January 2016

Teachers' Of Students With Visual Impairments Perceptions And Experiences Of Teaching The Expanded Core Curriculum

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TEACHERS' OF STUDENTS WITH VISUAL IMPAIRMENTS PERCEPTIONS AND EXPERIENCES OF TEACHING THE EXPANDED CORE CURRICULUM

by

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A Dissertation

Submitted to the Graduate Faculty

of the

University of North Dakota

in partial fulfillment of the requirements

for the degree of

Doctor of Philosophy

Grand Forks, North Dakota
December
2016

This dissertation, submitted by Renae Therese Bjorg in partial fulfillment of the requirements for the Degree of Doctor of Philosophy from the University of North Dakota, has been read by the Faculty Advisory Committee under whom the work has been done and is hereby approved.

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December 1, 2016
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Title	Teachers' of Students With Visual Impairments Perceptions and Experiences of Teaching the Expanded Core Curriculum
Department	Teaching and Learning
Degree	Doctor of Philosophy

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Renae Therese Bjorg
November 29, 2016

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ACKNOWLEDGMENTS

I wish to thank the following individuals who have encouraged, supported, and equipped me to complete this dissertation. I could not have done it without their help. Through this research and writing process, I have grown in ways that reach far beyond the walls of academia. I am deeply grateful for the individuals who came alongside me on this journey.

I want to thank Dr. Myrna Olson, my committee chairperson. You planted the seeds of the doctoral program years ago, and nurtured and supported me as they came to fruition. Your confidence in my abilities helped me to step more fully into the woman I am today. Your guidance and direction throughout my educational experiences at the University of North Dakota, and especially during this dissertation process, have been invaluable.

My sincere thanks to Dr. Kari Chiasson, my doctoral advisor. Not only did you provide the roadmap for successfully completing this dissertation, you held the light at every turn so that I would stay the course. Your insights and provocative questions helped me to analyze my data and refine my writing process. You taught me to have courage and to take risks.

I wish to thank Dr. Patti Mahar, committee member, for being a joyful giver. You have inspired me to embrace the process, and to embrace life. Your feedback confirmed

on of my deepest desires for this research, which is that people know the importance and the value of teaching the expanded core curriculum.

I wish to thank Dr. Peggy Mohr, committee member, for her unique perspectives. Your suggestions to work with physical therapists and occupational therapists to create innovative ways of service delivery are brilliant. Your gentle, yet passionate, demeanor has helped me approach this project from a more grounded standpoint.

I want to thank my editor, Sharon Fields. I appreciate your keen eye for detail and editorial work. Your investment in ensuring that this document is of the utmost quality is unparalleled. Thank you to Sandy Krom also, who formatted this document.

I want to thank each of the individuals who participated in this study. I am grateful to them for taking time to share their stories, and for the continual difference they make in the lives of their students with visual impairments and the students' families. The contributions these teachers of students with visual impairments have made are priceless.

I wish to extend a special thank you to my family. I appreciate your support and encouragement more than you know. To my daughter Bianca and her husband Jake, thank you for always cheering me on and celebrating my successes. Ella, Anna, Joshua, Karina, Caleb, and Olivia, your joyfulness and playfulness lifted my spirits and inspired my creativity. I am so blessed that you are my grandchildren. To my son Zach, thank you for helping me to set realistic goals and encouraging me to accept nothing less than greatness. Shana, thank you for the many copies of articles and research items. Shannon and Jake, thank you for your patience and forgiveness for often being preoccupied with this dissertation. Mom and Dad, your love and support mean the world to me. Thank you to my husband, Paul. You are my beloved and my best friend. Thank you for your

prayers and for believing in me. Your strength and faith are unwavering. You are my dream come true. I thank you, Jesus Christ, my Lord and Savior. With you, all things are possible.

ABSTRACT

The purpose of the qualitative research study was to explore the perceptions and experiences of teachers of students with visual impairments (TSVIs) in the state of North Dakota regarding the expanded core curriculum (ECC). This study included transcribed interviews from six TSVIs who taught in grades K-12.

The National Agenda for the Education of Children and Youths with Visual Impairments, Including Those with Multiple Disabilities was used to frame this study. Phenomenological methods were used to analyze the interviews into codes, categories, themes, and an assertion. Following were the seven themes supported by the data collected:

1. Teachers of students with visual impairments (TSVIs) reported that the responsibility of educating students with visual impairments is "huge"; therefore, it takes a village (i.e., North Dakota Vision Services/School for the Blind [NDVS/SB] professionals, teams, and others) to ensure the unique needs of students with visual impairments are met.
2. TSVIs emphasized the importance of systematic and purposeful instruction, and ongoing and systematic checks for understanding.
3. TSVIs perceived instructors at the NDVS/SB as experts in teaching the expanded core curriculum.

4. TSVIs perceived they were primarily responsible for teaching compensatory skills and use of assistive technology.
5. TSVIs perceived the parents of students with visual impairments and the NDVS/SB were primarily responsible for teaching independent living skills of the expanded core curriculum (ECC).
6. TSVIs perceived academic curriculum takes precedence over the expanded core curriculum.
7. Limited time and limited access prohibit TSVIs from providing consistent, and systematic, instruction of the expanded core curriculum within their respective school districts.

These seven themes converged into the following assertion: Educating students with visual impairments in the state of North Dakota requires an integrative approach in which academic curriculum and expanded core curriculum are addressed through collaborative efforts among all stakeholders and service providers.

In summary, educating students with visual impairments is an enormous task that no one person can accomplish alone. It behooves stakeholders, associated with vision impairments, to work together to create models for teaching the expanded core curriculum that ensure equity of services throughout the state.

CHAPTER I

INTRODUCTION

Teachers of students with visual impairments (TSVIs) have a demanding role in educating students who have limited or no vision. The term visual impairment is used to describe a continuum of visual conditions that impedes individuals from accessing their environments, learning, and completing life skills independently. Some individuals on the continuum use their vision as their primary mode for gaining information. On the opposite end of the continuum, individuals who are totally blind must rely on other senses to gain information. For the purposes of this study, visual impairment is synonymous with legal blindness. It indicates a visual acuity of 20/200 or less, after best corrected vision. This designation means that a person with a visual impairment standing 20 feet from an object will see what a person with "normal vision" standing 200 feet from the object will see. A prescription for glasses will not improve the vision. The term visual impairment is also used to indicate a visual field of 20 degrees or less. A student with a visual field loss may see as if he or she were looking through a tube or a straw.

According to the American Printing House for the Blind (2014), there are approximately 60,393 students reported to have visual impairments in the United States. A majority of these students are served in the public school system (83.1%), while fewer students are served in the residential schools for the blind (8.5%). The remainder of

students receive services through rehabilitation programs and programs for students with multiple disabilities.

The field of visual impairment is considered to be a low incidence disability area. Consequently, there are few opportunities for people, in general, to interact with or relate to individuals who have vision impairments. For example, a general educator employed in the public school could teach for 15 years and never have contact with a student with limited or no vision. Hence, the teacher would not know of the strategies, technologies, or curricula needed to educate these individuals. In addition, it is unlikely that anyone in the educator's school district would understand the unique needs of students with visual impairments, unless the district employed a teacher who was educated and certified to teach these students. This lack of experience with students who have visual impairments is compounded by the shortage of teachers of students with visual impairments. Despite the low numbers of students with visual impairments, there are not enough teachers to address the scope of these students' needs (Ferrell, 2007).

Impact of Visual Impairments

According to Lowenfeld (1973), individuals with visual impairments are restricted in their ability to explore and participate in a variety of experiences, get around in their environments, and control their environments and selves in relationship to those environments. To combat these limitations, it is necessary to provide concrete, hands-on experiences with explicit and purposeful instruction for participation, and opportunities to unify concepts (e.g., to make sense of their environments). Systematic, direct instruction must be provided to ensure students with visual impairments learn to use their other senses (hearing, touching, tasting, smelling) efficiently, in order to avoid fragmented,

inconsistent learning (Allman & Lewis, 2014). Barraga and Erin (1992) outlined the role that vision plays in child development, in general, in order to ascertain the effects of visual impairments. The following 17 statements by Ferrell (2000) provide a summary of those aspects that affect the development of children with visual impairments:

1. **Vision gives a reason for movement.**…[It is the primary modality in which a baby and mother bond. Infants learn to hold their heads up and move to explore their environments because they see and want to experience.]

2. **Vision provides continuous contact with the environment.** When their eyes are open, children are instantly…[connected to the world] around them.

3. **Vision is an active sense that is under [a**…**student's control**].…[Students are able to close their eyes to tune out visual input, but they are not able to]… turn off their hearing or sense of smell.

4. **Vision gives an estimation of space.** Children…look at a desired object in …[their environments] and calculate the movement necessary to obtain it. They can also determine where empty chairs and the food table are located. And they do all of this without moving.

5. **Vision stimulates coordination and control.**…[Infants develop an awareness of their body parts through visual cues obtained by watching.]

6. **Vision provides feedback for refining patterns of movement.** Vision helps children give meaning to movement. When children reach for a toy, they learn how far and in what direction to extend their arms and then can make… necessary adjustments. Interactive games, such as pat-a-cake, help children make a physical connection to…visual image.

7. **Vision allows for vicarious participation in movement.** With vision children can watch another person's actions and be part of an activity. Young children…watch others move around and develop an understanding of how to move their body parts. When an adult rolls a ball, for example, a child watches the adult's position, the shape of the hands, the pushing action of the arms, and the movement of the ball. Thus, the child learns a great deal about rolling a ball without ever touching it.

8. **Vision provides information about the sequence of totality of movement patterns in progress – the whole process is visible.** Vision provides the wholeness of actions, the "start-to-finish" aspects of an activity. Young children see other children swinging and gain valuable information about the

process of swinging – the position, posture, and acceleration of the swing; the pumping action of the arms and the legs; and expressions of enjoyment.

9. **Vision provides a model for motor skills and gives feedback on the result.** Vision allows children to watch others' movements and see what happens as a result of those actions. The children can then imitate those movements, observe their own movements, and use this feedback to correct their movements.

10. **Vision facilitates body image and perception.** By observing the whole and individual parts of the body, children gain an easy sense of where their body parts start and end. [For example, they see that their fingers are connected to their bodies through their arms, and where their bodies end and the world begins.] Vision also helps children develop a sense of depth, as well as directionality and laterality, as they look at objects and people in all areas of their environment and see how these objects and people relate to them. This perception assists children in forming the concept of objects.

11. **Vision provides consistent, coordinated, and verifiable information.** Vision is not subject to the whims of opportunity – it is always there unless one closes one's eyes. Odors, on the other hand, disappear, and [the] touch can be used only if one is within reach. If a person hears a noise, vision verifies where it came from. Other sensations are discrete, one-time occurrences that are intermittent, inconsistent, and generally unverifiable.

12. **Vision is a strong motivator that stimulates self-initiated exploration of the environment.** Vision alone can motivate sighted children to move. If children see a desired toy, they will move to it without needing another person to encourage them. Vision encourages children's curiosity to explore and increases children's motivation to become independent.

13. **Vision provides an incentive for tactile exploration.** Tactile exploration is stimulated by the visual dimensions of objects, such as color, pattern, shape, and location.

14. **Vision is a distance sense and is under an individual's control.** Individuals can regulate visual input by opening and closing their eyes, and they see both near and far. Hearing is a distance sense, too, but there is no way to control the presence or absence of sound in the environment. Sound without visual verification is only noise coming from some undefined place. It acquires meaning only after sustained tactile, motor, and auditory interaction. In time, sounds become predictable, but a sound must acquire meaning before it can provide information about location, cause, or source.

15. **Vision facilitates cognitive development.** Vision is related to the development of concepts, abstractions, and mental representations that are difficult to form without visual memory.

16. **Vision provides an incentive for communication.** Young children learn to communicate with the world by developing a bond with the permanent people in their lives. For children who are sighted, vision tells them that their parents are constant and predictable people in their worlds. By responding to the sight of their parents and then turning to their parents' voices, young children begin to communicate by directing visual attention, showing anticipation, and then gesturing and eventually making sounds. The communicative intent of the gestures and sounds receives constant feedback and reinforcement from vision. As they observe the faces of adults, children are motivated to continue this ever-increasing cycle of reaching out, response, motivation, reaching out, response, and so on. Adults take advantage of children's visual sense to teach communication by using such phrases as "See this?" "Look at this." "Over here."

17. **Vision helps children develop concepts.** Concept development is an ongoing learning process for all children. Children learn the names of items and their function and then how to use the items. Concepts range from concrete (objects and characteristics, such as shapes, sizes, textures, likenesses, and differences) to semiconcrete or semiabstract (colors) to abstract (emotions and thoughts). (pp. 128-129)

The world is designed for people who have vision. Vision is the primary modality in which a baby and mother bond. Infants learn to hold their heads up and move to explore their environments because they see and want to experience. Vision allows individuals to have continuous contact with their environments; they understand where their bodies are in space. For example, they see that their fingers are connected to their bodies through their arms, and where their bodies end and the world begins. They look at objects in their environments and discern how to move their bodies to attain those objects. They develop concepts of "stars," "skyscrapers," and "oceans" by looking at them. Skills of dressing, eating, smiling, etc., are also learned through the visual modality.

Most students learn incidentally, through observation. That is, they learn about their environments through visual experiences which are supplemented by verbal or written descriptions. A student learns about the concept of "elephant" by looking at pictures, or looking at the animal in its natural environment or in a zoo. Through his or her observations, the student comes to understand the meaning of trunk, tusks, tail, ears, and enormous. A student who did not "see" the elephant would be able to learn the vocabulary, but would have limited understanding of its true meaning without concrete, hands-on experiences. Students with visual impairments would need to touch the elephant's trunk, tusks, ears, and tail to develop an understanding of these concepts. Additionally, they would need to be able to put the parts of the elephant together to see the "whole"; that is, they need to understand the spatial relationships. The student with visual impairments needs instruction that is specific, systematic, and purposeful in order to develop the concept "elephant."

While it is clear that vision, or lack thereof, affects an individual's ability to learn skills necessary to become an independent participant in his or her own life, the question still remains whether the children grow and develop at the same rate as their sighted peers (Ferrell, 1998). The opportunities available to learn impact the success of each individual.

Roles and Responsibilities of Teachers of Students With Visual Impairments

Teachers of students with visual impairments (TSVIs) are "special educator[s] trained and certified to provide direct instruction, accommodations, and modifications that provide access to the general curriculum for children who are blind or visually impaired" (Spungin & Ferrell, 2007, p. 1). TSVIs work in collaboration with other team

members (i.e., parents, general educators, school psychologists, orientation and mobility specialists) to ensure students with visual impairments receive a free appropriate public education (FAPE) in accordance with IDEA 2004 (Turnbull, Huerta, & Stowe, 2009). They serve students ranging in age from birth to 21 years, whose needs vary vastly (Wolffe et al., 2002). For example, the needs of a student who uses the braille code to solve advanced math problems are different than the needs of a student who is a nonreader and has multiple disabilities. Misconceptions and distortions have hindered understandings of the impact of visual impairments (Barraga, 1976).

Teachers of students with visual impairments (TSVIs) are responsible to conduct formal and informal assessments. They obtain and interpret information from the eye doctor (ophthalmologist), as well as other eye reports and functional vision reports. Additionally, they provide assistance in understanding and interpreting test results for other professionals. For example, as a result of the low numbers of students with visual impairments (Spungin & Ferrell, 2016), many school psychologists lack experience or training in evaluating students who have this disability. Thus, TSVIs would assist the psychologist. Some of the types of assessments conducted and interpreted by TSVIs include functional vision assessments; communication skills (e.g., reading distance, reading rates, and reading accuracy; portability of reading; visual fatigue; and tactile sensitivity); and learning media assessments in reading, writing, listening, and technology (Spungin & Ferrell, 2016). Teachers of students with visual impairments (TSVIs) assess learning environments and collaborate and consult with general educators to ensure that they are equipped to educate *all* children, including students with visual impairments, as mandated in the No Child Left Behind Act of 2001.

The role of the teacher of students with visual impairments (TSVIs) is to teach skills that provide access to the general curriculum. For example, for the student with visual impairments who cannot clearly see printed materials to access literacy (e.g., fluency, comprehension, computer technology, writing skills), direct and systematic instruction must occur (Riley, 2000). TSVIs provide an introduction to the mechanics of reading and writing, using braille. They also instruct students with visual impairments in spatial orientation to the page, use of the braillewriter and other specialized equipment, as well as application and reinforcement in decoding, comprehension, encoding, writing, and composition strategies taught by the classroom teacher (Spungin & Ferrell, 2016). TSVIs teach students how to skim brailled materials, search for significant information in recorded materials, take notes, and write reports. This teaching role is important because the general education teacher is not familiar with the braille media, cannot read or write braille, or understand the technical aspects of applying it (Spungin & Ferrell, 2016).

