MentalHealth.gov: SAMHSA 1-877-726-4727

Audio and video recordings, all paper records, and all transcripts will be retained for a minimum of three years following the end of the study as per federal regulations and the University of Denver (DU) Institutional Review Board (IRB) policy.

Benefits

The benefits which may reasonably be expected to result from this study is that you will help inform communities of professionals that span across education and psychology about issues related to preadolescent, twice-exceptional students. We cannot and do not guarantee or promise that you will receive any benefits from this study. Your decision whether or not to participate in this study will not affect your employment or standing with Three Pillars Lab School.

Confidentiality of Information

The researcher will ensure that information is secure and unidentifiable throughout the duration of the study and following the completion of all research. In order to keep personal information confidential during this study, all data will be stored in a password-protected secure computer. Your individual identity will be respected and kept private. Any and all

Personal information collected will be de-identified and each participant will be assigned a pseudonym to maintain privacy and confidentiality. Audio and video-recorded interviews and transcriptions will be stored and password-protected. Audio and video-recorded files and transcripts will be destroyed after three years once this research study has concluded as per federal regulations and University of Denver IRB policy. The link between your identifiers and the research data will be destroyed after the records retention period required by state and/or federal law.

Limits to confidentiality

All of the information you provide will be confidential. However, if we learn that you intend to harm yourself or others, including, but not limited to child or elder abuse/neglect, suicide ideation, or threats against others, we must report that to the authorities as required by law.

Your name will not be used in any report. Identifiable research data will be encrypted, and password protected.

Your responses will be assigned a code number. The list connecting your name to this code will be kept in an encrypted and password protected file. Only the research team will have access to the file. When the study is completed and the data have been analyzed, the list will be destroyed.

With your permission, I would like to audio/videotape this interview so that I can construct an accurate transcript. Your name will not be in the transcript or my notes. Research data will be destroyed after the records retention period required by state and/or federal law.

Because of the nature of the data, it may be possible to deduce your identity; however, there will be no attempt to do so and your data will be reported in a way that will not identify you.

Information collected about you will not be used or shared for future research studies.

The information that you provide in the study will be handled confidentially. However, there may be circumstances where this information must be released or shared as required by law. Representatives from the University of Denver may also review the research records for monitoring purposes.

Appendix H: Demographic Face Sheet

Name: _____ Date: _____

Pseudonym: _____ (Researcher Only)

Your gender: M _____ F _____

Primary Language: _____

Current Occupation: _____

Education (highest level attained): _____

For Parents:

How many children do you have? _____

What is the birth order? (Where does your twice-exceptional child fit into the birth order?) _____

How many of your children are gifted? _____

How many of your children are identified as twice exceptional? _____

For Teachers:

Years/Subjects Taught – K-12: _____

Years/Subjects Taught at Three Pillars Lab School: _____

Were you or any family members identified as “gifted”? _____

Appendix I: First Interview Protocol with Teachers

Thank you for taking the time to meet with me today for this interview. My name is Karen Arnstein and I am a doctoral student at the University of Denver. Today is [day], [month] [date] [year] and I am interviewing [participant]. The purpose of this interview is to describe your experiences to understand the developmental transitions of preadolescent, twice-exceptional students.

I am going to spend the next 60 to 90 minutes asking you questions about your perceptions and experiences twice-exceptional students. By signing the consent form, you agree that I have permission to record and transcribe this interview. I will also take extensive notes during this interview. The information and data from this interview will be used for a doctoral research project and may be published in the future. This interview recording and transcript will not be accessible to anyone but me and will be encrypted, password protected, and stored in a secure location. The information from this interview will not be shared with anyone without your express written permission.

Do you have any questions before we begin? Great, let's get started.

I'm going to have you fill out a demographic information sheet so I can assign a pseudonym. The questions I'm going to ask will begin with "how" and "why" and are meant to guide our conversation. Please feel free to expand your answers as you feel comfortable – to best describe your experiences, feelings, and thoughts regarding twice-exceptionality in your child.

Question 1

Tell me about some of your twice-exceptional students. Please describe examples you have seen or experienced of asynchronous development where the student seemed "out of sync."

Question 2

Please describe examples of gifted characteristics your students demonstrate.

- How do those characteristics impact the learning for the student and the class?
- In your experience, how were these characteristics addressed before you came to Three Pillars Lab School?

Question 3

Please describe examples of learning differences your students demonstrate.

- How do those learning differences impact the learning for the student and the class?
- How do you address student needs for accommodation or modification?

