

PERCEPTIONS OF PARAPROFESSIONALS AND SPECIAL
EDUCATION TEACHERS REGARDING THE EFFECTS OF
PARAPROFESSIONALS ON STUDENT INDEPENDENCE FOR
INDIVIDUALS WITH DOWN SYNDROME

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Abstract

As time passes, many students with Down Syndrome, who were previously excluded from general education classrooms, are beginning to be included in these settings. As a result, schools are facing the increasing challenge of determining how to properly service this population in their least restrictive environment. The focus of this phenomenological study was to identify the perceptions of educators and paraprofessionals who service these students as they relate to the independence of students with Down Syndrome. The participants were teachers and paraprofessionals who work directly with students with Down Syndrome on a daily basis. Data were collected through qualitative methods, including semi-structured interviews, a focus group, and journaling to prompts. The analysis determined three main themes: increased communication skills for students with Down Syndrome who were included in the general education classroom, a commitment for increased professional development and training for paraprofessionals, and a need for successful classroom management and culture in the classrooms in which the students are included.

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Signature: Gabrielle Elizabeth Baker

Date: March 10, 2020

Dedication

This dissertation is dedicated to my husband, Jessie. You are an amazing husband and human being! Thank you for your love and support. I have never doubted that you are in my corner and that I count on you always.

Also, it is dedicated to my beautiful daughter, Crosby. Thank you for being along for the ride with me the last nine months of this journey and for making me a mother.

I love you both today and always.

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I am blessed.

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CHAPTER 1: INTRODUCTION

The earliest known depiction of a person with Down Syndrome is in a Flemish painting dated from 1515. In the early 1920s, the life expectancy of someone with Down Syndrome was nine years old, at most. Since then, many researchers have studied this gene abnormality that causes challenges in individuals. In 1946, Benjamin Spock, the author of *Baby and Child Care*, wrote that all babies born with the disease now known as Down Syndrome should be immediately institutionalized. In 1966, English doctor, John Langdon Down, after whom the disease is now named, first described Down Syndrome as a disorder and studied the population with distinct physical characteristics, which have now been discovered to be people with Down Syndrome. He was unclear on the cause of Down Syndrome at the time, but his research was pivotal to bringing awareness to this disease. The true cause of Down Syndrome, a gene mutation, was discovered in 1959.

Down Syndrome is also referred to as trisomy 21, and is a chromosomal condition in which extra genetic material can cause delays for individuals in numerous ways. These can include mental, verbal, and physical developmental delays. Individuals with Down Syndrome can share many physical features including a flat facial profile, an upward slant to the eyes, unusually small ears, and a larger, protruding tongue (Martin, 2009). Additionally, many individuals with Down Syndrome are also shorter than their like-aged peers. Common medical problems associated with Down Syndrome vary from individual to individual. However, persons born with Down Syndrome are at a higher risk for congenital heart disease, vision and hearing problems, thyroid problems, obesity, seizures, and neck problems (Martin, 2009).

In the United States, Down Syndrome can now be detected in utero and for many families, is one of the main genetic tests to be done before giving birth. Amniocentesis became common

practice in the United States in 1976, and now is commonly utilized to determine gene abnormalities in utero. In 1984, diagnostic blood tests were developed to detect Down Syndrome as early as 12 weeks (Martin, 2009).

In the United States alone, one in every 691 babies is born with Down Syndrome, making it the most common chromosomal condition today. Currently, there are more than 400,000 people living with Down Syndrome. These individuals are living longer than ever before, with a life expectancy increasing from 25 years in 1983 to 60 in 2017 (Martin, 2009). Individuals with Down Syndrome go on to join the work force, go to college, and can live normal, independent lives. However, how do early intervention and school-based interventions affect the outcomes of these individuals in the long-term?

Down Syndrome can affect learning abilities in different ways for each individual with the extra chromosome. Often, children with Down syndrome are faced with a mild to moderate intellectual impairment, speech delays, and delays in motor skills. They may need help with adaptive skills, as well. These can include, but are not limited to, self-care, dressing, and ambulating the school (Drang, 2008).

Until as recently as the 1950s, many individuals with disabilities were placed in institutions as many parents believed that these facilities were the only option for educating their children. For many, special education services at the school level were only available at large public schools in large cities. In 1954, the Supreme Court ruled that students could not be separated from schools due to their race (Drang, 2008). Due to this, many parents in the special needs community worked to change the perspective that children with disabilities could not be taught in the general classroom.

Until the Rehabilitation Act of 1973, there were still over 50% of students who were being serviced outside of their appropriate home school (Drang, 2008). This act helped to guarantee federal funding for public facilities receiving federal funding. Then, in 1990, the Individuals with Disabilities Act (IDEA) was passed requiring all schools to provide free and appropriate education to all children.

Students with Down Syndrome can often require special education services in the school. These services can greatly vary depending on the child, but some common services and accommodations that may be required include the need for physical, occupational, and speech therapies. Additionally, students may need limited visual distractions, behavior supports, additional time and assistance for classwork, and therapeutic staff support in the classroom from paraprofessionals (Martin, 2009).

With an increase in students with Down Syndrome being included in general education settings, and a significant push from parents and advocacy groups to do so, understanding the needs of these students, both academically and functionally, is vitally important. In some areas of the country, over 80% of students are currently fully included in the general education setting (Glorcelli, 2008). However, this is not always the case in more rural areas or in smaller school districts. This situation is confounded by the education and training needs of paraprofessionals. In Indiana, and many other states, paraprofessionals require little to no training to work with students, but are being expected to spend 90% or more of the school day with these high-need students (Martin, 2009).

A recent nationwide survey indicated that the majority of children with Down Syndrome in mainstream schools are supported by a learning support assistant for between 20-27 hours per week (Glorcelli, 2008). Parents reported that in more than half of the schools sampled, the child's

support assistant sits next to them for most of the time, occasionally or never working with other children in the class. Additionally, the survey data reported that children with Down Syndrome are only taught by their classroom teacher less than once a week, and receive the majority of their instruction from paraprofessionals, often being pulled from the classroom for this direct instruction from their support professional (Drang, 2008). How does this need for academic and functional support affect the students' independence long term?

As more students are being included in general education settings, looking forward to the overall independence of these students as they complete school and enter into the workforce is extremely important. Understanding their unique barriers, required supports, and motivators can be helpful to educational leaders in order to develop the best practices for working with these individuals.

Statement of the Problem

Children and adults with Down Syndrome are being included in general education classrooms more often in today's schools. Schools are often navigating this inclusion problem with the utilization of paraprofessionals in the classroom. While all children – those with disabilities and those without, can benefit from some time without direct supervision, enabling them to gain in independence and mix socially with their peer group, it is often necessary for the additional supports to be utilized so that students can be successful in the general education setting (Glorcelli, 2008). However, many studies have sought to examine the effects of these paraprofessionals in the classrooms.

Survey data supported the notion that the level of support offered to students with Down Syndrome is often a blanket policy rather than actually specific to the individual child (Glorcelli, 2008). This can often lead to students with lesser needs being over-supported, and students who

need more support being moved into a more restrictive environment, often against parents' wishes, rather than being supported in the classroom. One critical aim of support, particularly at secondary level, must be to increase students' independence and progressively reduce their need for adult assistance.

Without understanding the barriers that persist and the needed supports for these students, how can teachers be sure that utilizing paraprofessionals in the classroom is an effective way to manage students' behavior and learning?

Purpose and Significance of the Study

The purpose of this qualitative study was to analyze the perceptions of general education and special education teachers on how a paraprofessional can affect student independence for students with Down Syndrome. The study utilized through artifacts, teacher questionnaires, teacher interviews, and a focus group. Research posited that paraprofessionals have a direct impact on student independence in many ways (Martin, 2009). This study detailed the educator's perceptions of how students are impacted by having or not having a paraprofessional in the classroom.

Research Question

What are perceptions of general education and special education teachers regarding the effects of paraprofessionals on student independence for individuals with Down Syndrome?

Theoretical Framework

The Relation of Theory to Practice in Education by John Dewey provides a theoretical framework for this study. In this document, John Dewey compares professional education for teachers to the education of other professionals. Two approaches were distinguished – apprenticeship and the laboratory. For the purpose of this study, the framework provides a guide

to the differences of teacher perspective and parent perspective on paraprofessionals working with students in the classroom and how that affects student independence, both academically and functionally both in the current classroom environment and later in life.

Conceptual Framework

The review of literature influenced the conceptual framework in the examination of barriers to the independence of students with Down Syndrome. This literature review defines inclusion, the history of its use and the conceptual and legal framework for providing students with special needs an inclusive learning environment. Combined with Special Education laws, this helps to define the topic and identify barriers to students with Down Syndrome in the general education setting.

An examination of current educational research concerning the needs and supports for students with Down Syndrome, and the educators and paraprofessionals who support them in and out of the classroom, identified needs that are unique to the individual. These factors help address the personal, academic, and functional needs of the students and staff. Supports that were identified include continued education for staff and effective learning practices for all students.

Rationale for the Study

Many studies have revealed that there is an impact on independence for students with paraprofessional support in the classroom (Martin, 2000). However, the perceptions of paraprofessionals and special education teachers regarding the utilization of paraprofessionals for individuals with Down Syndrome have yet to be elucidated. This study provided clarity regarding the perceptions of the effects of paraprofessionals on student independence.

Researcher Positionality Statement

A personal interest in the topic came from experiences working in an educational leadership position in an inpatient facility for individuals with severe behaviors as an Intensive Behavioral Interventionist. With this population growing and becoming a more significant portion of the overall student population, identifying barriers and challenges for learning in the general education environment is particularly critical. Although paraprofessionals may help students with Down Syndrome with some barriers in the general education classroom, paraprofessionals do not remove all barriers. The paradigm shift from seclusion education to inclusion education throughout the country requires a closer examination of these issues. Personal experiences formed the thoughts, perspectives, and perceptions about this population's barriers, needed supports, and motivations.

Personal experiences have the potential to cause biases. This study, however, utilized various methods of trustworthiness to address this potential problem. The methods of trustworthiness included triangulation, peer reviewing and the utilization of detailed descriptions that were sufficiently substantial.

Limitations, Delimitations and Assumptions

Limitations. The data were gathered from a charter school in an urban, Midwestern city. It was limited to only the teachers and paraprofessionals of this specific school district. This limits potential response to both the questionnaires and the interview questions. The study is also limited to the student population in the school district where these educators are implementing the best strategies for the students whom they service. The limited geographical sample affects the ability to simplify the responses of this study in comparison to larger populations. The target population only included the educators in this Indianapolis charter school. Since students with Down Syndrome vary across the world, the perceptions of teachers on the effects of

paraprofessionals on student independence may differ from those educators in other regions of the world or United States.

Delimitations. In Simon (2011), delimitations were described as decisions that limit the scope of the study and are intentionally decided by the researcher. The selection of the population for this study was the primary delimitation. The selected learners were all elementary-aged students from one geographic area, all of whom have Down Syndrome. Different criteria could have been utilized to select different participants. This study was conducted in an urban area in the Midwest. The results of this study may not apply to other areas of the country. Finally, the selection of the theoretical Framework, *The Relation of Theory to Practice in Education* by John Dewey, is also a delimitation due to its main focus on the relationships between educators and parents.

Assumptions. In this study, it is assumed that participants provided honest answers and that the process of selecting participants yielded a homogeneous group of participants. Assumptions cannot be totally controlled, but in this study, they were limited to help control the validity and credibility of the study.