In addition to assisting students in accessing the core academics, teachers of students with visual impairments (TSVIs) also address a myriad of skills that are needed to be learned by many students with visual impairments. These vision-disability specific skills, outlined in nine areas of instruction, are known as the Expanded Core Curriculum (ECC) (Hatlen, 1996). These areas of instruction include (a) compensatory or access skills, (b) career education, (c) independent living skills, (d) orientation and mobility skills and concepts, (e) recreational and leisure skills, (f) self-determination skills, (g) social interaction skills, (h) use of assistive technology, and (i) sensory efficacy skills. The ECC will be further defined in the following paragraphs. Skill development in each of these areas is vital for students to become independent in their homes, schools, and

communities. Further, in order for students to become proficient, the ECC must be taught through systematic and purposeful instruction by a highly qualified professional in the field of visual impairments.

Expanded Core Curriculum

Throughout history, educators have recognized that the needs of students with visual impairments extend beyond what the traditional classroom curricula offers (Allman & Lewis, 2014). The expanded core curriculum (ECC) provides a *framework* to address these needs (Hatlen, 1996). In the following paragraphs, the nine areas of specific instruction are outlined, as addressed in the ECC.

1. *Compensatory or functional academic skills*: Guerette (2014) defined compensatory access as "information about the world, the ability to communicate, and literacy" (p. 61). Mastery of these skills indicates the student who is visually impaired has access to learning in a manner commensurate to that of his or her sighted peers (Hatlen, 1996). Some skills in this domain include learning braille, organizational skills, and identifying needed accommodations to complete a task (Lohmeier, Blankenship, & Hatlen, 2009).
2. *Social interaction skills* (Sacks, 2014): Development in this area hinges on the ability to recognize and adapt to the social rules of society. Many of these rules are internalized through visual imitation (Sacks, 2014), which poses challenges for individuals with visual impairments, as they miss subtle nuances, facial expressions, and gestures. Some components of social interaction include social etiquette, knowledge of self, and interpretation and monitoring of social behavior.

3. *Orientation and mobility skills*: According to Fazzi (2014), *orientation* refers to knowing one's position in relation to his or her environment, and conceptually understanding how things in one's environment are related physically and spatially. *Mobility* is moving through one's environment (Fazzi, 2014). The ultimate goal of orientation and mobility is safe, efficient, and independent travel (Hill & Ponder, 1976). Orientation and mobility skills are taught by a professional specifically trained in this area. The role of teachers of students with visual impairments (TSVIs) is to reinforce the techniques, such as expecting the student to use his or her cane during travel, and helping students to generalize orientation and mobility techniques through academic work.
4. *Independent living skills*: This area consists of tasks that people perform in their everyday lives that are necessary for independent living (Hatlen, 1996). Some components of independent living skills include personal hygiene, dressing, preparing and eating meals, managing time and finances, and organizing their daily activities and interactions.
5. *Recreation and leisure skills*: This area focuses on development of recreational and leisure activities that students with visual impairments can enjoy throughout their lifetimes (Hatlen, 1996). Students with visual impairments cannot visually observe others participating in these activities; thus, they are not aware of their choices. Skills for participation must be deliberately planned and taught. Some components of recreation and leisure include play, health, fitness, and individual sports and hobbies (Allman & Lewis, 2014).

6. *Career education*: This area focuses on skills, preferences, innate abilities, and habits needed to be successful in life (Wolffe, 2014). Students explore their strengths and interests through a systematic approach to ensure that they understand the basic knowledge of the work world that those with vision learn through prior visual experiences (Hatlen, 1996).
7. *Sensory efficiency*: This area refers to "how well…[one] receives, transmits, and interprets information about people…[and] objects…in the environment, using all sensory systems" (Smith, 2014, p. 117). The senses include hearing, vision, touch, taste, and smell. Using the senses effectively and efficiently is paramount to developing skills in all other ECC areas, as the senses aid in determining what is important enough to retain as knowledge (Kolb & Whishaw, 2009).
8. *Assistive technology*: According to the Individuals with Disabilities Act (IDEA 2004), assistive technology is defined as any item, piece of equipment, or product system, whether acquired commercially off the shelf, modified, or customized, "that is used to 'increase, maintain, or improve functional capabilities of a child with a disability'" (Turnbull et al., 2009, p. 10). Technology has been termed "the great equalizer" (Hatlen, 1996). In addition to the expectation that students with visual impairments will complete the general education technology curriculum (e.g., keyboarding), specific skills and knowledge in specialized equipment and devices is also necessary. One such device is a braille embosser, which produces braille when connected to a computer.

9. *Self-determination*: This area emphasizes the rights of individuals with visual impairments to make decisions based on their desires, natural abilities, and strengths. Some components of self-determination include choice making, problem solving, self-monitoring, decision making, goal setting, and self-advocacy (Downing, 2010).

While the goal for all students is that they become independent and successful adults, students with visual impairments need specific and purposeful training, and direct exposure to concepts, people, and environments to achieve this goal.

Issues Related to Visual Impairments

There is a gap in the professional literature regarding the field of visual impairments. In fact, this gap is so significant that the authors of foundational textbooks are hindered in "their ability to provide adequate numbers of current references for their chapters,"…[and further] "the core and expanded core curriculum have been virtually ignored for the past decade or more" (Holbrook, 2015, p. 159). The lack of current research is attributed to the low incidence of students with visual impairments (Holbrook, 2015). In sum, there are not enough teachers of students with visual impairments (TSVIs) to do the research, and there are not enough students with visual impairments to participate in large studies (Holbrook, 2015). Ultimately, this low incidence impedes TSVIs from developing and implementing research-based instruction and following best practices.

In a recent informal survey conducted by the North Dakota Vision Services/School for the Blind (October 27-29, 2015), seven issues relating to educating students with visual impairments in the state of North Dakota were addressed. Of

particular note is the finding that 20 out of 20 participants identified a "lack of adequate time to address the expanded core curriculum" as an issue. Additionally, participants reported their students received a lack of adequate instruction in many of the expanded core curriculum areas. Further, teachers of students with visual impairments (TSVIs) questioned the validity of standardized and state tests for students who are visually impaired.

In addition to a lack of time to implement the expanded core curriculum, as noted previously, Ferrell (2007) identified issues of large caseload sizes, teacher shortages, and a growing reliance on technology. Further, the itinerant model of service delivery has become the norm. Teachers of students with visual impairments (TSVIs) are expected to travel between schools and districts to serve students on their caseloads (Brown & Glaser, 2014). The amount of time spent traveling and the geographic distances between schools impedes contact time with students and team members, which limits time for direct instruction. TSVIs often work in isolation, meaning they have no network of support to "share the load, bounce ideas around, or solve problems related to issues specific to serving children with visual impairments" (Brown & Glaser, 2014, p. 519). This isolation is especially true for TSVIs who work in rural settings. Ferrell (2007) also clarified the rights of individuals with visual impairment to be educated in the least restrictive environment (IDEA 2004):

> Placement is not just an issue of providing supports, it is an issue of receiving equal access to the curriculum and to the academic and social life of the classroom. It is not just a question of having one's books and worksheets in braille, or a tactual map, or a computer with speech access software. It is also a question of the facial expressions that silently communicate expected behavior, the visual metaphors that have no reference point, the slides and videotapes and television that are truncated into auditory descriptions, the tactual models that are

> based on a visual representation, and the concepts that are not explained because they are assumed – not purposefully or with intent to harm, but harmful by omission nevertheless. (para. 9)

Purpose of the Study

The purpose of this study was to examine the perceptions and experiences of teachers of students with visual impairments (TSVIs), in the state of North Dakota, regarding the expanded core curriculum (ECC). The academic needs of students with visual impairments parallel those of their peers who are sighted; nonetheless, the academic core curriculum and the expanded core curriculum need to be addressed.

Statement of the Problem

Students with visual impairments not only need to have an understanding of core academics, they need to have an understanding of how to develop independence without the benefit of incidental learning that occurs naturally through observation. The statement of the problem is that students in the state of North Dakota, who are visually impaired and who have not acquired the expanded core curriculum skills, are at a distinct disadvantage in comparison with their sighted peers to function effectively in their homes, schools, and communities (Allman & Lewis, 2014). These expanded core skills are fundamental to the students' growth and development. Further, these skills must be taught from birth. In the public school system, educators are spending more time teaching skills needed to access the academic curriculum and less on the skills needed to access life. Because the public school curriculum is developed for visual learners, students with visual impairments must be purposefully taught. Unless shown or taught directly and purposefully, students with visual impairments are not able to fully access their environments. For example, students (who have a significant visual impairment) go

through the lunch line at school. They do not see the food choices; whereas, their peers who are sighted visually scan to see their options. While learning to open a milk carton is difficult for most kindergarten students, it is exceptionally hard for students who are visually impaired. Students with visual impairments cannot see the arrow on the carton to orientate their fingers to the correct "open" side. Additionally, they are unable to learn from watching their peers open their cartons. While there are tactile cues on a milk carton, it takes an enormous amount of practice to locate the arrow tactilely, to correctly place both hands on the carton, and to open it. Students with visual impairments must be taught using specific and purposeful instruction over an extended period of time. This specific instruction must occur in all settings and on all tasks.

Research Questions

The following two research questions guide this study:

1. What are the perceptions of TSVIs in the state of North Dakota, with regard to the expanded core curriculum?
2. What are the experiences of TSVIs in the state of North Dakota, with regard to the expanded core curriculum?

Conceptual Framework

This research project was explored through the lens of *The National Agenda for the Education of Children and Youths with Visual Impairments, Including Those with Multiple Disabilities* (referred to as The National Agenda) (Corn & Huebner, 1998). I selected this "framework," because The National Agenda was conceived through a grassroots movement and is considered to be *the* guiding structure that ensures students with visual impairments receive the supports and services needed to become independent

and successful. This agenda was established in 1995, by stakeholders vested in the assurance that children and youths with visual impairments received services that were effective as well as timely. To accomplish this task, 10 goals were defined. In the following list, the goals framed in The National Agenda are listed.

- Goal 1: Students and their families will be referred to an appropriate education program within 30 days of identification of a suspected visual impairment. Teachers of students with visual impairments and orientation and mobility (O&M) instructors will provide appropriate quality services.
- Goal 2: Policies and procedures will be implemented to ensure the right of all parents to full participation and equal partnership in the education process.
- Goal 3: Universities with a minimum of one full-time faculty member in the area of visual impairment will prepare a sufficient number of teachers and orientation and mobility (O&M) specialists for students with visual impairments to meet personnel needs throughout the country.
- Goal 4: Caseloads will be determined based on the assessed needs of students.
- Goal 5: Local education programs will ensure that all students have access to a full array of service delivery options.
- Goal 6: All assessments and evaluations of students will be conducted by or in partnership with personnel having expertise in the education of students with visual impairments and their parents.
- Goal 7: Access to developmental and educational services will include an assurance that textbooks and instructional materials are available to students in the appropriate media and at the same time as their sighted peers.
- Goal 8: All educational goals and instruction will address the academic and expanded core curricula based on the assessed needs of each student with visual impairments.
- Goal 9: Transition services will address developmental and educational needs (birth through high school) to assist students and their families in setting goals and implementing strategies through the life continuum commensurate with the students' aptitudes, interests, and abilities.
- Goal 10: To improve students' learning, service providers will engage in ongoing local, state, and national professional development. (American Foundation for the Blind, 2003, pp. 1-3)

While the scope of *The National Agenda for the Education of Children and Youths with Visual Impairments, Including Those with Multiple Disabilities* is broad, this dissertation will focus on Goal 8. Specifically, this study will explore the perceptions and experiences of teachers of students with visual impairments, in the State of North Dakota, with regard to the expanded core curriculum.

Significance of the Study

Skill development in the expanded core curriculum is paramount for increasing the likelihood that students with visual impairments become independent in their homes, schools, and environments. Information gathered through this study may help local and state decision makers, at varying levels, to structure purposeful strategic plans for effective implementation of the expanded core curriculum. Findings have the potential to impact service delivery for students with visual impairments in the state of North Dakota, and to serve as a basis for resource allocation. Additionally, this study might identify gaps that lead to attaining more resources and developing new ways of looking at how already existing resources are integrated. Ultimately, findings might influence how teachers of students with visual impairments ensure the ECC goals are accomplished in North Dakota.

Researcher Approach

In this phenomenological research study, six teachers of students with visual impairments (TSVIs) in North Dakota who worked with students (kindergarten through twelfth grade) participated in this study. Participants were currently employed as TSVIs in the state of North Dakota, and were willing to be interviewed via telephone to share their perceptions and experiences of the expanded core curriculum. Phenomenology was

determined to be the most appropriate methodology, as it seeks to explore the "lived experiences" of TSVIs.

Researcher Bias

I have spent a majority of my special education career as a teacher of students with visual impairments (TSVIs) in rural settings. While it is beneficial to have a wealth of background knowledge in the field of vision impairment in order to communicate and relate with the participants in this study, there are also potential drawbacks. I was cognizant of my "prejudgments, biases, and preconceived ideas" (Moustakas, 1994, p. 85) and set them aside in what Husserl refers to as "epoche" (p. 85). "Epoche [i.e., bracketing] includes entering a pure internal place, as an open self, ready to embrace life in what it truly offers. From epoche, we are challenged to create new ideas, new feelings, new awarenesses and understandings" (p. 86). This essential component of the research study will be accomplished by reflective journaling and memo writing. Moustakas purported that "epoche is rarely perfectly achieved…attitude and frame of reference significantly reduce the…biases" (p. 90).

Delimitations of the Study

1. This study focused on the perceptions of teachers of students with visual impairments (TSVIs) regarding the expanded core curriculum for students with visual impairments (kindergarten through twelfth grade) who were classified by Individuals with Disabilities Education Act (IDEA 2004) as legally blind (Turnbull et al., 2009). Individuals who are legally blind have a visual acuity of 20/200 best corrected vision, or a field of vision restricted to 20 degrees or less of the 180 degree "normal" field of vision. Data pertaining to curricular issues

for students reported to have low vision and students identified with multiple impairments were excluded from this study.

2. This research was limited to the state of North Dakota.
3. Interviews were conducted via phone with five of the six participants; thus, the nonverbal information obtained through face to face interviews was not apparent.
4. Teachers of students with visual impairments (TSVIs), with less than three years of experience in the field of vision, were excluded from this study.
5. Teachers of students with visual impairments, who have provisional licenses to teach students with visual impairments, were not included in the study.
6. The field of visual impairments is small. Some participants might have had concerns about the confidentiality of their responses.

Definitions

The following terms are used throughout the study. These terms are defined in the section that follows to assist the reader and to establish common terminology.

1. Blind: It indicates a visual acuity of 20/200 or less best corrected vision. This means that a person with a visual impairment standing 20 feet from an object will see what a person with "normal vision" standing 200 feet from the object will see. A prescription for glasses will not improve the vision. The term visual impairment is also used to indicate a visual field of 20 degrees or less.
2. Core curriculum: It includes the universal curriculum taught to all students in the public school setting and primarily involves academic subjects (i.e., reading, language arts, mathematics, health).

3. Expanded core curriculum: Refers to nine areas of curriculum which must be addressed in order for students with visual impairments to become independent (compensatory access, sensory efficiency, assistive technology, orientation and mobility, independent living, social interaction, recreation and leisure, career education, self-determination) (Hatlen, 2006).
4. Itinerant: Model of instruction whereby the TSVI travels to multiple schools to serve students in each location (Brown & Glaser, 2014, p. 519).
5. Sighted: Refers to individuals who have no visual impairments.
6. Teacher of students with visual impairments: "A special educator trained and certified to provide direct instruction, accommodations, and modifications that provide access" (Spungin & Ferrell, 2007, p. 1).
7. Orientation and mobility specialist: A professional who is certified to teach students with visual impairments to travel safely, efficiently, and independently in their environments (Hill & Ponder, 1976).
8. Visually impaired: For the purposes of this study, visual impairment is synonymous with legal blindness, as defined previously.

Organization of the Study

Chapter I included the background and need or significance of studying the topic of the expanded core curriculum, as perceived through teachers of students with visual impairments in the state of North Dakota. The National Agenda was used as a theoretical framework for this phenomenological study. Researcher bias, delimitations, and definitions were also included in this chapter.