Question 4

When have you noticed a student struggling with a transition through a developmental stage due to asynchrony?

- In your perception, how does that compare to their friends, classmates or what you know about development?
- How do you know your student is struggling with their social-emotional growth?

Question 5

What scaffolding have you used to help promote successful developmental transitions for your student?

- How did you learn about that strategy?

Question 6

What barriers seem to have inhibited successful developmental transitions for your student(s) in the past or present?

Question 7

How do you see your role in supporting your twice-exceptional students to close the gaps due to asynchronous development?

- How has your perception of your role changed since you began working with twice-exceptional students?

Question 8

Are you gifted or twice exceptional?

Thank you again for taking the time to meet with me. If you have any additional information you want to share, please e-mail me at the e-mail listed on your copy of the consent form.

I have one more question to close:

- *I will send you a copy of the transcript to verify accuracy. When reading your transcribed interview, is there anything you would like me to think about or pay attention to?*

Appendix J: Second Interview Protocol with Teachers

Thank you for taking the time to meet with me today for this interview. Today is [day], [month] [date] [year] and I am interviewing [participant]. The purpose of this follow-up interview is to gain a deeper understanding of the developmental transitions of preadolescent, twice-exceptional students.

I am going to spend the next 60 to 90 minutes asking you questions about your perceptions and experiences of twice-exceptional students. Your previously signed consent form conveys that you agree that I have permission to record and transcribe this interview. I will also take extensive notes during this interview. The information and data from this interview will be used for a doctoral research project and may be published in the future. This interview recording and transcript will not be accessible to anyone but me and will be encrypted, password protected, and stored in a secure location. The information from this interview will not be shared with anyone without your express written permission.

Do you have any questions before we begin? Great, let's get started.

The questions I'm going to ask will begin with "how" and "why" and are meant to guide our conversation. Please feel free to expand your answers as you feel comfortable to best describe your experiences, feelings, and thoughts regarding twice-exceptionality in your student.

Question 1

In our first interview, you told me about some of your twice-exceptional students. Can you tell me a little more about the examples you described in our first interview?

- For example, how did you know these students were experiencing asynchronous development?

Question 2

Could you tell me a little more about the gifted characteristics your students have demonstrated?

- For example, how did you address them in your classroom?

Question 3

In our first interview, you described examples of learning differences demonstrated by your students.

- How did those learning differences impact the learning for the student and the class?
- How did you address them?

Question 4

You described your perceptions and how you noticed when a student is struggling with a transition through a developmental stage.

- Was the struggle related to social/emotional growth and maturity? If so, how did the student describe the situation?
- Did other students/peers notice the struggle and how did they respond?

Question 5

What strategies have you used to help promote successful developmental transitions for your student(s)?

- How did you learn about that strategy or was it intuitive?

Question 6

What barriers seem to have inhibited successful developmental transitions for your student(s) in the past or present?

- Do these barriers seem to align with what parents have shared about their student?

Question 7

How do you see your role in supporting your twice-exceptional students to close the gaps due to asynchronous development?

- How has your perception of your role changed since you started to work with twice-exceptional students?

Thank you again for taking the time to meet with me. If you have any additional information you want to share, please e-mail me at the e-mail listed on your copy of the consent form. I have one more question to close, I will send you a copy of the transcript to verify accuracy. When reading your transcribed interview, is there anything you would like me to think about or pay attention to?

Appendix K: First Interview Protocol with Parents

Thank you for taking the time to meet with me today for this interview. My name is Karen Arnstein and I am a doctoral student at the University of Denver. Today is [day], [month] [date] [year] and I am interviewing [participant]. The purpose of this interview is to describe your experiences to understand the developmental transitions of preadolescent, twice-exceptional students.

I am going to spend the next 60 to 90 minutes asking you questions about your perceptions and experiences twice-exceptional students. By signing the consent form, you agree that I have permission to record and transcribe this interview. I will also take extensive notes during this interview. The information and data from this interview will be used for a doctoral research project and may be published in the future. This interview recording and transcript will not be accessible to anyone but me and will be encrypted, password protected, and stored in a secure location. The information from this interview will not be shared with anyone without your express written permission.

Do you have any questions before we begin? Great, let's get started.

I'm going to have you fill out a demographic information sheet so I can assign a pseudonym. The questions I'm going to ask will begin with "how" and "why" and are meant to guide our conversation. Please feel free to expand your answers as you feel comfortable to best describe your experiences, feelings, and thoughts regarding twice-exceptionality in your child.

Question 1

Tell me about your child. How did you know your child was "out of sync" in either their cognitive or social-emotional development where they may have been ahead or behind their age peers?