Definition of Terms

The following terms are used throughout the study and are central to the research questions:

Inclusion Services: The educational practice of educating children with disabilities in classrooms with children without disabilities (Harding, 2009).

Individualized Education Plan (IEP): Each public school child who receives special education and related services must have an Individualized Education Program (IEP). Each IEP must be designed for one student and must be a truly individualized document. The IEP creates

an opportunity for teachers, parents, school administrators, related services personnel, and students (when appropriate) to work together to improved education results for children with disabilities (U.S. Department of Education, 2000).

Teacher/ Educator: A teacher who completed a teacher education program and earned a bachelor's degree or higher, thereby obtaining a full State certification (Adler, LaNasa & Marszalek, 2010).

Paraprofessional: School employees who work alongside and/or under the direction of a licensed or certified educator to support and assist in providing instructional and non-instructional services to children, youth, and their families (Gerber, 2001).

Organization of the Study

This study is organized into five chapters: Chapter One, Introduction; Chapter Two, Literature Review; Chapter Three, Methodology; Chapter Four, Presentation of Findings; and Chapter Five, Conclusions, Implications, and Recommendations. Chapter One is a discussion of the overview of the study, including the introduction and background of the study, the statement of the problem, the purpose and significance of the study, the theoretical and conceptual framework of the study, the research question, the rationale for the study, the positionality statement of the researcher, the limitations, delimitations, assumptions, definitions, and the organization of the study. Chapter Two is a literature review as it relates to the topic. Chapter Three details the methodology and procedures of the study, and includes a discussion and description of the research design, setting and participants, instruments used to gather data, data process and analysis, ethical considerations, and methods to increase validity and credibility. Chapter Four provides an analysis of the data and presentation of the findings. Chapter Five reports the conclusions, implications and recommendations of the study's research.

Summary

Throughout history, many children and adults with Down Syndrome have been faced with a plethora of different services and educations depending on their circumstances. Over time, parents and advocacy groups have fought for inclusive education for children with Down Syndrome, and in many cases have helped to create opportunities for these individuals to be normalized in society (Hedov, n.d.). Teachers, administrators and parents are still faced with the obstacle of integrating students with Down Syndrome into typical classrooms alongside paraprofessionals and other students. This qualitative study investigates teachers' and paraprofessionals' perceptions of how students with Down Syndrome's independence is impacted by the utilization of a paraprofessional in the classroom.

CHAPTER 2: LITERATURE REVIEW

Special Education in the United States

In the 1800s, there was little to no education services for individuals with special needs. However, there were a few specialized schools for individuals. These included the American School for the Deaf in 1817 and the Perkins Institution for the Blind in 1832 (Buckley, 2002). For the most part, many individuals with special needs were institutionalized at this time. However, in 1840, Rhode Island passed a law mandating education for all children. This was the beginning of education for all students. In 1864, the Columbia Institution was the first school to provide college degrees for deaf and blind students (Osborne, 2006). It became the first college in the world for students with disabilities. In 1919, *Beattie v. Board of Education* was passed. This act allowed for the expulsion of students due to facial abnormalities and drooling. This was mainly due to the teachers and other students being “repulsed” by these students. In 1922, the Council for Exceptional Children was formed to advocate for students with disabilities.

In 1993, the Cuyahoga Council for Retarded Citizens was formed. This was one of the first big parent advocacy groups for children with disabilities and was formed by parents whose children were excluded from public school in Ohio. This protesting and advocacy led to the creation of a special education classroom for these students (Thompson, 1995).

In 1942, the classification of autism was formed by Dr. Leo Lerner at Johns Hopkins University. And, in 1950, the National Association for Retarded Citizens was formed by banding together many parent advocacy groups into one larger group (Osborne, 2006).

Seventy-two percent of children with disabilities were not enrolled in public school in 1950, but were either kept home or institutionalized (Anderson et. al., 2001a). It took several decades for special education in public schools to come into being. Section 504 of The

Rehabilitation Act of 1973 states that discrimination cannot occur based on a child's disability (Osborne & Russo, 2006).

As early as 1954, the Supreme Court began making decisions that would begin the process of providing equal education access to all students in the United States (Harding, 2009). In 1954, the *Brown v Board of Education* decision determined that separate education is inherently not equal. After over a century of students with special needs being institutionalized and parents fighting for special education programs in the public schools, this decision helped to begin the process of special education in the general population school systems.

In the United States, students with disabilities have only been legally protected since 1975. In 1975, the Education for All Handicapped Children Act (EHA) was passed, which legally protected the right to attend public school for students with disabilities (Perspectives, n.d.). This act, also known as the EHA, gave children with disabilities specific legal rights to an education. This act made sure that all students with disabilities are educated in public schools. EAHCA included providing free educations, special education for children 3-21, supplemental services, due process, zero reject, and least restrictive environment. Before this act, many students with disabilities were turned away from schools. The act also initiated the idea of a Least Restrictive Environment (LRE). LRE means that students' IEPs should stipulate that these students be included with their non-disabled peers as much as possible. This ensures that the student has social experiences. In LRE classrooms, paraprofessionals and aids are usually required. This was in an effort to allow the maximum possible opportunity for the students with disabilities to interact with their non-disabled peers. Under the EHA, students were only able to attend a separate school if the nature or severity of the disability is such that instructional goals cannot be achieved in the regular classroom. Finally, this law contained information about the

due process clause that guaranteed an impartial hearing to resolve conflicts between the parents of children with disabilities and the school system.

In the 1970s and 1980s, due to many strong parent advocates, students with mild disabilities were mainstreamed into regular classrooms (Causton & Tracy-Bronson, 2015).

In 1990, the EHA was reformulated and renamed to the Individuals with Disabilities Education Act (IDEA). IDEA provided further detail about the inclusion of children with disabilities and the rights of their parents to be involved in their child's education. IDEA also required that an IEP be designed with parental involvement and approval to meet the needs of every child with a disability. IDEA required students to meet three requirements in order to receive special education services: (1) a child must be between the ages of 3 and 21, (2) a child must have a specifically identified disability, and (3) a child must be in need of specially designed instruction in the least restrictive environment (Osborne & Russo, 2006).

After IDEA, and decades of parent advocacy, the Americans with Disabilities Act (ADA) was also passed in 1990. This act ensured the equal treatment and equal access for all people to employment opportunities and public accommodations. The ADA was intended to prohibit discrimination on the basis of disability in state and local governments, employment, public accommodation, transportation and other services (Osborne, 2006).

In 1997, IDEA was reauthorized. In addition to all the rights that were upheld in the previous version, the new version included information emphasizing the academic outcomes for students with disabilities (Thompson, 1995). This included the expectations for students, information on the general curriculum, and determining appropriate outcomes for students with disabilities. Finally, this new version also included information about transition plans for students as they age out of school and into work-based programs.

Starting in 2000, inclusion education became the standard in much of the United States. Again, IDEA was reauthorized by Congress in 2004. IDEA was again, Congress restated that special education services should be designed around each individual child's needs. In addition, they stated that students with disabilities should be given access to the general education curriculum in the regular classroom, to the maximum extent possible. Also in 2004, the idea of Response to Intervention (RTI) was introduced. These interventions are initiated before a student qualifies for special education services. Public schools are required, by law, to seek out, evaluate, and collaborate with private institutions in order to ensure that children with disabilities are receiving the supports and helps needed to succeed (Drang and McLaughlin, 2008). Clarifying the relationship of private schools to funding for students with disabilities was another focus of the reauthorization. It is unclear why private schools report that low numbers of their students receive evaluations, diagnoses, and IEPs, even when there are special education programs available for students within the private institution (Eigenbrood, 2005). In 2009, IDEA was up for reauthorization, but it was delayed due to the changes to the No Child Left Behind (NCLB) Act (Osborne, 2006).

The History of Down Syndrome

In 1866, the Victorian physician, Dr. John Langdon Down is best remembered for having a specific group of patients with similar characteristics. These characteristics included upward slanting eyes, flattening in the back of the head, and poorly controlled tongues (Buckley, 2002). Previously, no one had identified this special population of people with Down Syndrome. In 1961, this population was formally named as Down Syndrome. John Langdon Down did extensive research on individuals with Down Syndrome to determine their common characteristics and features. It was this scholarly work, published in 1866, that earned Down the

recognition as the “father” of the syndrome. Although others had previously recognized the characteristics of the syndrome, it was Down who described the condition as a distinct and separate entity.

In recent history, advances in medicine and science have enabled researchers to investigate the characteristics of people with Down syndrome. In 1959, the French physician Jérôme Lejeune identified Down Syndrome as a chromosomal condition (Anderson, 2001). Instead of the usual 46 chromosomes present in each cell, Lejeune observed 47 in the cells of individuals with Down Syndrome. It was later determined that an extra partial or whole copy of chromosome 21 results in the characteristics associated with Down Syndrome. In 2000, an international team of scientists successfully identified and catalogued each of the approximately 329 genes on chromosome 21. This accomplishment opened the door to great advances in Down Syndrome research. Ninety-eight percent of cases of Down Syndrome are caused by an extra copy of chromosome 21 (Trisomy 21).

Today we know that Down Syndrome occurs in 1 in 700 births, making it the most common chromosomal condition (Anderson, 2001). It is caused by an extra copy of the 21 chromosome. A few of the common traits associated with Down Syndrome are low muscle tone, small stature, an upward slant to the eyes and a single deep crease across the center of the palm. Individuals with Down Syndrome are becoming increasingly integrated into society and community organizations, such as school, health care systems, work forces, and social and recreational activities. Individuals with Down Syndrome possess varying degrees of cognitive delays, from very mild to severe. Most people with Down Syndrome have cognitive delays that are mild to moderate.

Although the cause of Down Syndrome is known, the cause of the extra chromosome is still unclear. While there is a link of maternal age to an increase in the chance of having a child with Down Syndrome, there are still 80% of children with Down Syndrome who are born to mothers under age 35 (Martin, 2009). There is no definitive scientific research that indicates that Down Syndrome is caused by environmental factors or the parents' activities before or during pregnancy. The additional partial or full copy of the 21st chromosome which causes Down syndrome can originate from either the father or the mother. Approximately 5% of the cases have been traced to the father.

Due to advances in medical technology, individuals with Down Syndrome are living longer than ever before. In 1910, children with Down Syndrome were expected to survive to age nine. With the discovery of antibiotics, the average survival age increased to 19 or 20. Now, with recent advancements in clinical treatment, most particularly corrective heart surgeries, as many as 80% of adults with Down Syndrome reach age 60, and many live even longer (Van Riper, 2003). More Americans are interacting with individuals with Down Syndrome, increasing the need for widespread public education and acceptance. At increasing rates, children with Down Syndrome are being provided with the same life experiences as their non-disabled peers. More children with Down Syndrome are fully integrated into the activities of their family and, in many communities, it is commonplace for children with Down Syndrome to be integral members of their schools, neighborhoods, and workplaces.

Skinner: Behavior Modification

Behavior modification is a treatment approach which is focused on changing behavior. This method is based on the work of B.F. Skinner, a well-known psychologist who developed the operant conditioning theory, which suggests that behavior can be modified by consequences and

through reinforcement. The major goal of behavior modification is to replace undesirable behaviors with acceptable ones. An underlying theme is the belief that how people react to an object or event can be modified by learning (Wolpert, n.d.). This technique can be used in all age groups, and can be applied to a wide range of settings.