Chapter II is a review of the literature with regard to the topic of the expanded core curriculum. Subcategories in this chapter include historical perspectives, The National Agenda, and the expanded core curriculum.

Chapter III contains a description of the qualitative methods and procedures I used to conduct this study. Participant selection, data collection, methods of analysis, and discussion of trustworthiness are provided in this chapter.

Chapter IV is a presentation of the data with respect to the literature. Participants' quotes were utilized to provide information about the perceptions and experiences of teachers of students with visual impairments (TSVIs).

Chapter V includes the summary, conclusions, recommendations for teaching the expanded core curriculum, and recommendations for future studies.

CHAPTER II

REVIEW OF LITERATURE

The purpose of this study was to examine the perceptions and experiences of teachers of students with visual impairments (TSVIs), in the state of North Dakota, regarding the expanded core curriculum (ECC). This chapter contains a review of the literature related to this disability specific curriculum. The literature is organized into the following categories: historical perspectives, The National Agenda, and the expanded core curriculum.

Students who are visually impaired have the same basic needs as all children (Orlansky, 1977). Educationally, they have the right to a free appropriate public education in the least restrictive environment (IDEA 2004) and are expected to learn the same academic curriculum offered by their local schools as their sighted peers. Beyond the academic curriculum, students with visual impairments require instruction that is disability specific: "Children who are blind or visually impaired see differently than their sighted peers and, therefore, need to be educated to take that difference into account" (O'Connor, 1998, p. v.). Prior to the development of The National Agenda, academic achievement was considered a priority, while skills of dressing, eating, and grooming; traveling safely throughout one's environment; and career education were "elective" (Corn & Huebner, 1998). These skills were often "added to the learning needs of students and taught as time allowed" (Hatlen, 1998, p. 50). In sum, reading skills were considered

to be more important than skills that would ensure lifelong independence. The National Agenda was set forth to establish a concrete and cohesive plan to address the unique needs of students with visual impairments.

Historical Perspectives

According to Lowenfeld (1973), education of individuals who had visual impairments reflected the attitudes of society and were divided into phases of evolution: separation, ward status, self-emancipation, and integration. In tribal societies, some individuals with visual impairments were put to death, while others were treated with great respect or reverence. Regardless of whether the individual was considered to be a liability or an asset, separation from society was inescapable.

At the time monotheism came into practice, orphans, elderly, and individuals who were blind became the responsibility (wards) of society, namely the Christian church (Lowenfeld, 1973). Some of these individuals were admitted into asylums or hospitals; yet, most became beggars, reliant upon assistance from the church community. During the Crusades, hospices specifically dedicated for individuals who were blind were founded. By the 18th century, some of the wards became educated and were perceived to be "outstanding in various fields of endeavor" (Lowenfeld, 1973, p. 2). Thus, the phase of self-emancipation commenced. In Table 1, five "outstanding" individuals who lived during the self-emancipation phase are highlighted. Their roles in society helped to change perceptions to support the idea that individuals with blindness "could be intellectually competent and could lead regular lives" (Hatlen, 2000, p. 2).

Table 1. Famous Individuals With Visual Impairments and Their Accomplishments.

Name	Years of Life	Contribution
Nicholas Saunderson	1682-1739	Mathematician Lucian Professor of Mathematics at Cambridge
John Metcalf	1717-1810	English road engineer and bridge builder
Thomas Blacklock	1721-1791	Scotch poet and minister
Francois Huber	1750-1831	Swiss naturalist Specialized in the life of bees
Maria Theresia von Paradis	1759-1824	Viennese singer and pianist

Note. Adapted from *The Visually Handicapped Child in School* (pp. 2-3) by B. Lowenfeld (Ed.), 1973, New York, NY: American Foundation for the Blind. Copyright 1973 by American Foundation for the Blind, Inc.

The integration phase evolved from the belief that individuals who were blind had strengths and interests that went beyond the limited job skills taught in segregated workshops for individuals who were blind (Lowenfeld, 1973). The advent of training and new job opportunities for individuals with blindness resulted in advanced travel techniques (orientation and mobility) to ensure safety and independence in getting around in their work environments and in their communities. The field of orientation and mobility was propelled further, as the needs of soldiers who had become blinded in war exploded.

Residential Schools

Residential schools were established in Europe and in the United States with the premise that children who were blind needed to be separated from their sighted peers in order to learn, because no other way seemed feasible (Lowenfeld, 1981). One reason for the separation was that public schools were not prepared to teach students with visual impairments. Hatlen (2000) cited geographical distance and low incidence of blindness as prohibitive in educating students with visual impairments in their home communities. Additionally, separation of individuals with blindness from those who could see had been the norm. In some German societies, individuals who were blind spent their lives on one campus. Upon graduating from residential schools where they spent their school aged years, they transitioned to a building to work on handicrafts; upon retirement, they transitioned to a building for the aged. Lowenfeld (1981) referred to this as "cradle to grave security" (p. 47). Proponents of this type of security argued that individuals with visual impairments needed others to take care of them. In fact, they argued that it was cruel to expect these individuals to care for themselves.

Contrary to the German model of protective separation, the education of students with visual impairments in Europe and the United States has focused on ensuring these students are equipped to become productive contributing members of society, "that blind children must be brought up to take their rightful places in society with the privileges and responsibilities that are a part of citizenship" (Lowenfeld, 1975, p. 101). Residential schools have been formed on "principles of promise and potential" rather than places of charity or pity (Ferrell, 2007, Historical Trends, para. 4). These schools have been centers of knowledge and expertise for teaching methodologies that enrich learning experiences

for students with visual impairments. They have also served as training facilities for teachers of students with visual impairments (TSVIs), their students, and their parents.

The first residential school was established in Paris, by Valentin Hauy in 1784 (Lowenfeld, 1973). Hauy believed that all students who were blind could learn to read and write, perform music, carry out everyday activities, and benefit from vocational training (Roberts, 1986). The trend of founding residential schools in the United States and Canada, fashioned after Hauy's school, began in 1829 and concluded in 1957. All but nine states in the United States housed a school for the blind. Initially, these schools were privately funded, and it was considered "fashionable for the well-to-do to send their children to boarding schools" (Roberts, 1986, p. 3). In 1837, prompted by the changing views on education that all children, including children who were blind, were entitled to a free public education, the first state supported residential school was established (Roberts, 1986). The law to support this view did not come into effect until more than 100 years later. Nonetheless, schools for the blind were established prior to the laws mandating education.

Although education in schools for the blind was the only option for students with visual impairments in the United States until 1900, these schools were scrutinized (Hatlen, 2000). Samuel Howe, the director of the first residential school in the United States, argued that it was a fundamental right for children who were blind to live with their families and be educated and supported in their home communities. Additionally, he held that students who were blind were entitled to an education equal to that of their sighted peers.

Students who were visually impaired were first integrated into public schools in 1900 as a result of (a) changing perceptions of society toward blindness, (b) the superiority of public schools in America, and (c) the importance of family life (Lowenfeld, 1973). The movement towards integration grew out of the charge of residential schools to educate students who would contribute to society. In order to assimilate into society, students with visual impairments needed to be exposed to it. Thus, opportunities for students with visual impairments to get together with sighted students in the community, and for sighted students in the community to go to the residential schools, were arranged. In the public school system, students with visual impairments were assigned to a homeroom with a resource teacher and went to classes in which they did not need specialized assistance with sighted peers (Lowenfeld, 1975). Eventually, as students with visual impairments became more independent, they were placed in general education classrooms and went to the resource rooms for specific skill development. According to Ferrell (2007, Historical Trends, para. 3), "by the 1930s residential schools were 'mainstreaming' secondary students in local high schools, 40 years before the term came into the educational lexicon in 1974 (Merriam-Webster, 2001)."

Schools for the blind remained the primary source of education until the 1950s, when children affected by an "epidemic of blindness" became school age. This epidemic known as retrolental fibroplasia (renamed as retinopathy of prematurity) affected approximately 10,000 infants born prematurely (Hatlen, 2000). The cause of blindness was eventually associated with oxygen therapy administered to premature babies (Gruber & Moor, 1963), which resulted in "scar tissue behind the lens of the eye" (Hatlen, 2000, p. 18). Local school districts became the primary source of education for

children with retrolental fibroplasia for the following reasons: (a) The schools for the blind could not manage the large influx of students; (b) there were enough students to justify hiring a resource teacher for students with visual impairments in local school districts; (c) low prevalence of students with visual impairments was no longer a valid reason to send students to schools for the blind; (d) many students with retrolental fibroplasia were born to affluent families who did not want to send their children hundreds of miles away to attend residential schools; (e) professionals and communities were ready for change; (f) curriculum adaptations to general education were already being made; and (g) the rapid growth of volunteer braille-transcriptionists increased throughout the country (Hatlen, 2000). As a result of the epidemic and the already forward movement toward the education of children with special needs, teamwork and collaboration between parents, educators, social workers, as well as professionals specializing in language, eye care, and mental health, became a necessity (Kastein, Spaulding, & Scharf, 1980; Lowenfeld, 1971).

From the mid 1950s to the 1970s, Howe and his colleagues pioneered a movement, which asserted that "children with visual impairments had no specialized or unique needs. Their needs were believed to be parallel to those [needs] of their sighted peers" (Hatlen, 1990, p. 79). In this new model of education, students spent most of their school day in the general education classroom with their sighted peers. They would be considered to be integrated successfully, if they "learned and competed with sighted classmates in academic subjects" (Hatlen, 1990, p. 79). The role of the special educator in this model was to adapt materials and transcribe them into the appropriate modality, consult with the general education teacher, provide braille instruction, and reinforce

classroom learning through tutoring. Throughout the mid 1950s to the 1970s, Hatlen (1990) and his colleagues took great pride in the fact that students with visual impairments received their educational rights alongside their sighted peers. In fact, there was no segregation between the sighted and the non-sighted. Additionally, these students with visual impairments did well academically. It was not until the students who were visually impaired began to graduate, after spending their entire academic careers in the general education classrooms, that Hatlen and his colleagues began to realize the adverse effects of educating the students with visual impairments in the same way as their sighted peers. Instead of educating students to become independent and productive citizens, they produced young adults who could solve advanced math equations and read advanced literature, but could not make change for a dollar or dress themselves. They also lacked the ability to determine what skills were necessary to obtain jobs. When denied instruction specific to their visual impairments, students lacked organizational skills, had poor social relationships, and demonstrated deficits in the areas in which they were previously instructed (Curry & Hatlen, 1988). Conversely, their sighted peers who received the same education were prepared to pursue educational and work aspirations and to live as independent adults.

As the 15-year era of total academic immersion into the general education classroom ended, Hatlen (1990) proved that students with visual impairments had the same basic needs and rights to education as their sighted counterparts; nonetheless, they required a totally different teaching methodology that was specific to their visual impairment.

In the 1970s and 1980s, changes in legislature and implementation of it shifted the focus of education (Lowenfeld, 1981). Of these new laws, P.L. 94-142, the Education for All Handicapped Children Act (EAHCA) had the greatest impact on the way in which children with disabilities were educated and served. This impact was especially significant for individuals with intellectual disabilities (formerly known as mental retardation) and for students with severe multiple disabilities. Thousands of these students lived in state institutions, where they were denied access to education (Hatlen, 2000).

Established in 1975, the Education for All Handicapped Children Act (EAHCA) mandated that *all* children with disabilities had the right to a free and appropriate public education. Specifically, these children were to be educated alongside their peers in the least restrictive environment. EAHCA also included (a) an emphasis on comprehensive and appropriate assessment; (b) the requirement of an Individualized Education Program (IEP) for every child with a disability; (c) a four-step process of services: identification, assessment, development of an IEP, and placement; and (d) a due process to mediate differences between schools and parents (Hatlen, 2000).

While the EAHCA freed individuals with severe disabilities from institutions and guaranteed them an education, its impact on the field of visual impairments was not as helpful. Integration with sighted peers and education of individuals with visual impairments and multiple disabilities had occurred in day schools long before the passing of the EAHCA (Hatlen, 2000). Also, partnerships with parents in making decisions and planning for their children were considered essential to the education of the students with visual impairment prior to the law. The challenge for teachers of students with visual

impairments (TSVIs) was learning how to assess, develop IEPs, and determine placements (Hatlen, 2000).

According to Spungin (1998), the Education for All Handicapped Children Act (EAHCA) came at a cost to students with visual impairments. Because of their unique needs and the nature of the low incidence prevalence, it was expensive to educate students with visual impairments. The delegated funds for mainstreaming *all* children with disabilities were not inclusive enough to meet the needs of all the students. The lack of funds, the move toward placement of all students with disabilities into the general education classrooms, and the lack of support from specialized teachers resulted in inadequate services (Spungin, 1998). Further, the term least restrictive environment (LRE) became synonymous with educating students with disabilities alongside their non-disabled peers (i.e., placements were made based on "philosophical beliefs," rather than on the individual needs of each student). In this model, residential schools were considered as a last resort rather than a place of optimal, efficient, and necessary education, as well as a viable resource for parents, students, and professionals. The National Agenda was established, because "services for some [students who are] blind and visually impaired…are not…addressing their unique educational and learning needs" (Hatlen, 2000, pp. 15-16).

The National Agenda

Children with visual impairments learn differently, because they cannot rely on their visual sense to obtain information (Ferrell, 1997).

> The information they obtain through their other senses is *inconsistent* (things do not always make noise or produce an odor), *fragmented* (comes in bits and

> pieces), and *passive* (not under the child's control). It takes practice, training, and time [to make sense] to sort all this out. (Ferrell, 1997, p. v)

O'Connor (1998) stated, "Children who are blind or visually impaired see differently…and, therefore, need to be educated to take that difference into account" (p. v). The National Agenda was established to identify and account for those differences and to level the playing field so that individuals with visual impairments might learn the same information as their sighted peers in a way that is commensurate with their strengths and needs. It was developed, because students with visual impairments were not receiving the quality and quantity of services needed to support their individual needs consistently and universally (Spungin, 1998). Specifically, many students (a) did not receive orientation and mobility service from a teacher specially trained to provide the service, (b) textbooks in braille did not arrive when students with sight received their books, (c) assessments were completed by professionals not qualified to ascertain the implications of visual impairments, and (d) lack of low-tech devices and training in use of the devices hindered students from using vision. Ultimately, students with visual impairments lacked the skills or emotional readiness to join the workforce and achieve independence as adults.

In 1990, *A Nation at Risk* and the subsequent movement of Goals 2000 (as well as the special education document, *Achieving Better Results for Children with Disabilities*) were produced. None of these documents addressed the specific needs of individuals with visual impairments. Consequently, in 1994, leaders in the field initiated conversations among parents, professionals, adults with visual impairments, administrators, and organizations supporting individuals with visual impairments. A steering committee was

formed and work groups produced goals that would "have major positive impact on the education of children and youths with visual impairments, and could be achievable by the year 2000" (Corn & Huebner, 1998, p. 4). The work groups proposed 19 goals. More than 2,000 surveys were distributed throughout the United States, asking respondents to rate the extent of potential impact on educational services and programs, and to indicate their beliefs in how likely the goal was achievable by the year 2000. Five hundred and sixteen respondents (parents, professionals, adults with visual impairments) from 40 states returned the survey. Following are the eight goals established as a result of the survey, indicating The National Agenda (Corn & Huebner, 1998), which created a "framework" for establishing quality service delivery and program models for educating students with visual impairments.

Goal 1: *Referral*: Students and their families will be referred to an appropriate education program within thirty days of identification of a suspected visual impairment.

Goal 2: *Parent Participation*: Policies and procedures will be implemented to ensure the right of all parents to full participation and equal partnership in the education process.

Goal 3: *Personnel Preparation*: Universities, with a minimum of one full-time faculty member in the area of visual impairment, will prepare a sufficient number of educators of students with visual impairments to meet personnel needs throughout the country.

Goal 4: *Provision of Educational Services*: Service providers will determine caseloads based on the needs of students and will require ongoing professional development for all teachers and orientation and mobility instructors.

Goal 5: *Array of Services*: Local education programs will ensure that all students have access to a full array of placement options.

Goal 6: *Assessment*: Assessment of students will be conducted, in collaboration with parents, by personnel having expertise in the education of students with visual impairments.

Goal 7: *Access to Instructional Materials*: Access to developmental and educational services will include an assurance that instructional materials are available to students in the appropriate media and at the same time as their sighted peers.

Goal 8: *Core Curriculum*: Educational and developmental goals, including instruction, will reflect the assessed needs of each student in all areas of academic and disability-specific core curricula. (Corn & Huebner, 1998, pp. 5-6)

Data were collected to determine a baseline for each of The National Agenda goals. Survey results, with regard to Goal 8, revealed five barriers to providing the disability specific core curriculum and five potential solutions to the barriers (Table 2).

