Reflections of Experiences in General Education Schools by Individuals with Visual Impairments

Dissertation

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Abstract

The number of students with visual impairments in general education schools has been increasing in the United States as well as worldwide. Research needs to investigate the experiences of individuals with visual impairments in general education classrooms. The developmental niche theory was used to explore how people with visual impairments describe social and academic experiences in primary and secondary general education schools.

The purpose of this qualitative study is to explore the experiences of students with visual impairments in primary and secondary general education classrooms. Research data was obtained from people with visual impairments who attended general education classrooms in primary, elementary, or high school. The participants were adults who already graduated from high school. Online semi-structured interviews were conducted with seven individuals with visual impairments who received some part of their education in primary and secondary general education classrooms.

Good relationships with some general education and resource room teachers, acceptance by some teachers and classmates, and being academically successful in some classes are the main positive social and academic experiences of students with visual impairments in general education classrooms. Teacher support, personal attributes of students, extracurricular activities, positive attitudes of classmates and teachers, and a safe and inclusive school and classroom environment led to positive social and academic experiences for students with visual

impairments in general education classrooms. Bullying is the most common social experience, and lack of accommodations is the most common academic experience in this study. In addition, Math is the most difficult class for most of the participants. Physical education is the other class those which students with visual impairments were mostly not included due to a lack of accommodations.

Future research should examine suggestions or solutions for the negative social and academic experiences in general education schools described by individuals with visual impairments. Future research should also focus on the reasons to transfer to specialized schools for the blind for students with visual impairments. An examination as to the reasons why Math class was the most difficult class for students with visual impairments and the reasons why students with visual impairments lacked inclusion opportunities in Physical Education classes should be deeply investigated in future research.

Dedication

Dedicated to my loving wife, parents, grandparents, sister, and children Noyan and Nora

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Fields of Study

Major Field: Department of Teaching and Learning

Specialization: Education of Students with Visual Impairment

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Chapter 1. Introduction

This chapter provides an overview of the present study. First, the background of the study is discussed. Second, the theoretical framework is explained. Then, the rationale for the study, the purpose of the study and research questions, and the significance of the study are discussed. The last part of the chapter presents the definition of key terms of the study.

Background of the Study

The number of students with visual impairments in general education classrooms has been increasing in the United States. In 1963, approximately half of the students who are classified as legally blind in the United States lived in residential schools for the blind. (Smith et al., 2016). In 2015, the American Printing House for the Blind (2015) reported that 83% of students with visual impairments attend public schools, and 8.4% of students with visual impairments attend schools for the blind. The number of students attending public school has continued to rise. According to the American Printing House for the Blind (2018), approximately 85% of students with visual impairments attend public schools, and about 8% of students with visual impairments attend schools for the blind. In the last 50 years, the number and percentage of students with visual impairments in schools for the blind have dramatically decreased, while the number and percentage of students with visual impairments in public schools have increased.

Changes in school placement for students with visual impairments have coincided with a series of legislation, that made it possible for students with visual impairments to stay in their local public schools. The Vocational Rehabilitation Act (VRA) and the Education for All Handicapped Children Act (EAHCA) were enacted in 1973 and 1975, respectively. Then, the Americans with Disabilities Act (ADA) and the Individuals with Disabilities Education Act (IDEA) was enacted in 1990. The VRA and ADA are both civil rights laws, and the VRA provided basic civil rights protections for students, employees, and other individuals with disabilities (Hatlen, 2000). On the other hand, the EAHCA is known as mainstreaming law and ensures that all children, regardless of their disability, receive a free and appropriate public education. Mainstreaming was defined as the partial integration of students with disabilities into regular education settings, based on their individual needs, abilities, and characteristics (Dev, 1996). The Individuals with Disabilities Education Act (IDEA) and Individuals with Disabilities Education Improvement Act (IDEIA) are extended versions of the EAHCA. One of the most important components of the IDEA, and later the reauthorization of the act known as IDEIA, was provisions for providing education in a child's least restrictive environment. This means students with disabilities should be educated with students without disabilities as much as possible. The idea of the least restrictive environment encouraged students with disabilities including students with visual impairments to be enrolled in general education classrooms. Therefore, more students have been enrolled in general education classrooms in time. The combination of the passage of these laws revolutionized education for students with visual impairments, thus opening doors for students with visual impairments to be taught along their

sighted peers in local public schools. More details of the impact of these laws on public education are explored in further detail in Chapter 2.

According to Smith et al. (2016), the inclusion of students with visual impairments in classrooms with their sighted peers has several advantages. Reduction of stigma, opportunities for social interactions with students without disabilities, and higher academic expectations are the major advantages of inclusion for students with disabilities. On the other hand, concerns of parents of students with disabilities about bullying, getting less attention in general education classrooms, and the unreadiness of general education teachers are the main disadvantages of inclusion.

Placement in a classroom is not the only impact on students with visual impairments' learning. There is also research concerning the attitudes of general education teachers toward the inclusion of students with visual impairments in their classrooms, and findings are mixed. Although Mushoriwa (2001) found that primary school teachers had negative attitudes toward inclusion in Zimbabwe, Ravenscroft, Davis, Bilgin, and Wazni (2019) reported that elementary school teachers had positive attitudes toward the inclusion of students with visual impairments. Moreover, Miyauchi (2020) reported that attitudes of general education teachers toward inclusion were mixed and were dependent upon the individual teachers, students, and environmental-related factors. Miyauchi and Paul (2020) also reported that accessibility, social interactions, and the physical surroundings of schools are the main barriers.

Students with visual impairments can have both negative and positive experiences when they are educated in a general education setting. Good relationships with general education and resource room teachers (Chang & Schaller, 2002), acceptance by teachers and classmates

(George & Duquette, 2006; Opie, Southcott & Deppeler, 2017), and being academically successful (Opie, Southcott & Deppeler, 2017) are the main positive social and academic experiences of students with visual impairments in general education classrooms. Supportive teachers (Chang & Schaller, 2002; George & Duquette, 2006; Miyauchi & Paul, 2020), and parents (Opie, Southcott & Deppeler, 2017), high expectations from students (Chang & Schaller, 2002; Opie, Southcott & Deppeler, 2017), personal attributes of students (George & Duquette, 2006; Opie, Southcott & Deppeler, 2017; Miyauchi & Paul, 2020), extracurricular activities (Opie, Southcott & Deppeler, 2017), safe and inclusive classroom environment (Chang and Schaller, 2002; Miyauchi & Paul, 2020) and positive school climate and attitudes (Hess, 2010) led to positive social and academic experiences of students with visual impairments in general education classrooms.

On the other hand, bullying is one of the most common negative social experiences for students with visual impairments in inclusion classrooms (Austin, 2018; Haegele and Zhu, 2017; Brydges & Mkandawire, 2017; Rosenblum, 2000; Worth, 2013). Lack of socialization is the other common negative social experience for students with visual impairments (Austin, 2018; Conroy, 2008; Haegele and Zhu, 2017; Haegele, 2019; Jessup et al., 2018; Kim & Kim, 2015; Rosenblum, 2000; Thurston, 2014; Worth, 2013). In addition, lack of teacher training and experience (Brydges & Mkandawire, 2017; Lamichhane, 2013; Lieberman & Houston-Wilson, 1999; McCarthy & Shevlin, 2017; Opie, 2018; Wall, 2002), lack of supplementary and specialized instruction (Brydges & Mkandawire, 2017; Koehler & Wild, 2019), lack of time for instruction (Lieberman & Houston-Wilson, 1999; Opie, 2018; Wall, 2002), community attitudes (Conroy, 2007; Lamichhane, 2013), parental overprotection (Lieberman & Houston-Wilson,

1999) and teachers' concern about safety (Wall, 2002) are all common negative academic experiences for students with visual impairments in general education classrooms. It is important to learn about both positive and negative social and academic experiences and the factors that lead to positive experiences for students with visual impairments in inclusion classrooms.

Theoretical Framework

Niche theory is the primary theoretical framework used for this research. This theory was first proposed in evolutionary biology as a niche construction theory and was used to describe how organisms not only adapt to environments, but in part also construct them (Lewontin, 1983). The developmental niche theory, as described by Super and Harkness, (1986) examines the influence of cultures on human development. Super and Harkness' developmental niche theory has three main subsystems: 1) the physical and social settings in which the child lives; 2) the customs of childcare and child-rearing; and 3) the psychology of the caretakers. Gauvain (1995) further developed the use of developmental niche theory for organizing cognitive developmental research in relation to culture. Her three subsystems are 1) activity goals and values of the culture; 2) material and symbolic tools for satisfying cultural goals and values; and 3) higher-level structures that instantiate cultural goals and values in everyday practice.

The developmental niche theory has also been used in research with individuals with visual impairments (Fast, 2018; Chiu, 2020). Fast (2018) used the developmental niche theory to explore accessibility to public transportation for travelers with visual impairments. She explored the subsystems of 1) public bus settings; 2) learning strategies and accommodations for individuals with visual impairments; and 3) attitudes and knowledge of public transportation

workers. Furthermore, Chiu (2020) used the niche theory to investigate the science identity of students with visual impairments. According to her, norms, people, and resources are parts of the Niche theory in science learning environments.

Niche theory centers on the individual and explores subsystems around them. The niche theory pays attention to both the biological differences of children and the culture on child development. In this study, developmental niche theory will be used to explore how people with visual impairments describe their social and academic experiences in primary and secondary general education schools. Three subsystems described in the present study are 1) a school setting of educational placement 2) accommodations made for the student with a visual impairment and 3) attitudes of classmates, teachers, and parents regarding the student with a visual impairment.

Rationale for the Study

Due to the mandates of the IDEA legislation that requires students with any disability, including visual impairment, to be educated in the least restrictive educational placement, the number of students with disabilities including visual impairments in general education schools has been increasing. However, literature investigating the experiences of students with visual impairments in primary and secondary general education schools is limited. Therefore, by gathering data from students with visual impairments about their experiences in this qualitative study, we better understand the needs of the students and factors that affect the students' experiences in inclusion schools.

Purpose of the Study and Research Questions

The purpose of this qualitative study is to explore the experiences of students with visual impairments in primary and secondary general education classrooms. Research data was obtained from people with visual impairments who attended general education classrooms in primary, elementary, or high school. The participants were adults who already graduated from high school. The data collection process is explained in detail in Chapter 3. The present study will investigate the following questions:

1. What are the positive social and academic experiences of students with visual impairments in general education classrooms? What factors lead the positive social and academic experiences in inclusive settings?
2. What are the negative social and academic experiences of students with visual impairments in general education classrooms?

Significance of the Study

A series of legislation have led to the ability of students with visual impairments to attend classes with sighted peers in public schools. Since the 1970s, legislation such as the VRA, ADA, EAHCA, IDEA, and IDEIA have increased enrollment in general education classrooms in both primary and secondary general education classrooms in the last fifty years. This increase in enrollment resulted in both positive and negative experiences for students with visual impairments. However, there is a dearth of literature on the social and academic experiences of students. Therefore, additional research is needed to explore the factors that lead to positive social and academic experiences. The present study addresses a lack of research within the field

of visual impairments regarding the experiences of students with visual impairments and factors that affect those experiences in primary and secondary general education classrooms. This study also will help us to fill the gap, especially about positive social and academic experiences in the literature.

Definition of Terms

i. Americans with Disabilities Act (ADA): the ADA provides civil rights protections for students, employees, and other individuals with disabilities in all areas of public life. The law was enacted in 1990 (Hatlen, 2000).

ii. General Education School: Unlike Special education school, general education school is where students with disabilities can be educated with their peers without disabilities. General education schools can include general education classrooms or self-contained classrooms (Smith et al., 2016).

iii. Inclusion: inclusion begins in general education settings, and students' academic performances are not the concern of inclusion but are only concerned with students' benefits of being in the general education class (Huston, 2007).

iv. Individuals with Disabilities Education Act (IDEA): the IDEA is a federal law and enacted in 1990 and reauthorized in 1997. People are eligible for services under IDEA (age 3 through 21) if they have one of the recognized disabilities: autism, deaf-blindness, deafness, emotional disturbance, hearing impairment, intellectual disability, multiple disabilities, orthopedic impairment, other health impairment including an attention-deficit/hyperactivity disorder (ADHD), specific learning disability includes dyslexia,

speech or language impairment, traumatic brain injury, visual impairment, and developmental delay.

v. Least Restrictive Environment: least restrictive environment means students with disabilities should be educated with students without disabilities as much as possible (Smith et al., 2016).

vi. Legal Blindness**:** central visual acuity of 20/200 or less in the better eye with best correction or a central visual acuity of more than 20/200 if there is a visual field defect in which the peripheral field is contracted to such an extent that the widest diameter of the visual field subtends an angular distance of no greater than 20 degrees (Huebner, 2000, p. 59).

vii. Low Vision: central visual acuity of 20/70 to 20/200 in the better eye with correction or a visual field of 20 to 40 degrees or less in the better eye with correction (Huebner, 2000, p. 60).

viii. Mainstreaming: partial integration of students with disabilities into general education settings, based on their individual needs, abilities, and characteristics (Dev, 1996).

ix. Orientation and Mobility Services: Services provided to blind or visually impaired children by qualified personnel to enable those students to attain systematic orientation to and safe movement within their environments in school, home, and community (IDEA, 2004, 300.34(c)(7))

x. Related Services: transportation and such developmental, corrective, and other supportive services as are required to assist a child with a disability to benefit from special education, and includes speech-language pathology and audiology services, interpreting

services, psychological services, physical and occupational therapy, recreation, including therapeutic recreation, early identification and assessment of disabilities in children, counseling services, including rehabilitation counseling, orientation and mobility services, and medical services for diagnostic or evaluation purposes (IDEA, 2004, 300.34)

xi. Students with Blindness: They use braille or auditory methods to receive instructions (Smith et al., 2016).

xii. Students with Low Vision: They use their vision as their primary sensory channel (Smith et al., 2016).

xiii. Visual Impairment: an impairment of the vision that causes a real or perceived disadvantage in performing specific tasks (Corn & Koenig, 2000).

Chapter 2: Literature Review

The study aims to investigate the social and academic experiences of students with visual impairments in primary and secondary general education classrooms. In this chapter, the theoretical framework of the study and literature review on positive and negative social and academic experiences of students with visual impairments are presented. Chapter 2, a literature review is divided into five main sections: theoretical framework, students with visual impairments, main legislations in the United States, inclusion of students with visual impairments, and experiences of students with visual impairments in general education classrooms.

The Developmental Niche Theory

Niche theory was first proposed in evolutionary biology as a niche construction theory, and it was stated that organisms not only adapt to environments but in part also construct them (Lewontin, 1983). Laland et al. (2001) define niche construction theory as "organisms frequently choose, regulate, construct and destroy important components of their environments, in the process changing the selection pressures to which they and other organisms are exposed" (p. 22). Nests, holes, burrows, paths, webs, dams, and chemical environments are some examples of how they construct their environments (Odling-Smee et al., 1996).

The developmental niche was used by Super and Harkness (1986) to understand the influence of cultures on human development. According to Super and Harkness (1986), "the developmental niche, in response, is a theoretical framework for studying cultural regulation of

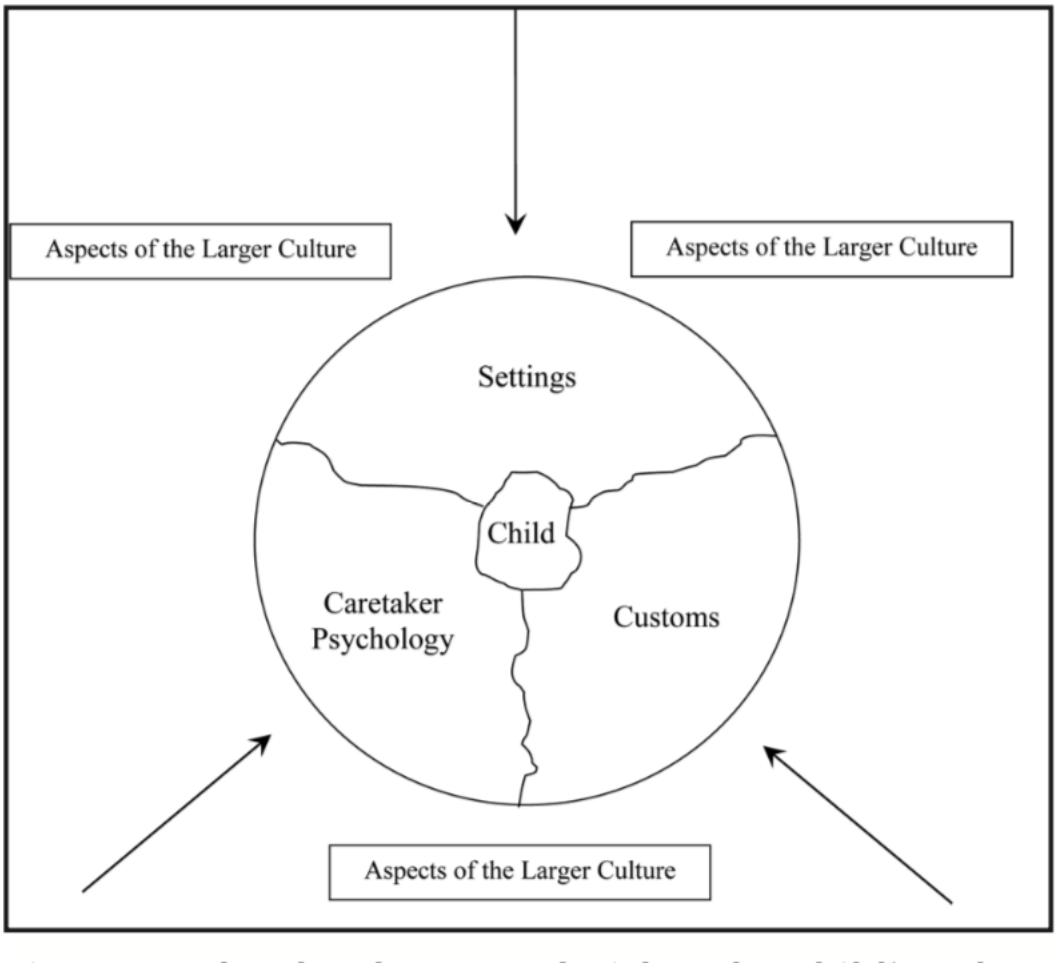
the micro-environment of the child, and it attempts to describe this environment from the point of view of the child in order to understand processes of development and acquisition of culture" (p. 552). Super and Harkness (1986) investigated a rural Kipsigis community in Kenya to understand relationships between the settings of children's everyday lives and different aspects of child development. Their developmental niche has three main subsystems: 1) the physical and social settings in which the child lives; 2) the customs of childcare and child-rearing; and 3) the psychology of the caretakers.

The physical and social settings in which the child lives play an important role in the child's development. Super and Harkness (1986) provided some examples to explain the subsystems of the developmental niche theory. For example, American babies overall slept more than Kipsigis babies because of the differences in physical settings and daily routines of two different communities. The meanings of the work and play are differently constructed by those two communities. In addition, the expectations of the parents from the children in the two communities were different; for instance, older children especially girls are responsible for taking care of the baby siblings in the Kipsigis community.

Super and Harkness (1986) defined the customs as, "sequences of behavior so commonly used by members of the community, and so thoroughly integrated into the larger culture, that they do not need individual rationalization and are not necessarily given conscious thought" (p. 555). For instance, carrying a baby on the caretaker's back is an example of the customs in the Kipsigis community. The psychology of the caretakers includes parenting styles and belief systems of parents. For example, Kipsigis parents deliberately taught their babies how to sit and walk and not crawl, so they acquired sitting and walking skills earlier than American babies.

Figure 3.2 shows children's culturally constructed environment in the developmental niche theory. A child is at the center of the subsystems, and settings, caretaker psychology, and customs are around a child as three subsystems that are influenced by aspects of the larger culture.

Figure 1. The Developmental Niche Theory



Note: Taken from (Harkness et al., 2007, p. 34S).

Moreover, Gauvain (1995) used developmental niche theory for organizing cognitive developmental research in relation to the culture. Her three subsystems are 1) activity goals and

values of the culture; 2) material and symbolic tools for satisfying cultural goals and values; and 3) higher-level structures that instantiate cultural goals and values in everyday practice. According to Gauvain (1995), human behavior and thinking occur with a meaningful combination of material, social, and individual resources that are organized to achieve a particular goal, and both opportunities and constraints on human action are provided by the culture. For instance, Brazilian street children showed better arithmetic skills when they sold candies to make money than in more formal situations, or Puluwats, which is an islander community in Micronesia created a goal-oriented navigational system. Although this system has inconsistencies, it was sufficient for them to find their way around the island.

The second subsystem explains that symbolic and material tools have been used by people to acquire mathematical skills throughout history such as abacuses, calculators, or computers. For example, the Hindu-Arabic numeral system replaced the Roman numeral system during the 14th century in Italy because Hindu-Arabic numerals are easy to learn and perform without elaborate equipment. Another example in Gauvain (1995) is that Chinese children made fewer counting errors than American children because numbers in Chinese are more standardized than in English.

The last subsystem focuses on formal and informal social interaction practices and active participation. According to Kendal (2012), "scaffolding by a teacher, parent, or some aspect of the learning environment can be implemented by altering the cognitive growth rate or by affecting the carrying capacity for the logistic cognitive growth" (p. 244). This also aligns with Vygotsky's zone of proximal development. Vygotsky (1978) defines the zone of proximal development as "it is the distance between the actual developmental level as determined by

independent problem solving and the level of potential development as determined through problem-solving under adult guidance or in collaboration with more capable peers" (p. 86). Moreover, According to Lave and Wenger (1991), situated learning occurs when an individual actively participates in the learning experience, and it stresses the importance of the interaction between the children and the constructed learning environment.