Students with Down Syndrome with additional needs in the area of behavior rarely fall outside the range of behavior exhibited by peers, and the school's behavior guidelines will be applicable to all students. If a student with Down Syndrome routinely engages in difficult behavior, it is important to examine the underlying reasons, because often some aspect of school life does not meet the student's needs. Research-based knowledge into the ranges and types of behavior difficulties exhibited by students with Down Syndrome can be informative, particularly if paired with proven behavior intervention plans (Feeley, 2006). This includes using information from assessments, partnerships with parents, quality of relationships with these students, achievement in the curriculum, and differentiated instruction. Research has shown that inappropriate behavior can serve an important function for an individual with a disability. Maladaptive behavior, whether it is socially acceptable, frequently serves to communicate wants, needs or preferences. This is especially true for individuals who may not have an effective system of verbal communication.

A commonly used element of behavior modification is positive reinforcement, or a reward system. An example of positive reinforcement is giving a child a hug when the child does a good job, or to provide money for good grades (Feeley, 2006). Negative reinforcement, which takes something away to reinforce good behavior, is also an effective tool to modify habits or other behavior. An example of negative reinforcement is when a child decides to get ready for

school on time, and parents subsequently stop nagging the child about this issue. The takeaway of nagging reinforces the improved morning routine.

Behavior modification can also discourage unwanted behavior through punishment, which can also be positive or negative. In this theory, the term *positive* refers to something added, such as a consequence (Ledwidge, 1978). An example is making athletes run extra laps if they are late to practice. Negative punishment is when something is taken away, such as the removal of video games if chores have not been completed. In this example, the negative punishment should encourage this child to do chores in the future in order to avoid punishment.

Behavior modification can be an effective technique used in parenting, and also to help manage behavior in children or adults with attention deficit disorder, autism or oppositional defiant disorder. Furthermore, this method can be used to increase desired behaviors in any individual, regardless of functional level (Green, 1999). For example, behavior modification has been used successfully in weight management and smoking cessation programs. Behavior modification can also be used to increase productivity within organizations and businesses.

Children with Down Syndrome are at an increased risk for engaging in challenging behaviors that may present problems within community, leisure, and educational settings, and, in many instances, precludes them from accessing these environments. Children with Down Syndrome are often described as "stubborn" and "obstinate." In fact, references to challenging behavior have historically been seen in the clinical literature and continue to exist today (Green, 1999). For example, children with Down Syndrome show higher rates (than typically developing children) of attention problems, social withdrawal, noncompliance, and compulsions (such as arranging objects and repeating certain actions), as well as high rates of self-talk. With increasing age, behaviors associated with anxiety, depression, and withdrawal also increase. Finally, recent

research has indicated a pervasive pattern in children with Down Syndrome, present from infancy, of escape and attention motivated challenging behaviors involving noncompliance and misuse of social behaviors. Fortunately, substantial empirical research demonstrates the effective use of behaviorally-based procedures to assess and intervene on challenging behavior in individuals with developmental disabilities (across the ages).

Individualized Education Plan

Under the Individuals with Disabilities Act (IDEA), students with disabilities are required to have an IEP. An IEP is the blueprint for each child's special education. These plans are tailored to the needs of each individual child. This document is created by the child's education team, which can consist of many members (Lorenz, 1998). This team primarily consists of the child's parents, teachers, occupational therapist, speech therapist, but can also include any other members that the team deems necessary. These can include outside therapists, members of the administration team or other influential members of the child's education. The IEP becomes a signed, legal, binding document that the school is required to follow.

Each IEP is developed in an IEP meeting by the child's team, and is comprised of many different components. These include: the child's present level of performance, annual goals for the child, special education supports and services, accommodations, modifications, and measurements for the student's progress toward goals. In a standards-based IEP, these goals are all aligned with state academic standards based on the child's grade level. The annual goals are written to help the child meet grade-level standards. Any services or supports that the child may receive as part of the IEP is in an effort to reach the grade-level standards.

Childhood Interventions

Early intervention services are federally mandated in the United States for all children. Early intervention is a term that refers to a broad array of activities designed to enhance a young child's development (Thompson, 1995). Under the 1997 reinstating of IDEA, schools are required to participate in Child Find. Child Find is, “the continuous process of public awareness, screening, and assessment designed to locate, identify, and refer as early as possible all young children with disabilities who are in need of preschool special education services under the Individuals with Disabilities Education Act, should be coordinated across state and local agencies to ensure efficient use of resources” (NC, n.d.). Preschool assessment teams conduct developmental screenings to determine eligibility for all students as early as birth. These assessments test in the domains of cognitive, communication, sensorimotor, social-emotional and conceptual development.

Early interventions can be critical in a child’s development. Providing services early helps children catch up and increases their chances for success in school and life overall. In order to be eligible for early childhood intervention services, children from birth to age three must have either a developmental delay, or specific health condition that will probably lead to a delay—including genetic disorders, birth defects and hearing loss. Under these guidelines, children with Down Syndrome qualify for early childhood interventions due to their genetic disorder of Down Syndrome.

Many services are available to families of children who qualify for early intervention services. These services include assistance and therapy to address physical skills, cognitive skills, communication skills, adaptive skills, social-emotional skills and sensory processing skills. Children born with Down Syndrome often lack in many or all of these areas. However, the

intervention services for individuals with Down Syndrome do not stop at early childhood. These individuals often have various therapies throughout their lifetime.

In the realm of physical skills, children with Down Syndrome often suffer from low-tone, which can cause delays in reaching, crawling, walking, drawing, and building. These are all skills that early interventions can address before the child becomes school aged, and, the skills are often worked on in and out of the classroom throughout the child's life. In addition to hypotonia, and low tone, individuals with Down Syndrome often share certain physical features, such as flat facial profile, an upward slant to the eyes, small ears and a protruding tongue. While these common physical features affect many individuals with Down Syndrome, they do not affect every person with the genetic condition. A common misconception for individuals with Down Syndrome is that they always have difficulty walking, and it is true that many individuals with hypotonia suffer from difficulty walking. Thus, it is pivotal to participate in early physical therapies and agility activities to help build the child's tone and physical strength. Motor skills develop at a slower rate for children with Down Syndrome than for those without (Dujin, 2010). These delays in motor development reduce infants' opportunities for exploring and learning about the world around them and therefore further affect cognitive development. Some common interventions or accommodations that can be helpful for students with Down Syndrome in this area of functioning include: allow extra time for tasks, provide increased opportunities for practice, repetitive training, working with a physical therapist, wrist and finger strengthening activities, and multisensory activities.

Cognition can be greatly impacted by the child's motor skills, but can also be affected by the child's IQ. In many cases, early intervention services would assist with the skills of thinking, learning and solving problems through play-based or other therapies. These therapies would be

in an effort to make milestones along with their peers (Dujin, 2010). Research shows that children with Down Syndrome thrive around typical peers and when provided with appropriate education can excel in many academic areas. However, each person's cognitive ability is unique to them. It can be difficult to compare individuals with Down Syndrome due to their varying cognitive abilities. With children with Down Syndrome, auditory processing delays are evident, which can also affect cognitive skills inside and outside the classroom. Most children with Down Syndrome struggle with basic number skills and their number skills are typically some two years behind their reading skills. The ability of children with Down Syndrome to hold and process verbal information is not as good as their ability to hold and process visual information. These verbal short-term memory problems make it more difficult to learn new words and sentences. They also make it more difficult to process spoken language, and this can adversely affect learning in the classroom. In this area, there are many interventions and accommodations that can be utilized in and outside of the classroom, but two of the most common are extended time and repeated practice to learn skills.

Next, early interventions can help with communication skills. These would include talking, listening, and understanding others. In childhood, specific deficits in verbal short-term memory may become apparent. Speech development includes a longer period of phonological errors and more variability, as well as poorer intelligibility, which is associated in part with hearing status. Expressive language delays continue relative to comprehension and cognition. The vocabulary deficits in production for individuals with Down Syndrome are those of performance, rather than competence: increased automaticity of vocabulary production, and methods to increase activation of vocabulary should improve access (Lloyd, 2000). These methods include practice, increased wait time, prior priming of word forms and content.

Compensation for the reduced effectiveness of auditory short-term memory is desirable, e.g. through visual presentation of both form (reading) and meaning (context). Some common interventions and accommodations which can be utilized in this area are: working with a speech therapist, working with an occupational therapist on feeding therapy and postural control, one-to-one instruction in articulation skills, and working with augmentative communication devices whenever necessary.

Young children with Down Syndrome can also lack skills in the adaptive area of functioning. This can include help with dressing and eating. According to a study done on Dutch children, “Children with Down syndrome acquire their adaptive skills at a slower pace and reach their ceiling scores at about the age of 12 years, at a substantially lower level than a reference group of typically developing children” (Duijn, 2007). Oftentimes, children with Down Syndrome make large gains in the area of adaptive skills in early childhood and elementary school. In a similar study conducted in the United States, it was found that, “One to 6-year-old children showed significant age-related gains in adaptive functioning, but older subjects showed no relation between age and adaptive behavior” (Dykens, 2006). Many attribute this leap in adaptive skills to the atmosphere of being around like peers.

Children with Down Syndrome can also receive services in the area of social-emotional skills. This can include the areas of playing, interacting with others and behavioral skills. The social functioning of babies and children with Down Syndrome is relatively less delayed than other areas of development. Babies with Down Syndrome look at faces and smile only a week or two later than other children and they are usually sociable infants. Infants with Down Syndrome enjoy communicating and make good use of non-verbal skills, including babbling and gesture in social situations. Most children and adults with Down Syndrome continue to develop

good social skills and appropriate social behavior, though a significant minority may develop difficult behaviors, particularly those with the greatest delays in speech and language development. Interventions for children with Down Syndrome should strongly focus on integrating vocabulary skills and social functioning starting at an early age. Implications for Rehabilitation Children with Down Syndrome need help and support in social functioning. Systematic training to optimize social capabilities and to prevent social problems should be prioritized. Structured and explicit learning of words important for social interaction with peers and for conflict solutions should be emphasized. Integrated interventions focusing on social functioning and vocabulary should begin in preschool to prepare children for participation in mainstream education.

Students with disabilities exhibit deficits in age-appropriate social skills. (Mastropieri & Scruggs, 2002). Children of elementary school age with developmental delays find it difficult to establish and maintain reciprocal friendships (e.g., many play alone rather than engage in group play). They are also less likely to initiate interactions with other children. However, research findings show that students can develop real friendships with early intervention. Developing social skills at a young age is critical. As students get older, the opportunities to form friendships with typically-developing classmates diminish. Friendships benefit both typically-developing students and students with Down Syndrome (Falvey, 2005). Students with Down Syndrome avoid loneliness gain support in developing social, communicative, and cognitive skills, increase self-esteem with sense of belonging and develop a support network within their school community. Typically-developing students seem to have more positive attitudes and a better understanding of the challenges that peers with disabilities face. (DeutschSmith, 2006).

Finally, children with Down Syndrome may require support in the area of sensory processing skills. Sensory integration is the process of taking in information from the environment through various sensory systems (touch, smell, sight, movement, sound and the pull of gravity on the body). Children with Down Syndrome do not always have sensory deficits, but often when they do, it can lead to maladaptive behaviors. Sensory deficits can be present particularly in children who have comorbid autism or other disabilities. Occupational therapists can work on these skills along with fine motor skills.