Table 2. Barriers and Potential Solutions to Providing the ECC.

	Barrier	Solution
1.	Caseload too large	Summer programs
2.	Must first meet academic needs	Schools for the blind
3.	Inadequate assessment materials	Extended year / extended day
4.	No recognition of need from administration	In-service for administrators and teachers in denial
5.	Students do not have enough time	More placement options

Note. Adapted from *A Report to the Nation*: *The National Agenda for the Education of Children and Youths with Visual Impairments, Including Those with Multiple Disabilities* (p. 51) by A. L. Corn and K. M. Huebner, 1998, New York, NY: AFB Press. Copyright 1998 by AFB Press.

Results highlighted what parents and professionals had known for years: Many students were not receiving the disability specific core curriculum, due to lack of time (as

a result of large caseloads and prioritization of academic subjects), and a lack of administrative support (as a result of misperceptions of student need). Innovative solutions to provide instruction in the disability specific core curriculum were recommended.

Since 1998, two more goals have been added to The National Agenda. Some of the existing goals have been redefined to include the following:

Goal 1. Students and their families will be referred to an appropriate education program within 30 days of identification of a suspected visual impairment. Teachers of students with visual impairments [TSVIs] and orientation and mobility (O&M) instructors will provide appropriate quality services.

Goal 2. Policies and procedures will be implemented to ensure the right of all parents to full participation and equal partnership in the education process.

Goal 3. Universities with a minimum of one full-time faculty member in the area of visual impairment will prepare a sufficient number of teachers and orientation and mobility (O&M) specialists for students with visual impairments to meet personnel needs throughout the country.

Goal 4. Caseloads will be determined based on the assessed needs of students.

Goal 5. Local education programs will ensure that all students have access to a full array of service delivery options.

Goal 6. All assessments and evaluations of students will be conducted by or in partnership with personnel having expertise in the education of students with visual impairments and their parents.

Goal 7. Access to developmental and educational services will include an assurance that textbooks and instructional materials are available to students in the appropriate media and at the same time as their sighted peers.

Goal 8. All educational goals and instruction will address the academic and expanded core curricula based on the assessed needs of each student with visual impairments.

Goal 9. Transition services will address developmental and educational needs (birth through high school) to assist students and their families in setting goals and implementing strategies through the life continuum commensurate with students' aptitudes, interests, and abilities.

Goal 10. To improve students' learning, service providers will engage in ongoing local, state, and national professional development. (American Foundation for the Blind, 2003, pp. 1-3)

Expanded Core Curriculum

In 2004, The Individuals with Disabilities Education Act (IDEA) was reauthorized. Formerly, this law was referred to as the Education for All Handicapped Children Act, IDEA 1990, and IDEA 1997. In addition to the provisions of free appropriate public education and least restrictive environment, IDEA 2004 mandated that Individualized Education Programs (IEPs) must address functional performance and must meet the educational needs resulting from disabilities (Sapp & Hatlen, 2010). "The reauthorization clearly supports the provision of instruction in all the areas of the ECC, since these are functional and educational needs that result from a disability" (Sapp & Hatlen, 2010, p. 339). "The Expanded Core Curriculum provides opportunities for equality for the blind and visually impaired; to NOT teach it is to deny this basic human right" (Hatlen, 2005, para. 1).

A 2005 qualitative study by Carolyn Palmer was conducted to determine the perceptions of parents and professionals with regard to the Expanded Core Curriculum (ECC). Specifically, Palmer (2005) sought to determine participants' understanding of the ECC and perceived issues and challenges to the interface between the ECC and Regular School Curriculum. Participants were selected from regular and special schools, and education facilities across four regions in an unidentified country. Data were

collected over a two-week period. Findings indicated that Regular School Curriculum was perceived to be the foundation for all teaching and learning programs in the country studied. Further, the ECC was not perceived as a separate curriculum: Participants viewed the ECC as a necessary means by which students with visual impairments obtain essential skills and knowledge in order to (a) gain access to the regular curriculum, (b) compete on a level playing field with their sighted peers, and (c) become active in their own learning. The Individualized Education Program (IEP) process was deemed vital in ensuring that ECC goals and objectives were implemented as appropriate for each student. Vision support teachers believed the role of the general education teacher was to deliver the regular curriculum; and, the role of the vision support teacher was to deliver the ECC and collaborate and support the general education teacher.

Several perceived challenges relating to the ECC were identified by Palmer (2005):

1. Neither parents nor professionals understood the interface between the ECC and the regular curriculum.
2. The Department of Education and general education teachers viewed the ECC to be in competition with the Regular School Curriculum.
3. General education teachers were ignorant about the value of the ECC.
4. There was a lack of understanding that the Regular School Curriculum is the core and the ECC constitutes the skills and knowledge students with visual impairments need to access the general education curriculum.
5. Students with visual impairments add to the workload of general education teachers.

6. General education teachers do not feel qualified to adapt and integrate curriculum.
7. Vision support teachers lacked time to support the general education teachers.
8. Communicating the importance of the ECC (to administrators, parents, students, and community members) is an enormous task.

Orientation and Mobility

One of the most significant challenges for people who are visually impaired is to travel independently outside of their homes (Ball & Nicolle, 2015). In addition to traveling safely and independently, mobility affords individuals with visual impairments opportunities to engage in social interactions and to maintain a quality of life. In order to determine the major concerns of individuals who are visually impaired in relation to independent travel, and how they resolve the concerns, a qualitative study was conducted using a *grounded theory* approach (Ball & Nicolle, 2015). Results revealed that individuals who had visual impairments made decisions about mobility based on what was perceived as "normal" by themselves and others in a given situation. It was concluded that, in order to increase independent travel, service providers needed to "normalize" participation, autonomy, and self-reliance (Ball & Nicolle, 2015). Lowenfeld (1973) held that mobility training is critical to ensuring independence and promoting integration into society.

Accessing Assistive Technology

According to Lowenfeld (1973), the three chief obstacles that individuals with visual impairments need to overcome can be resolved through assistive technology: access to information, independent travel, and a lack of meaningful experiences (Smith,

Kelly, & Kapperman, 2011). Students who have visual impairments need to learn the same skills in technology use as their peers who are sighted. Some of these skills include keyboarding, creating and saving documents, organizing documents and retrieving documents, printing and using the World Wide Web to send and receive emails, and using other social media. In order to perform these basic skills, students who have visual impairments also need to learn to access the technology.

Adoption of virtual textbooks is another way in which the use of assistive technology enhances learning for students with visual impairments. Reproducing a textbook in braille is an arduous enterprise, related to the cost and the time involved in creating it. Frequently, books required by school systems are simply not available in braille or large print, or not available in a timely manner. Often, students with visual impairments wait several weeks or months to acquire a textbook their sighted counterparts received within the first days of the school year (Smith, Geruschat, & Huebner, 2004). While advances in the field of technology make it possible for individuals with visual impairments to access textbooks and other printed materials using computers, these students are not receiving the experience they need with assistive technology (Kelly, 2009). Overall, Kelly (2009) stated that 59% to 71% of students who would benefit from assistive technology did not have opportunities to use it. Teacher beliefs that technology was not important, lack of equipment due to financial cost, and feelings of incompetence by the teachers to integrate technology into the curriculum or instruct students were cited as reasons why students have limited opportunities to use technology (Kamei-Hannan, Howe, Herrera, & Erin, 2012).

A secondary analysis of a large scale national policy survey was conducted from 1999-2004 to determine the percentage of assistive technology being used over a four-year period. The aim of the study was to determine the level of use of assistive technology in students with visual impairments (K-12) in Illinois. Results indicated that less than half of the students who had visual impairments had the opportunity to use assistive technology during each of the three measured periods (Kelly, 2009). Additionally, there was a lack of change in use of assistive technology over the five years studied. Increased parental involvement in school meetings and networks with other parents resulted in significantly higher odds in the likelihood of effective technology use by their children. The need for specialized training in the area of assistive technology in university preparation programs was indicated.

Kamei-Hannan et al. (2012) conducted a study to investigate the knowledge and skills of graduate students who took a course on assistive technology at three university programs within a six-year span. Participants completed a pre-test and two follow-up tests to determine the importance and frequency of use of assistive technology devices and software following completion of a course. Comparison scores of self-reported skills from the first to last date of testing revealed a perceived overall improvement of 80% to 90% for all of the specific technologies, and increased confidence in technologies specific to individuals with visual impairments. A close link was found between teachers' perceptions of their students' needs and the skills that they had for meeting those needs (Kamei-Hannan et al., 2012).

Career Education

Students who have visual impairments must have firsthand experience in a variety of work settings to make knowledgeable decisions about their job goals (Sapp & Hatlen, 2010). In order to determine if instruction in areas of the expanded core curriculum positively influenced success (i.e., employment, participation in volunteer activity, or enrollment in postsecondary education and training), an analysis of the National Longitudinal Transition Study 2 (NLTS2) was conducted (Wolffe & Kelly, 2011). The NLTS2 is a longitudinal data base of high school and post-high school transition-aged youths with disabilities (Wolffe & Kelly, 2011). Wolffe and Kelly (2011) investigated which disability specific services were received by individuals with visual impairment in the public school system and how those services translated into outcomes for those who received them. An analysis of the data revealed limited instruction in some areas of the expanded core curriculum, such as career counseling (help finding a job, training in job skills, and vocational education). The severity of the visual impairment influenced which expanded core curriculum measures were utilized. Significant relationships were found between the use of braille and attending a postsecondary institution and having obtained employment. Career counseling, orientation and mobility, the use of assistive technology, social interaction, and the receipt of braille instruction were also found to be significantly related to each other and to employment.

Social Interaction

"Learning social skills might be as important as learning to read," suggested Hatlen (2006, p. xii). Despite this proclamation, Lohmeier (2006) claimed that social interaction development and visual efficiency were the least emphasized areas of the

expanded core curriculum. According to Sacks (2014), social skills are intricately tied to all parts of a student's life, especially in the areas of compensatory access, recreation and leisure, independent living, and self-determination. Learning social skills mandates that the parent, teacher, and community members bring the world to the child. The itinerant model of instruction and large caseload sizes, in most cases, prohibit students from becoming socially included by their peers related to the lack of time for direct, systematic, and consistent instruction (Ajuwon, Sarraj, Griffin-Shirley, Lechtenberger, & Zhou, 2015). Deficits in social skills result in potential isolation, dependence, and an inability to become employed or maintain employment (Sacks & Wolffe, 2006).

Compensatory Access

Compensatory skills are skills necessary for students with visual impairments to access the general education curriculum at a level commensurate with their sighted counterparts (Sapp & Hatlen, 2010). Guerette (2014) identified three components of compensatory access: (a) access to information about the world, (b) the ability to communicate, and (c) literacy. Skill development in these areas is central to academic success.

In the area of communication, braille is a primary tool for many students who are visually impaired. Individuals with Disabilities Education Act (IDEA 2004) mandates a student with a visual impairment be provided with instruction in braille, unless the IEP team is able to justify why it is not the most appropriate reading and writing modality for the student. Despite this mandate, there is a significant decrease in the number of students receiving braille instruction over many decades (Musgrove & Yudin, 2013). According to Rex, Koenig, Wormsley, and Baker (1994), daily instruction in braille for one and

one-half to two hours is necessary to improve braille literacy. Finding the time to provide all of the components of the general education curriculum and the expanded core curriculum requires creative thinking among team members. Huebner (2000) emphasized the importance of delineating roles and sharing responsibilities to ensure student needs are met.

A study was conducted to explore the feelings of future general education preservice teachers to measure the degree of receptivity (pertaining to enthusiasm for including a student with a visual impairment and their expectations for the success of such an arrangement) and calmness (emotional tension held by teachers in response to being told a student with a visual impairment is to be in their charge) (Harrison, Cooch, & Alsup, 2003). Results indicated that no significant changes were seen in receptivity before and after taking a nine-week course to practice reading and writing braille, use braille resources, and view technology. Teacher confidence in teaching students with visual impairments was not a predictor of change in attitudes toward inclusion. Children whose parents learned braille developed positive attitudes and increased levels of motivation.

Recreation and Leisure

Several barriers to physical activity for students with visual impairments have been identified: (a) lack of concept development, (b) delays in motor concepts, (c) low physical activity, and (d) low levels of health-related fitness (Haegele, Lieberman, Columna, & Runyan, 2014). Also, students with visual impairments need additional supports to gain confidence in physical activities. One way to overcome these obstacles was to embed expanded core curriculum (ECC) goals into the physical education goals

(cognitive, social, affective, and motor). Haegele et al. (2014) discussed each of the ECC areas and concluded that TSVIs needed support to teach each of the nine components. The authors provided suggestions as to how these goals might be accomplished through physical education. For example, strategies to increase self-determination include the following (Haegele et al., 2014):

- prepare students to be successful in different activities using sport as a medium.
- teach the same sports and units as their peers so they will have choices in the future.
- provide a variety of choices in terms of sports that may allow students to develop a sense of autonomy, competence, and at the same time allow them to relate to their peers and family members.
- include students in [the] process of making accommodations or modifications of activities.
- allow students to make choices as to what accommodations they need to participate, do not assume based on previous students.
- keep track of personal bests and athletic goals. Beating these records can lead to higher self-confidence in sport and activity.
- teach lifelong activities that students can choose to participate in after graduation, including what modifications students may need to participate. (p. 46)

A lack of physical activity has been linked to health conditions such as obesity and heart failure (Columna, Haibach, Lieberman, Fernández-Vivó, & Cordero-Morales, 2016). Limited opportunities to participate in physical activities, and limited skills or knowledge of parents on how to teach physical activity and sports to their children with visual impairments, contribute to sedentary lifestyles (Columna et al., 2016). In order to promote physical activity and motor skill development, Columna et al. designed and implemented a two-day workshop for children with visual impairments and their parents. The goals of the workshop were to teach parents the benefits of physical activity, the importance of motor skill development, and how to analyze motor skill performance in their child (Columna et al., 2016). On Day One, students with visual impairments were

assessed by physical education candidates and exercise dance students to determine six locomotion skills and six object control skills. Parents learned the importance of skill development, and strategies and modifications to be used with their child. Additionally, they learned games, and how to break skills into smaller steps. On Day Two, parents and their child practiced previously learned skills and expanded upon them. Parents reported that they enjoyed the activities and their confidence levels in teaching their children skills to promote physical activity increased as a result of the workshop.

Lieberman and Conroy (2013) asserted that children with visual impairments often demonstrate delayed physical and motor abilities as compared with their sighted peers. Further, these children required one-to-one instruction to facilitate physical and motor skill development (in addition to other areas of the core and expanded core curriculum). Teachers of students with visual impairments (TSVIs) have insufficient time to work on all areas of the ECC, as their primary focus has been on academics, tutoring, and teaching communication skills (Wolffe et al., 2002). Thus, paraeducators have been hired to provide intensive support to students with visual impairments (i.e., they reinforce instruction). A survey using a validated questionnaire was given to 143 parents and professionals to determine current and future needs of paraeducators (Lieberman & Conroy, 2013). Specifically, the authors sought to determine the training needs of paraeducators in the area of physical education for children with visual impairments. Findings of this study revealed that 50% of paraeducators were trained to work with children in the general education classroom; while 64% of the paraeducators went to physical education classes with the students with visual impairment, only 22% were trained to support these students in the area of physical education. Participants reported

that the focus of their training had been on information related to the visual impairment, guiding techniques, modifying activities, safety, and teaching strategies; they asked for more training in all areas of the ECC (Lieberman & Conroy, 2013).

Self-Determination

Self-determination was added to the ECC in 2003. Components of self-determination include self-knowledge, self-advocacy and empowerment, assertiveness, informed decision making, problem solving and goal setting, and self-directed and self-regulated behavior (Wolffe & Rosenblum, 2014). Robinson and Lieberman (2004) surveyed 54 students who were visually impaired or deaf-blind to examine the opportunities they were given for self-determination at home, at school, with friends, for health care, and in physical education classes. Results indicated that over 40% of decisions were made for students with visual impairments, and most students reportedly did not participate in their own Individualized Education Program (IEP) meetings. Moreover, the greater the visual impairment, the less opportunities for self-determination. No significant difference was found for gender and age. However, significant differences were found in the areas of school and health care. Robinson and Lieberman (2004) concluded that students with visual impairments must be given more opportunities to make decisions. Additionally, while stakeholders agreed that self-determination skills were vital for student success, a lack of student goals in this area was noted. Parents must navigate between being overly protective and allowing their child to take risks (Robinson & Lieberman, 2004).