A child is at the center of the Niche theory, and subsystems are around them. The Niche theory pays attention to the biological differences of a child. According to Harkness (2007), a child has a particular set of inherited dispositions that comes from birth. The Niche theory emphasizes the importance of culture on child development. Super and Harkness (1986) provided a framework for investigating the impacts of cultural futures on child-rearing. They explored the customs, values, and cultural beliefs at a family level. The authors focused on a Kipsigis community in Kenya and provided particular examples of how cultural beliefs and values influence child development. It is seen that cultural beliefs and values are not distal influences in the developmental niche theory.

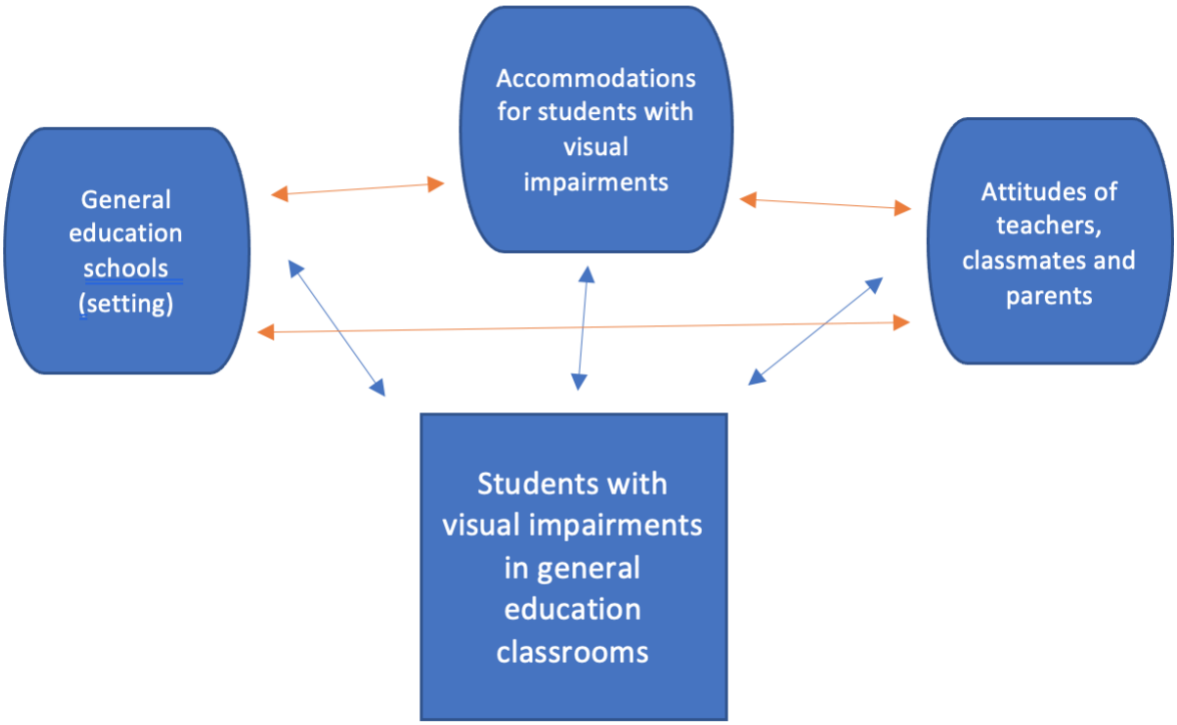
While developmental niche theory has examined cultural beliefs and values of children in Kenya, the developmental niche theory can also be applied to the analysis of children with disabilities including visual impairments. For instance, Harkness et al. (2007) used settings of daily life, customs of care, and the psychology of caretakers as three subsystems of the developmental niche theory. The authors provided particular examples of how parents' culturally constructed ideas can support or challenge the work of the occupational therapist. When examining the niches of persons with visual impairment, Fast (2018) used this theory to investigate accessibility to public transportation for travelers with visual impairments. Public bus

settings, learning strategies and accommodations for individuals with visual impairments, and attitudes and knowledge of public transportation workers are three subsystems examined in her work. Moreover, Chiu (2020) used niche theory to examine the science identity of students with visual impairments. Norms, people, and resources are parts of the Niche theory in science learning environments.

In the present study, the developmental niche theory is used to explore how people with visual impairments describe social and academic experiences in primary and secondary general education schools. The three-subsystem model created by Fast (2018) used to analyze the niche of persons with visual impairment, serves as the theoretical methodology used in this study to create the subsystems for further analysis. The subsystems in the current study are: 1) a school setting of educational placement 2) accommodations made for the student with a visual impairment and 3) attitudes of classmates, teachers, and parents regarding the student with a visual impairment.

The first subsystem of school setting includes the many components of general education classroom educational experiences of students with visual impairments. Included in the school subsystem are examinations of availability of the materials, appropriate technology, appropriate teacher training, assistive devices, and paraprofessionals. The second subsystem focuses on the accommodations to include students with visual impairments in schools. The third subsystem focuses on the attitudes of classmates, teachers, and parents about students with visual impairments.

Figure 2. Relationship among the subsystems



There is a reciprocal relationship between the subsystems and students with visual impairments. Each subsystem interacts with each other as well as the student with a visual impairment. For example, a school setting can have both a positive and negative impact on the accommodations available to the students which may be a direct or indirect correlation with attitudes of others including the teachers, classmates and parents.

Students with Visual Impairments

Congenital Visual Impairments and Adventitious Visual Impairments

Students with visual impairments are a heterogeneous group that represents a group of students that ranges from those with low vision to those who are totally blind, and they can be classified based on different characteristics such as congenital and adventitious visual impairments (Welsh and Tuttle, 1997). According to Welsh and Tuttle (1997), "The term congenital visual impairment refers to a condition of blindness or severe visual impairment that is present at birth or occurs at an age when the absence of vision probably will alter a person's conceptual development" (p. 60). Children who lose their vision before the age of three can be found under the definition of congenital visual impairment because children do not have any visual imagery or memory before age three.

Moreover, Warren (1994) stated that children with congenital blindness have difficulties in dealing with spatial concepts. Because children with congenital blindness depend on auditory and tactual sources, they may not develop certain abstract concepts as much as their peers do. This also can create functional difficulties for children with congenital blindness in the mobility and leisure activity areas. Their lack of sense of the concept of directionality creates mobility problems for them, so they can easily become lost if they don't have orientation and mobility (O&M) skills. O&M is a specialized training designed to facilitate the ability of individuals with visual impairments to perform independent travel skills (Crudden, Cmar, & McDonnall, 2017).

Furthermore, congenital blindness affects motor development. According to Fraiberg (1977), children with congenital blindness showed significant delays in crawling and walking alone across a room.

On the other hand, Welsh and Tuttle (1997) defined adventitious visual impairment as "Individuals who at one time were sighted but who have subsequently lost some, if not all, of their vision are described as having an adventitious visual impairment (p. 67). A vision could be gradually lost because of diseases like diabetic retinopathy, cataracts, and glaucoma, or people can lose their visions in a sudden way such as unexpected accidents. People with congenital blindness may experience traumatic loss and shock when they lose their vision. Other factors such as the degree of remaining vision, the stability of vision, personal characteristics, age of vision loss, and environmental factors also influence the experiences of people with visual impairments when they lose their sight.

Blindness and Low Vision

There are legal and educational definitions of blindness that can also be found in the literature. Legal blindness is defined as "central visual acuity of 20/200 or less in the better eye with best correction or a central visual acuity of more than 20/200 if there is a visual field defect in which the peripheral field is contracted to such an extent that the widest diameter of the visual field subtends an angular distance of no greater than 20 degrees" (Huebner, 2000, p. 59). Huebner (2000) also defined low vision as "central visual acuity of 20/70 to 20/200 in the better eye with correction or a visual field of 20 to 40 degrees or less in the better eye with correction" (p. 60). Definitions of legal blindness do not exactly show the ability to use vision in terms of a

person's visual functioning. Other factors like contrast sensitivity, motivation and cognitive ability of a person need to be considered.

On the other hand, Smith et al. (2016) also provided educational definitions of blindness. According to the authors, students who are blind use braille or auditory methods to receive instructions in the schools, and students with low vision use their vision as their primary sensory channel. Therefore, educational definitions are mostly based on the functional usage of the vision to receive instructions. It is important to know that students who are legally blind may read print, but students who are educationally blind are unable to read print. According to Huebner (2000), most states in the United States do not require a clinical definition of legal blindness to provide services. Students with visual impairments may receive specialized services if they are educationally blind or have low vision.

History of Educating Students with Visual Impairments

When we look at the history of students with visual impairments, the first attempts to develop systematic programs to educate children with visual impairments started in Europe. However, those attempts were not successful until the mid-18th century. The Institute for Blind Youths was established in Paris in 1784 by Valentine Haüy. Expectations for students with visual impairments were low in this early period, even though some of the students succeeded in educational activities (Hatlen, 2000).

The development of the Braille code was a significant milestone for educating students with visual impairments. Louis Braille, who became blind at an early age, developed braille code (Hatlen, 2000). The development of the Braille code was important because the education of

students with visual impairments could not be progressed without tactile reading and writing. However, different codes were also developed in time and created controversy between the associations. Finally, the Braille Authority of North America (BANA) became the authority in the United States and Canada (Hatlen, 2000) and created one unifying English code.

The first educational programs in the United States for students with visual impairments followed Valentine Haüy's residential school system. Residential programs were the first significant opportunities for children with disabilities to receive services especially for children with deafness and visual impairments. For example, the first school for students with visual impairments, the New England Asylum for the Blind (later Perkins School for the Blind) was founded by Samuel Gridley Howe in Boston in 1829. Then, the New York Institute for Special Education and Overbrook School for the Blind in Pennsylvania were founded respectively in 1831 and 1832. The first three schools for the blind were privately funded and supported schools. Later, the Ohio State School for the Blind was the first school that was founded with state funds in Columbus, Ohio in 1837. Then, other residential schools for the blind were established in following years (Hatlen, 2000).

One of the important milestones for the education of students with visual impairments in the United States was the establishment of the American Printing House for the Blind (APH) in1858 because students with visual impairments had braille books and other instructional materials through the agency of the APH. The APH was established as a result of an act passed by the General Assembly of Kentucky in 1858 to the growing need for books and educational aids for students who are blind. Then, the APH began raising funds from citizens and printed the first book in 1859. Then, the United States Congress passed The Act to Promote the education of

the Blind in 1879, so the congress provided appropriate funding for students who are blind for the first time as a result of this act. The APH produced textbooks in braille and instructional materials for the usage of the students who are blind. They also provide independent living products for individuals with visual impairments. (American Printing House for the Blind, n.d.).

Education of the students with disabilities including visual impairments gradually improved in the United States. According to the United States Department of Education (2010), public school programs in the United States served only one-fifth of the students with disabilities in 1970, and services were minimal and provided in segregated settings. Some children with disabilities were even excluded from the educational system. Before legislations in the mid-70s, children with disabilities may receive education from private educational programs or programs that are designed particularly for students with disabilities. However, parents of children with disabilities needed to pay the educational expenses of their children. For instance, Smith et al. (2016) stated that approximately half of the children who are classified as legally blind in the United States stayed in residential schools for the blind in 1963, and those children were provided some education, training, and daily living support by the residential schools for the blind.

Since that time, things have changed in the United States. According to the United States Department of Education (2018), only around 0.1% of students in the school-age population are classified as having visual impairments during the 2017-18 school year (ages 3–21). The statistics represent the number of students with visual impairments who have the right to special educational services.

Since the term visual impairment includes both students who are blind and students with low vision, there is a variation on the educational services needed for students with visual impairments. For example, many students with visual impairments have the ability to read print. According to the American Printing House for the Blind (2018), approximately 33% of students with visual impairments are visual readers, 8% are braille readers, and 12% are auditory readers. The rest of the students with visual impairments are pre-readers or non-readers. If we exclude pre-readers and non-readers, approximately 63% of students with visual impairments are visual readers, 15% are braille readers, and 22% are auditory readers by reading medium. Visual readers use large print and magnification devices to read.

Classroom placement of students with visual impairments does not automatically lead to placement at a specialized school for students who are blind. According to the American Printing House for the Blind (2018), 84.3% of children with visual impairments attend public schools, and 7.9% of children with visual impairments attend schools for the blind. The rest of the children attend rehabilitation programs and multiple disabilities programs. Therefore, the majority of students with visual impairments in the United States of America are attending schools with their sighted peers in general educational settings.

Main Legislations/Acts in the United States

A series of legislation made a revolution for the education of students with visual impairments in the last quarter of the 20th century. This revolution started with the Vocational Rehabilitation Act in 1973 and continued with the Education for All Handicapped Children Act (EAHCA) in 1975. Then, it followed with the Americans with Disabilities Act (ADA) in 1990 and the Individuals with Disabilities Education Act (IDEA) in 1990 and 1997. ADA was the

expanded version of Section 504, and IDEA was the expanded version of EAHCA. Then, IDEIA was authorized as an extended version of IDEA.

Section 504 and ADA

Vocational Rehabilitation Act is known as Section 504 which was passed in 1973 and provides basic civil rights protections for students, employees, and other individuals with disabilities (Hatlen, 2000). Section 504 prohibits discrimination against students with disabilities in federally funded programs, and schools should provide appropriate accommodations to students with disabilities based on Section 504. Copenhaven (2007) stated that a student has to have a physical or mental impairment that substantially limits one or more major life activities to be eligible under Section 504. Examples of life activities are learning, walking, seeing, speaking, hearing, and breathing. Section 504 requires agencies to provide auxiliary aids to provide equal opportunity for students with disabilities. For instance, Brailled materials, audio recordings, and telecommunications devices are auxiliary services that are useful for students with visual impairments.

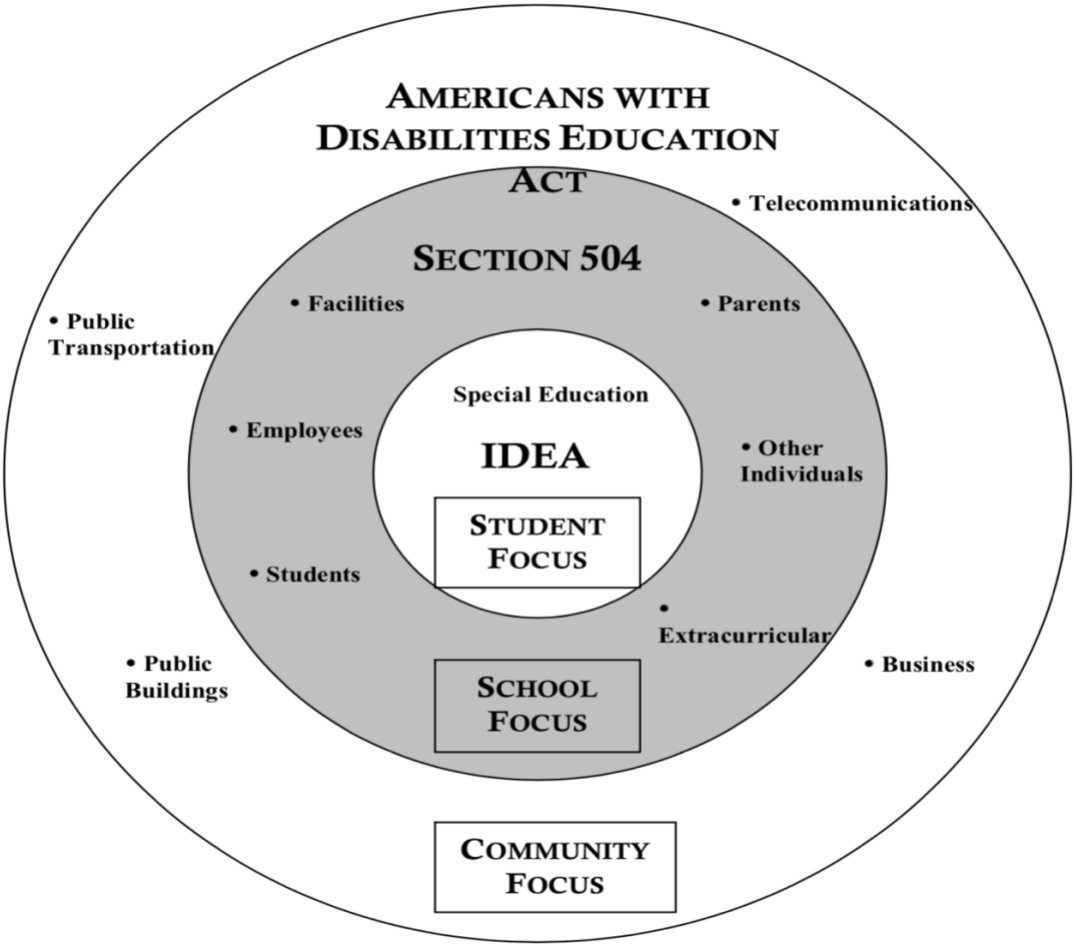
ADA is an expanded version of Section 504 and enacted in 1990. Smith et al. (2016) stated that the main difference between the two legislations is that while section 504 applies to programs and institutions that receive federal funds, ADA applies to everything except churches and private clubs. Therefore, every public accommodation and a governmental agency must comply with ADA even if they do not receive federal funds. If private schools do not receive federal funds, they do not have to comply with Section 504. However, those schools have to comply with ADA unless they are associated with a church. Willings (2019) stated that ADA requires public transportation to be accessible including traffic lights, ramps, sidewalks,

pedestrian crosswalks, restroom facilities, and parking lots for individuals with disabilities. It also requires buildings and facilities to be accessible including detectable warnings, braille, and large print signage, and accessible elevator controls for people with disabilities. In addition, sighted guides are provided for students with visual impairments as auxiliary aids.

Eligibility of Section 504 and ADA vs IDEA

People are eligible for services under IDEA if they have one of the following disabilities: autism, deaf-blindness, deafness, emotional disturbance, hearing impairment, intellectual disability, multiple disabilities, orthopedic impairment, other health impairment including an attention-deficit/hyperactivity disorder (ADHD), specific learning disability includes dyslexia, speech or language impairment, traumatic brain injury, visual impairment, and developmental delay. IDEA/IDEIA is for the school-age population (ages 3-21). On the other hand, a person must have a physical or mental impairment that significantly limits major life activities like breathing, walking, seeing, hearing, and learning to be eligible for Section 504 and ADA.

Figure 3. Relationship between IDEA, Section 504, and ADA



Note: Taken from (Copenhaver, 2007, p. 23).

Because of the broad definition under Section 504 and ADA, even though some students are not eligible for IDEA, they are eligible under Section 504 and ADA. For instance, a student with a severe peanut allergy resulted in a substantial limitation in breathing, so she would be eligible under Section 504. However, she would not be eligible under IDEA. Another example is a student with mobility impairment which resulted in difficulty walking, but she does not need

specialized instruction and special education; this student is not eligible for IDEA. However, she would be eligible under Section 504 due to a limitation in walking, and schools need to provide accommodations for eligible students (Smith et al., 2016). Figure 1.1 illustrates the relationship between IDEA, Section 504, and ADA. IDEA focuses on students who are eligible for special education. Section 504 focuses not only on students but also on other elements on the school level. ADA is very broad and focuses on components in a community.

The EAHCA, IDEA, and IDEIA

EAHCA is known as mainstreaming law and was enacted in 1975. According to EAHCA (1975), more than half of the children with disabilities did not receive appropriate educational services in the United States, and one million children with disabilities were completely excluded from the public school system before this act. Schools were not required to ensure that all children, regardless of their disability, receive a free and appropriate public education before EAHCA was enacted. (Vaughn et al., 2018). EAHCA requires an individualized education plan (IEP) for every student by a multidisciplinary team.

EAHCA was renamed as IDEA in 1990. Smith et al. (2016) stated that autism and traumatic brain injury (TBI) were added as new disability categories, and schools were required to develop individualized transition programs for students with disabilities when they turned 16 years old. Vaughn et al. (2018) stated that IDEA also established people-first language for referring to people with disabilities and extended special education services to include social work, assistive technology, and rehabilitation services. IDEA was reauthorized in 1997. Hatlen (2000) stated that IDEA added orientation and mobility as a related service for students with visual impairments and mandated consideration of assistive technology devices when developing

an IEP. This legislation required a general education teacher to be a member of the IEP team and students with disabilities to take part in statewide and districtwide assessments.

IDEIA is the most recent authorization of EAHCA and IDEA and was enacted in 2004. The purpose of the reauthorization was to make IDEIA consistent with the No Child Left Behind act. According to Vaughn et al. (2018), a zero-reject policy came with IDEIA because if school officials felt that they did not have adequate equipment to address the needs of students with disabilities, they would not accept those students in their schools before IDEIA enacted. Vaughn et al. (2018) stated that if students need related services like occupational therapy, physical therapy, and orientation and mobility instruction services, counseling, and transportation services, IDEIA requires schools to provide those services to students. Transition planning and programming that include further schooling, vocational training, and employment must begin for students with disabilities when they reach age 16. In addition, IDEIA requires states to include students with disabilities in assessment programs with appropriate accommodations. States must provide appropriate modifications and develop alternative assessments for students with disabilities if students with disabilities cannot participate in assessment programs. It also requires that students with disabilities cannot be discriminated against because of their language, culture, and background in comprehensive assessments.

IDEIA also allows schools to use interventions to decide if students are eligible for special education services (Vaughn, et al., 2018). IDEIA mandates that schools follow specific procedures when identifying and serving students with disabilities. Schools must keep all records and documents about students with disabilities as confidential and accessible to parents. Students

with disabilities and their parents must be involved in decisions, and if there is a conflict about services parents and schools can request an impartial hearing.