Question 2

Please describe your child's area(s) of giftedness.

- How did you become aware of their giftedness?
- Who identified them officially?
- If your child was in public school, how did the school provide appropriate challenge?

Question 3

Please describe your child's area(s) of learning differences?

- How did you become aware of their learning differences?
- Who identified them officially?
- If your child was in a public school, how did the school provide accommodations?

Question 4

When have you noticed your child struggling with a transition through a developmental stage due to his or her being “out of sync”?

- In your perception, how does that compare to their friends and siblings?
- How do you know your child is struggling with their social-emotional growth?

Question 5

What supports have you or your child encountered that helped promote successful developmental transitions for your child?

Question 6

What barriers have you or your child encountered that seemed to inhibit successful developmental transitions?

Question 7

How do you see your role in supporting your twice-exceptional child to close the gaps due to asynchronous development?

Question 8

Are you or child’s other parent twice exceptional?

Thank you again for taking the time to meet with me. If you have any additional information you want to share, please e-mail me at the e-mail listed on your copy of the consent form.

I have one more question to close:

- *I will send you a copy of the transcript to verify accuracy. When reading your transcribed interview, is there anything you would like me to think about or pay attention to?*

Appendix L: Second Interview Protocol with Parents

Thank you for taking the time to meet with me today for this interview. Today is [day], [month] [date] [year] and I am interviewing [participant]. The purpose of this follow-up interview is to gain a deeper understanding of the developmental transitions of preadolescent, twice-exceptional students.

I am going to spend the next 60 to 90 minutes asking you questions about your perceptions and experiences of your twice-exceptional child. Your previously signed consent form conveys that you agree that I have permission to record and transcribe this interview. I will also take extensive notes during this interview. The information and data from this interview will be used for a doctoral research project and may be published in the future. This interview recording and transcript will not be accessible to anyone but me and will be encrypted, password protected, and stored in a secure location. The information from this interview will not be shared with anyone without your express written permission.

Do you have any questions before we begin? Great, let's get started.

The questions I'm going to ask will begin with "how" and "why" and are meant to guide our conversation. Please feel free to expand your answers as you feel comfortable to best describe your experiences, feelings, and thoughts regarding twice-exceptionality in your child.

Question 1

Tell me more about your child. Have you noticed a pattern where they seem "out of sync" in either their cognitive or social-emotional development where they may have been ahead or behind their age peers?

Question 2

Tell me more about your child's area(s) of giftedness:

Have you learned about an area of giftedness that you were not aware of?

How have you supported your child in their areas of giftedness?

For example, do you feel that your awareness has supported your child during difficult periods or transitions?

Question 3

Can you tell me more about your child's area(s) of learning differences?

Do you feel that their learning differences have had an impact on their social-emotional growth?

How did you perceive your child when you first learned of their learning differences?

How does that differ from your perception today?

Question 4

In our first interview, you described your perceptions and how you noticed when your child was struggling with a transition through a developmental stage.

In your perception, was the struggle related to your child's social-emotional growth and skills? If so, how would you describe it?

Was your child aware of their own struggle and how did you support your child through the transition?

Question 5

Are there any other supports you or your child encountered that helped promote successful developmental transitions for your child that we may not have discussed before?

Question 6

Are there are other barriers you or your child encountered that seemed to inhibit successful developmental transitions that we may not have discussed before?

Question 7

Has your perception changed regarding your role in supporting your twice-exceptional child to close the gaps due to asynchronous development? If so, how?

Thank you again for taking the time to meet with me. If you have any additional information you want to share, please e-mail me at the e-mail listed on your copy of the consent form.

I have one more question to close:

I will send you a copy of the transcript to verify accuracy. When reading your transcribed interview, is there anything you would like me to think about or pay attention to?

Appendix M: First Interview Protocol with Psychologist

Thank you for taking the time to meet with me today for this interview. My name is Karen Arnstein and I am a doctoral student at the University of Denver. Today is [day], [month] [date] [year] and I am interviewing [participant]. The purpose of this interview is to describe your experiences to understand the developmental transitions of preadolescent, twice-exceptional students.

I am going to spend the next 60 to 90 minutes asking you questions about your perceptions and experiences twice-exceptional students. By signing the consent form, you agree that I have permission to record and transcribe this interview. I will also take extensive notes during this interview. The information and data from this interview will be used for a doctoral research project and may be published in the future. This interview recording and transcript will not be accessible to anyone but me and will be encrypted, password protected, and stored in a secure location. The information from this interview will not be shared with anyone without your express written permission.