Agran, Hong, and Blankenship (2007) conducted a study to investigate the opinions of teachers of students with visual impairments (TSVIs) about

self-determination. The authors found that instruction in academics was the primary responsibility of TSVIs. Thus, less time was available for instruction in the ECC. Most (60%) of participants reported to have written IEP goals specific to self-determination. The type of instruction, time spent working on self-determination goals, and level of mastery were not measured. The value of self-determination depended on the severity of the visual impairment: The more significant the disability, the less likely self-determination was seen as important. Thirty-six percent of participants were unfamiliar with the term *self-determination* (Agran et al., 2007).

Self-determination is one of the most important content areas to promote learning and independence (Agran et al., 2007). Instruction in this area is necessary. Self-determination skills are rarely taught in the educational setting, and are the least likely of the nine areas of the ECC to be taught (Lohmeier et al., 2009). One reason TSVIs do not address self-determination is because curricula are not available or awareness of curricula is lacking (Levin & Rotheram-Fuller, 2011).

Independent Living Skills

Limited research regarding independent living skills of individuals with visual impairments has been found. This finding was also noted by Lewis (2012), in her position paper documenting the need for targeted instruction in this area of the expanded core curriculum. According to Lewis (2012), independent living skills (i.e., hygiene, eating, dressing, clothing selection, and care; food preparation; money management; time management; telephone use, cleaning, home maintenance, and community functioning) are essential for living independently, and contributing and participating in society.

Lewis and Iselin (2002) conducted a study to compare the independent living skills, of 6- to 9-year-old children who had visual impairments, with their same aged peers who did not have visual impairments. Parents of 10 children who were visually impaired, and parents of 10 children who were sighted, were asked to respond to interview questions based on an independent living skills survey. The 101 question survey was divided into the following areas: hygiene, dressing, clothing care, kitchen, home care, money, telephone, and community. Findings indicated children with visual impairments performed 42% of the independent living skills independently, while 84% of children who were sighted performed the tasks independently (as reported by parents). Further, parents reported that 42% of children who had visual impairments were not able to perform the tasks with assistance, while 12% of students who had no visual impairments were unable to perform the tasks. There was a statistically significant difference in the parents' responses between the levels of assistance provided in the two groups. Children who had no visual impairments performed higher than children with visual impairments.

Sensory Efficiency

In the 2012-2013 school year, 0.1% of all students (ages 3-21) had visual impairments (Snyder & Dillow, 2015). Students with visual impairment are considered to be a "heterogeneous population" (Cooney, Young, Luckner, & Ferrell, 2015). This means that two students who are the same age, in the same grade, and have the same eye condition use their vision in a way that is unique to them individually. In other words, no two students with visual impairments see or utilize their vision in the same way.

Sensory efficiency refers to "how well an individual receives, transmits, and interprets information about people, objects, and events in the environment, using all sensory systems" (Smith, 2014, p. 117). Skills involved in sensory efficiency include visual efficiency, auditory learning, and the development of advanced tactile skills (Sapp & Hatlen, 2010). Sensory efficiency skills must be taught. Children who are visually impaired rely on their sense of touch to solve problems; however, decoding items tactually requires complex skills (Withagen, Vervloed, Janssen, Knoors, & Verhoeven, 2010).

While the ECC is deemed important by professionals and advocates for individuals with visual impairments, no consistent plan to address the nine areas has been established (Wolffe & Kelly, 2011). Barriers to teaching the ECC include time restrictions and lack of communication about who is responsible to teach each area (Lohmeier et al., 2009).

Chapter II Summary

In this chapter, a historical perspective for the education of individuals with visual impairments was presented. The conceptual framework of *The National Agenda for the Education of Children and Youths with Visual Impairments, Including Those with Multiple Disabilities* was outlined. Finally, a literature review highlighted each of the nine areas of the expanded core curriculum: orientation and mobility, accessing assistive technology, career education, social interaction, compensatory access, recreation and leisure, self-determination, independent living skills, and sensory efficiency.

CHAPTER III

METHODOLOGY

Introduction

The purpose of this study was to examine the perceptions and experiences of teachers of students with visual impairments (TSVIs), in the state of North Dakota, regarding the expanded core curriculum (ECC). This chapter includes the research design, sampling procedures, negotiating entry, data collection, the methods of data analysis, and a discussion of the methods of trustworthiness.

Research Design

Although there are three distinct research approaches (qualitative, quantitative, and mixed) (Creswell, 2014), each has value. In a quantitative approach, research is based in theories posed to determine relationship and causal factors. The focus is on *how* variables relate to one another. Large samples are utilized and, thus, the results are highly generalizable. In sum, the research view is broad, but lacks depth.

While quantitative studies seek to explore variables and determine their relationships, qualitative studies relate to "understanding of perceptions, attitudes, and processes" (Glesne, 2011, p. 39). To explore the perceptions and experiences of teachers of students with visual impairments (TSVIs), free from quantitative boundaries (Glesne, 2011), a phenomenological framework was used for this research. Phenomenology is grounded in the "lived experience" (Starks & Trinidad, 2007) and seeks to reveal the core

elements (essence) of that experience. Phenomenology "investigates "*what* [italics mine] was experienced as well as *how* [italics mine] it was experienced" (Starks & Trinidad, 2007, p. 1376). The role of the researcher is to "bracket" her/himself off from the experience in order to describe it. Further, bracketing involves setting aside the essences of an object to discover the intentionality placed on it by the persons who experience it (e.g., their perceptions). Although experiences may be similar, perceptions differ based on the lived experience with the object (Harman, 2007). Thus, examining the perceptions and experiences of TSVIs with regard to the expanded core curriculum was a powerful endeavor. Phenomenologists seek to uncover the hidden aspects of life. Perceptions can change, but phenomenology is based on what is perceived as the real (Starks & Trinidad, 2007). Crotty (1998) states that a phenomenological framework "calls into question what is taken for granted" (p. 82). This study brought to the forefront the lived experiences of TSVIs with regard to the expanded core curriculum.

Sampling Procedures

Participants in this study were selected using purposeful sampling (Patton, 2002). Teachers of students with visual impairments (TSVIs) have the most experience working with individuals with visual impairments and implementing the expanded core curriculum (ECC); therefore, their participation helped to ensure "thick" and "rich" descriptions. Because the pool of TSVIs was relatively small (approximately 12), all qualified TSVIs were invited to participate in this research study. While the goal was to have all TSVIs participate, six to eight were considered to be acceptable.

Negotiating Entry

In order to identify possible participants, I requested the names and contact information of teachers of students with visual impairments (TSVIs) from the North Dakota Department of Instruction (DPI). I received a list via email of 26 TSVIs, 16 of whom were employed by public schools. Participants were selected, if they met the following criteria: (a) had three or more years of experience as a TSVI, (b) were currently employed by a public school(s) in North Dakota, and (c) worked with students in kindergarten through twelfth grade in North Dakota. I sent an email to each TSVI with a brief description of the study and asked them if they would be interested in participating. A reminder email was sent to those who did not respond, within two weeks of the first email. To broaden the pool of potential participants, Paul Olson, Superintendent of the North Dakota Vision Services/School for the Blind, was contacted and asked to send the invitation to North Dakota teachers of students with visual impairments (TSVIs) listserv members. All TSVIs who met the criteria and chose to participate were sent a written informed consent (Appendix A), via email, and were asked to sign and return the consent for participation by email. The consent form explained to participants the minimal risks of participating in the interviews and the study. Participants were informed that they could terminate the interviews or their participation at any time without penalty.

Participants

A call for participation was sent to 16 teachers of students with visual impairments (TSVIs) employed in the state of North Dakota as per a Department of Public Instruction document, and to ND TSVI listserv members. Eight of the 16 TSVIs responded. Six met the criteria of being currently employed as TSVIs in the state of

North Dakota for a minimum of three years. One potential participant responded to the call after the close of the interview process. One potential participant did not meet the criteria of having a minimum three years of teaching experience as a TSVI.

To protect anonymity and confidentiality, the names of the participants were changed to pseudonyms for this dissertation and for any future publications that might include data from this study. All of the TSVIs who participated in the study were female. (In fact, all TSVIs in the state were female at the time of this study.) Found in Table 3 are the years of experience in the field of visual impairment in North Dakota, caseload sizes, and the approximate size of the community in which each TSVI worked. One TSVI was employed full time in a district; yet, only one-half of her time was dedicated to serve students with visual impairments. One TSVI served in the role of TSVI and Orientation and Mobility (O&M) Specialist. All participants were hired in an itinerant model of service delivery.

Table 3. Description of the Participants.

Participants	Years as TSVI	Caseload Number of students	Community (approximations)
Karina	4	1	7,800
Jane	9	18	25,000-30,000
Ella	13	3	2,500
Anna	18	20	> 50,000
Jackie	19	25	70,000
Olivia	40	14	20,000

Data Collection

Glesne (2011) purports that "the opportunity to learn about what you cannot see and to explore alternative explanations of what you do see is the special strength of interviewing in qualitative inquiry" (p. 104). For this study, semi-structured, one-on-one telephone interviews were the primary means of collecting data. One participant completed the interview in a face to face meeting (as per her request). An interview protocol (Appendix B) was developed and used to guide the interview process. Further, this protocol provided a structure for note-taking while conducting the interviews. Additional questions were asked spontaneously during the sessions to gain details and clarification (Merriam, 2009). The Expanded Core Curriculum (ECC) Descriptions (Appendix C) document was designed to provide a common language for ECC terminology. Interview questions and the ECC Descriptions document were emailed to the participants at least two days prior to the scheduled interviews. One participant did not receive the protocol or the ECC Descriptions document prior to the interview. She was given an opportunity to review the interview questions at the beginning of the session. The ECC Descriptions document was referred to throughout the interview process. The time to complete the interviews ranged from 60-90 minutes.

The purpose of these interviews was to elicit perceptions and experiences of teachers of students with visual impairments (TSVIs) regarding the expanded core curriculum. All interviews were digitally recorded using a digital recording device. Participants were reminded of the note-taking and recording procedures. Participants shared their stories of their lived experiences by responding to the questions. Data were analyzed using the procedures outlined in the following paragraphs.

Data Analysis

Directly following each interview, I wrote reflective notes to monitor my thought processes during data collection and analysis (Strauss & Corbin, 1998). Next, the digital recording was sent to an online transcriptionist (rev.com) with whom I had an agreement of nondisclosure. After I received each transcribed (verbatim) interview, I removed any identifying information. I listened to the recording and corrected transcription errors on the document as necessary.

A copy of the transcript was emailed to the participant for verification that the transcript accurately reflected the statements made in the interview (i.e., member checking) (Maxwell, 2013). One participant elected to make changes to the original transcribed interview.

Upon receiving the transcript, I re-read it several times to gain an overall view, and to keep track of my initial thoughts and experiences of it through memo writing to "develop tentative ideas about categories and relationships" (Maxwell, 2013, p. 105). The use of memos or journals "contain[s] the researcher's personal record of insights, beginning understandings, working hunches, recurring words or phrases, ideas, questions, thoughts, concerns and decisions made during the research process" (Maykut & Morehouse, 1994, p. 68). It was especially important for me to discern thoughts and concerns, based on my personal experiences from the perceptions and experiences of the participants.

After reviewing the transcript as previously described, I wrote significant statements for each sentence of text. I reduced the significant statements through coding (Maxwell, 2013). To ensure the coding and organizing process was accurate and

appropriate, my advisor reviewed the notes from the first two interviews, the list of codes, and the associations between the responses of the first two participants (i.e., an audit trail) as defined by Lincoln and Guba (1985). I then organized the data into categories by looking for emerging patterns. Finally, I synthesized categories into themes (Moustakas, 1994).

ATLAS.ti (software program) was utilized to categorize the interview data into 99 initial codes. These initial codes were too narrow; therefore, these codes were reviewed and assigned into 44 codes. The codes were then ranked by the number of interview statements associated with them. The searching and filtering features of this software allowed me to identify and organize the data into *emic* themes based on the responses of the participants and *etic* themes based on concepts revealed through the research process. Of the 44 codes, three categories and seven themes emerged. These themes were further audited by my advisor. I have included a list of the seven themes in the following paragraphs. These themes and an assertion will be discussed further in Chapter IV and Chapter V.

Theme One: It takes a village.

Theme Two: Ongoing and systematic checks for understanding are mandatory for students with visual impairments to gain educational competency.

Theme Three: Teachers of students with visual impairments perceive the North Dakota Vision Services/School for the Blind professionals as experts in the expanded core curriculum.

Theme Four: Teachers of students with visual impairments perceive they are primarily responsible for teaching compensatory skills and use of assistive technology areas of the expanded core curriculum.

Theme Five: Teachers of students with visual impairments perceive the parents of students with visual impairments and the North Dakota School Vision Services/School for the Blind professionals are primarily responsible for teaching the independent living skills area of the expanded core curriculum to students who are visually impaired, across the state.

Theme Six: Academic curriculum takes precedence over the expanded core curriculum.

Theme Seven: Limited time and limited access prohibit teachers of students with visual impairments from providing consistent and systematic instruction of the expanded core curriculum within the school district.

Trustworthiness

Triangulation is a system of checks and balances, whereby the results from different sources of data are compared to ensure the same conclusion is found throughout these sources.

Ultimately, triangulation facilitates deeper understanding of the phenomenon while maintaining different aspects of it (Maxwell, 2013). The purpose of a validity check is to *test* conclusions and filter out any possible threats to the findings (Maxwell, 2005). To test conclusions, the following methods were employed: interviews, member checking, audit trail, triangulation of data, and "rich thick" description, and peer auditing. I was cognizant of any bias I had as a result of my experiences as a teacher of students

with visual impairments, as well as other biases that might have influenced the study. This task of keeping my biases in check was daunting, as my own experiences were similar to those of the participants. I reduced the chances of researcher bias by exercising reflexivity. Specifically, I answered the interview questions from my perspective and experiences; I read and re-read the interview transcripts enough times so that I knew what each participant said (i.e., I was very familiar with the data) and wrote notes in the margins; I recorded my thoughts in journal entries. According to Robson (2002), it is "not possible for individuals to completely isolate their personal experiences from the analysis" (p. 173). I agree with Robson's assessment. However, despite the impossibility of complete isolation, it is possible to identify the voice of the writer as opposed to the voice of the participants. Chapter IV contains direct quotes from participant interviews.

CHAPTER IV

PRESENTATION OF THE DATA WITH RESPECT TO THE LITERATURE

The purpose of this study was to examine the perceptions and experiences of teachers of students with visual impairments (TSVIs), in the state of North Dakota, regarding the expanded core curriculum (ECC). At the start of this chapter, I introduce each of the six teachers of students with visual impairments (TSVIs) who participated in this study. Following the introductions, overarching categories and themes that emerged from the data were described and discussed. The framework for this phenomenological study was interwoven throughout the narratives.

Pseudonyms have been used for those taking part in the study to maintain anonymity. I have referred to the participants by the following names: Jackie, Olivia, Anna, Karina, Ella, and Jane.

Descriptions of Participants

Jackie

Jackie has been a teacher of students with visual impairments (TSVI) for 18 years. At the time of the interview, she served students with visual impairments (ages 3-21 years) in one of the larger school districts in North Dakota. The district was comprised of 13 elementary schools, 4 middle schools, and 3 high schools. Students with visual impairments were educated in their home schools. Thus, Jackie traveled throughout the district to provide educational services. Jackie also provided vision services to a

neighboring school district. Jackie was the only TSVI in her district and the neighboring district and approximated her weekly travel time to be 15 hours.

Jackie managed a caseload of 20 students in the larger school district, and she provided direct service to 10 students with variation in the amount of time she spent with each student. She worked with some students with visual impairments every day for longer periods; some she saw weekly, and some students she worked with in blocks of time throughout the week. Jackie also consulted with several students/teams, served several students on 504 plans, and monitored a few students. Two students on her caseload were totally blind (one preschool age, one high school age); several students had low vision and several students had severe multiple delays. Previously, Jackie participated in the monthly preschool screenings; however, due to her "high and demanding caseload," she discontinued her involvement in this activity. Some of Jackie's other duties included interpreting the eye doctors' reports, conducting observations, and answering vision related questions from parents and other professionals as they arose. She also answered questions for nurses who conducted vision screenings.

Olivia

Olivia's career in the field of visual impairments spanned 40 years from first being hired as a paraprofessional at a residential school. The following year she became employed at that same school as a teacher of students with visual impairments (TSVI). At the time of the interview, Olivia was employed by a school district in a community of approximately 20,000-30,000 people, with approximately 3,000 students (kindergarten-grade 12) enrolled in the public schools in that community in which she worked. Olivia's caseload consisted of 14 students: One student was totally blind, one

student was partially sighted, and 12 students had Asperger's Syndrome and/or Attention Deficit Hyperactivity Disorder.