Inclusion

Placement Issue

All children served in Special Education must have a written, implemented, and reviewed Individualized Education Plan (IEP) that meets their needs. An IEP is one of the most significant components of IDEIA and is used to plan and guide the education of students with disabilities in education. IEPs are developed and implemented by a team whose members are experts in different disciplines as well as experts of the child with disabilities. General education teachers, special education teachers, parents and guardians of students with disabilities, representatives of the local education agencies are some members of IEP teams. In addition, other professionals from related services such as doctors, social workers, speech and language pathologists, psychologists, and occupational therapists may join IEP teams if needed (Vaughn et al., 2018). If a student is of legal age, the student with a disability also joins the IEP team.

Smith et al. (2016) stated that IEP teams decide whether students with disabilities are eligible for the services by doing a comprehensive assessment. IEPs must include meaningful goals and appropriate educational services for students with disabilities. If parents/guardians of students with disabilities do not agree on the decisions of IEP teams, they may choose mediation sessions to solve differences with the school. If there is still a conflict, both sides can request an impartial hearing.

The least restrictive environment must be accessed for classroom placement of a student with visual impairments. The Least restrictive environment is described as the environment that

allows students with disabilities to be educated with their non-disabled peers as much as possible. This includes general education classrooms but can also include specialized schools or hospitals if the IEP team deems this setting is the most appropriate for the individual students (Smith et al., 2016). Only if the needs of a student with a disability cannot be met in general education classrooms, may the student be placed in special classes, special schools, or resource rooms based on the needs of the students. Therefore, special classes or special schools may be the least restrictive environment for some students with disabilities based on their individual needs.

The least restrictive environment also supports inclusive practices. IEPs of students with disabilities determine the amount of time they spend in general education classrooms. The least restrictive environment is addressed at each IEP meeting. While some students with disabilities benefit from full-time inclusion, some others spend limited time in general education classrooms. This depends on the individualized needs of the child that the IEP is addressing. Sometimes a least restrictive environment for one child can be a most restrictive for others.

According to Vaughn et al. (2018), there are six continua of placement options from most inclusive to least inclusive. The first placement is that students with disabilities are placed full-time in general education classrooms. General education teachers consult with specialists if needed and support students with disabilities in the classroom. The second placement is that students with disabilities still stay in general education classrooms the entire school day, but general education teachers and special education teachers co-plan and co-teach for part of the school day and provide support to the students.

The next placement is part-time placement in a special education classroom. In this placement, students with disabilities are placed in general education classrooms for part of the school day. However, they are placed in resource rooms for the rest of the school time if available. A resource room is where students with disabilities spend some time to get academic or other assistance from special education teachers, therapists, and other professionals, but they are educated in the same setting with their peers without disabilities the rest of the time outside of the resource room (Dev & Haynes, 2015). Students with disabilities, including visual impairments, who are placed in a resource room have an opportunity to study in small groups with special education teachers and other specialists. These teachers and specialists help the students to improve their areas of weaknesses in resource rooms. According to Vaughn et al. (2018), reading, writing, and math are the most common academic areas that students with disabilities receive in the resource rooms. The findings of Kart (2017) support the findings of Vaughn et al. (2018). Kart (2017) conducted a national survey with resource room teachers of students with visual impairments in the USA and found that reading, writing, and math subjects were received three times more than science by the students with visual impairments in the resource room.

If a resource room option is not available for students with disabilities in general education schools due to lack of special education teachers or lack of space, itinerant special education teachers can help to fulfill the needs of students with disabilities. Itinerant special education teachers visit general education schools and communities to offer advice, resources, and support to students with special needs, their teachers, and their parents. For instance, Dinnebeil et al. (2006) stated that itinerant early childhood special education teachers in Ohio

typically visit students with disabilities for approximately an hour once a week. According to Dinnebeil et al. (2006), there are two major types of itinerant services: direct and consultative. In the direct model, an itinerant special education teacher works directly one on one with a student with disabilities in her general education classroom or a separate room on IEP objectives. On the other hand, in the consultative model, an itinerant special education teacher provides consultation and support to a student with disabilities' general education teacher or parents.

If the needs of students with disabilities cannot be met in part-time placement in general education schools, they may be placed in a full-time special education classroom in a general education school. In this placement, students with disabilities are educated in special education classrooms most of the school day, but they might spend time with students without disabilities only during non-academic periods such as lunch or in elective classes such as physical education, music, art, and vocational education. If students with disabilities perform well academically and socially in special education classrooms, they may be placed part-time in general education classrooms.

In the next placement, students with disabilities are placed in special schools which are only for students with disabilities. Some needs of students with disabilities may be severe and complex and cannot be fulfilled in general education classrooms. For that reason, they can be placed in special schools. According to Vaughn et al. (2018), the number of enrollments in special schools usually less than in general education schools, so more individual attention, and technical services can be provided in special education schools. However, they have limited contact to interact with students without disabilities during the school day.

The last type of placement is a residential school, treatment center, or homebound instruction. Some students with disabilities' health and physical conditions prevent them from joining regular school activities, so they may receive instructions at home. The homebound placement could be long-term or short-term. Some students with disabilities may have surgeries and temporarily need instructions at home. In that situation, a homebound teacher visits the students and provides direct instruction at home.

History of Inclusion

One of the most significant components of the IDEA was the least restrictive environment which means students with disabilities are educated with students without disabilities as much as possible. Therefore, at the beginning of the last quarter of the 20th century, more students have been included in public schools. For example, about half of the children who are classified as legally blind in the United States lived in residential schools for the blind in 1963 (Smith et al., 2016). According to Smith et al. (2016), students with disabilities began to integrate into general education classrooms in the 1970s, but they were mainstreamed in music, physical, and non-academic classes. However, students with disabilities were assumed to have belonged in general education classrooms since the mid-1980s. This shows that the education of students with disabilities first gradually shifted from segregation to mainstreaming, then the tendency changed from mainstreaming to inclusion.

According to the American Printing House for the Blind (2018), 84.3% (53551) of children with visual impairments attend public schools, and 7.9% (4994) of children with visual impairments attend schools for the blind. American Printing House for the Blind (2015) also reports that 83% (51271) of children with visual impairments attend public schools, and 8.4%

(5196) of children with visual impairments attend schools for the blind. Those statistics show that the number and percentage of students with visual impairments in public schools have still increased from 2015 to 2018.

Huston (2007) explains the difference between mainstreaming and inclusion. She stated that mainstreaming is when students with disabilities spend a portion of their school day in the general education program and a portion in a separate special education program. On the other hand, inclusion begins in general education settings, and students' academic performances are not the concern of inclusion but are only concerned with students' benefits of being in the general education class. In addition, full inclusion means that students with disabilities will be in a general education classroom full time regardless of their disabilities' condition and severity.

Not only legislations in the United States promoted inclusion, but also some other statements such as Salamanca Statement also encouraged inclusion for students with disabilities. Salamanca Conference was held in Spain in 1994, and it is a significant international declaration that focuses on inclusive education for students with special needs. According to the Salamanca Statement (1994), "regular schools with this inclusive orientation are the most effective means of combating discriminatory attitudes, creating welcoming communities, building an inclusive society and achieving education for all; moreover, they provide effective education to the majority of children and improve the efficiency and ultimately the cost-effectiveness of the entire education system." (p. ix).

Research Surrounding Inclusion

Inclusion has several advantages. Smith et al. (2016) stated that reduction of stigma, opportunities for social interactions with students without disabilities, and higher academic

expectations are the main advantages of inclusion for students with disabilities. On the other hand, there are professionals and parents who did not support inclusion. According to Smith et al. (2016), some parents are concerned that their children with disabilities might be bullied by students without disabilities, or they might get less attention in a general classroom. In addition, some general education teachers may feel unready to teach students with disabilities or collaborate with special education teachers.

There is research conducted with general education teachers who have a student or students with visual impairments in their classrooms. For instance, Mushoriwa (2001) surveyed 400 primary school teachers towards the inclusion of students with visual impairments in their classes in Zimbabwe. The majority of the participants had a negative attitude towards inclusion and believed special schools were best for them. It was difficult to include students with visual impairments in general education classrooms due to large classes and lack of resources, aides, equipment, and support staff.

On the other hand, Ravenscroft, Davis, Bilgin, and Wazni (2019) conducted questionnaires with 253 elementary school teachers in Turkey. The majority of the participants had positive attitudes toward the inclusion of students with visual impairments in their classrooms. Slightly more than two-thirds of the participants believed inclusion increased the student's circle of friends. Lastly, the authors found that teachers' initial and in-service training led to a more positive attitude towards inclusion.

Furthermore, Kart and Kart (2021) conducted a literature review to understand the outcomes of inclusion on students without disabilities in general education classrooms. According to the study, although inclusion had mostly positive and neutral effects on students

without disabilities in the lower grades, it had neutral and negative effects in later grades in terms of academic achievement. On the other hand, inclusion had mostly positive effects on students without disabilities in terms of social outcomes. Reduction of fear, hostility, prejudice, and discrimination as well as an increase of tolerance, acceptance, and understanding were the major social effects of inclusion on students without disabilities.

In addition, the Expanded Core Curriculum (ECC) should be taught to students with visual impairments to succeed in school, the community, and the workplace (Hatlen, 1996). According to Sapp and Hatlen (2010), the ECC consists of the following nine components of instruction: compensatory or access skills, orientation and mobility (O&M) skills and concepts, social interaction skills, independent living skills, recreational and leisure skills, career education, use of assistive technology, sensory efficiency skills, and self-determination skills. Teachers of students with visual impairments and O&M specialists also stressed the importance of instruction of the ECC to students with visual impairments to have a successful life (Sapp & Hatlen, 2007).

Experiences of Students with Visual Impairments in General Education Classrooms

Although there is much research about the experience of students with disabilities, there is a lack of research about the experiences of students with visual impairments in general education classrooms in the literature. For example, Miyauchi and Paul (2020) used narrative meta-analysis to investigate the experiences of students with visual impairments in general education classrooms. Accessibility, social interactions, and physical surroundings of schools are the main barriers in the meta-analysis. Positive school climate, supportive teachers who have

high expectations from students with visual impairments, positive attributes of the students such as assertiveness and autonomy are the main factors of successful inclusion.

Miyauchi (2020) conducted a systematic review to investigate and understand the perceptions of general education teachers and challenges to access academic subjects of students with visual impairments in general education classrooms. The authors found that students with visual impairments were excluded from participation in classroom activities. According to the authors, attitudes of general education teachers toward inclusion were mixed and depended on teachers, students, and environmental-related factors. The unreadiness of teachers is one of the major factors that was reported by general education teachers. In addition, physical education, science, and mathematics were the most discussed subjects in the study.

Positive Academic and Social Experiences of Students with Visual Impairments

Chang and Schaller (2002) conducted multiple semi-structured in-depth interviews with 12 students with visual impairments to understand how the support was provided by teachers in residential and general education schools in the United States. Several students with visual impairments had a close relationship with their general education and resource room teachers. Their relationships were similar to mother-child relationships, and teachers listened to the students and cared for them. Moreover, teachers had high expectations from their students. Most teachers in blind schools and general education schools believed students with visual impairments were as intellectually capable as students with visual impairments and encouraged them to succeed in schools. It was reported that tactile cues, active learning, cooperative learning groups, the provision of braille materials, and assistive technology were the main instructional

strategies used by the teachers. Therefore, many students' social and academic experiences were mostly positive. Most of the teachers created a safe and inclusive classroom environment for students with visual impairments. However, four of the students reported that they did not get adequate support from their teachers.

George and Duquette (2006) investigated the psychosocial experiences of an 11-year-old sixth-grade student with low vision in Canada. The authors conducted interviews with the student, his teachers, and his mother and completed classroom observations. The student was accepted and treated equally by their teacher and classmates except some of the physical education activities. Personal characteristics of him and support from teachers about his needs played an important role in his successful inclusion in a general education classroom.

Opie, Southcott, and Deppeler (2017) investigated the experiences of a senior secondary school student with visual impairments in Australia. He encountered challenges pertaining to teaching, technology, administrative inflexibility, and restricted social engagement. For instance, he used assistive technology and giant textbooks, so he had to sit alone by himself in the classroom. His ability to socialize with other students in the classroom was restricted due to large texts and technology. Although he felt isolated in the classroom, he was not alone in extracurricular activities such as choir, debate, and drama groups. Even though he encountered barriers in school, he was academically successful. He had a couple of close friends and did not face social rejection and bullying. His parents were supportive, and the school had high expectations from him. He is a self-confident, loud person, so personal attributes also played a role in his success. Furthermore, Hess (2010) surveyed 63 students with visual impairments (12 to 19 years old) in general education classrooms and 200 teachers about the school climate and

attitudes toward inclusion in Israel. According to the study, students with visual impairments felt less stigma, when the school climate and attitudes were positive.

In addition, supportive teachers (Chang & Schaller, 2002; George & Duquette, 2006; Miyauchi & Paul, 2020) and parents (Opie, Southcott & Deppeler, 2017), high expectations from students (Chang & Schaller, 2002; Opie, Southcott & Deppeler, 2017), personal attributes of students (George & Duquette, 2006; Opie, Southcott & Deppeler, 2017; Miyauchi & Paul, 2020), extracurricular activities (Opie, Southcott & Deppeler, 2017), safe and inclusive classroom environment (Chang and Schaller, 2002; Miyauchi & Paul, 2020) and positive school climate and attitudes (Hess, 2010) led to positive social and academic experiences of students with visual impairments in general education classrooms.

Negative Social Experiences of Students with Visual Impairments

Bullying is one of the most common negative social experiences for students with visual impairments especially in general education classrooms (Austin, 2018; Haegele and Zhu, 2017; Brydges & Mkandawire, 2017; Rosenblum, 2000; Worth, 2013). According to Nansel et al. (2001), "Bullying is a specific type of aggression in which (1) the behavior is intended to harm or disturb, (2) the behavior occurs repeatedly over time, and (3) there is an imbalance of power, with a more powerful person or group attacking a less powerful one" (p. 2094). Bullying behavior could be verbal, physical, or psychological. Name-calling and threat are examples of verbal bullying, and rumors and exclusion are examples of psychological bullying.

According to the National Center for Educational Statistics (2016), 42% of the bullying occurred in a hallway or stairwell at schools, and 34% of the bullying occurred inside the

classrooms. People who have been bullied reported that physical appearance, race or ethnicity, religion, gender, sexual orientation, and disability are reasons for the bullying. Espelage et al. (2015) stated that students with disabilities can be at a higher risk of bullying victims in comparison to the students without disabilities.

Brydges and Mkandawire (2017) conducted in-depth interviews with 17 students with visual impairments (12-15 years old) in general education schools in Nigeria. Most of the students attended Special Education schools before attending general education schools. According to Brydges and Mkandawire (2017), bullying in the classrooms and playgrounds is the major negative social experience for students with visual impairments in general education schools. One of the students with visual impairments reported that other students hid her chairs in the classroom. She also mentioned that when her writing materials fell on the ground, some students kicked them away.

Furthermore, Rosenblum (2000) conducted interviews with 10 adolescents with visual impairments (13-17 years old) and their best friends to investigate their perceptions in the United States. Six of the students with visual impairments had low vision, and four of them had blindness. Bullying was one of the major negative social experiences in the study as well, and almost all participants were teased due to their visual impairments. One of the students with visual impairments was involved in a fight because of bullying and beaten another student. The student reported that he had never been bullied again after this incident. Haegele and Zhu (2017) conducted semi-structured interviews with 16 adults with visual impairments to understand their experiences in integrated physical education in the United States and Canada. Bullying and

negative peer interactions are some of the negative experiences of students with visual impairments in integrated physical education classrooms.

Moreover, Worth (2013) conducted interviews with 28 young people with visual impairments (16-25 years old) to compare sociality in mainstream and special school spaces in England. Bullying again was the main negative social experience for students with visual impairments in mainstream schools. Students with visual impairments did not get adequate help from general education teachers to prevent bullying even though physical bullying occurred. Lastly, Austin (2018) stated that she also had similar experiences with other students with visual impairments as a person who grew up with Albinism and Nystagmus. Other children called her Albino and asked her why her eyes were moving. She reported that those comments affect her emotionally, so she always cried and walked away.

Lack of socialization is the other significant negative social experience for students with visual impairments (Austin, 2018; Conroy, 2008; Haegele and Zhu, 2017; Haegele, 2019; Jessup et al., 2018; Kim & Kim, 2015; Rosenblum, 2000; Thurston, 2014; Worth, 2013). According to the literature, even though students with visual impairments were usually physically included in general education classrooms, inclusion was not effectively performed for students with visual impairments. For example, Jessup et al. (2018) conducted a survey with 12 high school students with visual impairments in Australia. Students with visual impairments felt less accepted at mainstream high schools. Furthermore, students with additional disabilities with visual impairments felt lonelier than students only have visual impairments in mainstream high schools.

Moreover, Rosenblum (2000) stated that one of the students with low vision tried to hide her visual impairment to be accepted by their peers. Students with visual impairments also had

difficulties developing friendships with other students because some students treated them like they had a disease. In addition, Kim and Kim (2015) surveyed freshman college students with visual impairments in Korea to understand their transition from high school to college. The students felt dissatisfied with the transition education and services that they receive in high school. They stressed the importance of social integration and assertiveness training in high school to cope with stress and depression in colleges.

Even though using paraprofessionals has academically positive effects on students with visual impairments, it has negative effects on educational and social independence (Conroy, 2008; Worth, 2013). Paraprofessionals assist students with disabilities in general education classrooms and remain with students with disabilities during school time (Idol, 2006). Paraprofessional support has been growing and spreading for students with disabilities (French, 2003; Forster & Holbrook, 2005). When students with visual impairments get support from a paraprofessional, they usually sit together back or side of the classroom that creates a physical separation between the students with visual impairments and other students in the classroom, also with a general education teacher because other students or a general education teacher talk directly with the paraprofessional instead of the students with visual impairments. In other words, using a paraprofessional limit the interaction of students with visual impairments with their classmates and a general education teacher. This may create a social exclusion for students with visual impairments.

Thurston (2014) examined how two students with visual impairments with albinism experienced inclusion and support in high schools in the United Kingdom. The students felt different from their peers because of their skin and hair colors. Being visible due to their physical

attributes (color of skin) was challenging for the students because they wanted to be blended in and not to be visible, in the school. Low vision aids such as magnifiers also made them visible. Although those aids improved their vision, they found them emotionally challenging. Teachers also insisted on students using low vision equipment, and this created tension between the students and teachers. Students felt that teachers patronized them and knew what the best was for them. In addition, Austin (2018) reported that as a person with albinism and low vision felt embarrassed, ashamed and tried to deny her disability. She often did not share her visual challenges with their friends and refused to get help when it was offered.

Haegele and Zhu (2017) found that all students with visual impairments in the study were excluded from some physical education activities. The students were asked to participate in different activities from their sighted peers by their physical education teachers, or they did not choose to attend activities because they were chosen last for team activities. Those kinds of experiences created frustration and inadequacy on students with visual impairments and negatively affected their perceptions toward physical education and their willingness to participate in activities. Moreover, Haegele (2019) conducted one on one interviews with an adult with visual impairments who is currently a teacher in a school for the blind in the United States. The findings of the study were consistent with the findings of Haegele and Zhu (2017). According to Haegele (2019), the participant had challenging social interactions with his classmates and felt uncomfortable participating in activities in physical education classrooms.

On the other hand, students with visual impairments were accepted by other students in a specialized school for the blind (Hatlen, 2004; Worth, 2013). For instance, According to Worth (2013), students with visual impairments had good relationships with their classmates in a

specialized school for the blind because they shared the same impairment. However, they were judged and patronized by their caretakers in dormitories. Students with visual impairments felt that they had limited freedom because of the safety rules in a residential school for the blind. Lastly, Hatlen (2004) also stated that when students with visual impairments spend some time in a specialized school for the blind, they will acquire self-confidence, self-determination, and social interaction skills that help them to adapt to society.

Negative Academic Experiences of Students with Visual Impairments

Lack of teacher training and experience is the most common negative academic experience for students with visual impairments (Brydges & Mkandawire, 2017; Lamichhane, 2013; Lieberman & Houston-Wilson, 1999; McCarthy & Shevlin, 2017; Opie, 2018; Wall, 2002). General education teachers are a significant component of the public school system, but their lack of experience and training creates challenges for students with visual impairments in general education classrooms. General education teachers usually asked other students in the classroom to assist students with visual impairments, but this was not working effectively due to academic competitiveness among the students in Nigerian schools (Brydges & Mkandawire, 2017). Therefore, the other students in the classroom sometimes refused to dictate notes and explain difficult concepts to students with visual impairments.

According to Brydges and Mkandawire (2017), students with visual impairments had difficulties in Math lessons because of the specialized vocabulary and system, so they needed additional lessons and well-trained teachers for Math lessons. McCarthy and Shevlin (2017) also found similar results to Brydges and Mkandawire (2017). McCarthy and Shevlin (2017)

conducted multiple interviews with people with visual impairments to examine their educational experiences in the Republic of Ireland. They found that accessing the Math curriculum was specifically difficult for students with visual impairments because most teachers in general education schools did not have adequate knowledge of braille and braille math notation.

Most of the physical education teachers did not feel that they had adequate professional preparation to include students with visual impairments in physical education classrooms (Lieberman & Houston-Wilson, 1999). They reported that they had limited information about blindness. According to Lieberman and Houston-Wilson (1999), physical education teachers watched a video, a short lecture, and participated in a goalball game in the preservice physical teacher education. This limited amount of information was not sufficient for physical education teachers to include students with visual impairments. Lieberman, Houston-Wilson, and Kozub (2002) also surveyed 148 physical education teachers who had students with visual impairments in their classrooms in the United States. It was reported by the participants that lack of professional preparation, lack of appropriate equipment, lack of adequate programming, and lack of time were the main barriers to include students with visual impairments in physical education classrooms.