Home Life and Academic Independence

The birth of a child with Down Syndrome is likely to affect the family system in many ways, from the micro level of dyadic interaction to the macro level of the cultural views guiding parent perceptions about a developmental disability. Few studies, to date, have surveyed families about their life experiences. Parental adaptation to a child with Down Syndrome has also been studied extensively in relation to parental well-being, especially the psychological reactions of parents. Many studies on parental adaptation to a child frequently, siblings can also be heavily impacted by the birth of a sibling with special needs. There are numerous studies that have examined the impact on siblings of having a brother or sister with Down Syndrome, although these generally focus on children who are in middle childhood or older. These studies typically focus on behavior or other adjustment problems in the sibling and/or on the relationship between the typically developing child and the child with Down Syndrome.

Family life in families of children with Down Syndrome is likely to contain some mix of hassles and uplifts, disappointments and great satisfactions, and it is important that the uplifts and satisfactions be considered if an accurate picture of family life is to be gained (Dykens, 2008). These positive aspects of family life are also likely to contribute to the ability to cope with the

difficulties families may face. The demands associated with parenting a child with Down Syndrome appear to increase with age, and it may be that the focus of research should be on these older age groups.

Inclusion Education

Inclusion is a philosophy of education based on the belief in every person's inherent right to fully participate in society. It implies acceptance of differences and access to the educational experiences that are fundamental to every student's development. When effectively implemented, research has demonstrated academic and social benefits for all students - both those who have special needs as well as typical students. Friendships develop, typically-developing students are more appreciative of differences, and students with disabilities are more motivated. True acceptance of diversity will ultimately develop within the school environment and is then carried into the home, workplace, and community. Parents of children with Down syndrome described multiple benefits of successful inclusion experiences, including higher self-esteem, independence in daily living skills, greater academic achievement, positive social interactions and improved speech and communication (Wolpert, 1996). They reported that the following factors had the most significant relationship to successful inclusion experiences: teacher preparation, format of the curriculum (lesson plans and materials), classroom management and curricular style of the teacher, collaboration between special and general education, parental confidence in professionals, attitude of professionals (open-mindedness, enthusiasm and confidence were cited as helpful character traits for successful inclusion), contact, and encouragement from and friendships with peers. Changes over the past 30 years have brought access to education for children with special needs. In more recent years, there has been slow but steady development of inclusive education for children with Down Syndrome.

With supportive legislation to help schools provide the resources necessary to meet special educational needs, more children are being educated in their local school settings. Research indicates that appropriate education provided in inclusive settings offers the best opportunities for children with Down Syndrome.

Research findings from studies comparing children who have been educated in special schools and classrooms indicated. A study conducted in 2000 compared the achievements of teenagers of similar ability and family background educated in special schools and mainstream settings (Buckley, 2002). The study showed significant educational benefits for teenagers who had been through mainstream education with 25-30 hours of additional learning support assistance. The teenagers who had been fully included in mainstream classes showed gains of more than two years in spoken language skills and three years in reading and writing ability on standardized measures. These measurements of 'years' for typically developing children would equate to four and six year gains for children with Down Syndrome, as they usually progress at about five months per year in these measures. In addition, there were gains in math skills, general knowledge, and social independence. There were no differences in personal independence or social contacts out of school between the teenagers educated in special and mainstream classes, and a tendency for the mainstream students to have better behavior.

Academic Effects of Paraprofessionals

The results of one study showed that teacher paraprofessionals have little, if any, positive effect on students' academic achievement. The only positive effect was an improvement in reading scores for students who attended a class with a teacher paraprofessional for two or three years. These results were the only exceptions to a plethora of negative findings. The study also showed that the types of duties paraprofessionals performed had no bearing on student

achievement. Because teacher paraprofessionals are called upon increasingly to provide instruction to pupils, policies and research must help us select and prepare paraprofessionals to perform effectively. Paraprofessionals are a great asset to the educational team, but there are some constraints on the responsibilities they can and should have. By law, a paraprofessional or education assistant cannot write programs without supervision of certified personnel, create new, alternative instruction without direction from the teacher or other certified personnel, implement “behavior” ideas without direction of the teacher or other certified personnel, or take complete responsibility for any students (Buckley, 2002). Sometimes when the role of the paraprofessional is unclear, they may be a barrier to student learning. Often, parents will advocate for the presence of a full-time paraprofessional out of concern for their child’s success. It is important to discuss the role of the paraprofessional several times each year. If a student can be successful in the classroom once peer supports are developed, the role of the paraprofessional changes. For some students, the paraprofessional will continue to be a necessity. However, their direct interaction with the student should lessen over time as natural supports and accommodations are developed and the student learns the classroom routines. Many studies report that the utilization of paraprofessionals can isolate a student and reduce their interactions with peers.

The Effects on Long-Term Independence

Traditionally, the curriculum for students with Down Syndrome has focused on direct or independent teaching. However, interdependence is essential for students with disabilities. Interdependence is when two or more people learn and agree to function as a group relying on each other to get through the day and accomplish what is necessary and desired by the group (Falvey, 2005). Designing curriculum to include interdependence teaches students responsibility and trust.

An increasing number of adults with Down Syndrome in the U.S. are living independently with limited assistance from family members or the state. A small percentage are able to live entirely independently. Some students in the United States with Down Syndrome graduate from high school, and some go on to pursue post-secondary education.

More opportunities are available for education and employment today than ever before.

Anecdotally, it is evident that people with Down syndrome can be excellent employees, and some employers have reported a higher satisfaction level among all workers when they have co-workers who have Down Syndrome. Businesses are seeking young adults with Down syndrome for a variety of positions. They are being employed in small and medium sized offices, by banks, corporations, nursing homes, hotels, and restaurants. They work in the music and entertainment industry, in clerical positions, and in the computer industry. People with Down Syndrome bring reliability, enthusiasm, and dedication to their jobs.

Paraprofessional Education

Despite more than 600,000 teacher paraprofessionals in American schools today, research provides little information about their classroom activities, their qualifications for carrying out their duties, or their impact on student achievement and behavior. If teacher paraprofessionals have a positive effect on students' performance, does the effect depend on the number of years the student attends classes with a teacher paraprofessional? The teacher paraprofessional movement in the United States has created a state of affairs that requires many paraprofessionals to perform tasks for which they are ill-prepared (Gerber, 2001). As increasing numbers of paraprofessionals are working in public schools to support the inclusion of students with disabilities, parents need to provide support and direction in defining the variety of ways in which paraprofessionals can be helpful. In doing so, it is important to remember

paraprofessionals are not substitutes for certified personnel. Rather, paraprofessionals provide an extra support in classrooms where the combination of needs necessitates two adults to coordinate and meet the needs of all the children in the classroom.

Paraprofessionals come from a variety of backgrounds. They must have knowledge and skills to be good at working with children, although they learn these skills mostly on the job. A paraprofessional must enjoy working with children, have a positive attitude, and be a team player. A good paraprofessional needs to know when to step back and encourage a child to be independent, but also when to step in when something is not right.

Summary

There have been numerous improvements in the Special Education system over the past 100 years. In particular, people with Down Syndrome are living longer than ever and are afforded many more opportunities than they previously were. Overall, the United States has made strides in the education of people with Down Syndrome, but there are still areas that could be improved. For teachers and paraprofessionals, there are different responsibilities and education levels. All of these factors can greatly affect the independence of a child with Down Syndrome, both in the classroom and later in life.

CHAPTER 3: METHODOLOGY

This chapter provides the reader with an overview of the methodology for this qualitative study regarding the factors that attribute to independence for students with Down Syndrome as they relate to the utilization of paraprofessionals in the general education setting. This study allowed for a deeper understanding of the factors that impact overall student independence in this setting. The appropriateness of a qualitative approach is discussed in this section. The research plan provided includes a discussion of the primary components of the methodology: the setting and participants of the study, the procedures of data collection, sources of the data, and management of the data. Furthermore, this section explains the coding systems, efforts to achieve trustworthiness, credibility, transferability and dependability, ethical considerations, the data analysis procedures, and the influence of the theoretical and conceptual frameworks.

The purpose of this study was to gain a better understanding of how paraprofessionals can affect a student with Down Syndrome's independence level in the classroom while also providing insight on effective strategies that should be utilized with students with Down Syndrome to gain independence in the classroom. In this specific study, a qualitative research approach was used to attain information on the perceptions of general education and special education teachers on the independence of children with Down Syndrome. This chapter presents the entire research approach, methods of data, how data were analyzed, and the population used for the data.

Research Questions

What are perceptions of general education and special education teachers regarding the effects of paraprofessionals on student independence for individuals with Down Syndrome?

Qualitative Research Method

This study utilized a qualitative research approach to pursue an in-depth understanding of the human experiences in the participants' everyday lives. A qualitative study is appropriate for this research based on the question and its intent. Polkinghorne (2005) referred to qualitative data as an "umbrella" term under which a range of methods that utilize data in language form is gathered. While there are many advantages to qualitative research, the main advantage in this study is that qualitative research allows for the evaluation of existing theories through deductive approaches.

Qualitative studies have the ability to utilize basic interpretive research to explore society, culture and individuals. These studies often scrutinize human experiences and utilize a phenomenological approach to the study of individuals. Although there is a possibility of bias with a qualitative approach, when conducted with fidelity, these studies produce credible and valid results.

All research methods have strengths and weaknesses. However, qualitative research is most appropriate for this study because it provides the ability to extend questions, flexibility and transferability of the research to other similar settings. This chapter provides information for the reader on the steps taken to surpass these limitations, most importantly, bias, the coding of data, confidentiality, and rigor.

Phenomenological Approach

Human experience is a phenomenon (Ary, Jacobs, Irvine, and Walker, 2019). Phenomenology is the study of how perceptions, beliefs, and experiences of individuals help to shape their human experience. This study is typically done through the use of interviews from a small sample group. Based on this data conducted, one can synthesize generalizations about the lived experiences of the people who have experienced the same phenomena. Studies in this

category differ from other qualitative studies due to the fact that they focus on subjective experiences of the participants.

Description of the Specific Research Approach

A qualitative research design was utilized to gather in-depth perceptions of the participants. Polkinghorne (2015), noted many different types of data in qualitative studies. These included: interviews, observations, documents and artifacts. This study compiled a case study of focus groups and semi-structured interviews. While the focus group served as the primary source of data, triangulation was achieved by also examining questionnaires and artifacts. These artifacts included student academic achievement data. Since teacher's perspectives were vital to this study, it was necessary. The basis of the data for the study came from the voices of the participants through the focus groups.

Semi-structured interviews. Semi-structured interviews present different advantages and disadvantages in a qualitative study (Gay, 1999). Although semi-structured interviews may be time-consuming, they are best suited for a qualitative study which seeks to gather information that cannot be collected from individuals utilizing a multiple-choice questionnaire. Semi-structured interviews provide a safe and flexible environment for the participants to share their opinions, thoughts, insights and feelings without the influence of other informant's ideas or bias. If the researcher can establish a relationship with the interviewee, the information may turn out to be much more complex than what would be gathered from just a multiple-choice questionnaire. Ary, Jacobs, Irvine, and Walker (2019) determined that one-on-one interviewing limits bias to the moderator, allowing for greater input from the participants.