Anna

Anna served as a teacher of students with visual impairments (TSVI), in the same school district, for 18 or 19 years. The school district was comprised of 17 elementary schools, 3 middle schools, and 3 high schools. She estimated the population of the community to be about 70,000. Anna was the only TSVI in her district.

Anna provided direct service to five students on a weekly basis as determined by their individual needs. She worked with some students daily, and others twice weekly. Sessions were scheduled in 30 minute to 45 minute blocks. Anna also provided consultative services for more than 20 students.

Karina

Karina was a TSVI in a smaller town for the past four years. She worked half time as a TSVI and half time as a teacher in early childhood special education. One middle school age student on her caseload was blind, and she served nine students who do not have vision related issues.

Ella

Ella was first introduced to the field of visual impairments, when the special education director in her school district proposed that someone become certified to teach in that area. Ella responded to the invitation and she has been a TSVI for 13 years. Previously, she taught children enrolled in the preschool special education program.

Ella has had three students on her caseload. One student who had cortical visual impairment moved to another city; one student who had low vision graduated at age 19;

and one student who is blind (has light/dark perception) was a senior scheduled to graduate at the end of the school year.

Ella worked in a community of approximately 2,500 people. Over the last few years, the school district fluctuated in size as a result of the oil boom in the state. The 20% growth in enrollment caused a lot of change for teachers and students in that community.

Jane

Jane was a teacher of students with visual impairment (TSVI) and an orientation and mobility (O&M) specialist in one of the larger communities of North Dakota. There were approximately 20,000-30,000 people who resided in the area where she worked. Access to public transportation, shopping areas, and strip malls was prevalent.

Jane was in her ninth year as a TSVI/O&M Specialist at the time of the interview, and managed a caseload of 18 students (ages 3-21 years). These students exhibited a wide range of eye conditions ranging from low vision to congenital blindness. She also worked with students diagnosed with albinism, optic nerve dysplasia, optic nerve hypoplasia, and glaucoma (uncontrolled by medication), and a syndrome, known as CHARGE, caused by a genetic disorder which involves sensory, physical, medical, and developmental issues. Jane had a variety of students on her caseload. She said, "No day is ever the same."

Interview Data

All teachers of students with visual impairments (TSVIs) who participated in this study were asked similar questions during the interview process. An interview protocol (found in Appendix B) was used to provide structure and to ensure that important topics were not forgotten. Additionally, a summary of the expanded core curriculum (ECC) was

provided to each participant in order to ensure a common language for the ECC was utilized (found in Appendix C). A number of additional questions arose during the interview process, based on the participants' responses. The conversational format of the interviews sought to provide thick and rich descriptions of the TSVIs' perceptions and experiences with the expanded core curriculum.

During the coding process, three major categories and seven themes emerged from the interview data (Table 4). The categories and themes that developed within each category are discussed in the following section.

Category I: Competence

Teachers of students with visual impairments (TSVIs) are highly educated to work with students who have diverse needs and unique ways of perceiving and interacting with the world related to their visual impairments. These TSVIs possessed an expansive knowledge base, not only in the core curriculum (e.g., reading and writing), but also in the nine areas of the expanded core curriculum (i.e., skills in compensatory, sensory efficiency, assistive technology, orientation and mobility, independent living, social interaction, recreation and leisure, career education, and self-determination). Despite the vast knowledge possessed by these TSVIs, they relied on the North Dakota Vision Services/School for the Blind (NDVS/SB), outside services, and others who they perceived had more expertise. Under the category of "Competence," three major themes developed.

Theme One: It takes a village

All participants believed that the responsibility of educating students with visual impairments was "huge." Five of the six participants believed they must rely on the North

Table 4. Data Analysis.

CODES	CATEGORIES	THEMES	ASSERTIONS
• Adapt • Aware • Caseload • Concern • Decide • Experience • Expect • Expertise • Lone ranger • Gap • Independence • NDVS/SB	Competence	It takes a village. Ongoing and systematic checks for understanding are mandatory for students with visual impairments to gain educational competency. Teachers of students with visual impairments perceive the North Dakota Vision Services/School for the Blind professionals as experts in the expanded core curriculum.	Educating students with visual impairments in the state of North Dakota requires an integrated approach in which academic curriculum and expanded core curriculum are addressed through collaborative efforts among all stakeholders and service providers.
• Collaborate • Adapt • Evaluate • Instruct • Friend/peer • Gap • Para • Primary person • Problem-solve • Rank • Responsible • Scale • Support • Assistive Technology • Career • Compensatory • Independent Living • Rec & Leisure • O&M • Self-determination • Sensory • Social • Strategy	Roles and Responsibilities	Teachers of students with visual impairments perceive they are primarily responsible for teaching compensatory skills and use of assistive technology areas of the expanded core curriculum. Teachers of students with visual impairments perceive the parents of students with visual impairments and the North Dakota School Vision Services/School for the Blind professionals are primarily responsible for teaching the independent living skills area of the expanded core curriculum to students who are visually impaired, across the state.	
• Academic • Caseload • Concern • Core curriculum • Elementary • High school • Inequity • Limit • Need • Time • Travel	Challenges	Academic curriculum takes precedence over the expanded core curriculum. Limited time and limited access prohibit teachers of students with visual impairments from providing consistent and systematic instruction of the expanded core curriculum within the school district.	

Dakota Vision Services/School for the Blind (NDVS/SB), the team, and other experts to assist in educating students with visual impairments.

Ella felt she needed to rely on others to meet the needs of her students with visual impairments and shared the following:

> I was the TVI [teacher of students with visual impairments]. I was the only one in the school. It's a small school, so there was one of us. One of me. That was something that I battled, because I was in charge of everything. As good as I am, or as good as I think I am, or as good as somebody tells me I am....You have to rely on outside services. You have to rely on the School for the Blind and anybody else you can bring in to assist that has more knowledge than you.

Anna recognized the needs of students in preschool, middle school, and high school varied vastly and that her competency in each grade level depended upon her experiences. Anna stated:

> It's a new day every day. You feel like you're starting fresh and you never feel like you know everything which can make you feel incompetent. You just feel like you should know that but it's something new. When you work with kids at such a range, preschool to high school…then they graduated and then all of a sudden, I got a kindergarten student. I felt very incompetent when it came to teaching pre-braille. I had never had to do it in my 15, 16, 17 years of teaching…it was a learning curve like starting all over.

Jane found she was responsible to teach others to help her, because she believed all team members played a part in educating the students with visual impairments. Jane asserted:

> I think I have a lot of responsibility in that primary teaching but it needs to be shared so I would need to help the parents know these are the strategies. These are the supports, these are the tools or cues helping paraprofessionals know, helping the other people. A lot of times it might even be peers.

Jane also felt that the primary responsibility of educating students with visual impairments in the area of compensatory skills must be shared. She explained:

> I think, I would say the teacher for the visually impaired, but it's, I think, all of these things have to be a team effort just because we can never be everything to everyone. It's a team effort between myself, if there's paraprofessionals, classroom teachers, case managers, parents, just looking at the whole team that supports the student.

Anna also noted:

> I have a good friend that's a teacher in Bismarck, and her student was writing and doing YouTube videos on how to use certain pieces of technology, so we would Skype with them. This student was just awesome with mine and taught her more than I ever could have because he's in the trenches. He uses this stuff every day, so he really knew how to make it work and the shortcuts and those kinds of things. You get by with a little help from your friends, that's for sure.

Theme Two: Ongoing and systematic checks for understanding are mandatory for students with visual impairments to gain educational competency

In general, students who are sighted learn concepts from whole-to-parts; whereas, students with visual impairments learn concepts from parts-to-whole (Fazzi & Petersmeyer, 2001). For example, to understand the concept of "bus," the student with a visual impairment must integrate the information attained through numerous high quality experiences using touch, movement, and sound. Fazzi and Petersmeyer (2001) cautioned that students with visual impairments who do not have opportunities for hands-on experiences might be able to talk about the concept without having an understanding of the concept (e.g., talks about coastline, but does not know what coastline means). Students with visual impairments need a multitude of opportunities to practice new skills and to generalize them. Gaps in learning occur when ongoing and systematic checks for understanding are omitted. All participants perceived concept development and ongoing, systematic checks for understanding important.

Olivia felt that students who are sighted relate to the world through a visual context and might assume students with visual impairments are viewing the world through that same context.

Olivia posited:

> Just understanding how big the world is that you don't see and how it compares to what we're talking about…their world [visual] is out there, her world [visual impairment] is right here. It's a very difficult thing for people who have seen their whole life to understand how their world actually is and what they relate things to. Those concepts are really, really important to make sure they understand…

Karina reflected on the topic this way:

> …she seems to get confused or not understand something at times and usually it has to do with a visual thing that she maybe doesn't know what something looks like, so then she can't visualize it, and then it affects the meaning of what she's reading….I can stop there and ask her some questions and figure out what the confusion is, and then explain it usually with something hands on, or in comparison to something that she does understand.

Ella further explained:

> Sometimes the concept development, you just don't know what they don't know…you read a story about a little red wagon. Maybe they've never ridden in a little red wagon. Everyone else has probably seen a picture of a little red wagon on some storybook sometime, but these kids haven't. So you bring in a little red wagon, or a tire swing, or just some concrete thing that you assume that the kids have been exposed to but maybe haven't because it would be unsafe for them or the family just hasn't ever had that.

Jackie highlighted the need for concept development and checks for understanding to help a student with a visual impairment overcome fear of automatic toilet flushers. A hands-on approach or, in this case, a hands in the toilet bowl experience facilitated learning for one student. Jackie added:

> We brainstormed with the mom....Have them actually, in a clean basin, put their hands in. Flush a regular toilet, and show how the water swirls around and then it empties and refills. Give them the real experience and that the noise that it makes

is because that they have to push that water out. That's the noise, and not to be afraid of that.

Jane stated:

I think concept development is one of the most important areas to focus on and so much of what we do is that direct teaching piece for learning those concepts. It's important to realize how much kids take in visually and incidentally and we need to make sure we're leveling the playing field for our students, teaching those things or giving those experiences and activities.

Theme Three: Teachers of students with visual impairments perceive the North Dakota Vision Services/School for the Blind professionals as experts in the expanded core curriculum

North Dakota Vision Services/School for the Blind (NDVS/SB) professionals provide services for individuals who have visual impairments from the age range of birth through death. Services were provided on the NDVS/SB campus and across the state of North Dakota through an Outreach Program. All participants perceived the NDVS/SB professionals as experts in teaching the expanded core curriculum.

Jackie described the short-term programming in the expanded core curriculum (ECC) at NDVS/SB in this way:

…students are being released from their regular education curriculum time to work on an expanded core curriculum. That's the time to do it [ECC] and of course they are more specialized because they're trained, and most efficient at it.

Ella's perception of NDVS/SB instructors was:

They're the experts in the field. They've seen so many more kids and more cases. I'd rather have a doctor who has done 30 procedures than just one.

Jane added:

They have a lot of experience and expertise up there that we're able to tap into.

Karina indicated that:

> …there's things that might come up that I wouldn't maybe even consider or think of, that they're more aware of.

Finally, Olivia emphasized:

> They were the gurus of dress. They were the gurus of going to the movies. They were going out in public doing this, and doing that…when they got to that seventh grade, eighth grade, and they'd start thinking about all that stuff, those are the ones [NDVS/SV] that do the social things and get them going.

Discussion of Category I: Competence

All of the teachers of students with visual impairments (TSVIs) who participated in this study were itinerant; they traveled from place to place to serve students on their caseloads. Although the size of the caseloads varied, the responsibility of each TSVI was immense, because each of them was the sole provider in their districts who had specialized training in the area of visual impairments (Brown & Glaser, 2014). Although each of the participants was highly educated to teach the general education curriculum as well as the ECC, they perceived the teachers at the North Dakota Vision Services/School for the Blind (NDVS/SB) to be experts in teaching the expanded core curriculum (ECC).

Through the words of the participants, there is a strong link between visual reference and learning. A typical child with vision learns by observing multiple times before being expected to carry out a task. For example, a child learns to eat independently by first watching his or her mom or dad hold a spoon, scoop the food from a bowl, and bring it to the child's mouth. The child might have observed this eating routine hundreds of times, before the child imitates the action. A child with a visual impairment does not have the same opportunities to observe, because information coming in visually is distorted and incomplete; therefore, concept development is limited. Guerette (2014)

defined concept development as “the process of (a) understanding the characteristics of an item and (b) understanding the relationship among the item’s characteristics and with other objects in the environment” (p. 63). Since students with visual impairments do not learn incidentally through natural settings and situations, they require systematic and sequential instruction to develop an understanding of the different kinds of concepts (Guerette, 2014). Hall (as cited in Guerette, 2014) identified 10 categories of concept development that need to be understood by students with visual impairments. These categories include “(a) body awareness, (b) environmental awareness, (c) awareness of object characteristics, (d) time awareness, (e) spatial awareness, (f) actions, (g) quantity, (h) symbol awareness, (i) emotional and social awareness, and (j) reasoning” (pp. 63-64). Each of these categories was further broken down into related concepts. For example, the category of quantity includes concepts of measurement (inches, feet, yards). Ferrell (2011) found that some concepts needed for literacy comprehension, math skills, and following directions were developed between the ages of 28-48 months. Examples of these concepts include “space (across, around, up-down); quantity (some-all, both, many); time (before-after, birthday); size (big-little, long-short); touch (cold-hot, hard-soft); and other (color[s], missing, shapes)” (Ferrell, 2011, p. 295). Direct systematic instruction needs to occur across all academic and functional areas in order for the child who has a visual impairment to become independent. Students with visual impairments need hands-on experiences to develop competency in understanding concepts that sighted peers learn incidentally. Additionally, a direct, systematic approach to teaching the concepts must be used in order for students with visual impairments to

learn them. Further, concept development for students with visual impairments must be consciously and consistently monitored to ensure generalization of the skill.

While TSVIs are highly educated professionals, it is not feasible for them to teach every concept that students with visual impairments need to learn. They must rely on the North Dakota Vision Services/School for the Blind (NDVS/SB), teams, and other experts to facilitate learning. An integrated team approach involving parents, general education teachers, TSVIs, orientation and mobility specialists, NDVS/SB teachers, and other specialists is necessary for educating the student with visual impairments.

Category II: Roles and Responsibilities

During the interview process, TSVIs were asked to identify the primary person they perceived to be responsible for teaching each of the nine components of the expanded core curriculum (ECC). An analysis of the data revealed that TSVIs perceived they were primarily responsible to teach compensatory skills and assistive technology skills. TSVIs perceived the primary person(s) responsible for teaching the independent living skills component of the ECC were the parents and/or the North Dakota Vision Services/School for the Blind. In the remaining six areas of the ECC, no predominant person was identified as the primary person responsible across all TSVIs.

Theme Four: Teachers of students with visual impairments perceive they are primarily responsible for teaching compensatory skills and use of assistive technology areas of the expanded core curriculum

Compensatory skills include concept development, spatial understanding, communication needs, speaking and listening, study, and organization (Guerette, 2014). All six teachers of students with visual impairments (TSVIs) who participated in the study concurred that this area of the expanded core curriculum was closely tied with the

academic curriculum and that the TSVIs were primarily responsible for teaching compensatory skills.

Jane stated that the TSVI is the primary person responsible for educating students with visual impairments in the area of compensatory skills; however, this responsibility must be shared.

Jane said:

> I think, all of these things have to be a team effort just because we can never be everything to everyone. It's a team effort between myself, if there's paraprofessionals, classroom teachers, case managers, parents, just looking at the whole team that supports the student.

Jane also shared:

> I think concept development is one of the most important areas to focus on and so much of what we do is that direct teaching piece core, learning those concepts. It's important to realize how much kids take in visually and incidentally and we need to make sure we're leveling the playing field for our students, teaching those things or giving those experiences and activities.

Olivia added her comments about teaching compensatory skills:

> She'll [student will] come back with an answer, and it's way out in left field. Then I can say, "What concept didn't I get across? Because that's not where I was going." Then you can figure out what's missing and where the gaps are. This communication is really big time needy right now with this one.

Olivia further explained:

> You start out with those concepts, those basic concepts that there is a printed word and it's important for labeling, and all the basic concepts before and after, on top or below, spatial understanding. Just because we're talking about the truck doesn't mean it's the truck that came out of the little box. Trucks come in different sizes, and the truck you're riding in is a different size than the one you play with.