Opie (2018) conducted interviews with seven students with visual impairments to understand their experiences in general education schools in Australia. She stated that schools provided equipment, but teachers did not have the expertise to use that equipment and assist students with visual impairments. Students with visual impairments did not have equipment training and support, and general education teachers and aides had little knowledge of that technological equipment. General education teachers had no training about the technological

equipment, so students with visual impairments reported that the teachers tried equipment out on the students. Thus, they explored the equipment themselves by using it. In addition, Lamichhane (2013) found that general education teachers did not know appropriate teaching techniques for students with visual impairments in general education schools in Nepal.

Opie, Deppeler, and Southcott (2017) conducted interviews with seven students with visual impairments who receive education in general education schools and their parents, aides, and teachers in Australia. Lack of time, lack of availability of large print materials, assistive technology, and exclusion from science, mathematics, and physical education were the main difficulties that were reported by the participants. Teachers and aides did not have sufficient knowledge about assistive technology, so they could not help students with visual impairments.

deVerdier and Ek (2014) investigated the reading development, academic achievement, and support for six students with visual impairments in general education classrooms in Sweden. They found that students with additional disabilities had the most negative experiences in schools, and their parents were also more critical about the support given by the schools. Lack of adequate knowledge about braille and teaching methods was one of the challenges reported by the participants. In addition, several teachers reported that mathematics, physics, chemistry, and physical education were the most difficult subjects to make accessible for students with visual impairments.

Lack of supplementary instruction and lack of specialized instruction are other negative academic experiences for students with visual impairments (Brydges & Mkandawire, 2017). The students also needed specialized classroom technology such as JAWS, which is a speech program to participate in computer lessons. However, some schools in Nigeria did not have that

classroom technology due to the high cost. In addition, Lieberman and Houston-Wilson (1999) reported that students with visual impairments may need beeper balls and goals, bell balls, and larger and brighter equipment to participate in physical education lessons. However, this equipment could be costly in schools' budgets, so physical education teachers should speak about physical education needs in IEP meetings. Thus, school districts can provide that equipment. Some general education schools even did not provide Braille textbooks for students with visual impairments in Nepal (Lamichhane, 2013).

Furthermore, Koehler and Wild (2019) surveyed 51 teachers of students with visual impairments to understand the access and participation of students with visual impairments in the Science curriculum in the United States and Canada. They found that although students with visual impairments spent most of their time in general education classrooms, the participation rate of the students in laboratory, advanced level Science classes, and dissection and chemistry experiences was low. Moreover, lack of materials and equipment, and lack of teacher training were other barriers found in the study. For example, advanced laboratory equipment such as the Talking LabQuest© and SciVoice Lab Solutions© was not available for students with visual impairments. Even some assistive technology devices were available, untrained personnel who did not know how to use the assistive technology in the classroom was another problem.

Lack of time is another negative academic experience for students with visual impairments (Lieberman & Houston-Wilson, 1999; Opie, 2018; Wall, 2002). For example, Wall (2002) conducted surveys with general education teachers to understand the attitudes of general education teachers toward inclusion in Canada. General education teachers reported that they needed extra time to teach students with visual impairments in their classrooms, so lack of time

was one of their concerns. Wall (2002) also found that if teachers had a direct or indirect experience with students with low vision in the past, they had more positive attitudes toward inclusion than teachers who did not have experience with students with low vision in the past.

Lieberman and Houston-Wilson (1999) conducted surveys with more than 170 physical education teachers in the State of New York and highlighted the barriers that impede the students with visual impairments to attend physical education classes. One of the barriers was finding time for physical education in the schedule of students with visual impairments. The main reason for the limited time was that students with visual impairments had Braille, orientation and mobility (O&M) classes, and occupational therapy classes. Those classes filled the students' schedules, and there was no time for physical education classes. In other words, physical education was paid less attention than Braille and O&M classes by the administrators.

Furthermore, according to Opie (2018), students had difficulties seeing the board, so they did not have a chance to take notes in a limited time. Therefore, some students took a photo of the board, but when they went home, they had to write them down. This was also time-consuming because they had to write notes in five or six of the classes again, and sometimes it was impossible to write them at home due to limited time.

Community attitudes are another negative academic experience for students with visual impairments in different cultures (Conroy, 2007; Lamichhane, 2013). Lamichhane (2013) conducted a survey and interviews with people with disabilities to understand the barriers to education in Nepal. The author pointed out how culture and norms had negative perceptions toward a disability in Nepal, so this negatively affected parents of the children with disabilities including visual impairments. For instance, having a child with a disability was seen as a

punishment of the gods because of parents' sins based on religious teachings in the society. This view affected the parents, so they did not believe that their children could benefit from education. Thus, they kept their children away from school. Moreover, this attitude was more extreme for girls than boys with disabilities. Some parents not only kept their daughters with disabilities away from the school but also hid them entirely from the community.

Conroy (2007) found similar perspectives to Lamichhane (2013). She investigated the challenges and services for students for visual impairments who are coming from a Hmong background in the United States. Hmong people in this research were Southeast Asian refugee tribes that lived currently in the United States. According to some people of Hmong society, disabilities were caused by the wrongdoings of parents or wrong behaviors of pregnant women during pregnancy, so children with disabilities could be segregated from society.

Parental overprotection and teachers' concern about safety is the other negative academic experience for students with visual impairments especially in general education classrooms (Lieberman & Houston-Wilson, 1999; Wall, 2002). For instance, Wall (2002) found that general education teachers had safety concerns in the general education classrooms and reported that they always closely watched the students with visual impairments keep them away from danger and protect them from unexpected accidents.

Some physical education teachers also could see students with visual impairments as incapable of doing some activities in the lessons (Lieberman & Houston-Wilson, 1999). Having a student with visual impairments in the physical education classrooms may be a threat not only for students with visual impairments but also for other students in the classroom as well. According to Lieberman and Houston-Wilson (1999), some parents of students with visual

impairments also thought that their children were unable to participate in physical education activities due to safety reasons, so this view limited students' interaction with the environment and other students in the classroom.

Chapter Summary

The number of children with visual impairments in general education classrooms has been increasing in the United States. American Printing House for the Blind (2018) reported that about 85% of students with visual impairments attend public schools, and approximately 8% of students with visual impairments attend schools for the blind. The Americans with Disabilities Act (ADA) and the Individuals with Disabilities Education Act (IDEA) are the laws that increased the participation of students with disabilities including visual impairments in public schools. Especially the idea of the least restrictive environment as a part of the IDEA encouraged students with disabilities including students with visual impairments to be enrolled in general education classrooms.

Students with visual impairments had some positive social and academic experiences, but mostly had negative social and academic experiences in primary and secondary general education classrooms. Good relationships with general education and resource room teachers, feeling less stigma, being academically successful, and acceptance by a teacher and classmates are the main positive social and academic experiences of students with visual impairments in general education classrooms. Supportive teachers, high expectations from students, extracurricular activities, parental support, personal attributes of students, safe and inclusive classroom environment, and school climate and attitudes led to positive social and academic experiences of students with visual impairments in general education classrooms.

On the other hand, bullying and lack of inclusion are the most common negative social experiences that are found in the literature. Furthermore, lack of teacher training and experience, lack of supplementary and specialized instruction, lack of time, community attitudes, and parental overprotection and teachers' concern about safety are the most common negative academic experiences for students with visual impairments in primary and secondary general education classrooms.

In this present study, the developmental niche theory is used to investigate how people with visual impairments describe their social and academic experiences in primary and secondary general education schools. Three subsystems described in the present study are 1) a school setting of educational placement 2) accommodations made for the student with a visual impairment and 3) attitudes of classmates, teachers, and parents regarding the student with a visual impairment.

There is very little research that investigates the social and academic experiences of students with visual impairments in primary and secondary general education schools is scarce. In order to understand how students with visual impairments are included in general education classrooms, it is important to know about the social and academic experiences of students with visual impairments. This research examined how those experiences reflect the positive and negative social and academic experiences of students with visual impairments in general education classroom settings.

Chapter 3: Methodology

The purpose of this qualitative study is to investigate the social and academic experiences of individuals with visual impairments in primary and secondary general education schools. The research questions of the study are:

1. What are the positive social and academic experiences of students with visual impairments in general education classrooms? What factors lead the positive social and academic experiences in inclusive settings?
2. What are the negative social and academic experiences of students with visual impairments in general education classrooms?

This chapter outlines the procedures and methods that were used in this study. It is divided into four sections: methods, data collection, data analysis, and trustworthiness.

Methods

Qualitative Case Study

The qualitative case study method was chosen to answer the research questions. Bogdan and Biklen (2007) described the characteristics of qualitative research. According to the authors, qualitative data focus on words instead of numbers. Qualitative researchers are concerned with the process instead of outcomes or products, and the data is analyzed inductively by qualitative researchers. According to Creswell and Poth (2018), “Case study research is defined as a qualitative approach in which the investigator explores a real-life, contemporary bounded system (a case) or multiple bounded systems (cases) over time, through detailed, in-depth data collection involving multiple sources of information (e.g., observations, interviews, audiovisual material,

and documents and reports), and reports a case description and case themes" (P. 153). An individual, a community, or an event can be research topics in qualitative case studies.

In a multiple case study design, the researcher studies two or more cases (Yin, 2018). In the present study, I chose to use multiple case studies because I wanted to gather my data from multiple individuals with visual impairments. This is a multiple case study that involves seven different cases. I conducted interviews with seven individuals with visual impairments because it is important to conduct a multiple case study that will add perspective to the same topic and deepen the understanding of the experiences of students with visual impairments in general education schools.

Data Collection

Semi-Structured Interviews

DeMarrais (2004) defines an interview as "a process in which a researcher and participant engage in a conversation focused on questions related to a research study" (p. 55). According to Merriam and Tisdell (2016), interviews are necessary when we are interested in past events that are impossible to replicate, and they also stated that conducting interviews might be the only way to get data for some topics.

Merriam and Tisdell (2016) stated that there are three types of interviews: highly structured, semi-structured, and unstructured, and most of the interviews in qualitative research are semi-structured interviews. Hamilton and Corbett-Whittier (2013) stated that interviews provide rich data for a research study, and semi-structured interviews provide a greater depth of understanding. Hancock and Algozzine (2011) also stated that semi-structured interviews are

well fitted for case study research. According to Merriam and Tisdell (2016), there are five important characteristics of semi-structured interviews:

- Interview guide includes a mix of more and less structured interview questions
- All questions used flexibly
- Usually, specific data required from all respondents
- Largest part of interview guided by a list of questions or issues to be explored
- No predetermined wording or order (p. 110).

Question order is important, and interviewers should consider them carefully. Merriam and Tisdell (2016) stated that asking for neutral, descriptive information at the beginning of an interview is a good idea. For that reason, I started with the background and descriptive questions in the semi-structured interviews. I have created a list of interview questions and avoided asking multiple-choice, yes/no, and leading questions in it. Appendix A shows the complete list of interview questions.

However, it is never known what will happen during the conversations. According to Nespor (2018), "you can't map these things out beforehand: you have to co-construct them in the flow of conversation, and you can only do that by listening intensely, concentrating on what you're hearing – not worrying about your next question" (p. 11). Roulston et al. (2003) wrote, "Rather than listening, some students reported being engaged in analyzing the way the participants' experiences fit with their own research interests or thinking about the next question" (p. 661). Listening is an important aspect of interviewing, so I listened carefully to the interviewees and focused on the conversation. I was able to ask all the questions that I prepared

in the interviews. I did not only stick to my interview questions below during the interviews because the interviewees brought up some important points that were useful for the research.

Recruitment of Participants

People with visual impairments who received some part of their education in primary and secondary general education classrooms were the target participants for the study. Snowball sampling (Sedgwick, 2013) from personal and professional networks was used to identify, invite, and interview participants. Personal networks were established through previous research conducted during doctoral coursework. Professional networks were used through online social media professional platforms such as Teachers of the Blind and Visually Impaired/O&M Specialists Facebook page. Facebook recruitment post (see Appendix D) and Qualtrics link that had 13 questions (see Appendix B) were posted on the Facebook page to recruit participants.

A survey was created on Qualtrics that had 13 questions (see Appendix B) about participants' demographics. Second, an interview recruitment e-mail was created (see Appendix C) and attached link to the Qualtrics survey, as recruitment for this research. The personal network yielded only three individuals with people visual impairments. The posting on social media yielded an additional four participants. Once participants consented to the study, through the survey, contact was made regarding availability for interviews.

Participants

Seven people with visual impairments participated in this study. Their ages are between 27 and 40, and the average age is 32.4. Six of them are female, and one is male. One of them has associate's degree, and two of them have bachelor's degrees. Two of them have master's

degrees, one of them has EdS, and one of them has Ph.D. degrees. All of the participants have a congenital visual impairment. Three of them have oculocutaneous albinism, two of them have retinopathy of prematurity, and one of them has septo-optic dysplasia. Two of the participants have additional disabilities. Five of the participants (Caroline, Chelsea, Rebecca, Alice, and Morgan) read Braille, and two of the participants (Adam and Julia) do not read Braille. Similarly, five of the participants (Caroline, Chelsea, Rebecca, Alice, and Morgan) use a cane to travel, and two of the participants (Adam and Julia) do not use a cane to travel. Five of the participants received education k through 12 in general education classrooms. One of them had experience both in general education classrooms and a state school for the blind. Moreover, one of them had experience in a general education classroom and special education classroom in public schools.

Table 1. The demographic information of the participants

	Age	Highest Degree	Visual Impairment	Schools
Adam	36	EdS	Oculocutaneous Albinism	K through 5th 6th through 8th 9th through 12th
Caroline	29	Master's	Oculocutaneous Albinism	K through 5th 6th through 8th 9th through 12th
Chelsea	31	Associate's	Oculocutaneous Albinism	K through 3rd 3rd through 5th 6th grade 6th through 12th (Specialized state school for the blind) Career center (half day 11th and 12th grades)
Rebecca	35	Ph.D.	Retinopathy of Prematurity	K through 5th 6th through 8th 9th through 12th
Alice	27	Bachelor's	Retinopathy of Prematurity	1st through 4th 5th through 6th (Special Ed class) 7th through 8th (Special Ed class) 9th through 12th (Special Ed class)
Julia	40	Master's	Unknown/Undisclosed	K through 6th 7th through 8th 9th through 12th
Morgan	29	Bachelor's	Septo-optic Dysplasia	K through 3rd 4th grade 4th through 5th 6th through 8th 9th through 10th 10th through 12th

Semi-structured interviews were conducted with seven people with visual impairments who received some part of their education in primary and secondary general education classrooms. Two interviews were planned with each participant. The first interview focused on information about their experiences in general education schools, and the second interview was planned to do member checking with the participants. Both interviews were completed with the six participants.

All participants participated in the second interview, except for one female participant. Even after multiple attempts to make contact, no replies were received. Therefore, member-checking could not be completed with her. The first interviews with the participants lasted between 63 minutes to 111 minutes, and the total time of interviews with seven participants was more than 10 hours. The second interviews with the participants were approximately 30 minutes each.

Consent and Confidentiality

A consent script was part of the Qualtrics, in order to gain permission to participate in the study (see Appendix E), The participants did not have a chance to answer the survey questions on Qualtrics without consenting. Participants were informed that all their personal information would remain anonymous. Pseudonyms of the participants have been used to ensure the confidentiality of their identities, and all digital data was on a password-protected computer. Any data or analysis that was transcribed or printed was also kept secured in password-protected computers and only the investigators have access to these materials. Participants did not receive any incentive for participation in the interviews. Participants were also given the option to select their pseudonyms, and three of the participants chose their pseudonyms.

Positionality

I received my bachelor's degree in the area of elementary school education from Eskisehir Osmangazi University in Turkey, and I taught students in different elementary schools for four years. I taught students who have native languages other than Turkish. Although I had a couple of students with disabilities, I did not have any students with visual impairments in my classrooms when I taught. I was not familiar with the area of visual impairments before I started graduate school.

I received my master's degree in sensory impairments from the Ohio State University. My coursework focused on personnel preparation for teaching students with visual impairments in the United States as well as focusing on the modifications and accommodations needed to educate students with disabilities according to the standards and laws in the United States of America. Although I can define myself as an outsider, as an international doctoral student who does not have any visual impairments, I learned about the education of students with visual impairments across the US. My master's thesis focused on the views of teachers of students with visual impairments in the US regarding resource room practices for students with visual impairments. My doctoral training coursework also allowed me to participate in field work observations of educational practices for students with visual impairments and allowed me to conduct interviews with students with visual impairments, a general education teacher, and an itinerant teacher of visual impairments for class assignments throughout my Ph.D. program.

Data Analysis

Data collection and initial analysis of interviews took place between January 2022–July 2022. According to Bogdan and Biklen (2007), "Analysis involves working with the data, organizing them, breaking them into manageable units, coding them, synthesizing them, and searching for patterns" (p. 159). Merriam (2009) emphasized the importance of simultaneous data analyses with data collection, so data will be analyzed simultaneously with data collection. According to Bogdan and Biklen (2007), when researchers develop coding categories, first they search through their data for regularities and patterns. Then, they write down words and phrases to represent these patterns. I started analyzing data by creating appropriate codes and categories. The responses were examined for common themes and patterns and were compared to previous studies.

The common findings of the literature review for students with visual impairments presented in chapter 2 (Brydges & Mkandawire, 2017; Rosenblum, 2000; Worth, 2013), Miyauchi and Paul (2020), and Miyauchi (2020) were used as a starting point for the development of codes. First, transcripts were coded as academic and social. For example, one of the participants talked about her experiences in a math class. Therefore, this was coded as academic/math because the participant mentioned the difficulties of Math academically. One of the participants talked about her experiences about bullying, and therefore was assigned the code of social/bullying. However, some statements had more than one code. For example, one of the participants talked about having an aide in the classroom was academically positive but socially negative. Therefore, I coded it as academic/aide and social/aide. Settings also received codes. For example, if participants talked about elementary school experiences, the code elementary

school was noted. Similarly, if a participant commented about high school, it was coded as high school. Any demographic information was coded as demographics. For instance, if participants talked about their education and employment, they were coded as demographics/education or demographics/employment as a part of demographics information.

Zoom® software was used when interviewing my participants. This allowed for both an audio recording and transcripts of each interview. The audio recordings were used to help clean all transcripts as needed for any errors made in transcription by the Zoom application. In accordance with my IRB-approved study, transcripts were used for analysis upon obtaining all cleaned documentation. Recordings were immediately deleted. A field note form for the interview (see Appendix F) was used during data collection. Field notes were written during the interviews and reflections about the interviewees' reactions, gestures, and body language were noted. However, two of the participants did not provide access to their cameras, this data was not obtained from those participants.

Trustworthiness

Member Checking

Member checking was used to ensure the validity and accuracy of the findings. According to Shenton (2004), the accuracy of the transcripts and verification of the findings are significant characteristics of member checking. During the interviews, I asked for clarification and confirmation from the interviewee after she/he responded to every interview question. Before I asked the next question in an interview, I told each participant my understanding to make ensure the accuracy of my understanding. I asked for clarification if my understanding was not accurate. This member checking method is a common way to member check with individuals

with visual impairments (Wild, 2008). The second interview conducted with six of the participants served as additional member checking in order to provide opportunities for them to make comments on my findings. As stated above, this method could only be completed with six of the seven participants due to a lack of response to the inquiries to complete this step. Therefore, the participant's data was not member-checked beyond the methods used in the initial interview.

Chapter Summary

The qualitative case study method was used in the study, and the data was collected from multiple individuals with visual impairments. The target participants were people with visual impairments who received some part of their education in primary and secondary general education classrooms in the United States. I conducted interviews with people with visual impairments about past events that were impossible to replicate, so an interview was the only way to get data for the study. Therefore, semi-structured interviews were used to answer the research questions.

Seven individuals with visual impairments participated in this study. Six of them were females, and one of them was a male. All of the participants have a congenital visual impairment, and the average age of the participants was 32.4. I analyzed the data by creating appropriate codes and categories. The responses were examined for common themes and patterns and were compared to previous studies. The findings of the study were presented case by case in the Chapter 4.

Chapter 4: Results

The purpose of this qualitative study is to investigate the social and academic experiences of individuals with visual impairments in primary and secondary general education schools. By gathering data from students with visual impairments about their experiences in this qualitative study, we better understand the needs of the students and factors that affect the students' experiences in general education schools. The data was collected from seven adults with visual impairments reflecting on their time as students in a general education program. The following research questions guided the design of the study and the analysis of the data:

1) What are the positive social and academic experiences of students with visual impairments in general education classrooms? What factors lead the positive social and academic experiences in inclusive settings?

2) What are the negative social and academic experiences of students with visual impairments in general education classrooms?

This chapter reports the results of the study. The study has seven participants, and the findings are presented case by case. Each case study will provide information about the demographics of participants, social experiences of participants, academic experiences of participants, and overall experiences of participants.

Case Studies

Adam

Adam is 36 years old and has Oculocutaneous Albinism. His albinism is relatively stable and has regular visual degeneration. He has difficulties seeing distance, but he has no problem

with depth perception or color blindness. He has a short recovery time from bright light and therefore is not as photosensitive as others with the same eye condition. He has had a driver's license since he was 16 years old. He does not read Braille and prefers to use a print with magnification. He does not use a cane to travel.

Adam has an EDS degree in school psychology. He worked as a School Psychologist and Special Education Director in the past. He currently works in a non-profit company for adults and children with disabilities and veterans. Adam received his education in general education classrooms from kindergarten through high school in a state in the western partition of the United States. His elementary school was from kindergarten to 5th grade, middle school from 6th to 8th grade, and high school was from 9th grade to 12th grade.

Social Experiences

Adam was a popular kid in elementary school. For example, he was the vice president of the student association and started the school newspaper. He attended extracurricular activities such as school dance. In addition, he participated sports like basketball, dodgeball, foursquare, and baseball.