Participants, who provided informed consent, were sent reminders via email before the scheduled interview time both 48 hours in advance, and then the day of the interview. An

informed consent form was given to participants (see Appendix A). A list of interview questions were compiled to guide the interview and were created utilizing the literature review and conceptual framework identified in the literature review. An interview guide (see Appendix B) was utilized. Five participants were questioned in semi-structured interviews. At the end of each interview, the participants were asked if there was anything that was not asked that they felt should have been asked. Instructions were provided to the interviewees about the journaling portion of data gathering.

The interviews were also audiotaped with participant permission and transcribed verbatim directly following each interview. Descriptive field notes were taken in a journal during the interview to supplement the audiotape and transcription. Reflective notes were added to the journal after the interviews and transcription.

Focus group. A focus group was used to provide a greater understanding of educators' perceptions on the topic being studied. Questionnaires were created as an asset to the study. The data gathered from this focus group were utilized along with other support data to triangulate the data. The interviews provided abundant information to be synthesized by the author. Focus groups are interviews that allow the researcher to gather information. Group interaction is a vital part of this research method. Rather than the researcher asking specific questions, the group was encouraged to discuss freely among themselves. In this study, there was a focus group of six teachers from one school. These teachers were comprised of three paraprofessionals and three special education teachers. A second focus group consisting of paraprofessionals was also conducted. These focus groups were conducted in an effort to gain perceptions of the effects that a paraprofessional has on the independence of students with Down Syndrome. The researcher introduced a series of open-ended questions and the participants were encouraged to explore

their own issues from their own experiences.

Participant Journals. After the interviews, participants were provided with a journal to record ideas that were not yet shared in the interview or the focus group. These ideas may have developed later or the participants could have felt this information was too personal to share in the group or interview. These journals are a recognized qualitative method of gathering the perspectives of participants (Janesick, 1999; Kenten, 2015; Polkinghorne, 2015). Finally, a series of questions (see Appendix C), were included in the journal to gather additional data about ideas and experiences. Participants journaled thoughts from the end of the semi-structured until two weeks after the conclusion of the focus group.

Triangulation. Triangulation is described as the process of reducing researcher bias when more than one method is used to answer a research question (Heale 2010). This study utilized triangulation through the use of interviews, a focus group, journaling and other data sources.

Description of the Study Participants and Setting

This study involved one urban school located in central Indiana. The school was a PK-4th grade school composed of approximately 399 students with the following demographics: 315 White, 28 Multi-Racial, 28 Asian, 21 Hispanic, 7 African American. Of these students, 6.8% received free/ reduced lunches. About 10% of the students, or 40 students, receive special education services. During the questionnaire process and analysis of data, paraprofessionals, special education teachers, and paraprofessionals were utilized. With no connection to the questionnaire responses, a group of six teachers were chosen for a focus group. Three paraprofessionals and three special education teachers were utilized in this focus group. This allowed the focus group to be a mix of participants from various grade levels, ensuring a variety

of opinions. The responses from the questionnaires were utilized to create the focus group interview questions.

Data Collection Procedures

Data were collected in this study through semi-structured interviews that allowed participants to share their story and experience. These interviews were conducted in the participants' homes to provide privacy, anonymity and to avoid interruptions. The audiotape of each interview was transcribed after each interview. The focus group for this study met in a conference room to provide privacy and no interruptions. Participant journals were collected two weeks after the focus group. The writings were transcribed to facilitate coding.

Management of data. Tapes of the interviews, focus group, all transcripts, field notes and reflective notes, and journals were secured in a personally-owned safe. Electronic files were secured on a personal, password-protected computer.

Interview Protocols. The most important protocol in an interview is the list of interview questions (Patton, 2015). The interview question guide was designed to increase the process of interviewing multiple participants. The interview question guide was developed by sifting through existing research. Each question was linked to a specific research piece. The questions posed to the interviewees began with demographic and personal information. Jacob and Furgerson (2012) stated that the qualitative interviewer must also include in the protocol what will be said before beginning the interview, the collection of the informed consent form, and what will be said at the end of the interview. The interview then began with the establishment of common meanings for the terms *inclusion services*, *individualized education plan (IEP)*, *teacher/educator*, and *paraprofessional*. The protocol subsequently asked the remaining questions. Finally, the participants were asked to provide information on any questions that they

felt should have been asked, as well as any additional comments.

Data Analysis Procedures

Coding system. All interviews and the focus group were audiotaped and transcribed. The journals from the participants were transcribed. The contents of these transcriptions, supported by field notes and reflective notes, provided the raw data for this study. Subsequently, the raw data was converted to codes utilizing open coding. This was utilized to consolidate the data and link the raw data to the research question. These codes were then categorized. Open coding has been described by Ary, Jacobs, Irvine, and Walker (2019) as the process of labeling and categorizing the raw data by grouping similar items and concepts to develop concepts, categories or properties. Once compiled, the open codes were examined and the transcripts were reread to identify any patterns in the data. Through the process of axial coding, the data were organized by identifying patterns, categories, and subcategories. The axial codes were synthesized and organized into patterns. These patterns provided the selective codes by review of the transcripts and axial codes, which answered the research question. At all three levels of coding, the theoretical and conceptual frameworks were considered. Through this coding process, the raw data were organized and analyzed. At each stage of coding, the voice of the participants were considered and retained.

Rigor and Ethics in Qualitative Research

Credibility. Credibility can be defined as the confidence in the truthfulness of the research findings (Anney, 2014). In this study, efforts were made to attain credibility. These included data triangulation from multiple sources, (interviews, focus group and journals), which helped to corroborate the data. During many points of the study, peer debriefing was utilized to attain credibility. Through peer debriefing, insights were gained regarding the selection of the

participants, the interview protocols, coding and analysis of the data, findings, and conclusions. Member checks were also conducted with the participants during the focus group discussion. Researcher bias was also assessed throughout the study and there were efforts made for self-reflection of reflexivity or positionality.

Transferability. Transferability is described as the extent to which the findings of a study can be generalized to other situations or contexts. In this study, the context includes students with Down Syndrome and the teachers and paraprofessionals who educate them. This required detailed descriptions of the participants, their context and timeframe (Ary, Jacobs, Irvine, and Walker, 2019). While studying the literature review, limitations were described within the context of the participants. The use of purposeful sampling was pivotal in developing the sample. This allowed for the selection of participants who could provide the needed information and were willing to participate in the study.

Dependability. Dependability can be defined as the evaluation of findings by participants (Anney, 2014). During this study, a detailed audit trail was utilized and maintained through documentation and data triangulation (Ary, Jacobs, Irvine, & Walker, 2019).

Confirmability. Confirmability can be defined as the process of ensuring that research is free of bias in the study's process and analysis. During this study, a complete audit trail was upheld and corroboration was maintained through the triangulation of data. Additionally, the peer debriefer helped to achieve confirmability and control of potential bias (Anney, 2014).

Ethical Considerations

During this study, the Collaborative Institutional Training (CITI) guidelines on research with human subjects were utilized to guide ethical considerations. Permission was also obtained from the Carson-Newman University Institutional Review Board (IRB) and the school's IRB

before the collection of any data. All participants provided informed consent prior to their participation in the study. The consent process provided the participants with their rights, risks, and information about the value of the research, the time involved in the study, and provided the participants the opportunity to ask questions. All participants were informed that their participation was voluntary and that they could withdraw at any time from the study. The identity of the school and participants were protected to ensure confidentiality. Each participant received a pseudonym linked to the participant's gender to provide anonymity.

Summary

This qualitative study was conducted in a Midwest elementary school through a phenomenological approach as the data sought to examine the experiences and perceptions of the participants. All participants were educators or paraprofessionals in the school and worked directly with students with Down Syndrome. Participants for this study were chosen through purposive sampling and the assistance of a peer debriefer. Multiple data sources, such as interviews, focus group and journals, provided data triangulation for this study. Data generated were used to answer the research question: What are perceptions of general education and special education teachers regarding the effects of paraprofessionals on student independence for individuals with Down's Syndrome?

For this study, all materials were secured in a personal, locked safe and electronic items were stored on a personal computer and password protected. All data from the study deductively analyzed utilizing open, axial and selective coding and utilizing the theoretical framework of John Dewey, as well as the conceptual framework detailed in the literature review.

Many techniques of qualitative trustworthiness were used to increase the rigor and ethics of the study through the methods of credibility, transferability, dependability, and confirmability.

Numerous ethical considerations were utilized during this study. These were developed from the guidelines of CITI in research with human subjects. All participants signed informed consent forms and were reminded that participation was voluntary. Chapter Four provides the reader with a description of the individual participants, a presentation of the data generated through data collection, an analysis of the data through coding, and the results of the data analysis as it related to the research question.

Chapter 4: Presentation of the Findings

Introduction

The purpose of this study was to determine the perceptions of educators' and paraprofessionals' regarding the inclusion of students with Down Syndrome in their general education classroom setting. In order to understand the educators' and paraprofessionals' views on the topic, the study was designed to determine teachers' and paraprofessionals' perceptions of the utilization of paraprofessional support in the general education classroom. All research was completed after school hours. Teacher and paraprofessional questionnaires were delivered via school email on GoogleDoc forms; the interviews were recorded utilizing an electronic device after school. Additionally, the teacher focus group was conducted after school and recorded utilizing an electronic device. One main question guided this study:

1. What are perceptions of special education teachers and paraprofessionals regarding the effects of paraprofessionals on student independence for individuals with Down Syndrome?

Description of the Participants

The study was conducted at an urban school in central Indiana. This school was an elementary school with students ranging from Pre-Kindergarten to 5th grade. This school is composed of approximately 1100 students. The study participants were faculty members and paraprofessionals directly involved with working with students with Down Syndrome. Of the 32 teachers at the school, 6 are Special Education teachers. Of these six teachers, all 6 are female. All 6 of these educators work with students with Down Syndrome on a daily basis. From the pool of paraprofessionals, there are a total of 14 paraprofessionals that work at this school. Of these paraprofessionals, 4 of them currently actively work with students with Down Syndrome.

Of these paraprofessionals who work with students with Down Syndrome, 3 are female and 1 is male.

Table 4.1

Categorization of Participants by Subject

Classification	Number of Participants
Special Educator	6
Paraprofessional	4

Data Collection Process

A questionnaire was distributed to each participant via an online GoogleDoc form. The teachers and paraprofessionals chose to voluntarily participate with the understanding that the information was anonymous. A total of 10 teachers and paraprofessionals participated in the online questionnaire. Figure 4.1 details the number of teachers from each classification that participated in the questionnaire. The purpose of the questionnaire was to identify the teachers' and paraprofessionals' perceptions regarding the utilization of paraprofessionals as a support for students with Down Syndrome in the general education classroom setting.

From these 10 participants, 5 were selected randomly to participate in the semi-structured interview process. During these semi-structured interviews, the teachers and paraprofessionals were asked to clarify their responses to the open-ended questions that were asked on the questionnaire. These semi-structured interviews were audio-recorded utilizing a digital device for data collection and then immediately transcribed to better understand the participants' perceptions of the topic. This data were used to answer the research question presented.

Using the same 5 teachers and paraprofessionals that participated in the semi-structured interviews, a focus group was created. As a group, the teachers and paraprofessionals were asked

to dive deeper into their responses and conduct a meaningful conversation with the group of why they felt the way that they felt. This focus group also discussed the positives and negatives of utilizing paraprofessionals to support students with Down Syndrome in the general education classroom.

Description of the Questionnaire

To determine the depth of knowledge of the topic of the utilization of paraprofessionals in the general education classroom for students with Down Syndrome, data were collected through an online questionnaire that was sent to special education teachers and paraprofessionals. The questionnaire included questions that were Likert scale, ranking, and open-ended questions.