Anna articulated:

> This [compensatory skills area] is probably maybe one of the biggest areas that I feel like I cover. I feel like it overlaps with the assistive technology. I just think all

kids are covered under this area because I have some kids that are very academic. Maybe it's just giving them access to the generalized curriculum or the Common Core, teaching them braille, how to use magnification devices….Sometimes I think it's our role with the parents to educate them on the things that a student can be doing or maybe on braille.

Jackie said:

I think as a TVI [teacher of students with visual impairments], this is one of the areas of expanded core curriculum that I am able to just teach as part of the regular curriculum one-on-one with them as well…I do it every day.

Jackie further added:

That's [organization] probably a more difficult one because organization does seem to be an area where my vision kids often struggle, just because the school is such a fast-paced environment.

Karina stated:

…the concept development and spatial understanding, I know that that's one area that she has a difficult time with. Math concepts and things like that are very difficult, so a lot of times I will help her with her math after math class, which can take an entire class period for her to complete. There's just being able to help with those academic things while she's in the classroom and pulling [her] out to pre-teach those academic things that she'll need to learn so that she doesn't fall behind.

Karina further offered:

We work on using her planner and things like that on her BrailleNote, but I think part of what I'm noticing is that she's very dependent on myself and the teacher's assistant that works with her when I'm at the other building, at the other school that I work at. That's something we're working on is trying to back off a little bit so that she can do some of those things herself. I've noticed that she still forgets things, or just unorganized and doesn't have an organization system, or doesn't follow it when we work on it if we're not right there.

Ella described her experiences teaching compensatory skills to one student:

He was in the regular classroom most of the time, so concept development and spatial understanding, communication, all that was really handled in the classroom. I didn't have to do much of that outside of the classroom.

Ella further explained:

> The spatial understanding was something that we really struggled with for a while: over, under, beside, and that kind of thing. Even now, orientation and mobility is a struggle because she forgets which way to go sometimes. She doesn't understand where she is with her surroundings, so we have done a lot with that.

Assistive technology refers to the knowledge and skills needed by students with visual impairments, to learn how to use technology to access their environments, particularly in the area of independent living (McNear & Farrenkopf, 2014). Elements of assistive technology include (a) access to information (skills to use multiple tools, systems, and applications; knowledge of basic general technology skills, (b) communication (reading electronic books and writing; searching the Internet; tasks that require unique access such as math, science, and graphics); and (c) personal productivity (use of apps to improve "personal efficiency, productivity, and independence") (McNear & Farrenkopf, 2014, p. 189). All participants in this study perceived assistive technology vital for students with visual impairments to become independent.

Ella emphasized the importance of assistive technology:

> It's their way to get the knowledge. I can't express how important assistive technology is to kids. It's their way to get their information, whether from the textbook or from the Internet or from a paper or website. It's so much easier to be able to do that through assistive technology. My student that's blind has a BrailleNote and a computer with JAWS and a Victor Stream for most of her books, they're on there. She has a talking calculator, which I still don't know how the dang thing works half the time, but she does, so that's what's important.

Anna provided her view of assistive technology:

> I love that it [assistive technology] gives students access and gives them independence. That's always my biggest goal in mind is independence. I love it. I have a knack for it. I want to know more.

Anna added:

> I do a lot of research. I go on the Internet a lot and I look for checklists of things that can help guide me, what I need to teach and also what's current, what no longer is probably as important as it used to be and obviously, as things come along, the needs of the students. If I have a student that's in higher math and they need to know how to use software for a talking graphing calculator that I know about the skill that needs to be taught because it's a need. It really depends on the students. I might have students that just need to learn how to touch a switch and it needs to be where they can see it so that it's bright. It's such a range from just functional to extremely high academic. It just depends I guess on the students' needs.

Karina spoke about her experience with assistive technology:

> We worked on access to the Internet, and having email, and emailing her assignments to her teachers off of her BrailleNote. Those are things that I've taught her, just expanding that knowledge. We work on JAWS, and I have taught her how to get on the Internet, and how to do some basic research using Google or some other search engine. Usually we use Google. I've taught, the tangible graphics, there's an actual tangible graphics teaching program that we've done, just to kind of help learn how to read graphics.

Karina added further explanation of her work with this child:

> Then we worked on...like she started using a more complex, like a scientific calculator that we ordered, so just teaching her how to use that. We have a talking tactile tablet that the school that I work for actually purchased last year. She was in geography last year, in seventh grade, so we were able to use that to teach map, reading, and things like that. Then you can actually adapt it, and make maps of your own, and put landmarks on it, so I've taught her how to use that…she has learned how to download books onto her BrailleNote, using Bookshare, and also onto her iPhone.

Theme Five*:* Teachers of students with visual impairments perceive the parents of students with visual impairments and the North Dakota Vision Services/School for the Blind professionals are primarily responsible for teaching the independent living skills area of the expanded core curriculum to students who are visually impaired, across the state

Independent living skills are skills necessary for self-care. They include "organization, personal hygiene and grooming, dressing, clothing care, time management, eating, cooking, cleaning and general household tasks, telephone use, [and] money

management" (Bardin, 2014, p. 284). Four of the six participants perceived parents to be the primary person to teach independent living skills. One of the participants perceived parents and the North Dakota Vision Services/School for the Blind (NDVS/SB) professionals to be primarily responsible to teach independent living skills. Two participants perceived the NDVS/SB professionals to be primarily responsible for teaching independent living skills.

Jackie shared her perception about teaching independent living skills:

> Probably [parents and NDVS/SB professionals] to be the primary source in promoting most of these things, with enhancements from school personnel. If there is an area of need or a gap in those areas. I mean I think they need to be taught it but I think in the typical family situation dynamic would teach these things and with any other student, if there were gaps in that, any other teacher would have to teach those children these types of skills anyway.

Jane offered her perception of helping students learn skills of independent living:

> Outreach staff in working with the families and looking more at things that happen within the home are really key in helping our students learn and develop those skills because I think they're very important and sometimes the strategies that our students use are very individualized for their visual impairment….Outreach person who is able to support the families and the home, giving them that information and tools and strategies to support those things that happen more naturally in the home setting.

Anna provided her perception of teaching vs. responsibility in terms of teaching independent living skills:

> We have some parents that we feel like we need to teach a student how to cook in school but yet she doesn't require him to even set the table at home. I think that parents need to. This is probably the biggest area. Their role is to require their child to do some of these skills at home.

Jackie felt personal hygiene care should be taught at home; yet, when the student came to school without showering, or wore inappropriate clothing articles, she provided what the student needed. Jackie explained her rationale this way:

> We have talked a little bit about personal hygiene. Showering, I've noticed that sometimes you know you can tell that maybe she hasn't showered for a day or two and things like that, and doesn't really fix her hair, or use makeup or things like that. So that's something we've been discussing and that's hard because it's something that she should be doing at home before she comes to school. We do have a comb and some things here so when she comes to school, we can help her. She dresses, I mean, she picks out her own clothes and dresses and everything. We have had to have some discussions about when you wear a white shirt, you can't wear a colored bra, just things like that because that has happened a couple times and so there's just some things that come up that I don't know that you always think about until they happen.

Ella believed the North Dakota Vision Services/School for the Blind expert was primarily responsible to teach independent living skills. Ella explained her rationale this way:

> They've got a great guy that helps the kids with their independent living skills, especially in the kitchen, and he really does a good job. He's visually impaired himself, so he really knows what works and what doesn't. He's in the trenches himself. They've got a kitchen set up, so when you go down there...I don't know if the parents get much chance to go down there, but it's set up the way that it should be for visually impaired kids, so if parents can get down there, it's a great thing to see the way they have it set up and how they can set their own kitchen up for their student to be independent.

Discussion of Category II: Roles and Responsibilities

Participants perceived that they were primarily responsible to teach two of the nine areas outlined in the expanded core curriculum (ECC). These areas included compensatory skills and assistive technology skills. TSVIs believed concept development was important to academic success. Instruction of compensatory skills was integrated with the general education curriculum. These skills were taught in the general education classroom and in one-on-one situations outside of the classroom. Participants perceived skills in assistive technology to be the way students with visual impairments gained knowledge. TSVIs had to be knowledgeable about a variety of assistive technology

devices, and be aware of the changes in technology and recommendations specific to the students with visual impairments. The parents and the North Dakota Vision Services/School for the Blind (NDVS/SB) were primarily responsible to teach the independent living skills.

Category III: Challenges

Challenges refer to anything that hinders the process of teaching or learning skills in the expanded core curriculum (ECC). Two themes have been identified through the data analysis, under the category of "Challenges."

Theme Six: Academic curriculum takes precedence over the expanded core curriculum

Although all TSVIs perceived the ECC as important as the academic curriculum, a lack of time forced teachers to prioritize. All participants prioritized instruction in academic curriculum over instruction in the expanded core curriculum areas.

Ella explained her rationale for prioritizing instruction in the academic curriculum this way:

> The parents and students made the conscious decision that the kid's gonna be in the classroom, taking regular classes with their peers. If we pulled them out for independent living skills, to hone those, we would lose some of the academics.

Ella ranked independent living skills as less important than academics and rated it on a scale of 1 (lowest) to 4 (highest):

> …three. I'd give it [independent living skills] a 4, but I think sometimes academics are more important for some of these kids.

Jackie's older student chose academics over the ECC. Jackie explained:

> A high schooler chose not to [attend NDVS/SB week] because her academic demands in school were higher than her demands for the expanded core curriculum at the time.

Jane found that academics took priority over independent living skills for the following reason:

> I would say this is probably one of the hardest areas to address in the school setting, just because [of] time restrictions, the focus on more academic core curriculum types of classes and activities, and access to some of those types of equipment.

Anna explained the challenges she faces as a vision specialist:

> I think this is the one thing that I want to communicate when I think about this interview is it's really hard. When I think about my students that were in high school, I had one period a day where they were with me. If these students are on an academic track like they're going to college, 60 minutes a day allows you to address the academics. That's it. You might need to pre-teach certain braille symbols for an assignment coming up. You might have to reteach something they had in Spanish that day. Then maybe once or twice a week during that hour, they're out for orientation and mobility training which you don't see them at all. Providing these times for the independent living field is really hard.

Karina suggested that three weeks of intensive training in the expanded core curriculum (ECC) per year, at the North Dakota Vision Services/School for the Blind (NDVS/SB), was not enough. Academic focus at school resulted in reduced time for teaching the expanded core curriculum (ECC). NDVS/SB was expected to teach the ECC. She further explained her thinking this way:

> I think they [NDVS/SB] work on all of the expanded core curriculum skills that she needs to be working on. It's such a short amount of time. I think it's hard. I think that's great. I mean, it's an awesome job, I just sometimes wonder if…I think she would be doing better in some of these skills if she had more time there…North Dakota School for the Blind would have more time with her (it's three weeks…). Simply because they're [students] working on so many academic things at school sometimes that take up so much time, and then trying to fit in all of these [expanded core curriculum areas] on top of it.

Jackie provided further commentary related to the prioritization of academics:

> That's probably a more difficult one because organization does seem to be an area where my vision kids often struggle, just because the school is such a fast-paced environment. It's finding again, it's a balance of finding the time and finding it

> early enough because it's such a necessary skill that they have that piece taught first in order to be successful with everything. It already takes a longer amount of time to produce the material for the writing and those kind of things until it becomes developed.

Theme Seven: Limited time and limited access prohibit teachers of students with visual impairments from providing consistent and systematic instruction of the expanded core curriculum within the school district

Issues with time was one of the more frequently mentioned by interviewees in the study. All participants perceived lack of time a major barrier to providing consistent and systematic instruction of the expanded core curriculum (ECC). Limited time posed challenges in several ways. Some of the activities that consumed time included (a) preparing materials; (b) direct instruction; (c) providing instruction to teachers, peers, and paraeducators; (d) traveling from school to school; (e) deciding which assistive technology device to use with a particular student, learning how to operate the device, learning how to teach the device to the student, and actual time teaching the student; (f) accessing resources; and (g) ordering textbooks (several months ahead).

Jackie suggested that less travel time would allow for more instructional time, sharing her rationale this way:

> Having to lose that precious time traveling from school to school when I could be just working with the kids during that time. If I wouldn't have to lose that time traveling, that's just that much more time that you could work on more things with the kids….Probably a couple hours out of my day [traveling].

Jane also believed travel time cut into her direct service time with her students with visual impairments and said:

> …but travel is definitely something that cuts into how much time you're able to spend with kids in the day…probably an hour a day.

Ella indicated that professionals from North Dakota Vision Services/School for the Blind (NDVS/SB) did not spend time on the road, traveling during the winter months.

> Sometimes during December, January, you can't because of the weather, and that's totally understandable not having anybody on the road that doesn't need to be.

Karina found preparing tactile graphics and teaching the student to interpret them was time intensive and gave this explanation:

> It seems like there isn't enough information [on tactile graphics]. Or she struggles with trying to read them, so we spend a lot of time trying to interpret the information. Teaching her how to read the diagram sometimes takes longer than ...what she needs to figure out the answer to a question. I don't know if that makes sense….Like, we would spend two hours or an hour working on making some kind of a diagram for her to answer one test question. Then we spend time making it, time showing it to her, and explaining it, so she can answer one test question correctly.

Jackie prioritized braille math and braille instruction over functional skills in the expanded core curriculum, explaining why:

> …with the school day when they're doing the Nemeth instruction or the braille instruction or low vision and teaching technologies and things like that, there's not a lot of time for the extras as far as the expanded core curriculum.

Karina agreed with Jackie by stating the following:

> Math concepts and things like that are very difficult, so a lot of times I will help her with her math after math class, which can take an entire class period for her to complete.

Ella spoke of prioritizing this development of orientation and mobility skills, providing the following rationale:

> I think they need to be taught more [orientation and mobility skills] than I have the time to honestly as far as traveling in the community and learning how to use navigation tools and things like that. I wish that we could do it daily, honestly but I don't know that we would get the other things done that we needed to do for school.

Anna struggled to prioritize student needs because the core curriculum and the expanded core curriculum were equally important. She explained:

> …my big struggle is I need to teach the student, for example, how to translate their math on a BrailleNote because they're going to be taking a math class in college. That's important but so is being able to make yourself a can of soup on the stove, but you have to prioritize. That's the constant struggle...what are the needs of the students? What are the most pressing needs? How much time do we have? If they're academic, if they have multiple disabilities.

Karina described why she prioritizes working on assistive technology:

> I spend a lot of time working on assistive technology because I feel like that's something I need to work on so that she can be independent in school. I guess I focus a lot of time on that, and that is honestly taking the place of her regular computer time. That's her computer grade is assistive technology. I was able to work that out so she could work on those skills during that time.

With regard to preparation, Anna speculated:

> We're probably not addressing some of the areas as much as we should and that's just a lack of time…I don't know what the answer is how to fit it all in.

Ella made the following comment regarding time for preparation:

> We don't have as much time as we would want for development of skills and teacher skills, so you really rely on those in the trenches with you around the state...or the country, for that matter, with vision, because it's such a specialized field.

Jackie expressed her frustration regarding time:

> I do those [functional vision evaluations], but now my time is strapped, so the School for the Blind...I used them as a resource to come out and do a couple FVEs for me.

Karina begins the process of ordering textbooks for the following school year six months before they are needed. Karina explained:

> I usually start in February of the year before because it can take up to six months to get a book made, so I usually start emailing the teachers, like, in January.

Ella reported how she handled independent living skills:

> I would say probably maybe three to four times a year, we had all the students from the schools, elementary and secondary that have visual impairments get together and we would maybe meet at somebody's house. The kids would fold laundry, do cooking, they might vacuum. Wipe counters, sweep floors. We would just have different stations that we would rotate the kids in and then we'd also have a counselor come in from the school and talk to all the kids about their struggles and things that they had in common with each other. We used to do that. Now, that's kind of fallen apart because of time. With it just being me, it's hard to organize that. That's some of the skills that we've taught in that area. It's hard.

Karina described how she spent time with students on independent living skills:

> We work on cooking skills. Like I said, I was doing three nights a week staying after school for an hour specifically to work on cooking and cleaning and daily living kind of skills.

Anna expressed her desire for more outreach services from NDVS/SB in the area of independent living skills this way:

> It's kind of a no-win situation when it comes to that because I think they [NDVS/SB] do have a good program. I like that kids can just specifically work on those skills for five days in a row or whatever but getting them up there is really hard. I wish there was more North Dakota School for the Blind outreach in that area, the daily living skills area or they could come to us more often and work with the students directly on that.