Do you have any questions before we begin? Great, let's get started.

I'm going to have you fill out a demographic information sheet so I can assign a pseudonym. The questions I'm going to ask will begin with "how" and "why" and are meant to guide our conversation. Please feel free to expand your answers as you feel comfortable to best describe your experiences, feelings, and thoughts regarding twice-exceptionality in your child.

Question 1

Tell me why you became interested in twice-exceptionality and asynchronous development.

- What motivated you to work with these students or do research?

Question 2

How do you define "developmental transitions"?

Question 3

In your experience, have you ever seen the gaps due to asynchrony close?

- Who was the pivotal person?
- How long did it take?

Question 4

What supports do you believe help promote successful developmental transitions for twice-exceptional children?

Question 5

What barriers do you believe have inhibited successful developmental transitions for twice-exceptional children?

Question 6

How do you see your role in supporting twice-exceptional children and gifted education?

Thank you again for taking the time to meet with me. If you have any additional information you want to share, please e-mail me at the e-mail listed on your copy of the consent form.

I have one more question to close:

- *I will send you a copy of the transcript to verify accuracy. When reading your transcribed interview, is there anything you would like me to think about or pay attention to?*

Appendix N: Second Interview Protocol with Psychologist

Thank you for taking the time to meet with me today for this interview. Today is [day], [month] [date] [year] and I am interviewing [participant]. The purpose of this follow-up interview is to gain a deeper understanding of the developmental transitions of preadolescent, twice-exceptional students.

I am going to spend the next 60 to 90 minutes asking you questions about your perceptions and experiences of your twice-exceptional student. Your previously signed consent form conveys that you agree that I have permission to record and transcribe this interview. I will also take extensive notes during this interview. The information and data from this interview will be used for a doctoral research project and may be published in the future. This interview recording and transcript will not be accessible to anyone but me and will be encrypted, password protected, and stored in a secure location. The information from this interview will not be shared with anyone without your express written permission.

Do you have any questions before we begin? Great, let's get started.

The questions I'm going to ask will begin with "how" and "why" and are meant to guide our conversation. Please feel free to expand your answers as you feel comfortable to best describe your experiences, feelings, and thoughts regarding twice-exceptionality in your child.

Question 1

What motivates you to continue working with these students or conduct research?

Question 2

Can you tell me more about your definition of "developmental transitions"?

- How would you define it within social and emotional development?

Question 3

What current research or ideas have you personally incorporated in your work with twice-exceptional students? (e.g., social thinking, positive psychology, peer feedback, etc.)

- Did you see any positive changes regarding developmental transitions in the student by using different approaches in your work? If so, can you please elaborate?

Question 4

Are there any other supports you believe could help promote successful developmental transitions for twice-exceptional children that we did not discuss before?

Question 5

Are there any other barriers (family dynamics, school setting, etc.) you believe could inhibit successful developmental transitions for twice-exceptional children?

Question 6

What is the most important contribution you believe you make in your role in supporting twice-exceptional children and gifted education?

Thank you again for taking the time to meet with me. If you have any additional information you want to share, please e-mail me at the e-mail listed on your copy of the consent form.

I have one more question to close:

- *I will send you a copy of the transcript to verify accuracy. When reading your transcribed interview, is there anything you would like me to think about or pay attention to?*

Appendix O: Observation Protocol – Physical Space/Classroom Environment

Location of Observation: _____ Date: _____

Time of Observation: _____ Length of Activity: _____

Classroom setup	Evidence observed	Researcher reflections
Flexible seating (Baum, Owen, & Schader, 2017)		
Seating (wobble seats, therapy balls, etc.)		
“walking corridor” (students can stand or pace, lectern/podium, etc.)		
Accommodations for Sensory Issues		
Lighting		
Sensory tools (fidgets for hands/feet)		
Plants or other living creatures		
Colors and patterns		
Productivity Supports		
Clear written directions		
Posted rules, procedures, and expectations		
Timetable/schedule		
Frequent water/snack breaks		
Multimedia resources (audiobooks, video, websites, podcasts, picture books, etc.; Baum, Schader et al., 2014)		
Outdoor Environment		
Noise/sounds		
Natural environment		
Playground structure(s)		

Appendix Q: Timeline

Summer 2019 – Fall 2019: IRB process

Fall 2019: Obtain consent forms from participants

Fall 2019 – Winter 2019: Data collection

Winter 2019 – Spring 2020: Data analysis and write-up

Spring 2020 – Submit case study, present, and defend doctoral research project