The questions included:

1. On a scale of 1 to 5, with 1 being not at all familiar and 5 being very familiar, how familiar are you with working with students with Down Syndrome in the general education classroom?

Using Strongly Disagree to Strongly Agree, answer the following statements.

2. Paraprofessionals provide students with an opportunity to succeed in the general education classroom.
3. Paraprofessionals receive sufficient support from teachers to complete their job successfully.
4. Paraprofessionals receive sufficient training to do their job successfully.
5. I am able to successfully do my job.
6. I feel supported by the other members on my student's teaching team.
7. I am comfortable supporting students with Down Syndrome in the general education classroom.

Questions 8-10 were open-ended response questions which directly address the research question of this study.

8. What best practices are associated with paraprofessionals working with individuals with Down Syndrome in the classroom?
9. In your opinion, what are some of the positives of paraprofessionals working with students with Down Syndrome's independence in the general education classroom?
10. Do you feel that there are drawbacks for students who are receiving support from paraprofessionals in the general education classroom as it pertains to their independence?

Questionnaire Findings

Once the data were collected, a thorough analysis was conducted to understand the teachers' and paraprofessionals' perceptions. When asking about the familiarity of working with students with Down Syndrome in Question 1, the average familiarity was 2.1 out of 5. For Questions 2-7, a series of statements were given to determine the teachers' and paraprofessionals' understanding in using best practices and working with students with Down Syndrome. Figure 4.2 displays the total number of responses and percentages for each question.

Table 4.2

Teachers' and Paraprofessionals' Perceptions and Understanding of Working with Individuals with Down Syndrome

Question	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Question 2	0	0	2	5	3
Question 3	2	1	0	4	3
Question 4	5	3	1	1	0
Question 5	0	0	2	2	6
Question 6	0	1	2	2	5
Question 7	0	2	2	4	2

Questionnaire Open-Ended Question One

The first open-ended question was, “What best practices are associated with paraprofessionals working with individuals with Down Syndrome in the classroom?” Once the data were analyzed, several themes emerged related to this question. Below, Figure 4.3 depicts the key findings of open-ended question one.

Figure 4.3*Key Findings of Open-Ended Question One*

Key Findings	Number of Participants
Communication Skills	6
Person-First Language	5
Classroom-Management	5
Removal of Distractions	3
High Expectations	2

There was an overwhelming theme of the participants stating that they believed that communication skills and interventions were needed to successfully support students with Down Syndrome in the general education classroom. Participant 2 said, “utilizing communication systems for our students with Down Syndrome can help them to be more connected to their general education classroom”. 6 of the 10 participants (60%) of the participants also cited communication skills as a necessary component for best practices of working with individuals with Down Syndrome in the general education classroom.

Half of the participants suggested that person-first language is an integral part of best-practices for working with students with Down Syndrome. Person-first language is one refers to a person before referring to the person’s disability. It requires all persons working with an individual to not speak about that individual’s special circumstances or disability, but to rather focus on the person’s abilities. This language can greatly help to break down barriers for students with Down Syndrome in the general education classroom. Participant 5 stated, “utilizing person-first language helps all students in the classroom to feel that they are all equal and all have varying abilities and needs, rather than secluding or pointing out the one student in the classroom

with Down Syndrome.” Participants stated in question 4 that person-first language can break down barriers for students with Down Syndrome in the general education classroom. Participant 5 said, “utilizing person-first language helps all students in the classroom to feel that they are all equal and all have varying abilities and needs, rather than secluding or pointing out the one student in the classroom with Down Syndrome.” Participants noted that it was highly beneficial for students with Down Syndrome to feel “a part of the classroom culture” and not to be singled out for their disability. Many of the participants indicated that they feel that having the initial support of a paraprofessional in the general education setting allows the student to eventually feel confident to independently communicate with their peers and to feel like “an integral part of the classroom.”

Respondents to the survey also stated that they require additional professional development opportunities in order to feel that they are able to properly implement best practices in the general education classroom for students with Down Syndrome. Participant 2 stated, “there are often opportunities for educators to get professional development on the topic of best practices, but paraprofessionals do not have this opportunity.” The ability to receive training and information on best practices is essential to properly providing education and supports to students with Down Syndrome in the general education classroom. Participants also stated that during the professional developments, they would be able to work together as teachers and paraprofessionals to create a common bond over working with the students with Down Syndrome in the general education classroom.

Open-Ended Question Two

Open ended question two asked, “In your opinion, what are some of the positives of paraprofessionals working with students with Down Syndrome in the general education

classroom?” This question provided the study with a more in-depth look into the participants’ perceptions of working with students with Down Syndrome in the general education classroom.

Figure 4.4 details the key findings of the responses to this question.

Figure 4.4

Key Findings of Open-Ended Question Two

Key Findings	Number of Participants
Community of Students	9
Communication Skills	7
Social-Emotional Skills	3

When analyzing the responses of the participants for the second open-ended question, three main themes began to emerge from the responses. Ninety percent of the respondents identified that the community of students created when a student with Down Syndrome is integrated into the general education setting as one of the most important positives. Participant 3 stated, “I have seen the positive of one of my students being integrated in the general education classroom with a paraprofessional in that the other students have embraced him and feel that he’s an integral part of their classroom.” Participant 3 also said that, “This student being in the general education room with support has not only been beneficial for him, but it has also taught all the other students that we all have varying abilities and needs.” The sense of community was a common theme throughout nine of the 10 participants’ answers.

The second and third themes that emerged from open-ended question number two were the increased communication and social-emotional skills for the students with Down Syndrome who are receiving support from paraprofessionals in the general education setting. Participant 5 said, “I have seen increased social skills for my students who are in the general education setting

versus those who are in a special education classroom.” Multiple participants also detailed how the students who are in the general education setting can manage social situations better than their peers who are not integrated into the general education setting. Participant 10 stated, “My student with Down Syndrome is able to independently interact with his peers in his classroom because he has a relationship with them. I was able to fade my support so that he can be successful”.

Open-Ended Question Three

Upon an analysis of the third open-ended question, “Do you feel that there are drawbacks for students who are receiving support from paraprofessionals in the general education classroom?” a few main themes emerged. Figure 4.5 outlines the key findings from the participants’ opinions of the drawbacks of students with Down Syndrome being integrated into the general education setting.

Figure 4.5

Key Findings of Open-Ended Question Three

Key Findings	Number of Participants
Disruption of Learning	10
Falling Behind Academically	7
Lack of Training for Paraprofessionals	5

Each participant was asked her feelings about the drawbacks for students with Down Syndrome who are supported in the general education classroom by paraprofessionals. Three primary themes that emerged from this open-ended question. One hundred percent of the participants responded that the biggest drawback that they have experienced from students with Down Syndrome being mainstreamed is the disruption of learning for the other students when

problem behaviors arise. Participant 10 said, “We often have to remove the other students from the room during problem behaviors.” Other participants also made statements related to the disruption of learning. Participant 3 said, “Often my student with Down Syndrome is up running around the room or making noises and stimming which is disruptive to the class as a whole.” One participant even made a statement that it may be a detriment to the other students’ learning to have students with Down Syndrome in the classroom disrupting learning. Participant 2 stated, “I feel like I cannot step back and allow my student to be independent for fear that they will have problem behaviors.” Participants understand that there are positives for the students with Down Syndrome, but suggested that having these students integrated into the classroom with paraprofessional support may create barriers for the other students in the classroom.

Lack of training for paraprofessionals was also identified as a barrier. Fifty percent of all participants identified this as a concern as it relates to the utilization of paraprofessionals to support students with Down Syndrome in the general education classroom. Participant 6 stated, “I feel underprepared to work with students when they have behaviors in the classroom.” Another participant, Participant 2 stated, “I feel underqualified to provide support with academics in the general education setting for my student with Down Syndrome.” Both of these participants noted the lack of training and education that is provided to paraprofessionals and teachers before working hands-on with students in the general education classroom setting. Participant 3 stated, “I find that it’s hard to know when I should step back and allow my student with Down Syndrome to be independent”.

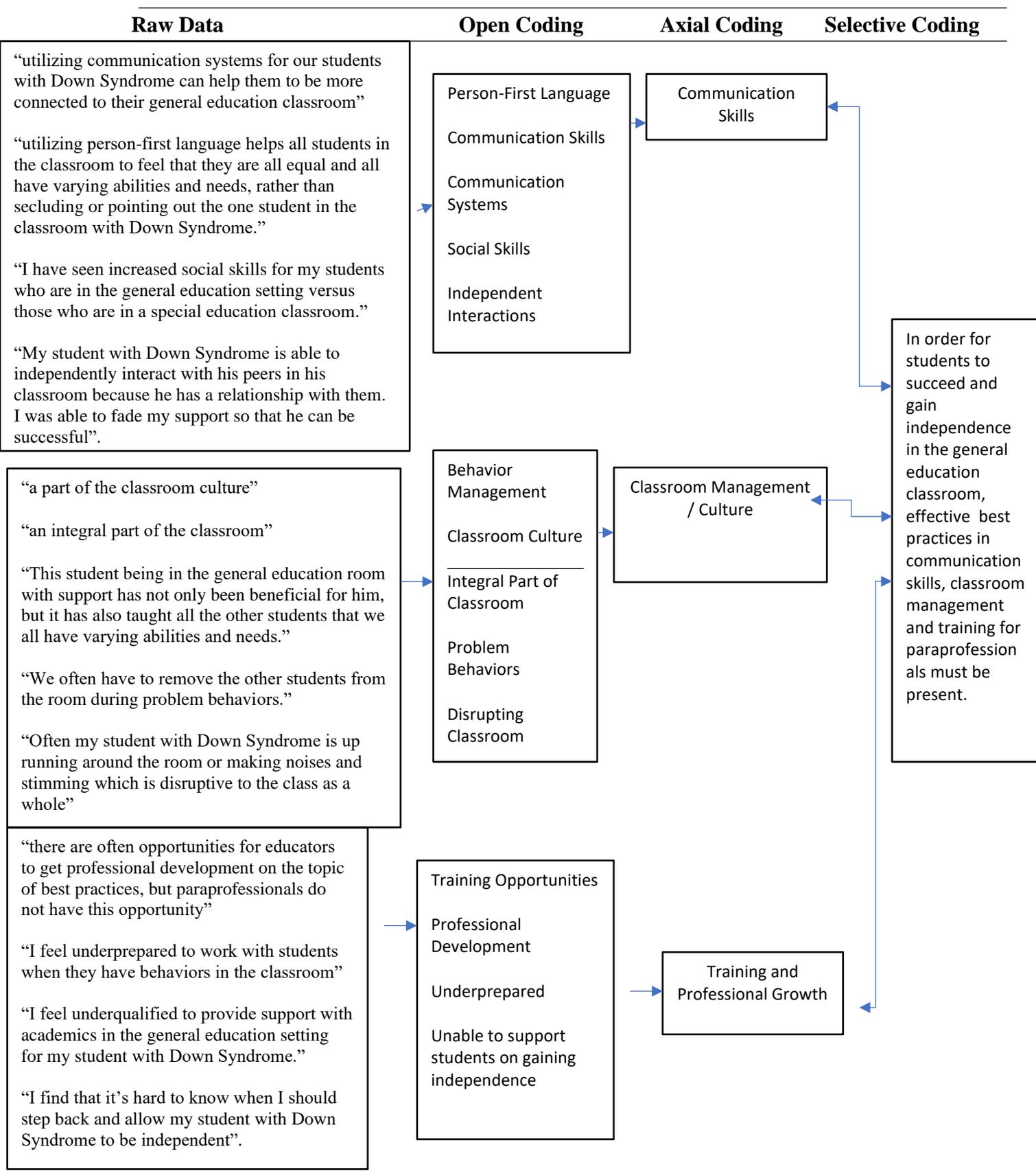
Study Findings

After finalizing the preliminary phase of the data collection process, data were sorted through open, axial, and selective coding. From this data, common themes were narrowed to

categories which express a clear understanding of teachers' and paraprofessionals' perceptions of the utilization of paraprofessionals in the general education classroom for students with Down Syndrome. Through the initial open and axial coding, themes developed which support the categories in presenting pertinent information to answer the research question. Selective coding permitted the data to be separated into one category, which addresses the research question. The study results have been divided into one category with the theme to justify that category. Table 4.6 illustrates the level of coding for the study.