Adam was active in many extra-curricular events as a student in middle school, too. He was in the Student Council, which allowed him to be part of the process of planning parties, dances, and fundraisers. He also participated in talent fairs and intramural sports. He enjoyed the sports of football and swimming in high school.

Even though participation in the many activities described above led to a mostly positive social experience for Adam, he remembers hearing particular comments about his albinism on

two different occasions, and both incidents ended with a fistfight. Once was in a 5th-grade physical education class, and he described the incident in the fifth grade:

> *I particularly remember the one in fifth grade I remember the kid's name was named [Eddie], he definitely had a reputation as the bully on campus. And I remember he said something like you're blind as a bat or something like that. And for some reason, I was not having it that day I usually would consider myself to have very long feet, not blow up on people. But something happened to where I just was not willing to take anything. And I remember the two of us started chasing each other around and throwing punches at each other and, the bad thing is I remember when we finally got the teacher saw us and blew the whistle and took us up to the office. And I remember him telling the principal and the teachers and his parents like I didn't throw the first punch it was made. And I didn't say a word and they all just assumed that he was lying, and I just remember going. He's not lying, but I didn't say anything, so he got in trouble, and I didn't get in trouble, and I still remember like if somebody would have just asked me, I told them the truth, but I was the one that started that what I just, he said something, and I punched him.*

The second one was during 7th-grade recess, and he was bullied due to his appearance. He described the incident in the seventh grade:

> *I want to say [it] started over a girl, I think the two of us were talking to or trying to flirt with the same girl. And I think the kids said something about you can't ever because you've got white hair or something and, and then the same thing [as before,] start chasing each other around the playground area, saying silly stuff to each other and started throwing some punches.*

Both of these negative experiences resulted in physical altercations. The experiences can be classified as bullying due to the remarks made about Adam's condition.

Academic Experiences

When Adam reflected on his academic experiences, he noted several positive interactions with his teachers and peers. Adam had accommodations in elementary school rather than specially designed instructions. Accommodations provided for him allowed him to remain in the general education classroom while having the ability to choose preferential seating and access large print materials. He had extended time on assignments and tests as an accommodation but stated he never needed it. He stated that he mostly sat next to the overhead projector and took notes from the slide after the other students had completed their work. His teachers used a copy machine to enlarge papers.

While discussing assistive technology, Adam made note that there was availability of Closed Caption Televisions (CCTV) to use during his school career. As a side note, Adam stated that he first saw a CCTV when he took the Scholastic Aptitude Test (SAT) exam for college entrance, but he did not know how to use it.

As his elementary career continued, Adam stated that he did not receive any special education services until third grade. He was pulled out of the general education classroom for Extra Reading Intervention. According to Adam, his reading level was ahead of everyone in that group, and it was not special for him. He hated spelling because he had to study hard in this area in elementary school. On the other hand, he liked recess and Physical Education. Wearing dark sunglasses helped him participate in Physical education classes. Science and History also were his favorite classes in elementary school.

In middle school, similar accommodations were made. Although Adam did not have any assistive technology in middle school, he had some accommodations such as preferential seating, large print, and extended time, similarly to his elementary accommodations. He met with his school psychologist once a year in middle school. He did not pull out of the general education classroom in middle school. Adam liked History, and Science Technology Engineering and Mathematics (STEM) classes in middle school, and building things was his favorite activity in class.

However, by the time he reached high school, he began to have struggles, particularly in physical education. Physical Education classes in high school was his least favorite because the physical education teacher liked outside basketball. He described his emotions about the class:

> *I didn't mind the outside basketball, but [named town] gets to be incredibly hot and sunny, for most of the year so a person that doesn't do good in the sun. I hated that aspect because I love the sport. I just hated dying in the heat. So, I remember not really liking that particular PE class because he was really into outside basketball.*

Academically he enjoyed his physics and chemistry coursework in high school because of the experiments that occurred in class. On the other hand, he stated he hated choir class because he was not a good singer. He was pulled out from general education classes and placed in a special education resource classroom for approximately an hour a day. A special education teacher and intervention specialist in this classroom with five students with other disabilities. He used the time in the resource class in order to finish his homework, so he had free time at home. He also went to a special class to take state tests in order to use extended time and large print as an accommodation.

During high school, Adam commented that the content moved faster, and texts were smaller. Therefore, he needed bigger papers. He tried to use a dome magnifier, but he did not like it because it was not useful. He explains why he did not like to use it:

> *I remember hating it because it was the area that it would magnify was really small and I remember that it always had a lot of glares on it, and I could never get the light level to be what I wanted to be able to read the thing. So usually, it would be in a shadow, or it'd be too washed out from the light, so it just doesn't work for me.*

He also used enlarged notebooks, which are two feet by one-and-a-half-foot size, but found that they were not useful, either. It was difficult to sort and use pages on little, tiny desks. He also was embarrassed to use those pages in the classroom. He described his feelings when he used enlarged notebooks in the general education classroom:

> *I was incredibly embarrassed to utilize those pages in class. So usually what I would do is I would spend most of my class period doing what I could without enlarging, and then I would go and [en]large whatever I needed, and then usually in that resource room class, I would read whatever I needed to on those giant pieces of paper, and I think a fair amount of that was an embarrassment of utilizing that physically large of paper.*

Overall Experiences of Adam in General Education

When it was asked what he could have done things differently in his education life, he stated that he would have utilized more assistive technology than he did in college preparation, and he would have taken more advanced classes in high school. He explained it:

> *I think in high school, I was academically strong enough to where it didn't require a huge amount of effort for me to pass all my classes, and it only required minimal effort for me*

to pass my classes with very good grades, so school was generally easy for me. But I also didn't take the hardest classes I could in high school. So, I think if I had it to do over again, I would have pushed myself to take some slightly harder classes, but that also would have likely required me to rely a little bit more on assistive technology or realized that I had more of a need, than I did in more that college prep and advanced placement classes. I think I was able to compensate enough to not needed, but I think about it taken more of those honors level classes in high school, and I think I would have likely had a little bit higher.

Adam's overall experience was mostly positive both socially and academically, although he had some negative experiences. His outgoing personality and involvement in extra-curricular activities at school allowed him to socialize with his classmates. This may have also contributed to his ability to create good relationships with his teachers and ultimately academic success. While he experienced bullying in elementary and middle school, his social experiences were mainly positive.

Caroline

Caroline is 29 years old and has Oculocutaneous Albinism, and she has severe light sensitivity. Her right eye has nystagmus and is developing strabismus. She reads Braille, and she rarely uses a cane to travel. Her highest degree is a Master of Arts in Teaching and Learning, and she worked as an elementary school teacher for students with disabilities and multiple disabilities. She currently works as an itinerant TVI from PreK through 12th grade and an assistive technology specialist for students with visual impairments.

Caroline received her education in general education schools from kindergarten through high school in the rural area of a state in the Midwestern region of the United States. Her elementary school was from kindergarten to 5th grade, middle school from 6th to 8th grade, and high school was from 9th grade to 12th grade. All schools were in the same district.

Social Experiences

Caroline had a small set of friends in elementary school, and most people in that school were helpful. Caroline was involved in several extra-curricular activities that allowed her to socialize with others. Caroline started the band in fourth grade in elementary school and continued into middle school. Her favorite activity was the band in middle school, but she stopped being in the band because she could not read the music because of her nystagmus. It was difficult for her to sit six inches from a music stand, so he was getting a lot of headaches from reading music. She participated in the swimming team in high school, and as a side note, the coach of the team was an intervention specialist for students with multiple disabilities in the high school. She described how the swimming coach made accommodations for her:

> *He knew what was up with my vision before I even had to say anything. He saw me hold a paper one time and he's like you can't see that can you and I'm like, nope. So, from then we started making our time sheets and everything that we would use and like practices and needs bigger so I would be able to clearly see who was in what events or practice lane or whatever.*

Other students were curious about Caroline's appearance, so they were asking her questions not necessarily in a bullying type of way in elementary school, but she was bullied a couple of times by older male students due to her appearance in elementary school. The boys

were three grades above Caroline. Those boys grabbed her hair or tried to take off her glasses. Since she had not received instruction on self-advocacy skills, she did not defend herself. She described one of the incidents:

> *They were not nice about it like they just did not, they didn't want to understand why I looked different or why I had white hair at the age of seven. Mom had been working the third shift show she had been up all night she had just taken me to school, she was done with her day. She had just dropped me off and she had noticed that this kid that was bullying me at the time had come up and started to like to pull up my hair and like asking, why is your hair so white, and she heard it she was just leaving the playground at that time. And she turned around and said you leave her alone. She was born like that. And he never did anything again, our principal was standing right there and just let my mom, basically go down on him in the best way that she could.*

While Caroline was unable to defend herself, both her mother and the school administrator took care of the situation. This led to an end of the bullying by others.

Academic Experiences

The school district that Caroline continued from elementary school through high school did not have any students previously to Caroline that had a visual impairment. Therefore, they did not know the types of services available for students with visual impairments. In addition, they did not know how to determine the accommodations that she might need. Caroline did not need help in the first and second grades since she was intelligent, and the print size was large enough for her. She was evaluated by school psychologists. Then she got a comprehensive visual evaluation because her parents pushed for it. However, she did not have any Orientation and

Mobility (O&M) instruction because her parents did not know that O&M instruction existed. The main accommodations Caroline received were large print, preferential seating, and extended time, especially in Math lessons. While many of the teachers wrote on the whiteboard in the classroom, Caroline and her teachers worked together to find the best contrast by trial and error. She was pulled out from the general education classroom to the resource room for reading once or twice a week. Reading started to get challenging for her because the print was getting smaller the older she got. Caroline had a high reading level and enjoyed reading. Therefore, the library was her favorite place in elementary school.

While Caroline loved to read, her least favorite time in school was recess. She stated that this was because the playground was not accessible. The playground had changes in terrain and did not have a lot of signs. There were not many opportunities for Caroline to engage in play with her peers during recess time due to the lack of accessible equipment. Caroline was intelligent, hard-working, and highly valued, especially in group work projects. She was helpful for her peers, and she also stated that she had good relationships with most of her teachers in elementary school.

Her assistive technology usage was limited as well. In fourth grade, she started to use CCTV, but she did not want to use it because of two reasons. First, it was cumbersome and needed its own table. Second, utilizing the huge CCTV in the classroom made her look different, but she did not want to look different.

When she transitioned into middle school, the conditions got a little bit more difficult. She was traveling throughout the building for some classes, and the school was not accessible. It was built in the 1950s and had poor contrast on stairs, making it difficult for her to travel

throughout the school. She continued to have a better experience in the sixth grade because her teachers followed her Individualized Education Plan (IEP). She had a CCTV, but she did not want to use it because of the same reasons in elementary school. She did not want to look different especially when she was a teenager.

Caroline had an intervention specialist, but she communicated with her just once to make stairs accessible which had poor contrast. A Teacher of Students with Visual Impairment (TVI) was also assigned for Caroline, but she knew what she needed and accommodated herself before the TVI was assigned. She had a couple of magnifiers as an assistive device, but she did not like to use magnifiers. She preferred to hold things closer to her face.

Most teachers in middle school did not have any information about teaching a student with visual impairments. Although she had IEP in middle school, in the upper middle school grades it was not followed. For instance, she was supposed to have to get her work in large print, but she did not get it. Her teachers also did not always follow the IEP. Caroline stated that the History teacher in the middle school was the "worst" teacher, she has ever seen in her life. The teacher wanted to sit everybody alphabetically in the classroom, so Caroline's seat was back in the classroom. The teacher used an old-school overhead projector for the class, but he did not permit Caroline to use the slides after the other students were done. Because of the seating placement, she was not able to copy the notes. She had a conversation with the intervention specialist and the principal. Then, they had a conversation with the teacher, but the problem was not solved. Some students in the History class shared their notes with Caroline, and the notes were helpful for her.

Advocacy by her parents did not happen this time, like it had in elementary school with the bully. She stated that her parents could have filed a due process due to unfollowed IEP, but they also did not have any experience with a child with visual impairments. She thought that she should have taken this situation to the district level, but she did not have information about that, either. There was a lack of knowledge of due process as well as a lack of understanding of her legal rights as a person with a visual impairment.

In high school, Caroline still lacked many accommodations and modifications that may have helped her to be more successful academically. The main accommodations she received were large print and extended time in high school. However, some teachers did not allow her to take extended time because she was taking higher-level classes. Once again, Caroline relied on her friends because classes in high school depended heavily on vision such as Chemistry. Students did a lot of chemical changes and measured things in the Chemistry class. She had a great partner who helped her in the class, and the chemistry teacher was also willing to help her in the class.

It also appears Caroline was lacking instruction in the expanded core curriculum. She did not get O&M services until she was a junior in high school. She had a TVI, and he helped her get ready for college. He gave her tips and tricks to cross streets she described as terrifying both downtown and around a college.

Overall Experiences of Caroline in General Education

Caroline's overall experience was socially mostly positive, but academically mostly negative. Although she was a successful student, her IEP was not followed many times, and she did not receive the services that she needed in general education schools. It also appears that she

was lacking instruction in the expanded core curriculum. When it was asked what she could have done things differently in her education life, she stated that she would have asked her parents to go to a different school to find better services that way she could get services for herself. However, her parents did not have experience with a student with visual impairments.

Chelsea

Chelsea is 31 years old and has Oculocutaneous Albinism. She reads Braille and uses a cane to travel. Her highest degree is an associate's degree in Computer Networking Systems. She currently works as a production specialist in assistive technology and accessible educational material center. She went to a preschool with children with multiple disabilities at the age of three and four. When she was five years old, she started kindergarten.

Chelsea received her education in general education schools from kindergarten through high school in a state in the Midwestern region of the United States. She went to two different elementary schools. The first one was from kindergarten through half of the third grade. Then she moved to another elementary school from half of the third grade to the end of the fifth grade. Two months after she started middle school, she transferred to a specialized residential school for the blind. She continued at the specialized school for the blind from sixth grade through the end of her high school years. Her last two years of high school, she went to a career center with sighted peers for half of the school day.

Social Experiences

Chelsea experienced numerous interactions with her teachers and classmates in the first and second elementary school that were not always positive. She explained how she was bullied several times.

You know I was already a target to be picked on but then of course when I couldn't see things, or my vision made me do something that looked funny to my classmates that made it much worse.

She had a second-grade teacher who used abusive language toward her because she couldn't find her spot in her reading textbook. She explained:

*My second-grade teacher was what they would like to call old school, which was really just a mean old woman. She called me[R*******] in front of the class multiple times. She was a wild woman. So that's kind of the experience I had there.*

She struggled with the bullying, and it impacted her thoughts toward others.

In my first elementary school I mean I was not coming from like I said, a happy home or happy at school. You know the kid [name]. and I had talked about taking a violent act against school against our peers when we were nine.

Things did not change much for Chelsea in middle school. She continued to have negative interactions with her teachers and her classmates. She stated that it was the worst time of her life because she was pushed, tripped, and called names. She had things thrown at her because they knew she would not see who had done it. She stated that she planned suicide at that time and described it:

*I just kind of gave up at that point, I started refusing to do work I would rip up worksheets and tell teachers to go [F***] themselves. You know I took myself to the next level because I didn't care anymore. And I didn't care anymore because actually, I had an exit strategy in my life. I have used the internet at home to figure out which combination of my parents' medications was likely to make me die.*

While dealing with the bullying and the ramifications of it at home, she continued to struggle at school. Socially, her accommodations given to her to use in class caused additional social struggles. One series of events seemed to stand out to Chelsea. She had a giant CCTV which weighed around 50 pounds that she was instructed to move from class to class on a cart. She started to use it in the 3rd grade, but she did not like it. She had to teach herself how to use the device. She refused to use it or move it in the hallways. As a result, she received six detentions from six different teachers due to her arguments with them about using CCTV. According to Chelsea, her teachers would talk about the value of CCTV to convince her to use it. A local organization helped to purchase the equipment for her, and the teachers wanted to see that she used the CCTV. She told her mother how other students and teachers treated her. She felt that she did not belong. During her two-week detention time in middle school, she was involved in a fight due to bullying. She described the fight:

> *I had a student in the hallway pulled the cord, out of my CCTV. And it had been drilled into me that if anything happened to that expensive equipment, you'd be in huge trouble. So, this kid just came up and started pulling cords out and I saw, and I jumped on this kid, and I beat the absolute[s***] out of him. Like, beat his head into the ground. And nobody bothered me after that. It was the most peaceful two weeks. You know I don't condone violence but it's like no I guess I should have done that sooner. Because they finally left me alone.*

Chelsea stood up for herself against the bullies. While it was done in a violent nature, it resulted in less teasing and bullying. Outside of issues with her CCTV, Chelsea tried to join the band, but she couldn't read music. She was excluded from gym classes because she was told that

the gym was not for her. She was never invited to join social clubs by any of her peers. There were no positive extracurricular outlets for Chelsea to be part of in her middle school years.

It was shortly after the incidents with her teachers and the bullies about her CCTV that her mother arranged a tour of the specialized residential school for the blind. Chelsea said that she did not want to feel different anymore, and she wanted to blend in. Going to a school for the blind was a turning point in her life, especially for her social experiences. While she struggled socially to fit in with her peers at her previous middle school, at the specialized school, Chelsea was involved in many positive social experiences. She was on the yearbook staff and was class president. She was in swimming, track, and on a goalball team [specialized team sport for the blind]. She had a large social circle, was part of the community and felt a sense of belonging.

Chelsea and her best friend were roommates in the dorm. Chelsea describes that roommate as a sibling rather than a friend. Before the specialized school, there was no routine in her life. She described the specialized school as the first place she felt safe and at home. She stated that the teachers at the school were kind. One of the teachers was like a parent to her, so she still meets with her for social activities.

Chelsea went to a career center with peers who did not have disabilities for half of the school day in the last two years of her high school career. She had positive peer relationships and interactions with her classmates at the career center. She stated that it was good to spend time around students without visual impairments at the career center. She also stated that being able to have friends without visual impairments before college was a good test for her. She described her experiences with her classmates in the career center:

They could come and visit me at the blind school after school. And, you know, introduce them to my other friends and because all of those students were comfortable with me, they were comfortable with my other blind classmates too and, you know, we're able to just do things that other teenagers were doing because they had a car, you know, we would go off campus on foot, because obviously none of us were driving. But if I brought a friend with a car a couple of us could go virtually anywhere. And that kind of freedom. A lot of teenagers crave that you know we got a taste of, but having an able-bodied friend, really gave us a taste of it.

Academic Experiences

While Chelsea struggled in public schools with sighted peers, she also struggled in those same schools with her academics. During her elementary school years, she worked with a tutor once a week for one hour in a specialized gym class. Except for this class, she received her education in a general education classroom without pullout in her first elementary school. Chelsea's least favorite part of the school day was recess and reading in the first elementary school. However, she liked the library because the library was an escape place for her.

As for accommodations, she did not get any kind of magnifier until third grade, and nobody taught her how to use it. She taught herself how to use the magnifier. She stated that she could read the print if the print was big enough. She had preferential seating as an accommodation.

In the third grade, she worked one-on-one with a tutor for 40 minutes every couple of days. They worked on the classwork that she did not finish in the classroom. She had a TVI, but

she met her once every other month. However, the TVI should have seen her more often as was written in her IEP. In addition, she did not have an O&M specialist in this school.

Although she had some accommodations and services academically in the first elementary school, she did not receive most of the services in the second elementary school. She was not provided with an O&M specialist, TVI, adaptive gym classes, or large print materials in her second elementary school.

In her current place of employment, she has access to documentation regarding accommodations of persons in her state who need print accommodations. The school had stated that they had made written requests for large print books that never arrived at the school for Chelsea. She wanted to see if those requests were actually made. Therefore, she searched the documents for which she had access to see if there were any requests made on her behalf for large print textbooks.

> *They said every year, they always told my mom every year, that they'd ordered my textbooks in large print. Well, as an adult I worked for the agency that orders those textbooks, I actually went back and pulled my information from those years, and there were no requests under my name in any of those years. So, I am that petty I went looking for that information when I started working there because I had a point to prove they were supposed to do the right [thing], they [were supposed to] support [me]. Yes, but they never did.*

Chelsea's least favorite class was math because it was visual and hard, and she had low grades and almost failed in math in the second grade. Her favorite part of the school was learning to use computers. She performed well on tests, except for math, if the print was large enough and

she could read it. She stated that she was capable and intelligent to be successful in school if she had the proper accommodations.

Chelsea did not have O&M services and large print materials in the middle school. She was pulled out of the general education classroom and went to a resource room for reading intervention. The resource room teacher acted just as a reader and never provided large print materials. She stated that there were other students with other disabilities in the resource room, but they did not receive appropriate services, either.

Chelsea described her move from the public school to the specialized residential school for the blind as saving her life. She had positive academic experiences at the school for the blind. She had a braillewriter and started learning braille in the 9th grade. A CCTV, large print textbooks, Jaws, Zoom Text, and talking books were some examples of assistive technologies she had in the school for the blind. Chelsea had better support from teachers. She stated that one of the teachers taught her daily living skills much more than she expected. She also stated that the teachers at the school were kind and cared for her.

Chelsea went to a career center with students without disabilities for half of the school day in the last two years of high school. She was the first student with visual impairments to attend the career center, and she was specializing in computer networking systems; a very visual program. At the career center, she used Jaws, ZoomText, and a Braille notetaker to support her academic work. She had a disability support teacher whose specialty was cognitive disabilities at the center. Teachers at the career center were willing to make accommodations although they did not have knowledge about visual impairment. Teachers at the career center contacted teachers at

her specialized residential school for assistance in making accommodations to Chelsea's schoolwork as necessary to help her be successful in her studies.