Table 4.6

Data Sorted in Levels of Coding for the Research Question: What are perceptions of and special education teachers and paraprofessionals regarding the effects of paraprofessionals on student independence for individuals with Down Syndrome?



Analysis of the Participant Interview Data

Interviews were conducted with 5 participants from the study. Random numbers were given to participants. Purposeful sampling was conducted. Random numbers were given to identify the individuals that would participate in the interview process. The teachers and paraprofessionals were asked to reflect on their current teaching/ work practices when responding to the questions that were asked. All teachers and paraprofessionals were asked the same questions in a semi-structured interview. Member checks were conducted to ensure correct understanding of the responses that participants gave through follow-up questions and restatement of the participants' thoughts. Sessions were recorded, then transcribed for each response. The questions asked were clarifying questions from the questionnaire to better understand each participants' response. Participants were challenged to think deeper about their responses answered on the questionnaire.

The five interviews were conducted on a one-on-one basis. These interviews took place in the school setting and the interview questions were reviewed for possible misunderstanding by a peer debriefer. From these interviews, three themes became evident about the independence of students with Down Syndrome as it pertains to the utilization of paraprofessionals in the general education classroom. Table 4.7 details the respondents and their role in the school followed by a detailed narrative of the findings.

Table 4.9

Role in the School of Interview Participants

Participant	Role
Participant 1	Paraprofessional
Participant 2	Special Education Teacher
Participant 3	Paraprofessional
Participant 4	Paraprofessional
Participant 5	Special Education Teacher

Professional Growth and Learning.

Five of the five participants stated that schools must provide training for teachers and paraprofessionals who work with students with Down Syndrome in the general education classroom.

Participant 3 stated that specific modeling and professional development within the classroom with experts would be needed to best understand the best ways to practice fading and instruction for students with Down Syndrome.

Participant 5 stated that student specific trainings focused around fading supports and increasing independence should be utilized for each student and their team. Participants 2, 3, and 4 also made statements similar to this statement.

Participant 1 stated that increased training is necessary to help students to be more independent in the general education classroom. “I struggle with how to be supportive of my students and teach them, while also allowing them to be independent and work through issues that they may have with other students or with specific assignments. Especially my students in

the higher grades, it can be hard to step back and let them fail at assignments. Where is the line between doing things for them and not letting them fail.”

In relation to this, Participant 2 stated that oftentimes paraprofessionals are not properly trained to know what their role in the classroom is. “I find that a lot of times the paraprofessionals are doing more than they need to be and actually are prohibiting the students from being independent. Most of the time, it’s not that they don’t want the student to be independent, but rather, they aren’t trained to know what to do.”

Increased Communication Skills.

Overwhelmingly, the participants stated that they found that students with Down Syndrome who were in the general education classroom with support from a paraprofessional showed increased communication skills. Participant 2 stated, “One of my students increased in their independent communication skills exponentially during the school year as compared to the year before where he was in a special education setting.” Three of the other participants cited communication skills as one increased benefit of general education for students with Down Syndrome who are supported by paraprofessionals. Participant 1 stated, “I’ve been able to step back in social situations—gym, recess, lunch—and see my student independently interact with his peers.”

Classroom Management.

Many of the participants also identified classroom management skills as a factor for student independence. Participant 2 stated, “I think that a big factor in the independence of the student is the classroom that they are in. Some of the teachers that my students are in their class, it is easier for the student to be independent because they set all the students up for success. It’s

easier for me to do an effective job of allowing them to be independent in these classrooms versus other classrooms.”

Participant 4 stated that he felt the biggest barrier to independence for students with Down Syndrome working with paraprofessionals was the personality differences between the paraprofessional, teacher and the student. They said, “Some students and their paraprofessional just do not click. It makes it hard to step back and allow them to be independent when you’re always at odds with the student. I try to communicate my frustrations with my special education teacher.”

Analysis of the Positives of Paraprofessional Support for Student Independence.

Overall, the perceptions from the paraprofessionals and teacher were positive. Looking deeper into the responses from the participants, the common theme of increased independence for the students who are in the general education setting with support came through. Participant 1 said, “Overall, I think that students benefit from being in the general education setting. The students are able to interact with their peers and be exposed to the same curriculum.”

Participant 4 also had a positive perception of the effects of paraprofessionals on the independence of students with Down Syndrome. They said, “It has been great to see my student grow and become more independent with their math stations. I am there if they need me, but I’m also able to walk around the room and help other students while they work independently. Throughout the year I’ve been able to fade back more and more to allow for more independence in the classroom.”

Analysis of the Negatives of Paraprofessional Support for Student Independence.

While the perceptions from the paraprofessionals and teachers were mostly positive, there were negatives that were identified by the participants in the interviews. The main negative,

which was identified by 80% of the participants was that students with Down Syndrome who are integrated in the general education setting with paraprofessional support often can cause disruptions for the other students/ classrooms.

Participant 1 stated, “When you’re in a classroom with a student and you try to fade so that they can be independent, sometimes those behaviors happen and you have to try to get them back under control. It can be frustrating when you don’t know what to do.”

Additionally, Participant 2 stated, “I’m often called away from my teaching with other students to deal with behavior concerns that the paraprofessionals should be handling. Sometimes the behaviors are severe and often can be disruptive to the other students. I think that a lot of the times the paraprofessionals should be able to handle these situations on their own, but they lack the training to do so.”

Analysis of the Focus Group

A focus group was conducted with the 5 participants to see if their views and opinions changed from the questionnaire and the interview. This group met after school in a round table discussion and addressed the research question related to the study. During this time, participants were able to review their answers from the questionnaire and responses to the interview questions. The participants were involved in the focus group and openly listened to the ideas of others through meaningful and respectful conversation. After a thorough analysis of the questionnaires, interviews, and focus group, it was found that the participant’s views had not changed. As a group, the participants stated that the main barrier to student independence in the general education classroom is the lack of training for paraprofessionals. They also conferred that they overall feel positively about the effects of paraprofessionals on the independence of students with Down Syndrome in the general education classroom. They stated that overall the

impact of the paraprofessionals on the independence of the students with Down Syndrome was increased independence with communication and social skills.

Summary

Chapter 4 provides an analysis of demographic and interview data. The purpose of this study is to understand teachers' and paraprofessionals' perceptions of the effects of the utilization of paraprofessionals on the independence of students with Down Syndrome. Analysis of the data gathered occurred to assist in answering the following research question:

1. What are perceptions of special education teachers and paraprofessionals regarding the effects of paraprofessionals on student independence for individuals with Down Syndrome?

Data were collected utilizing questionnaires, semi-structured interviews and a focus group. The data sources were analyzed, and common themes emerged. There were three main themes that appeared with the participants. From the participants, three themes became evident regarding the independence of students with Down Syndrome: teacher and paraprofessional education, classroom management, and increased communication skills. Chapter 5 details the qualitative research findings, conclusions, and inferences from these data as well as recommendations for future research.

Chapter 5: Conclusions, Implications, and Recommendations

The fifth chapter is separated into four sections to examine the findings of this qualitative study. The study is examined first, followed by an analysis of the findings with discussion of the available literature. The third section details the implications of the study. The concluding section proposes recommendations for future research pertaining to the teachers' and paraprofessionals' perceptions of the effects of paraprofessionals on the independence of students with Down Syndrome in the general education classroom.

Summary of the Study

The independence of students with Down Syndrome has been researched in many studies. Frequently, related studies on the effects of paraprofessionals has been researched. The purpose of this qualitative study was to investigate teachers' and paraprofessionals' perceptions of the effects of paraprofessionals on the independence of students with Down Syndrome in the general education classroom. The qualitative study is comprised of data from semi-structured teacher interviews. In order to achieve triangulation and to inform the examination of the teacher interviews, data were also collected from an online questionnaire and a focus group. A total of 10 participants, comprised of paraprofessionals and special education teachers responded to the online questionnaire. The questionnaire asked for volunteers to be willing to be interviewed for the purpose of gaining further information on the perceptions of the effects of paraprofessionals on the independence of students with Down Syndrome in the general education classroom.

From the teachers and paraprofessionals who responded to the questionnaire and agreed to be interviewed, five participants were randomly selected using purposeful sampling. The analysis of the data from this study offers a greater understanding of teachers' perceptions of the

effects of paraprofessionals on the independence of students with Down Syndrome in the general education classroom. This qualitative study was driven by the following research question:

1. What are perceptions of general education and special education teachers regarding the effects of paraprofessionals on student independence for individuals with Down Syndrome?

Findings

All study participants work in a public elementary school in central Indiana. A comprehensive analysis of data collected from the online questionnaire, semi-structured interviews and focus group provide answer to the qualitative research question. The findings of this study are formed on the triangulation of three separate sources: online questionnaires, teacher/ paraprofessional interviews and a focus group. To increase the credibility of the study, triangulation, member checks and peer debriefing were used during the research process. The following summary of the findings related to each individual research question and the themes that developed from the transcripts, online questionnaire and focus group.

Research Question

All participants who were interviewed agreed that the biggest barrier to independence for students with Down Syndrome who are supported by paraprofessionals in the general education classroom is the lack of training and professional development for paraprofessionals. Interviewed teachers' and paraprofessionals' explanations varied on what they thought recommendations for training the paraprofessionals. The main three themes identified from the interviews were: professional development, classroom management and increased communication skills.

It is important to understand what best practices are for the school, teachers, and paraprofessionals. Without utilizing best practices, the teachers and paraprofessionals cannot expect their students to be successful. All five of the five participants stated that schools need to

increase their training, specifically their student-specific trainings, to allow for the best practices to be implemented in the general education classroom for these students. Participant 2 even noted that without proper training, how are paraprofessionals to understand their role and when to fade to allow for increased independence from their student. Questionnaire responses indicated that 90% of respondents felt that paraprofessionals do not receive enough training to sufficiently complete the duties of their job.

From the questionnaire, interviews, and focus group, the final consensus of the group was that paraprofessionals can be beneficial to encourage the independence of students with Down Syndrome in the general education setting. With proper training and classroom management, the group saw increases in communication and social skills for students with Down Syndrome in the general education classroom.

Implications

The findings in this study noted themes and ideas that teachers and paraprofessionals hold to be true when considering the effects of paraprofessional support on students with Down Syndrome in the general education setting. From these findings, three implications can be formulated: schools must provide professional development for paraprofessionals and teachers who are supporting students in the general education classroom, teachers must utilize effective classroom management techniques in order for students with Down Syndrome to be successful and independent in their classrooms, and paraprofessionals and teachers notice increased independence with communication and social skills from students who are supported by paraprofessionals in the general education classroom. All teachers and paraprofessionals interviewed stated their opinions on the effects of paraprofessionals on student independence for individuals with Down Syndrome. School districts can take this information and formulate

professional developments that can help students and paraprofessionals to be successful in gaining independence for students with Down Syndrome in the general education setting.

Recommendations for Future Research

With the increase of parents wanting their students to be integrated in the general education classroom setting, the opportunity for future research is plentiful. This study focused on the teachers' and paraprofessionals' perceptions of the effects of paraprofessionals on student independence for individuals with Down Syndrome. Future recommendations would include broadening the region of data collection. This study utilized one school in central Indiana, therefore, broadening the region would provide a more representative sample from which feedback could be obtained. Another recommendation would be to expand the research to understand its effect on different disability populations- specifically Autism. Completing this research would answer the questions of if the teachers' and paraprofessionals' perceptions of the effects of paraprofessionals on student independence for individuals with autism are different than those of individuals with Down Syndrome. Another study that would be beneficial would be to conduct the study in a high school or post-school setting. This comparison would be beneficial to see the long-term effects of independence for students who work with paraprofessionals throughout their entire time being in school.

Summary

The purpose of this qualitative study was to examine the teachers' and paraprofessionals' perceptions of the effects of paraprofessionals on the independence of students with Down Syndrome in the general education classroom. Through questionnaires, interviews and a focus group, participants expressed their opinions of the effects of paraprofessionals on the independence of students with Down Syndrome in the general education classroom. Through

open, axial, and selective coding, the study revealed that paraprofessional development and classroom management were the two main barriers to student independence in the general education classroom. The study also revealed that paraprofessionals and educators noted an increase in communication and social skills for students who are included in the general education setting with paraprofessional support. All participants agreed that overall the perception of utilizing paraprofessionals to support students with Down Syndrome in the general education classroom is positive. They also all agreed that in order for students with Down Syndrome to be successful in the general education setting with support from paraprofessionals, they required additional training and professional development for the paraprofessionals. The information gained from this study will help school districts and IEP teams to determine effective practices of supporting students with Down Syndrome in the general education setting. This study will also provide districts with the knowledge of teachers' and paraprofessionals' perceptions of the effects of paraprofessionals on student independence for individuals with Down Syndrome.

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Appendices

Appendix A
Informed Consent Form

Informed Consent Document

PROJECT TITLE- What are perceptions of paraprofessionals and special education teachers regarding the effects of paraprofessionals on student independence for individuals with Down Syndrome?

PRINCIPAL INVESTIGATOR:

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INTRODUCTION

I am a doctoral student at Carson-Newman University. You are invited to join a research study to look at the perceptions of paraprofessionals and special education teachers as it pertains to the independence of students with Down Syndrome. You were invited to participate in the study because you are teacher or paraprofessional who educates students with Down Syndrome on a daily basis. You may discuss your decision of joining the study with family, friends, or anyone else. Your participation in the study is completely voluntary.

WHAT IS INVOLVED IN THE STUDY?

If you decide to participate you will be asked to participate in the following;

- an open-ended semi-structured interview, which will take approximately 45-60 minutes;
- a focus group, which will take approximately 45-60 minutes; and
- respond in a journal, which will take 30-45 minutes.

The semi-structured interview and the focus group will be audiotaped so that it may be transcribed.

The investigator may stop the study or remove you from the study at any time if it is determined to be in your best interest. You may stop participating at any time. If you stop you will not lose any benefits or services.

RISKS

There are no risks involving this study. The IRB (International Review Board) of Carson-Newman University has given permission for this study. Additionally, this community college granted permission for the study to take place.

BENEFITS TO TAKING PART IN THE STUDY

It is reasonable to expect the following benefits from this research: (1.) gain a better understanding of the challenges faced by individuals who educate students with Down Syndrome, and (2.) and an opportunity for you to share your thoughts on how paraprofessionals can better serve students with Down Syndrome's needs. However, there is no guarantee that you will personally experience benefits from participating in this study. Other institutions or students may benefit in the future from the findings of this study.

CONFIDENTIALITY

The following steps will be taken to ensure the confidentiality of your information and to protect it from

from unauthorized disclosure, tampering, or damage:

- Your name will not be used or revealed. You will receive a pseudonym based on your gender.
- The name of this college will not be used or revealed.
- A number rather than a name will be used to identify your student journal.
- All electronic data will be stored on a personal, password protected computer.
- All hardcopies of notes, transcripts, or other pieces of data will be stored in a personal filing cabinet with key lock.
- Materials will be maintained under this security for a period of five-years. At the end of that time, the materials will be destroyed.

INCENTIVES

No incentives will be used in this study.

YOUR RIGHTS AS A RESEARCH PARTICIPANT

Participation in this study is voluntary. You have the right not to participate at all or to leave the study at any time. Deciding not to participate or choosing to leave the study will not result in any penalty or loss of benefits or services to which you are entitled, and it will not harm your relationship with the researcher or anyone involved in the study.

CONTACTS FOR QUESTIONS OR PROBLEMS

Call 317.437.5069 or by email at gebaker@cn.edu, if you have questions about the study, any problems, unexpected physical or psychological discomforts, any injuries, or think that something unusual or unexpected is happening.

The chair of this study may also be contacted:

Dr. Julia Price

Director of the Carson-Newman University Advanced Programs

jprice@cn.edu

Thank you.

CONSENT

YOU ARE MAKING A DECISION WHETHER OR NOT TO PARTICIPATE IN A RESEARCH STUDY. YOUR SIGNATURE BELOW INDICATES THAT YOU HAVE DECIDED TO PARTICIPATE IN THE STUDY AFTER READING ALL OF THE INFORMATION ABOVE AND YOU UNDERSTAND THE INFORMATION IN THIS FORM, HAVE HAD ANY QUESTIONS ANSWERED AND HAVE RECEIVED A COPY OF THIS FORM FOR YOU TO KEEP.

Signature _____ **Date** _____ **Research Participant**

Signature _____ **Date** _____ **Interviewer**

Appendix B
Interview Guide

**What are perceptions of paraprofessionals and special education teachers regarding the effects of paraprofessionals on student independence for individuals with Down Syndrome?
Interview Guide and Protocol**

**Reminder: Collect the Informed Consent Form and answer any questions.*

Thank you for agreeing to participate in this study. I want to assure you that your identity will remain anonymous, as will the name of our school. I hope that the results will help our students and other schools make changes that will better support students with Down Syndrome in reaching their educational goals.

In my study, I am looking for the perceptions of special education teachers and paraprofessionals as it relates to the independence of these students. I am also interested in learning your suggestions for how the district could better support you and other educators who are working with students with Down Syndrome on a daily basis.

If my questions are unclear to you, just ask me to restate the questions in other words. I want your honest answers.

1. On a scale of 1 to 5, with 1 being not at all familiar and 5 being very familiar, how familiar are you with working with students with Down Syndrome in the general education classroom?

Using Strongly Disagree to Strongly Agree, answer the following statements.

2. Paraprofessionals provide students with an opportunity to succeed in the general education classroom.
3. Paraprofessionals receive sufficient support from teachers to complete their job successfully.
4. Paraprofessionals receive sufficient training to do their job successfully.
5. I am able to successfully do my job.
6. I feel supported by the other members on my student's teaching team.
7. I am comfortable supporting students with Down Syndrome in the general education classroom.

Questions 8-10 were open-ended response questions which directly address the research question of this study.

8. What best practices are associated with paraprofessionals working with individuals with Down Syndrome in the classroom?
9. In your opinion, what are some of the positives of paraprofessionals working with students with Down Syndrome's independence in the general education classroom?
10. Do you feel that there are drawbacks for students who are receiving support from paraprofessionals in the general education classroom as it pertains to their independence?

Information about Focus Group

Thank you so much for talking with me today and participating in my study. I am going to send a "Doodle Poll" to you through your school email. The "Doodle Poll" will help us to find a convenient time for you and the other participants to meet for a group meeting. I will send you information about the meeting time and place.

Journal

This is a journal. You will find a couple of questions in it that I would like for you to answer in the next few days. There are also places for you to jot down things that may come to you later about the questions and situations that we discussed today. The information that you have to share is important. Please bring this journal back to our group meeting. Just like the things that you shared, today, this information will be held confidential. Please do not write your name on the journal. I have placed a number on it, so I will know it's your journal and that I have collected all journals at the end of the study.

Again, I sincerely appreciate your help and your time!

Appendix C
Focus Group Facilitation Guide

What are perceptions of paraprofessionals and special education teachers regarding the effects of paraprofessionals on student independence for individuals with Down Syndrome?
Focus Group Facilitation Guide and Protocol

I want to remind you that your participation in the study is voluntary and that you can decide to withdraw at any time. I thank you for the time and information that you have shared with me in your interviews. It is very helpful to me in understanding your situations and needs and how the district and I could better help you increase independence for students with Down Syndrome.

Today, I want to revisit some of the things that we talked about in the interviews to make sure I fully understand the things that you said and that I “have it right”. I need to fully understand and tell your story. So, if I don’t have it right, please correct me. That is one of the purposes of our meeting today.

Provide summary of collected data to this point.

Ask for corrections or clarifications.

1. What best practices are associated with paraprofessionals working with individuals with Down Syndrome in the classroom?
2. In your opinion, what are some of the positives of paraprofessionals working with students with Down Syndrome’s independence in the general education classroom?
3. Do you feel that there are drawbacks for students who are receiving support from paraprofessionals in the general education classroom as it pertains to their independence?

**** Reminder: Discuss the return of student journals.***

Thank you, again, for your honest answers. This information will be critically important to this community college, other institutions, and me in making sure that we do all that we can do in making sure that adult, nontraditional students are successful in realizing their educational goals.

When the study is completed, I will forward to you an executive study of the findings.

Appendix D

Student Journal Questions

What are perceptions of paraprofessionals and special education teachers regarding the effects of paraprofessionals on student independence for individuals with Down Syndrome?
Student Journal Questions

I sincerely appreciate you sharing your time and thoughts with me in this study. In this journal, you will find six questions. The questions have no right or wrong answers. All that I ask is that you answer them truthfully, as this feedback is critical to the study and to school districts that seek to be more supportive of students with Down Syndrome and help them to overcome barriers to staying in school. If you have questions or concerns, I may be reached at gebaker@cn.edu or by phone at 317.437.5069.

Thank you, again,
Gabrielle Baker

1. Did you participate in professional development(s) specific to behavior management? Did you find them helpful or not? Why? Based on your experiences or what others have told you, how could they be improved?
2. As you consider the things that work to hinder the independence of students with Down Syndrome, which of these is the greatest barrier:
 - lack of teacher/paraprofessional preparation
 - self-confidence
 - classroom issues
 - family involvement
 - Why did you select this item?
3. What were the most significant challenges for you supporting a student with Down Syndrome in the general education classroom?
4. Who or what gives you the confidence or determination to work with students with Down Syndrome?
5. What were your experiences in supporting students with Down Syndrome regarding the following?
 - Expected. Technology skills with the learning management system, e-learn?
 - Word, Excel, PowerPoint, etc.?
 - Access to reliable internet services?
 - Expected knowledge of interventions/strategies
6. What have I not asked that you believe would make students with Down Syndrome more independent?