Overall Experiences of Chelsea in General Education

Chelsea did not have positive social and academic experiences in general education classrooms. However, things changed for her at the specialized school for the blind. She believed that she could have had a better classroom experience, and then successfully integrated with her peers in general education classrooms if she had better support at her general education public schools she attended prior to the specialized school for the blind. She described it:

> *I should have had peers, or at least adult models, a social network, somebody else who was like me and who understood. I could have been better integrated with my peers and probably had a better social life and a better educational experience in the mainstream.*

She also believed that she had negative experiences in general education classrooms for a reason.

> *You know, my experiences, and how it's shaped me, and I have to think that I experienced what I did [so that] somebody else in the future didn't have to. You know I've been doing that [informing people] for 10 years. I know I've changed the educational outcomes and just the social outcomes for other disabled people.*

Her experiences in the career center and general education schools from kindergarten through 6th grade also differ. She had better experiences in the career center because she had proper support in the career center compared to the middle school and learned how to advocate for herself. She explained the difference:

> *You know they [career center] admitted to me they weren't sure what to do with me, but they were excited to learn along the way these were people who were receptive. You*

know they had some more experiences with disability. Whereas my time in middle school they made it very clear they didn't want me. They didn't want to accommodate, or they just wanted to teach how they wanted to teach. There are a little more open-minded and willing to do different things (career center).

Rebecca

Rebecca is 35 years old and has a Ph.D. degree in Spanish. She has a vision in one eye. She was born premature and was put on Oxygen. Therefore, Retinopathy prematurity (ROP) developed in her eyes. She reads Braille and uses a cane to travel. At the age of three, she started pre-school. The school was a magnet school, so she received education there with other children with visual impairments. Her parents had to decide to send her a general education school or a specialized residential state school for the blind. Her retina specialist recommended her parents to send her to a specialized residential school for the blind. On the other hand, her pediatric ophthalmologist and preschool teacher recommended her parents send her to a general education school. Finally, her parents decided to send her to a general education school. Rebecca received her education in from kindergarten through high school in the Midwest. Her elementary school was from kindergarten to 5th grade, middle school from 6th to 8th grade, and high school was from 9th grade to 12th grade.

Social Experiences

Rebecca had two or three close friends in elementary school. When reflecting back, she did not remember any incident of bullying in elementary school. She was independent and outgoing, so gym and lunch were her favorites because she had more opportunities to interact

with others during those times. As an extracurricular activity, she was in the Glee Club, which is the choir for her elementary school. She was in the swimming club and joined the middle school track team in the 8th-grade.

Although experiences in elementary school seemed positive, things changed in middle school. Rebecca was bullied by boys in middle school. They called her "blind girl", especially in the Math classes. The student with a learning disability in her class picked on her the most. It was a student with a disability bullying another student with a disability. Rebecca did not know how to defend herself at those times, so her mother called the principal to advocate for her daughter and work with the school to solve the problems. Rebecca went from have multiple friends to only a couple of close friends in middle school. What was once her favorite part of the day became her least; lunchtime. This time was difficult because she had to memorize the menu in order to buy a lunch through the lunch line.

She continued to run track in the spring and cross-country in the fall in high school. She was a helper when she was running and described her experiences with her:

> *I have one girl who would run at my pace, and I would run alongside her. Okay, so that was helpful so like, you know, she came across any, you know, you know, changes, big changes in terrain or, you know, she could be like, you know, hey we're turning up here, or we're going to keep going straight or Be careful, there's a big ditch you know stay over this way, you know, so she could kind of help me, you know, help kind of pick up the slack sometimes visually. But you know I didn't, I did not have died at that time I was so running by myself, but I would run alongside someone.*

While she had teammate helpers in high school track, she did not have any close friends in high school. She was lonely. However, she started hanging out with students in the band even though she was not in the band. Rebecca really struggled in high school to make friends and find acceptance, socially.

Academic Experiences

In kindergarten, an itinerant TVI came into the classroom and worked with Rebecca's general education teacher for her transition from preschool to kindergarten. The TVI worked more with her parents and teachers than Rebecca. At this time, she was completely mainstreamed and did receive any individualized instruction outside of the general education classroom in elementary school. The main accommodations during her early years in school were large print, preferential seating, dark line papers, and markers with high contrast. She was given a handheld magnifier if she did not have a large print material. She was satisfied with the accommodations. The only recommendation was that she would have had a whiteboard with markers instead of a chalkboard in elementary school. Thus, she could have seen the board better particularly in Math classes. Her least favorite class was Math, and she had a fear of being called up to a board in Math lessons. She was nervous and had lots of anxiety during those times.

Teachers assigned her a peer helper through elementary school. If she could not see anything written on the board, or if she needed help with instructions, the helper assisted her. Rebecca stated that she did not need much help in elementary school, so if she needed help, her helper was the first person she asked for help instead of the teachers. Thus, the helper became a close friend of hers in elementary school.

Rebecca was unable to receive the large print materials she needed a majority of the time. Unlike elementary school, she was dealing with more than one teacher, so they sometimes forgot to enlarge papers. For example, her social studies teachers shared notes with her, but many of the teachers in the school were not willing to share their notes with her. While many teachers were not willing to make accommodations, a gym teacher did. For instance, she used a tee instead of someone throwing a baseball for her to hit with a bat when the class was playing baseball. She also had brighter colors and bigger size volleyball balls.

Rebecca was concerned about her appearance and did not want to look different in middle school. For that reason, she refused to use assistive devices such as magnifiers. She preferred to get close to the paper instead of using magnifiers.

There were no specialized classes for Rebecca, so she was always in the general education classroom with other students without visual impairments in high school. She was seeing her itinerant TVI once a month to make sure that large print books were ordered for her. However, she did not receive most of the textbooks in large print, so she had to use handheld magnifiers that she did not want to use. She was struggling to read print with magnification because of the strain on her eyes. For that reason, her mother read schoolwork to her whenever possible. She was supposed to get extended time on tests as an accommodation, but she did not receive the accommodation. This was especially challenging in her math class.

> *Here was a lot of. I don't know, discrimination on the part of just teachers not understanding. I guess they don't understand well she doesn't walk around with a white cane, she's a writer, she's an athlete. I'm saying why would they need extra time on this math exam? It was because I couldn't line up the numbers I couldn't, I had to double and*

triple-check that everything was lined up correctly before I started performing any task, you know to move anything, you know, or balancing equation or do anything like that you know I had to be just very meticulous, and in the dirt during those math, doing all that math stuff and it was just exhausting.

She had numerous negative experiences with Math teachers in high school due to lack of extended time accommodation in Math tests, so Math was not her favorite subject. However, the Chemistry teacher was supportive of her. For instance, the Chemistry teacher shared her notes with her to copy down. She preferred to use her teachers' notes instead of sitting close to the board if teachers are willing to share them. She also had a lab partner in Chemistry classes, and they shared the work. Her partner did the experiments, and she took notes and wrote the results. Her favorite classes were English and Spanish. Rebecca was good at Spanish because she stated that it was easy for her. She didn't take extra effort to speak the language or memorize the vocabulary in Spanish.

Overall Experiences of Rebecca in General Education

Rebecca's overall experience was mixed both academically and socially depending on her teachers and classmates. When asked what she could have done things differently in her education she stated that she would have wanted more blindness and O&M training in general education schools because she needed them in college. She explained it:

I would have wanted to learn cane skills I mean I guess maybe they thought, or their perception was oh well, she walks around fine she probably doesn't need cane skills at this time, but I mean I at least would have liked to have been exposed…. if the student has usable vision, they want them to use that vision. You know what I'm saying to whatever

extent you know for good or for bad you know that that's the mentality. But I don't know I would have liked to have learned more nonvisual techniques for doing things, but again, because they saw me as having a great deal of functional vision, it was never, it was never even on the table.

Alice

Alice is 27 years old and has a bachelor's degree in English. She is currently unemployed and has a vision in one eye. Retinopathy prematurity (ROP) developed in her eyes when she was born. She reads Braille and uses a cane to travel. She has a twin sister, and they both had surgeries on their eyes when they were babies. The surgery worked to improve vision for her sister, but it did not work for her. Her sister uses glasses and can drive a car.

Alice was placed in a Special Education Preschool when she was young. She had a TVI in her preschool. She did not do well, there. She was significantly behind her peers, academically. The teachers wanted to hold her back from kindergarten for additional preschool education because she was not learning coins. Alice received her education in general education schools from kindergarten through high school in a rural area of a state in the Mid-Atlantic and Northeastern regions of the United States. Her elementary school was from first grade through fourth grade, middle school was from fifth grade through sixth grade, junior high school was seventh through eighth grade, and high school was ninth grade through 12th grade. She was in the general education classroom in elementary school. However, she was in Special Education classrooms in the middle, junior high, and high schools.

Social Experiences

In elementary school, Alice had some friends and played games with them on the school playground. Alice found that the aide impacted her relationships with her classmates and teachers. She described this relationship:

> *I don't think that played a good, you know, a very good role in my social life, either because what kind of kid wants to hang out with the kid when I was an adult walking behind them all the time. Gym and recess are either just watched from far watched by an adult looking after another kid… That depended on the stupidity of the teacher because I've had incidences where you know us like, for whatever reason, a person doesn't think I can talk or communicate well and so they talked to my aide but like I have also had aides who have been like I don't know to ask her, but most teachers would talk directly to me but I have had incidences of teachers being done.*

She was bullied several times in middle school and described the incidences:

> *From fifth grade up was when like I was actively getting bullied because you know, for some reason, like, you know that age is again when like kids realize hey if I believe this kid like I can make everyone else laugh, you know at their expense, nice to them and I'd hang out with them, then they became [a*******]. But I'm like, what happened to you over the summer, you mean now. Not everybody, but like, like if they didn't actively bully me which most of them didn't, they wouldn't like to stand up for me, or anything at least not to my knowledge, I was a kid, social isolation, and like I remember actively you know trying to have conversations with my peers and they would either laugh at me like, even if I wasn't trying to make a joke. Ignore me, or like bully me straight to my face…They*

would make fun of me for looking really close at the paper. I learned to ignore because I'm just like this is what I have to do to function, so I'm not going to care, like at least not actively, but like my subconscious was very sad because you know obviously when you're a kid you want friends, and you don't like getting teased.

She did not share those bullying incidents with her parents and described the reasoning:

My home life wasn't you know wasn't abusive or anything but like very stressed because you know my parents had gotten divorced a couple of years ago, so my mom was a single mom of six, you know, and so, you know, I didn't really tell anybody because I'm like I don't want to pile on the stress at my home.

In time, she started to ignore repetitive bullying do and described one of the incidents:

I was getting water from the water fountain that I squirted myself on the face because like that's how I knew where the water was you know I'd press the button and wait to hit my face and drink some water. And they were making fun of me for that. I was just trying to be friendly you know ignoring me little things like that like my brain is kind of just blocked out verbal stuff so like I don't even remember it because I just by that point I'd learned to ignore it.

She ignored her classmates, and her classmates ignored her in high school. She did not have any friends, and she was bullied in high school, too. She learned not to react to bullies because she knew that they wanted the reaction. She described one of the incidents:

He threw it in my head I think it was a quarter just remember it bouncing off my head, you know, picking it up, like hey a quarter and, yeah, yeah. Hey, thanks. you threw a

quarter at my head once I just pocketed it and said thanks. No, he thought he was going to get me mad and I'm just like hey money cool.

On the other hand, she had one-on-one gym class with her physical education teacher in junior high school. Another student joined that class, and they ended up being friends:

Two students with one teacher, and that was really nice because we ended up being friends for a while, you know, for a couple of years we ended up growing apart.

Unlike the negative peer relationships and interactions with her classmates, she had a positive interaction with some of her teachers. For example, she always had a good relationship with her braille teachers in general education schools. Moreover, she had a positive interaction with her high school aide, and she described their relationships:

We had a great rapport because, you know, she, like she was very aware of what I needed. What I didn't need, you know that she could just be a person around me, and I wouldn't like to report her or anything if you need me. I'll be here if you know, I'll be all the way over there.

Academic Experiences

Alice was in the general education classroom except for braille and math classes in elementary school. She took a math class in a small group with other students with special needs and braille class one-on-one. Although she was learning to read braille in elementary school, the teachers were trying to have her rely upon her usable vision. Therefore, she took longer than her peers to complete work both at home and school. Long readings caused eye strain and headaches.

Preferential seating, a monocular, a dome magnifier, and enlarged books were the main accommodation and assistive devices in the elementary school. She was satisfied with her accommodations and assistive devices because she did not know of any better accommodations available at that time. She did not hesitate to use assistive devices because they made her life easier. She explained the logic of her decision:

> *You know this thing makes my life easier, so I don't care what other people think of me like, did I like when I got bullied for it. No. Did I feel I had a choice and whether I used it also no because, you know, it was either use it and make my life easier and get bullied or not use it and make my life way harder?*

Alice was in a Special Education classroom with other students with disabilities in middle school. She was mainstreamed recess, lunch, and gym; only if a ball was not involved. She also was pulled out of the special education classroom for Braille instruction. Her favorite class was English and her least favorite one was math.

She was again in a special education classroom with other students with disabilities in junior high school. Most of her classmates from middle school through the end of high school were the same individuals. Alice had both positive and negative experiences with her teacher in junior high school. Some assignments became very difficult for her. One assignment stood out to Alice. The history teacher in junior high school asked students to find a current event from newspapers as an assignment, and Alice described the experience:

> *She was my history teacher, and we had this assignment, called current events, internet was a lot bigger font, and the screen was bright, the newspaper was not the friendliest but much friendlier than the newspaper, barely see the headings in the newspaper, let*

alone, actually read the articles in a physical newspaper has to be from the newspaper, and you have to find it. And I very vividly remember being in the living room, like with the newspaper just all over the floor because I didn't know how to you know unfold and fold my mom basically did the assignment for me and told me what to write.

Another assignment stood out to her. Alice received an F grade in another essay in the same class because of spelling errors. She explained this grade:

I work so hard on this essay, and I got an F, and I think I got like a 61 or something and I was so sad and there was only because of spelling errors, it was like it was definitely on me. not noticing you know how many spellings errors.

However, she believed that if she had a screen reader as assistive technology, she would not think she was going to fail that class. She explained:

I definitely could have gotten the screen reader at that point, and no one suggested it, because like once at once I got a screen-reader, and like it talks it's amazing. I'm like, I don't have to have headaches all the time by leaning forward and putting my nose off the screen because that does what happens a lot when I read, I cannot do it for long periods and now I've got you know I've got my iPhone with voiceover and a Braille display so like now it's no issue, but back then. Oh man, you know, I very vividly like I was sad about that essay for like a week or two because I was, I was more disappointed in myself, but just because I wasn't like I'm not enough my low self-esteem like I put all of my self-worth into my academics because I'm like this is something I'm good at this is something people are proud of me I could do something and I knew I was going to academics, So when I failed this essay I was so sad.

The high school had two sorts of special education classrooms. One class for students with ADHD and sensory disabilities, and the other for students with cognitive disabilities who were low functioning. Alice was in the first classroom.

Alice had a notetaker that began using in middle school and continued to use in high school. Her reading speed was not good before high school, so her braille teacher worked on more on reading speed than learning the braille code. She was able to practice those skills with her notetaker in high school.

Alice also had additional special educational placements in her high school career. She was placed into a special education physical education class. She described why she liked the class:

> *It was a nice time to get out without, without a, you know, like having strenuous physical activity was actually way more fun than regular gym class…I also discovered I'm not terrible at tennis, which was cool because apparently like, to an extent, moving objects are easier for me to see so like, as long as I know they're coming you know I'm pretty good at it, I running track just run across the track for a bit didn't have to do not do the activity, you know, so it was a really nice chill class it really enjoyed it.*

Not all of her classes were in special education. She took some elective classes with other students without disabilities in high school. She described what happened in those classes:

> *When you pick your electives like you get to be with anybody. So, you know, so I was in a sort of in the mainstream in those cases just because you know they didn't actively separate the disabled kids who wanted to take an elective and the non-disabled kids, got to see classmates I hadn't seen a long time again.*

Overall Experiences of Alice in General Education

Alice had several negative social and academic experiences that seemed to overshadow any positive social and academic experiences in general education schools. She felt that her teachers did not do a good job to include her in general education classrooms and explained:

> *I think that my teachers didn't do a good job of helping people realize like hey people might have this one thing about them that sticks out because they're different, but that doesn't mean that they're, that doesn't mean that you don't have things in common with them. It might have made it easier for them to go like, oh hey Allison likes avatars. You know, I like avatars let's go say hi.*

When she was asked about what could have been done differently in her education, she stated that she would have stayed more in a general education classroom with classmates without disabilities because of social reasons.

> *I just wish they that they'd been better educated and, you know, and then like that, I'd been a bit more confident in myself to you know one stand up like earlier may be explained on my tech and stuff. When I was younger [I] had to control over my entire academic career. I would have definitely, like I would have definitely, asked to be in the mainstream sooner because like in retrospect, I'm like, I could have handled that. [Inclusion in general education], that would have been nice.*

Upon further reflection of her educational experiences, she found that she was actually glad that she did not go to a specialized residential school for the blind. She had met a student with visual impairments with additional disabilities who went to a specialized residential school for the blind in a summer camp, and she was not independent. She described:

> *The kids get the help they need but they're also not isolated from the world, and therefore when they enter the world you know no one knows how to interact with them and then they don't know how to interact with the sighted people… I've met a kid at summer camp, who, like were like 10 years old and couldn't dress himself.*

She reflected that her general education experiences allowed her to have better experiences socially and academically when she was in college because she knew how to advocate for herself.

Julia

Julia is 40 years old and has visual impairments. She has better central vision than peripheral vision. Julia does not read Braille and prefers audio to consume information. She has a guide dog and does not use a cane to travel. Her highest degree is a master's degree in vision rehabilitation therapy, and she is in graduate school to get her certification as a rehabilitation counselor. She finished all the requirements for the degree and is waiting to take her certification test in the fall. She currently works as a vocational rehab counselor at a state division of blind services for youth.

Julia has had the same TVI named Linda [pseudonym], since she was 15 months old. Julia's school district hired Linda for her, and she worked with her until the end of high school. Julia attended two different preschools with other students with disabilities, and Linda was a co-teacher in the first school. Julia received her education in general education schools from kindergarten through high school in a rural area in the Upper Midwest. Her elementary school was from kindergarten through 6th grade, junior high school from 7th through 8th grade, and high school was from 9th grade through 12th grade.

Social Experiences

Julia had many negative peer interactions with her classmates, and she described one of the bullying incidents in the sixth grade:

> *He was assigned to stand next to me. Let's see the first second row of risers for our sixth-grade program, and he was assigned to stand next to me. that was a dumb move on the teachers' part because I have cerebral palsy and can't stand without holding a railing. So, you know, standing on the second row, or the third, second row of risers near the edge, was a recipe for disaster. The kid next to me was an [i****] he decided, his version of fun was to try and push the blind girl off the risers. he poked and pushed, and nothing worked. I talked with the teacher, but nothing worked.*

Julia recalled another incidence of bullying in the seventh grade by the same student who bullied her in the sixth grade. She described the details:

> *It was seventh-grade art class and this kid showed up in that class. And he was just an [i****]. He's like, how many fingers am I holding up, and if I'd said something he would say no that's wrong and he put up, put up another finger. And he did other stuff. So, I talked to the school counselor and the counselor brought the kid's parents in and said, look, if your child doesn't stop doing this, we're going to charge him with sexual harassment and the parents [must have…] put the fear of God in this kid because he left me alone the rest of my school career. I'm told now he's a well-respected doctor, but I've never talked to him since then.*

She enjoyed music classes in elementary school, and she had piano lessons from first grade through the end of high school as an extra-curricular activity she enjoyed on her own time.

For the most part, she had positive interactions with her teachers in Junior High school. The exceptions were her Social Science and Physical Education teachers because they were not willing to make accommodations. She had two major events happen during her eighth-grade year really stood out for her and she described them:

> *I had a seizure in front of everybody and was diagnosed with epilepsy. I ended up in an ambulance going to a hospital. I started on anti-seizure medicine that year, and I've been on anti-seizure meds ever since. We also lost a classmate in an automobile crash. She was the first experience I had with losing a classmate to death. So that was a tough year for everyone.*

High school also proved to be tough for Julia as had been the case in middle school. She described her experiences, socially, in high school:

> *Socializing didn't happen in middle school, in high school. You know I was, I was a loner in school, although you know people talk to me at school that's as far as it went. It didn't, it didn't cross the school threshold for, you know, community social events. I didn't go to prom. I didn't go to homecoming you know any of that stuff. And, you know, it's, it is what it is I mean when I was younger, I thought maybe I should, you know, should have, but now 20 years past high school graduation whatever.*

While Julia struggled with her peers socially, she had positive interactions with her TVI Linda. She stated that they continued to communicate with each other after she graduated from high school. She described one of the after-school experiences with Linda:

> *Like there was this little place, not far from school, that we would go to frequently it had breadsticks and coke and she would teach me, you know, that's where I learned how to*

order at a restaurant. She taught me how to use a soda fountain there. That was some really special bonding time between us. We weren't a teacher and a student. We were friends.

Post high school, Julia was nominated to carry the Olympic torch for the 2002 Olympics, which were being held in Salt Lake City. Julia was nominated by one of her high school classmates. The classmate wrote a letter for the nomination, but Julia found this letter insulting. She described it:

When I read the essay, I wanted to puke because her reasons for nominating me and the Olympic, or the torch people chose me as one of the 11,000 torch bearers and I just about, wanted to puke because of her reasons where she can climb stairs and she can speak two languages. I'm like, oh my, just shoot me now. She can climb stairs and she wrote it mercy and it rubs me the wrong way. It would be described as inspiration porn if someone were describing it now.

Academic Experiences

While social struggles were evident for Julia, in elementary school, Julia had positive academic experiences. When she was in kindergarten, Linda worked with her on Braille and other skills after school three times a week. She also had received occupational therapy. The therapist worked with her two times a week. They worked on eating skills in a cafeteria on Mondays and worked on writing and daily living skills, such as using a toilet appropriately, on Thursdays in a different room. Most of her first grade was in the general education classroom. Linda worked with her for an hour twice a week, and the occupational therapist for 30 minutes

twice a week. She did not have occupational therapy after first grade. Linda stopped teaching her Braille after she attended a conference where they recommended using vision more.

The main accommodations Julia received were large print, high contrast books, and according to Julia, they were three times bigger in 1987 than today. Linda was an itinerant TVI and served three counties, and she worked with Julia three times a week depending on the school year. Linda would adapt Julia's worksheets and classroom materials for Julia. For example, she made tactile large print maps for Julia to participate fully in her Geography class. Julia had a whiteboard, but she did not like it because she couldn't see when her teachers wrote on the whiteboard. She had an Echo and Apple Synthesizer as assistive technology. Julia stated that they were primitive and awful, but they were the best she had at that time.

Julia had a classroom aide in the first grade, and the aide stayed with her all day at the school. The aide wrote what was written on the board, and Julia found that her handwriting was easy to read. Julia's mother and Linda decided that Julia did not need the aide anymore. According to Julia, they were thinking about her long term needs and acquiring her independence. The aide did not affect her relationships with classmates. While the aide was removed for a while, Julia did have an aide again in Math classes in fifth grade. The sixth-grade science teacher was her favorite teacher because he made Science lessons fun. She reflected on his class:

> *We had science, school science fair and, you know, he included me in that activity, without any thought as to what I could or couldn't do. I made a model of a dialysis machine and had a cabbage patch doll hooked up to this fake dialysis machine. But you know he was my favorite out of the five or six science teachers I had. He was my favorite*

one. He talked one day about frying an egg on the sidewalk, and I always thought that would be fun to try. I never did. But, you know, he made science fun that year, and then the next year it was awful.

In middle school, things changed for Julia. She had to travel from classroom to classroom in junior high school. Therefore, Linda and Julia worked on orientation and mobility in the summer between sixth and seventh grade. She had two teachers who were not thoughtful in junior high school. They were social science and physical education teachers. She described her experience with the social science teacher:

*Seventh grade was awful, awful. I had two teachers who were [i*****]. They didn't understand vision loss at all. They didn't seem to care or want to learn. The social studies teacher was an [i****] because he was very map-oriented in geography. He had these assignments that were crossword puzzles but maps. [I] couldn't see the crossword puzzle, or map, even, even if it was enlarged 250 or 200%. He ignored mom and Linda, but my mother told him something about how I wouldn't need to know maps, if since I'm not going to be driving in [named town] That finally made him understand. I think I ended up just having to do the crossword puzzles, which were still bad, but I didn't have to do the map part.*

Although an adaptive physical education teacher made many adaptations, she still has difficulties with the teacher and the class. She described her experience with the physical education teacher:

The physical education teacher was worse. I had an adaptive PE teacher, and very much into Dodgeball and baseball and all those sports that I couldn't participate in. When the

adaptive PE teacher wasn't there, the regular teacher just said, oh, go up on the stage and ride the exercise bike. Whatever they were doing on the gym floor, I was up on the stage writing the stupid exercise bike, and, you know, I suppose the kids stared; I wouldn't know. Couldn't get it through that teacher's thick skull. And the only time I really got individual attention in that class was when the adaptive teacher was there. She was there maybe twice a week three days a week, I can't remember. She taught me volleyball, but she didn't use a regular ball it was a big balloon that she blew up. So, it was easier to see.

German and Spanish were her favorite classes, and Math and Science were her least favorite classes in middle school. She refused to use assistive technology and devices (magnifiers, white cane, and screen magnification software) because she did not want to look different. She explained the reasoning:

In middle school seventh and eighth grade I was kind of stupid back then I didn't want accommodations. They were probably offered but I didn't want to use them and look different. So, probably in seventh grade I stopped using accommodations and should have used them.

Linda worked with Julia one to five days a week depending on the school year in high school. They worked more on Expanded Core Curriculum; specifically, the areas of independent living, recreation and leisure, and social skills.

Julia had an O&M teacher, but she saw him three times a year because he was the only O&M specialist in the state. He lived six and a half hours away from Julia. She did not want to use her cane because she did not want to look different. However, when she went to a college,

she realized that she should have used her cane because she needed better orientation skills in a college. She had a small laptop, and Alpha Smart, in the high school.

> *It's probably not made anymore. It's called the alpha smart. I probably couldn't read it anymore. It's like a green computer, probably, maybe as thin as maybe about as thin as a laptop, maybe, maybe a little thicker. And it had a form online display. But back then I could read the display because it had a gray background and black letters. But now I probably couldn't read it if I saw one.*

Julia started to learn JAWS in her senior year, and she has been using it for approximately 30 years. Her favorite subjects in high school were German and Spanish. She took both language courses for all four years. Math was the hardest lesson for her, and she almost failed in Math. She had a peer notetaker in Physical Science class in the ninth grade. The notetaker was her lab partner and took class notes. English teacher in 9th-grade wanted her students to sit alphabetically, and Julia was sitting on the backside of the classroom. However, her mother was a sub teacher for the district, so she came to her English class as a sub and became angry due to her daughter's seating placement. She described the situation:

> *I apparently was sitting in the back, why did she put me in the back with a bunch of rowdy boys? My mother was not happy. So, when the regular teacher came back, she was, she got an earful from my mother, and I got moved very quickly.*

Tenth-grade Biology was challenging for Julia. Furthermore, she could not take Chemistry class because she was told that she did not have good enough Math skills. While physical education had been challenging in the past, she reflected upon enjoying bowling and swimming in the physical education classes.

Julia believes students today are fortunate because of the technology available to them. The same technology was not available when she was a student. She described it below:

> *Sitting in a math class, for instance, 20 years ago, I was lost unless someone wrote out what was on the board. Now, people can take a picture with their cell phone or jaw have software that connects to the teachers' SMART Board, so that those images are projected on the student's computer or iPad. I mean, it's very different…There are a lot of improvements with regard to the size and the weight of technology and the portability because I would never have been able to log that video magnifier from one class to the next, and students now can take a portable video magnifier down the hall to math class and connect it to a teacher SMART Board. I mean, that's incredible from, you know, when it didn't have when I was growing up.*

Overall Experiences of Julia in General Education

Julia's experiences many negative social and academic experiences, although she had some positive experiences with a few of her teachers, and especially with Linda. Julia stated that she struggled to understand whether other individuals were serious or joking when they were talking to her, and this situation negatively affected her socialization in general education schools. She also stated that she and Linda should have worked more on social skills because she believed that they did not work enough in this area of the expanded core curriculum.

She wanted to go to a specialized residential school for the blind, at some point when she was a student. However, when reflecting upon her experiences in school, she is so glad that her mother sent her to the public school. She sees students from specialized residential schools for

the blind due to her current job, and she thinks some students form that placement do not have enough skills to live independently. She described it below:

> *I had a student who graduated from the blind school in 2020, and she couldn't handle college, even though she was so smart at the blind school, she just floundered at the big university… I think I need to learn to advocate for myself. I mean, you need Braille. Here's your Braille book, you need a screen reader. Here's jaws. So, you know, when I needed something in school, I had to ask the teacher or ask Linda, hey, I need this blown up, or I need more time…you know, kids that come out from the blind school, are worlds behind … in social skills, I think, and they are behind their peers in O&M skills because the O&M teachers at the blind school, don't take it seriously in my opinion.*

Morgan

Morgan is 29 years old, and her highest degree is a bachelor's degree in education. She is currently unemployed. Her visual impairment is septo-optic dysplasia which means that her optic nerve did not develop properly. She sees better if objects are closer or bigger than farther and smaller. She reads Braille and uses a cane to travel.

Morgan went to a preschool for all kids with disabilities, and she had a TVI. She received her education in general education schools from kindergarten through 10th grade in a state in the western part of the United States. She went to a high school from 10th grade to 12th grade in a state in the South-Central region of the United States. Because her father was in the military, she received her education in different schools.

Social Experiences

Morgan had mostly negative peer relationships and interactions with her classmates. She didn't have a lot of friends and did not participate in any after-school activities. She reflected upon an incident with a peer:

> *I told [myself that] I'm going to bite this kid in front of me, and I did I don't remember the other reasons. I got detention for stupid little things, probably, but that was like the craziest thing I probably ever did in school. I didn't like the consequences, so I never did it again.*

Then she changed schools when she was in fourth grade due to her father's military orders. She liked her teachers and peers except her TVI and O&M instructor in the school. Another change happened that year when she had to change schools due to a move. The home she was living in had mold and was condemned, so she moved into another home in another school. This school change resulted in even more difficulties. She did not receive any accommodations or receive instruction that would support her socially. She had a couple of friends in a Girl Scout troop. She described her experiences in the school:

> *Once I went to the new school, I hated my teachers. I hated my TVI and O&M, and I am still hating going to school. I hated math. I only had one or 2 friends… I did not like spending time there. I didn't get the help I needed, and the kids were mean to me. I didn't like going to this school too much and I had to be there from fourth to eighth grade. I had, like only one or two friends there, whereas I had a few friends at the previous school.*

She was bullied by other students in the school, but according to her, the bullying was not related to her visual impairment.

*I had other issues going on, and it just wasn't conducive for me and the other kids getting along. And plus, military kids are [j****]. Just FYI, the military kids are [j****]. Everybody was a base kid. The guys like to make sex jokes. [S*****] guys [s*****] base kid guys saying, stupid stuff I mean the way the kids in middle school treated me was more, you know, that stuck with me more than the stuff.*

High school did not improve things for her socially. She was involved only in Girl Scouts as an extra-curricular activity until she was in tenth grade, and she did not have any friends in her first high school. Then she changed her high school again because of military orders, but Morgan did not have any friends in her second high school, either.

Academic Experiences

Morgan was pulled out from general education classrooms for braille instruction every day for a couple of hours in the first grade, but she needed the instruction less in older grades. She had a good relationship with the resource room teacher. The resource room teacher Brailled her assignments, and she also received Math and Reading instruction in the resource room. She had an aide in the classroom in her first elementary school, and the aide assisted her schoolwork, especially in Math and Reading. There was another student with albinism in her classroom, so the aide helped both students with visual impairments.

Morgan had positive academic experiences in the second elementary school she attended, as well. She received education in a collaborative classroom that included students with and without disabilities together. A classroom teacher she had in elementary school also had special

education training, and she received the help she needed in this school. However, due to the mold problem, she changed schools and the negative academic experiences began. She described her emotions about the third elementary school:

> *Once I went to the new school, I hated my teachers. I hated my TVI and O&M, and I am still hating going to school. I hated math.*

The conditions improved a bit in fifth grade because she stated that she had a positive interaction with her fifth-grade teacher. The main accommodations were extended time, preferential seating, and use of a braille writer which she did not like because according to Morgan, it was old technology.

She continued middle school in the same building where she finished the fifth grade. She had a TVI for an hour a day. The TVI sometimes came to the classroom and checked on her to see if she needed something. There was no aide with her in the classroom in middle school, but she had an O&M specialist. She received assistive technology. Morgan had a Braille note taker and computers with screen readers. She even started to emboss her own work in middle school. While reading was her favorite activity, Math was the least favorite in middle school.

In high school, Morgan had a TVI and O&M specialist an hour for a week. She was able to use a braille writer and braille note-taker as assistive technology devices in high school. She was not happy with her school experience in her first high school because she did not have the support she needed there. She described this support:

> *I kind of hated going to that school I always had like too much homework. I didn't get the help I really needed. It was just terrible. I didn't know I could take or leave that place. It was exhausting the plus there's plus I wasn't getting the help I needed. The schedule was*

crazy. The classes were huge. It just. it was overwhelming. and I and I didn't have the support I needed.

Although she had negative academic experiences in the first high school, she had tutorials with a collaborative special education teacher for a math class. Those tutorials were helpful for her, and she was happy with the tutorial services. However, research papers led to another negative experience, and she explained it below:

I could probably have used somebody guiding me step by step, on the research papers. But I had to effectively handle it on my own, and it was. It was tough, and I ended up getting punished for it because I didn't know how to handle my stuff back. Awful TVI was the one who always emailed my parents whenever something went wrong.

She changed her high school again in 11th grade because of military orders, and the new high school was in a state in the South-Central region of the United States. She had positive academic experiences in the second high school and described them below:

I did better like I had better grades than I'd had in like 6 years when I went to that school. because at your time that was like the first time in a long time, I actually look forward to going to school.

The school had a content mastery classroom, similar to a resource room. Teachers who specialized in different subjects helped students based on their needs, and she found this help beneficial and explained it below:

Two or three teachers and a number of paraprofessionals that specialize in different subjects and anybody having trouble could just come in there and work. I love the content mastery. They were amazing. They helped me out so much.

She was pulled out of the general education classroom to get one-on-one instruction with a TVI. In addition, paraprofessionals came into the classrooms to help her in math and science classes. The paraprofessional was academically helpful to her. She stated that since she did not have any friends in the classroom, the paraprofessional did not affect her socialization with her classmates. She also attended summer and short-term programs in a specialized residential school for the blind, and she liked the programs there. She described it below:

> *I went to one summer program there, and I went to various programs that would be on weekends during the school year like that. A math tools program. They had a prom program, too. They had a camping program. Oh, my gosh! That one was so much fun work training camp during the summer They were fun. Oh, my gosh! they were great!*

Overall Experiences of Morgan in General Education

Morgan had negative peer relationships and interactions with her classmates in general education schools. She had both positive and negative academic experiences in general education schools that depended on school and teachers. If she received the accommodations and appropriate services in general education schools, she had more positive experiences than negative experiences.

When asked what she could have done things differently in her education life, she stated that her parents should have kept her in her first elementary school when she was in fourth grade because she was getting appropriate services there. She wanted to go to a specialized residential state school for the blind when she was a student, but her parents didn't want her to go. However, she finally had a chance. The year after high school she went for training at the specialized

residential state school for the blind. However, she did not like the school, and it was not what she expected:

> *It wasn't quite what I was expecting I expected more freedom I expected, you know, to not have to have an IEP anymore. I felt like I was being treated like a kid, and I felt like I was more ahead than they thought. I wish I'd never done it just gone straight to college.*

Through all of her experiences and placements, it was evident the positive impacts that could be made socially and academically for Morgan were all dependent upon the instruction she received in the expanded core curriculum as well as the accommodations for her classes.

Conclusion

Each individual case study provided information about their school experiences that were both positive and negative. Their reflections told individual stories of those experiences, both socially and academically. Reflections on individual experiences with teachers, students, peers, and specialists were all shared to provide insights into their experiences.

Chapter 5: Discussion and Conclusion

The purpose of this qualitative study was to explore the social and academic experiences of students with visual impairments in primary and secondary general education classrooms. The qualitative case study method was used in the study, and the research data were obtained from seven individuals with visual impairments who attended general education classrooms in primary, elementary, or high school.

The present study will investigate the following questions:

1. What are the positive social and academic experiences of students with visual impairments in general education classrooms? What factors lead the positive social and academic experiences in inclusive settings?

2. What are the negative social and academic experiences of students with visual impairments in general education classrooms?

This chapter discusses the findings of the research, and it has six sections. The first and second research questions were discussed in the results section, respectively. Next, attendance at a specialized school for the blind and niche theory were presented. Then, limitations to this research were presented. The fifth part of the chapter was the conclusion. Lastly, implications for practitioners and recommendations for future research were presented.

Results

Positive Social and Academic Experiences

The first question addresses the positive social and academic experiences of persons with visual impairment in the general education classroom and the factors that lead to those

experiences. While there is limited positive social and academic experiences of students with visual impairments in general education classrooms in the literature (Chang & Schaller, 2002; George & Duquette, 2006; Opie, Southcott & Deppeler, 2017; Hess, 2010), this research supports the literature available. Good relationships with general education and resource room teachers (Chang & Schaller, 2002), acceptance by teachers and classmates (George & Duquette, 2006; Opie, Southcott & Deppeler, 2017), and being academically successful (Opie, Southcott & Deppeler, 2017) were shown through the data in this study.

In this study, even though Adam and Caroline had some bullying incidents, they were mostly accepted by their teachers and classmates. For instance, Adam and Caroline were the type of students those teachers liked because they were hard-working students. Caroline was highly valued especially in group work because she was doing most of the group work. She stated that other students in the classrooms would like to be in the same group with Caroline. Therefore, her role in group works helped her to get accepted by their classmates. In addition, Adam's participation in extracurricular activities and sports helped him to get accepted by their classmates. Furthermore, Alice and Julia had good relationships with some of their teachers. For instance, Alice always had a good relationship with her braille teachers in general education schools and with her high school aide. Julia always had a good relationship with her TVI Linda.

In this study, even though individuals with visual impairments had academic challenges that were mentioned in chapter four, they succeeded to overcome challenges and eventually graduated from college. Chelsea has an associate's degree. Two participants (Alice, and Morgan) have bachelor's degrees, and two participants (Caroline and Julia) have master's degrees. In addition, one of the participants (Adam) has an EdS degree, and one of them (Rebecca) has a

Ph.D. degree. Therefore, this study reflects similar findings of positive academic success of a student with a visual impairment in work conducted by Opie and colleagues (Opie, Southcott & Deppeler, 2017).

Factors Lead the Positive Social and Academic Experiences

Supportive teachers (Chang & Schaller, 2002; George & Duquette, 2006; Miyauchi & Paul, 2020) and parents (Opie, Southcott & Deppeler, 2017), high expectations from students (Chang & Schaller, 2002; Opie, Southcott & Deppeler, 2017), personal attributes of students (George & Duquette, 2006; Opie, Southcott & Deppeler, 2017; Miyauchi & Paul, 2020), extracurricular activities (Opie, Southcott & Deppeler, 2017), safe and inclusive classroom environment (Chang and Schaller, 2002; Miyauchi & Paul, 2020) and positive school climate and attitudes (Hess, 2010) led to positive social and academic experiences of students with visual impairments in general education classrooms.

The findings of this study support this literature. Supportive teachers and high expectations from students led to positive social and academic experiences for individuals with visual impairments in general education classrooms in this study. For example, Adam stated that he had supportive teachers who had high expectations from him, so those factors helped Adam to have mostly positive social and academic experiences in general education classrooms. Accommodations help students with visual impairments to have positive academic and social experiences. Some teachers made accommodations in their classes, and individuals with visual impairments had positive experiences in those classes. For instance, teachers in his elementary school allowed Adam to take notes from the slide after the other students had completed their work. Similarly, Rebecca's social studies teacher in middle school and chemistry teacher in high

school were willing to share their notes with Rebecca. They had positive experiences in those teachers' classes. On the other hand, some teachers did not make accommodations for the students, and students had negative experiences in those classes. For instance, Julia's 9th-grade English teacher and Caroline's middle school History teacher made their students sit alphabetically in their classrooms, and the students had difficulties to see the board.

Personal attributes of the participants were another factor that led to positive social and academic experiences for students with visual impairments in general education classrooms similar to previous research (George & Duquette, 2006; Opie, Southcott & Deppeler, 2017; Miyauchi & Paul, 2020). In this study, Adam's overall experience was mostly positive both socially and academically. He had a self-confident, sociable, and outgoing personality, so his personal attributes helped him to have positive social experiences in general education schools. Being outgoing helped him socialize with his classmates and being academically successful helped him to create a good relationship with his teachers. Similarly, Rebecca was independent and outgoing in elementary school, so those attributes helped her to socialize in elementary school.

Extracurricular activities also helped students with visual impairments to socialize in general education schools, similar to the previous research conducted in the field by Opie and colleagues (Opie, Southcott & Deppeler, 2017). For instance, Rebecca ran track in the spring and cross-country in the fall, and Caroline was in the band in middle school. Similarly, Adam was in the Student Council, so he was part of the process of planning parties, dances, and fundraisers. He also participated in talent fairs and intramural sports. Those activities led students to have positive social experiences.

A safe and inclusive classroom environment and school climate (Chang & Schaller, 2002; Hess, 2010) were other factors that led to the positive social and academic experiences of students with visual impairments in general education classrooms. For example, Morgan's second elementary school had a safe and inclusive environment. She had a good relationship with most of her teachers and a few friends there. Therefore, she was satisfied with her experiences in this school. However, her third elementary school was not inclusive, and she did not have the services that she needed. She also did not have any friends in the school. Therefore, she stated that she hated the third elementary school. Moreover, Chelsea's general education schools were not inclusive. Chelsea did not have an O&M specialist in her first and second elementary schools and middle school, and she did not have large print materials in her second elementary school and middle school. She also was bullied several times during her general education experiences. Therefore, her family decided that she should attend a specialized residential school for the blind where she received appropriate services.

Foreign language classes (English, Spanish, German) were reported as favorite classes by many participants. For instance, Rebecca's favorite classes were English and Spanish, and she got a Ph.D. degree in Spanish. Similarly, English was a favorite class for Alice, and she got a bachelor's degree in English. Similarly, German and Spanish were Julia's favorite classes. Moreover, Rebecca was good at Spanish because it was easy for her. She stated that she didn't take extra effort to speak the language or memorize the vocabulary. She was good at Spanish because she stated that it was easy for her.

Negative Social Experiences

Students with visual impairments experienced negative social and academic experiences reported in the literature. For example, bullying (Austin, 2018; Haegele and Zhu, 2017; Brydges & Mkandawire, 2017; Rosenblum, 2000; Worth, 2013) and lack of socialization (Austin, 2018; Conroy, 2008; Haegele and Zhu, 2017; Haegele, 2019; Jessup et al., 2018; Kim & Kim, 2015; Rosenblum, 2000; Thurston, 2014; Worth, 2013) are common negative social experience for students with visual impairments in the literature.

The findings of this research support the findings of the literature on negative social experiences. Three of seven participants have albinism (Adam, Caroline, and Chelsea), and they were the target of other students in general education classrooms due to their white skin color and hair. Two of three participants with albinism were involved in a fight because of bullying (Adam and Chelsea). The other participants' reactions to bullying were ignoring (Alice) the bully or no reaction (Caroline, Rebecca) because they did not know how to defend themselves at that time.

Most of the participants (Adam, Caroline, Rebecca, and Julia) did not want to use assistive devices or accommodations to be accepted by their classmates. It also supports Rosenblum's (2000) findings because according to Rosenblum (2000) a student with low vision tried to hide her visual impairment to be accepted by their peers. Adam was embarrassed to use enlarged books in the classroom. Similarly, Caroline did not want to use a CCTV in the classroom because it made her look different. Moreover, Rebecca refused to use magnifiers, because it made her look different, and she did not want to look different in middle school. In addition, Julia did not want to use magnifiers, white cane, and screen magnification software

since she did not want to look different in middle school. However, one of the participants (Alice) did not hesitate to use assistive devices because they made her life easier. Although Alice thought that using assistive devices was one of the reasons for bullying incidents, she still preferred to use them.

On the other hand, using paraprofessionals/aides has academically positive effects on students with visual impairments, but it has negative effects on educational and social independence (Conroy, 2008; Worth, 2013). In this study, one of the participants (Alice) stated that the aide negatively affected her relationships with her classmates and teachers. However, two other participants (Julia and Morgan) stated that paraprofessionals/aides did not negatively affect their relationships with their classmates. Julia had an aide in first grade, and she thought the other students did not ignore her due to the aide at those ages. Morgan stated that she did not have any friends in the school before she had the aide, so the aide did not affect her socialization with her classmates, either.

Negative Academic Experiences

Lack of teacher training and experience (Brydges & Mkandawire, 2017; Lamichhane, 2013; Lieberman & Houston-Wilson, 1999; McCarthy & Shevlin, 2017; Opie, 2018; Wall, 2002), lack of supplementary and specialized instruction (Brydges & Mkandawire, 2017; Koehler & Wild, 2019), and lack of time for instruction (Lieberman & Houston-Wilson, 1999; Opie, 2018; Wall, 2002) are the most common negative academic experiences for students with visual impairments in general education classrooms.

The findings of this research support the findings of the literature on negative academic experiences. Some of the teachers did not follow a participants Individualized Education Plan

(IEP) or provide proper accommodations. For example, some students (Julia and Caroline) did not have preferential seating accommodation. Julia's 9th-grade English teacher and Caroline's middle school History teacher made their students sit alphabetically in their classrooms, and the students had difficulties to see the board. Similarly, Caroline and Rebecca did not have extended time, especially in Math lessons. Both individuals were academically successful and taking higher-level classes. Therefore, some Math teachers did not want to give them extended time on assignments and tests because the students did not need extended time in other lessons except Math. Another example is from Alice. Her class required students to find a current event from a newspaper. However, the teacher did not allow Alice to use a computer instead of a newspaper. She stated that her mother did the assignment because it was difficult to read a newspaper for her. In addition, Julia's middle school physical education teacher did not make accommodations for her and asked her to ride an exercise bike during the classes. In addition, Chelsea's second-grade teacher used even insulting words toward her. She called Chelsea [R*******"] because she could not find her spot in her reading textbook.

While making proper accommodations and following the IEP was a roadblock for many, one class seemed to be universally difficult for the participants in the study. Math was reported the most difficult class for most of the participants in this study which is common for students with visual impairments (Brydges and Mkandawire, 2017; McCarthy and Shevlin, 2017; Opie, Deppeler, and Southcott, 2017; deVerdier and Ek, 2014). Findings in this study support this previously reported finding. Most of the students needed extra help (Caroline, Rebecca, Chelsea, Alice, Julia, and Morgan) in Math lessons. Although Caroline and Rebecca did not need extra time for other classes, they needed extended time for Math classes that teachers were not

willing to provide extended time. Math was a difficult class for Chelsea because she stated that Math was visual and hard. Rebecca's least favorite class Math and had a fear of being called up to a board, particularly in Math lessons. She was also called repetitively by her classmates a "blind girl" especially, in Math classes. Furthermore, Alice took Math class in a small group with other students with special needs in elementary school, and Math was her least favorite class. Julia had a classroom aide in the fifth grade only for Math classes. Similarly, Math was the hardest and least favorite lesson for her, and she almost failed Math in the tenth grade. In addition, Morgan stated that she hated Math many times in the interview. She always had extra support in Math lessons in her education life such as resource room, classroom aide, and collaborative special education classroom.

Physical education was the other class that most students in this study were not included which is also another commonly reported difficult class for persons with visual impairment (Haegele & Zhu, 2017; Haegele, 2019; Lieberman & Houston-Wilson, 1999; Lieberman & Houston-Wilson & Kozub, 2002; Opie, 2018; deVerdier & Ek, and George & Duquette, 2006). Lack of knowledge, lack of professional preparation, lack of appropriate equipment, lack of adequate programming, and lack of time were the main barriers to include students with visual impairments in physical education classrooms (Lieberman & Houston-Wilson, 1999; Lieberman & Houston-Wilson & Kozub, 2002). Some of these same themes appeared in this study. For example, although Adam liked Physical Education class, the physical education teacher liked to do outside basketball and did not consider that Adam had oculocutaneous albinism. Furthermore, Julia's physical education teacher asked Julia to ride an exercise bike in physical education classes when the adaptive physical education teacher was not there. When her classmates

participated in the physical education activities, Julia just watched her classmates on the exercise bike.

Some negative experiences of the participants were caused by teachers, but they were not solved at the administrative or district level. Caroline's individualized education plan (IEP) was not followed by her history teacher in middle school. Although her parents talked with the intervention specialist and the principal, the teacher still did not follow the IEP. Her parents and Caroline did not take this problem to the district level due to a lack of knowledge. Moreover, Chelsea did not have an O&M specialist, a TVI, and large print materials in middle school. There was no request under her name for large print textbooks although the school claimed they ordered them. Furthermore, Rebecca also did not receive most of the textbooks in large print in middle school.

In addition, Alice and Rebecca had eye strain and headaches due to long readings. Although reading braille was the other option, teachers had the mentality that if a student with visual impairments had usable vision, she should have used it. For that reason, she worked on her homework and schoolwork a lot longer than she should have worked. Julia and Rebecca's teachers had the same mentality. For instance, Julia's TVI stopped teaching her Braille after she attended a conference where they recommended using a usable vision more. Rebecca also stated that she did not learn adequate blindness skills because teachers wanted her to use her usable vision.

Lastly, the lack of Expanded Core Curriculum instruction especially in the O&M skills and access skills was another finding of the study. The ECC consists of the following nine components of instruction: compensatory or access skills, orientation and mobility (O&M) skills

and concepts, social interaction skills, independent living skills, recreational and leisure skills, career education, sensory efficiency skills, self-determination skills, and use of assistive technology. For instance, Julia had an O&M teacher, but she saw him three times a year because he was the only O&M specialist in the State. Caroline did not have any O&M instruction in her elementary school. Similarly, Chelsea did not have an O&M specialist in her first and second elementary schools and middle school. In addition, Chelsea did not receive large print materials in her second elementary school and middle school. Likewise, Caroline was supposed to have to get her work in large print, but she did not get it in middle school. Large print is part of the access skills, and O&M instruction is part of the orientation and mobility (O&M) skills and concepts. According to Sapp and Hatlen (2007), teachers of students with visual impairments and O&M specialists stressed the importance of instruction of the ECC to students with visual impairments to have a successful life.

Attendance at a Specialized School for the Blind

While the research study focused on the experiences of the participants in their general education placement, one finding that was unanticipated was the need for a few of the participants to transfer to a specialized school for the blind. Chelsea's general education schools were not inclusive. She did not have O&M instruction and large print materials when she was in general education schools. She was bullied many times during her general education experiences and was involved in a fight because of bullying. In addition, her second-grade teacher used insulting words toward her in elementary school and received six detentions from six different teachers due to her arguments with them about using CCTV in middle school. Therefore, her parents decided that she should attend a specialized residential school for the blind.

On the other hand, Chelsea was involved in many positive social experiences in a residential school for the blind. She was on the yearbook staff and was class president. She was in swimming, track, and on a goalball team. She stated that the teachers at the school were kind, and the specialized school was the first place she felt safe and at home.

This finding supports some literature available. According to Mushoriwa (2001), the majority of elementary school teachers who participated in the study had a negative attitude towards inclusion and believed specialized schools for the blind were best for students with visual impairments. Worth (2013) stated that students with visual impairments had good relationships with their classmates in a specialized school for the blind because they shared the same impairment. Furthermore, according to Hatlen (2004) when students with visual impairments spend some time in a specialized school for the blind, they will acquire self-confidence, self-determination, and social interaction skills that help them to adapt to society.

Niche Theory

This theory was used by Super and Harkness (1986) to understand the influence of cultures on human development. The physical and social settings in which the child lives play an important role in the child's development. The developmental niche theory also was used in the analysis of children with disabilities including visual impairments (Fast, 2018; Chiu, 2020).

The first subsystem of the Niche theory in this study was a school setting of educational placement. If principals and teachers created a safe and inclusive environment in general education classrooms, a student with visual impairments was included and had positive experiences in the schools. For instance, Morgan had a good relationship with most of her teachers and a few friends in her second elementary school. She had a safe and inclusive

environment, so she was satisfied with her experiences in this school. However, her third elementary school was not inclusive, and she did not have the services that she needed. She also did not have any friends in this school. Therefore, she stated that she hated the third elementary school.

The second subsystem of the Niche theory in this study was an examination of accommodations. Accommodations help students with visual impairments to have positive academic and social experiences. The participants that had accommodations stated discussed the more positive academic and social experiences they had. In addition, Chelsea stated that if she had used her accommodations more in class, she would have been even stronger academically in general education classrooms. She did not have large print materials in her second elementary school and middle school. Therefore, her academic experiences were negatively affected in general education schools due to the lack of large print materials.

The third subsystem of the Niche theory in this study was the attitudes of classmates, teachers, and parents regarding the student with a visual impairment. All the participants in this study were bullied to some degree by their classmates in general education schools. For instance, Alice was bullied several times in middle school, but he learned not to react to bullies in time and ignored them. Her social experiences were negatively affected due to bullies. In addition, most of the participants (Adam, Caroline, Rebecca, and Julia) did not want to use assistive devices or accommodations to be accepted by their classmates. However, although Alice thought that using assistive devices was one of the reasons for bullying incidents, she continued to use assistive devices because they made her life easier.

Limitations to Research

The results of this qualitative study are not generalizable and do not reflect experiences of all persons with visual impairment in the general education setting. The findings are limited to the small number of participants were interviewed. The semi-structured interviews only explored how seven individuals with visual impairments describe their academic and social experiences in primary and secondary general education schools.

The interpretations are limited by the interpretation of one researcher and the limited participation of the participants in member checking. Two interviews were planned to conduct with the participants. The first one was about their experiences, and the second one was for member checking. All participants were asked to participate in the member checking session, however, one of the participants did not complete this task, even after multiple probes. In addition, only one researcher provided interpretation of the collective results of all case studies and their ties to the literature, thus further limiting the results.

Participants' perceptions could have been influenced by the passage of time. Participants were asked to reflect on their experiences in general education schools that occurred years before the interviews. Therefore, there is no way to verify the events that occurred or were described by the participants.

Content validity of the interview questions was also limited. The questions contained in the semi-structured interview were written by the author. One other researcher reviewed the questions for content only. The questions were not vetted with individuals with visual impairments. This is a further limitation of this qualitative research study.

Conclusions

The purpose of this qualitative study was to explore the experiences of individuals with visual impairments in primary and secondary general education classrooms. Research data were collected from seven people with visual impairments who attend general education classrooms in primary, elementary, or high schools. The developmental niche theory was used to explore how people with visual impairments describe social and academic experiences in primary and secondary general education schools. An individual is at the center of the Niche theory, and subsystems are around her. Three subsystems described in the present study are 1) a school setting of educational placement 2) accommodations made for the student with a visual impairment and 3) attitudes of classmates, teachers, and parents regarding the student with a visual impairment.

In this study, most of the social and academic experiences of students with visual impairments in general education classrooms were negative, although some positive experiences were found similar to the literature. Good relationships with some general education and resource room teachers, acceptance by some teachers and classmates, and being academically successful in some classes are the main positive social and academic experiences of students with visual impairments in general education classrooms. Experiences of students with visual impairments in general education classrooms depended on many factors. Teacher support, personal attributes of students, extracurricular activities, positive attitudes of classmates and teachers, and a safe and inclusive school and classroom environment led to positive social and academic experiences for students with visual impairments in general education classrooms. Lastly, language art classes also were reported as favorite classes by many participants.

Bullying and lack of socializing are the most common social experiences, and lack of accommodations, lack of supplementary and specialized instruction, and lack of Expanded Core Curriculum instruction are the most common academic experiences of students with visual impairments. In addition, Math is the most difficult class for most of the participants because most participants stated that Math depends on vision more than other classes. Physical education is the other class those which students with visual impairments were mostly not included due to a lack of accommodations. Lastly, eye strain and headaches due to long readings are the other negative academic experience found in this study. These findings provide researchers better understanding of the social and academic experiences of students with visual impairments in general education classrooms.

Implications and Recommendations for Future Research

The number of students with visual impairments in general education classrooms has been increasing in the United States. Results from this study add to the body of research on the social and academic experiences of students with visual impairments in general education schools. This study also helps to shed light on the factors that led to positive experiences for students with visual impairments in inclusion schools. By knowing those experiences, we better understand the needs of students with visual impairments in general education classrooms.

Future research should examine suggestions or solutions for the negative social and academic experiences in general education schools described by individuals with visual impairments. An examination as to the reasons why Math class was the most difficult class for students with visual impairments should be deeply investigated in future research. Future research should also focus on the reasons to transfer to specialized schools for the blind for

students with visual impairments. In addition, the reasons why students with visual impairments lacked inclusion opportunities in Physical Education classes should be investigated in detail.

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Appendix A: List of Interview Questions

1) Tell me about your visual impairment.
2) Tell me about your family life when you were a child.
    i) Did you have any other family member who has visual impairments?
    ii) Could you describe your relationships with your parents and siblings?
    iii) Could you describe your relationships with your friends?
3) Tell me about your educational background about primary and secondary general education schools.
    i) What type of schools did you attend?
    ii) Could you describe the process of starting schools? Did you receive an introductory session when you start a school?
    iii) Have you ever transferred from one school to another? Why? How were your parents involved during the transitions?
4) Tell me about your typical school day in primary general education schools.
    i) What did go well in schools? What did you enjoy most about schools? What was your favorite part of the school day?
    ii) What did you enjoy less in schools? What was your least favorite part of the school day?
5) Tell me about your social experiences in primary general education schools.
    i) How was your relationship with your teachers, and other people in the school?
    ii) How was your relationship with your peer without visual impairments?

iii) How was the attitude of your classmates during classroom activities?

iv) How was the attitude of the other students in common areas like a playground?

v) Did you participate in any after-school or weekend activities?

6) Tell me about your academic experiences in primary general education schools.

i) How did your teachers make accommodations for you in the classroom?

ii) What kind of assistive devices or equipment did you have in the classrooms? How did you satisfied when you used them in general education classrooms?

iii) Was there any assistant such as paraprofessionals help you in the classrooms in schools? How was your relationship with them?

7) Tell me about your typical school day in secondary general education schools.

i) What did go well in schools? What did you enjoy most about schools? What was your favorite part of the school day?

ii) What did you enjoy less in schools? What was your least favorite part of the school day?

8) Tell me about your social experiences in secondary general education schools.

i) How was your relationship with your teachers, and other people in the school?

ii) How was your relationship with your peer without visual impairments?

iii) How was the attitude of your classmates during classroom activities?

iv) How was the attitude of the other students in common areas like a playground?

v) Did you participate in any after-school or weekend activities?

9) Tell me about your academic experiences in secondary general education schools.

i) How did your teachers make accommodations for you in the classroom?

ii) What kind of assistive devices or equipment did you have in the classrooms? How did you satisfied when you used them in general education classrooms?

iii) Was there any assistant such as paraprofessionals help you in the classrooms in schools? How was your relationship with them?

10) If you could have done things differently in your school life, what would you have done?

Appendix B: List of Demographic Questions

Page 2 of Qualtrics:

1. Are you over the age of 18?
    a. Yes
    b. No [If no, go to final thank you page]
2. Did you attend a public school for any part of your K-12 education experience? This could be a part-time placement, only for a few grades, or your entire K-12 educational experience.
    a. Yes [if yes, go to question 6]
    b. No – if no, Go to a page to say thank you for your willingness to participate in this research, however you are not eligible for this project.
    3. What grades did you attend in public schools? [text box]
4. Please provide your name [open text box]
5. Please provide a contact email for this study [text box]
6. Please provide a contact phone number for this study [text box]
7. What time and day are best for me to contact you to set up your first interview. The follow-up sharing of information will happen at a later date and I will contact you using the information above at a later time. [text box]
8. Please indicate your gender.
    a. Female
    b. Male

c. Other

9. Please indicate your race and ethnicity.

    a. [Asian/Pacific Islander]

    b. [Black]

    c. [Latino/a]

    d. [Native American]

    e. [white]

    f. [bi/multi racial]

    g. [other] Specify: _____

    h. [don't know]

    i. [refused]

10. Do you read Braille?

    a. Yes

    b. No [Proceed to question 9]

11. If you do not read Braille, how do you typically consume information?

    a. Large Print

    b. Print with magnification

    c. Audio

    d. Other [text box]

12. Do you use a cane?

    a. Yes [Proceed to question 11]

    b. No

13. If you use a cane, please describe your use.

    a. I use a cane every day; I couldn't imagine traveling without one

    b. I can use a cane sometimes

    c. I have a cane with me sometimes; but it is often collapsed

    d. I have a cane but rarely use it

    e. I have a cane but never use it

    f. I don't have a cane

Appendix C: Interview Recruitment E-mail

Subject: Interview request

Dear (name),

As a researcher from The Ohio State University, I want to learn from you.

I would like to interview you as part of this project because you are an individual who has visual impairments. You should know that I won't use your name or any identifiable information with this research project.

If you agree to participate, I would like to do a personal, audio-recorded interview with you. The purpose of this interview will be to discuss how individuals who are blind or visually impaired describe the academic, social, and emotional challenges of people with visual impairments encounter in schools when they were students. It is my hope to better understand the experiences of individuals who are blind within these areas. I anticipate taking approximately an hour of your time.

Please respond to this e-mail with a phone number where we may contact you to set-up an interview time.

Thank you for your time and consideration of this project.

Mehmet Kart

Appendix D: Facebook Recruitment

My name is Mehmet Kart. I need your help in recruiting for my dissertation study. I am a doctoral student from The Ohio State University. I want to learn from anyone with a visual impairment that attended public school during their K-12 education. I plan to conduct interviews, online, for this work. No names will be used in reporting my findings. I anticipate interviews taking approximately an hour to three hours of your time for the first interview and the same for a follow-up review of my findings.

If you are interested, the link for the project can be found at:

[LINK]

Thank you for your time and consideration of this project.

Mehmet Kart

Appendix E: Consent Script for Interview

Academic and Social Experiences of Students with Visual Impairments in Primary and Secondary General Education Classrooms

(To Be Read at Beginning of Interviews)

Prior to the start of the interview, participants will be read and provided with the following information in an accessible format:

If you have questions or concerns about this research or feel you have been harmed by study participation, please contact Dr. Tiffany Wild from The Ohio State University, at wild.13@osu.edu or (614) 292-4783.

The researcher working with Dr. Wild is Mehmet Kart (kart.5@osu.edu).

For questions about your rights as a participant in this study or to discuss other study-related concerns or complaints with someone who is not part of the research, you may contact Ms. Sandra Meadows in the Office of Responsible Research Practices at 614-688-8288 or hsconcerns@osu.edu.

Researcher name and contact information: Mehmet Kart (kart.5@osu.edu) 832-212-7395

Once this information has been shared, the following script will be read by the interviewer(s):

I am a researcher from The Ohio State University, and I want to learn from you. Thank you for giving your time to speak with us today.

I am conducting a research study that requires me to ask you questions in the form of an interview. I anticipate that this interview will take approximately an hour of your time.

The purpose of this interview is to discuss how individuals who are blind or visually impaired describe the positive and negative academic and social experiences in primary and secondary general education schools. It is my hope to better understand the experiences of individuals who are blind within these areas.

The research itself holds minimal risks for the participants. You might face physical challenges en route to an interview, though no more than in their regular daily activities. I will regularly consult with you about your comfort level during the research. If you have any concerns or discomfort, I will take steps to remedy the situation or will negotiate agreeable circumstances with you yourself.

Potential benefits to society include a better understanding of the experiences of students with visual impairments and how we might make changes to our educational system in order to support and improve their educational experiences and post-school potential. You might feel positive about contributing to scholarship on students with visual impairments. I will maintain the confidentiality of records identifying the subject by storing individuals' identifying data securely and separately with electronic versions on password-protected computers or in OSU's protected cloud data storage system. In any and all correspondence, submitted drafts, and potential publications, participants will be identified using pseudonyms.

I will be taking audio recordings of your interview. This interview is voluntary. You may refuse to participate, skip any questions, or discontinue participation at any time without penalty or loss of benefits to which you are otherwise entitled.

Do you want to help us?

(Wait for response)

Appendix F: Field Note Form for Interview

Date		Interviewer	
Time		Interviewee	
Location			
Overview			
Notes			
Reflections			