"Limited Access" refers to perceived barriers to teaching skills in the expanded core curriculum (ECC). Barriers included a shortage of qualified professionals, distance from services, miscommunications about services, and access to equipment and tools.

Shortage of Orientation and Mobility (O&M) specialists impacts access to services. Since there is a shortage of TSVIs and O&M specialists, the North Dakota Vision Services/School for the Blind (NDVS/SB) has provided O&M services during the short-term programming offered on their campus, and through their outreach services. All TSVIs agreed that their students needed more services than were provided.

Jackie felt "lucky" that the North Dakota Vision Services/School for the Blind (NDVS/SB) hired an O&M specialist to serve students in her district exclusively; however, she was concerned that the O&M services that were provided were not enough to meet her students' needs. Jackie elaborated further:

> There's a high need area in our state, heavily. My experience has been limited and yeah. It's just too limited. There's not enough of it. With the training, with this specific training, I think it's such a big part of their life and their day that there just needs to be more…she gets it but I think she needs it more intensively. I wish my younger student would have more direct O&M service. I mean we work on it every day, every day, every day going in the educational setting and things like that but I think it could be more.

Olivia shared her beliefs regarding limited access this way:

> Because I live in the western part of the state, it's really tough to get orientation and mobility instructors out there. It's very fragmented, these skills...I don't have an O&M instructor there.

Olivia perceived that service delivery during the winter months was less reliable due to unpredictable weather conditions.

> We're in the northwest corner, so it wasn't always easy, especially with winter travel. You never know what the roads are gonna be like.

Olivia preferred that reports from North Dakota Vision Services/School for the Blind (NDVS/SB) include what her student worked on and how those skills could be reinforced.

> Sending me back what she can't do doesn't get us anywhere. I want to know what you worked on and how you did it so I can reinforce that. It's like what we need to do with parents. "This is what I worked on. This is how I did it. Can you do that at home?"

Olivia shared her views regarding support:

> They [NDVS/SB] have regional people but they're not certified in O&M either. They have their own little job. They do their job, and because I'm a vision teacher for the western part of the state, I do that job. She's supposed to help but if she's

not certified in O&M and that's what I need, or technology and that's what I need, then there's no point in me contacting her.

Anna expressed her worry about the future:

I do have a fear down the road what O&M is going to look like for us and if we're going to have some of those problems as what smaller districts have, finding somebody to come in in a consistent basis. Because to me, having orientation and mobility once a month is not enough. Absolutely not enough especially for a student who is totally blind. I think they need it at least once or twice a week.

Anna found vision services provided by NDVS/SB in the area of technology were tied to a person. Anna contended that:

…the person that was coming [from the North Dakota Vision Services/School for the Blind] and working with us, and teaching that, and helping us with that does not work there, so we don't have anyone that can come and do that with her [student] anymore.

Anna observed:

It's very hard for us to send our kids there [North Dakota Vision Services/School for the Blind]. First of all, it's so far away. Especially for younger kids to get to the specific skills week, it's hard. You don't want to send your little kid that far away for a week. Then the older kids, honestly if they're academic, they don't want to miss three, four or five days of school, that's huge. Even if you can send, have a discussion with the School for the Blind as well, it's not that they don't do a good job up there, it's just our kids don't want to miss that much school and it's hard for us to send them up there.

Ella added her experiences related to limited access:

There's an orientation and mobility person that probably comes out once a month [North Dakota Vision Services/School for the Blind Outreach teacher] is what it's been throughout the school year. Sometimes during December, January, you can't because of the weather, and that's totally understandable not having anybody on the road that doesn't need to be.

Ella suspected distance hindered access to services in the area of assistive technology:

I wish that the technology [North Dakota Vision Services/School for the Blind] would have come out to us more often than they did, but they didn't. I asked for

> it, but I don't know if the distance was too much or what. They didn't come out as often as I wished they would have.

Karina provided her thoughts on this topic:

> I think they need to be taught more than I have the time to honestly as far as traveling in the community and learning how to use navigation tools and things like that. I wish that we could do it daily, honestly but I don't know that we would get the other things done that we needed to do for school.

Jane was hired to fill the role of TSVI and O&M specialist. Jane stated:

> It's also hard to be in both the teacher for the visually impaired and their orientation and mobility instructor, just because of the time constraints on the school day, I guess. I wish there were more hours in the day.

Jane found that independent living skills lessons were based on availability of equipment and tools. Jane said:

> Looking at where these things are happening naturally within their school day has gotten like a Friday fun where we might do cooking or following recipes, that kind of thing, but I think there's limitations just like what I can bring into my office area to do with them as far as equipment and tools and that type of thing.

Ella shared about access in this way:

> …and access to some of those types of equipment when I think about my cooking and meal prep and that kind of thing that we don't have access to a lot of that.

Olivia described a perceived inequity of service delivery in this way:

> You can say, and you have somebody come out once in a month to do O&M but that doesn't happen, just because of logistics of the whole thing. Now, if I lived in Fargo, it'd probably happen. That's what I found with the School for the Blind services.

Discussion of Category III: Challenges

Students with visual impairments require a two pronged approach to education. One prong, the general education curriculum, is taught to all students. The second prong, the expanded core curriculum (ECC), is taught specifically to students with visual impairments (Curry & Hatlen, 1988). Through the participants' own words, it was clear

that their focus was primarily instruction in the academic areas. Given the time constraints and academic demands of the public school day, teachers of students with visual impairments (TSVIs) were forced to prioritize instruction in academic areas over instruction in the areas of the ECC. This task of prioritizing was not easy. One participant discussed her dilemma of choosing between teaching math skills to a student who would be attending college or teaching the student to make soup on a stove. Limited time and limited access to resources had a negative impact on the TSVIs' ability to meet the student needs in all areas of the ECC.

In addition to time constraints, there is a shortage of educated professionals (i.e., TSVIs and Orientation and Mobility (O&M) specialists). All participants believed their students needed more O&M instruction than was provided. One participant said she was "scolded" by the O&M specialist for performing duties the O&M specialist was legally responsible to fulfill. Distance from services provided by the North Dakota Vision Services/School for the Blind (NDVS/SB) was a factor for half of the participants. Unpredictable weather patterns hindered NDVS/SB Outreach service providers from traveling during winter months.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Purpose of the Study

The purpose of this study was to examine the perceptions and experiences of teachers of students with visual impairments (TSVIs), in the state of North Dakota, regarding the expanded core curriculum (ECC). *The National Agenda for the Education of Children and Youths with Visual Impairments, Including Those with Multiple Disabilities*, specifically Goal 8, was used as a framework in this study: "Educational and developmental goals, including instruction, will reflect the assessed needs of each student in all areas of academic and disability-specific core curricula" (Hatlen, 1998, p. 50). In Chapter I, an overview of the background and need for the study was provided. A review of the literature, including historical perspectives associated with the field of visual impairments, *The National Agenda for the Education of Children and Youths with Visual Impairments, Including Those with Multiple Disabilities* (referred to as The National Agenda), and the nine areas of the expanded core curriculum (ECC), were presented in Chapter II. In Chapter III, phenomenological methods utilized to interview six participants were discussed. Audio recordings of the five telephone interviews, and one in-person interview, were transcribed verbatim and then analyzed for codes, categories, themes, and one assertion. In Chapter IV, descriptions of the participants and analysis of the data were presented. Seven major themes emerged from the data and were supported

by participants' quotes and linked to the existing research. In this chapter, a summary, conclusions, recommendations for teaching the expanded core curriculum, and recommendation for future studies related to the ECC are provided.

Overview of the Methodology

This phenomenological research study consisted of interviews with six teachers of students with visual impairments (TSVIs), who were currently employed by school districts in the state of North Dakota, and who had a minimum of three years of experience in the field of vision impairment. All of the participants in the study were female. Interviews were recorded and transcribed verbatim. Transcriptions were read several times to gain an overall view, and initial thoughts about categories were recorded through memo writing (Maxwell, 2013). Participant responses were coded and then clustered into three categories. Seven themes and one assertion emerged from the data. In the following sections, the seven themes and the assertion that emerged are summarized.

Theme One: It takes a village

Theme One stated that participants perceived the responsibility of teaching students with visual impairments as "huge," and could not be addressed fully by one person. Therefore, the expanded core curriculum (ECC) needed to be addressed collaboratively by all stakeholders (i.e., teachers of students with visual impairments, orientation and mobility specialists, team members, professionals, parents, the North Dakota Vision Services/School for the Blind [NDVS/SB], and others). Haegele et al. (2014) found that TSVIs need support to teach each of the nine areas of the ECC. When TSVIs do not receive support, inadequate services ensue (Spungin, 1998). As itinerant teachers, each of the TSVIs was the sole provider in her school district who possessed the

skills and knowledge necessary to meet the unique needs of students with visual impairments academically, in the general education curriculum, and, functionally, in the expanded core curriculum. These data are supported by Brown and Glaser (2014), who concluded that the responsibility of itinerant teachers who have large caseloads is immense. TSVIs perceived that, despite their years of experience, "you don't know what you don't know" and "you can't be everything for everyone." Palmer (2005) found that communicating the importance of the ECC was challenging.

Ultimately, multiple entities play key roles in integrating approaches to teaching the expanded core curriculum. While the data indicate that TSVIs rely on others to support them in educating students with visual impairments, it is not clear if, or how, the roles and responsibilities for teaching each of the nine areas of the ECC were determined. Huebner (2000) found delineating roles and responsibilities key to successful service delivery.

Theme Two: Ongoing and systematic checks for understanding are mandatory for students with visual impairments to gain educational competency

Theme Two stated that participants emphasized the importance of teaching concepts through purposeful and systematic instruction, and ensuring gaps for learning these concepts were closed by utilizing ongoing and systematic checks for understanding. Concept development (a subcategory in the area of compensatory) is foundational to all learning for students with visual impairments, and these students require hands-on learning experiences to gain new knowledge, as well as opportunities to tie the new knowledge to knowledge already integrated. Understanding concepts is important for all students, regardless of their visual abilities; however, the way in which students who are

sighted learn concepts is different than the way students with visual impairments learn concepts. Namely, students with visual impairments learn from parts-to-whole; whereas, students with typical vision learn from whole-to-parts. Students with visual impairments need the TSVI and the parent to bring the world to them; whereas, students with vision see the world and initiate interactions with it. Additionally, concept development and other compensatory skills are needed for students with visual impairments to access the general education curriculum (Sapp & Hatlen, 2010). Haegele et al. (2014) stated that "lack of concept development" (p. 44) hinders students from being physically active. Low muscle tone, due to inactivity, was a concern for one participant. Low physical activity might impact health.

Theme Three: Teachers of students with visual impairments perceive the North Dakota Vision Services/School for the Blind professionals as experts in the expanded core curriculum

Theme Three stated that participants perceived NDVS/SB professionals as experts for the following reasons: (a) They have more training, (b) are more efficient, (c) have seen more students and more cases, and (d) have a different perspective than TSVIs. While the North Dakota Vision Services/School for the Blind (NDVS/SB) professionals provide vision services for individuals across the spectrum in terms of age, they specifically address the areas of the expanded core curriculum for students in grades K-12. In fact, most participants relied on the NDVS/SB professionals to "fill in the gaps" with regard to the expanded core curriculum. One participant said that "three weeks [of intensive services at the NDVS/SB] was not enough" time for students to gain skills in the expanded core curriculum. All participants concluded that NDVS/SB was a central hub for information specific to individuals with visual impairments. They identified the

provision of support, training, direct instruction to students with visual impairments and their families in the home environments, workshops and conferences, orientation and mobility instruction (hiring one O&M specialist for one school district). Two of the participants were able to borrow technology tools to utilize when assessing whether the tool was appropriate for the student being assessed. According to Ferrell (2007), schools for the blind have been "centers of knowledge and expertise for teaching methodologies" (Historical Trends, para. 4) that enrich learning experiences for students with visual impairments. Additionally, these schools have also served as training facilities for teachers of students with visual impairments (TSVIs), their students, and their parents. While the ECC was deemed important by professionals and advocates for individuals with visual impairments, a consistent plan to address the nine areas was not evident in this study (Wolffe & Kelly, 2011).

Theme Four: Teachers of students with visual impairments perceive they are primarily responsible for teaching compensatory skills and use of assistive technology areas of the expanded core curriculum

Theme Four stated that, of the nine areas of the ECC (i.e., compensatory, social interaction, orientation and mobility, independent living, assistive technology, self-determination, career education, recreation and leisure, and sensory efficiency), TSVIs perceived they were primarily responsible to teach the areas of compensatory skills and assistive technology. All participants indicated that skills in assistive technology were essential to facilitating students' independence, and that both of these areas were highly related to academics. All participants stated that their students with visual impairments were expected to learn the same skills in technology as their peers who were sighted. These data are supported in the literature (Smith et al., 2011).

Participants' comfort level with technology determined the amount of time the TSVI dedicated to conducting research, learning to operate new devices/tools, learning to teach the student how to operate the device, direct instruction, and problem solving when the device was not working properly. Kamei-Hannan et al. (2012) concluded that teacher beliefs about the importance of technology and feelings of incompetence to incorporate technology into the curriculum, or teach it, resulted in limited opportunities for use of technology. On a scale of 1 to 4 (4 being the highest score), one participant in this study rated assistive technology a "five" on the importance of teaching. Another participant had less desire to learn about new technology, relying on her grandchildren to program her Smartphone. All participants reported their administrators approved purchases for all or most of the assistive technology tools that were prescribed by the TSVIs. These data are contrary to what Kamei-Hannan et al. (2012) reported: A lack of equipment due to financial cost limited use of assistive technology. In this study, the TSVIs' interest, competence, and time to learn how to use the technology were stronger factors in determining student access.

Compensatory skills were deemed one of the most important areas on which to focus, because concept development (a subset of compensatory skills) was a foundational skill. All participants recognized students with visual impairments learned differently than their peers who were sighted, and direct instruction to develop concepts was necessary for student learning. Further, ongoing and systematic checks for understanding were important to ensure gaps in learning were closed. Students with visual impairments "miss out" on information presented visually, and access to curriculum extends beyond

information presented in tactile formats, especially when the student does not have the skills for cognitive mapping (Ferrell, 2007).

Theme Five: Teachers of students with visual impairments perceive the parents of students with visual impairments and the North Dakota School Vision Services/School for the Blind professionals are primarily responsible for teaching the independent living skills area of the expanded core curriculum to students who are visually impaired, across the state

Theme Five stated that, of the nine areas of the expanded core curriculum, TSVIs perceived parents and the NDVS/SB are primarily responsible to teach independent living skills. Opportunities to practice independent living skills (i.e., skill required for self-care) occur naturally in the home environment. Generally, these independent living skills are learned by watching and imitating through play. For example, children see their moms brush their teeth many times before imitating the skill. Children who are visually impaired must receive hands-on instruction, not only to use their toothbrush appropriately, but also to learn where to place the toothbrush so that it can be found when it is needed again. This skill of organization is also an independent living skill.

While TSVIs perceived parents of students with visual impairments and NDVS/SB professionals primarily responsible to teach independent living skills, there is no indication in the data that consistently demonstrates how and when these parents learn to teach the independent living skills. Outreach service providers from NDVS/SB travel to the child's home to provide direct instruction and to support the family, on an as needed basis. Some students also travel to the NDVS/SB and receive instruction in independent living skills during the short-term programming weeks, which are offered three times yearly, per age group. According to Bardin (2014), parents might have low

expectations of their child because the child does not attempt the skill/activity independently (which would indicate to the parent the child is ready to learn it). In essence, parents might be waiting to teach the skill, until their children are "ready" to learn it); conversely, children may wait for their parents to demonstrate the skill/activity to participate in it. Ella wondered why the parent was not expecting the child to set the table at home, and Jackie wondered why the parent was not expecting the student to shower at home. These two examples might be indicative of the parents' expectations. Parents do not naturally know how to teach independent living skills. They rely on NDVS/SB and the TSVI and other professionals to teach their children. One student attended a summer session at a school for the blind in another state, one year. The following year, she attended another facility in another state to gain skills in independent living.

Although the participants perceived parents to be primarily responsible to teach independent living skills, each of the TSVIs worked on independent living skills with their students at school, at home, or in the community (e.g., shopping for foods needed to make a meal). Olivia transported her students to an apartment setting to practice skills such as cooking, table wiping, and social interaction. Ella organized a day (three or four times a year) for students with visual impairments to meet at somebody's house and practice skills such as folding laundry, wiping tables, cooking, vacuuming, wiping counters, and sweeping floors. A counselor talked with the students about their struggles and about things they had in common with peers who had visual impairments. (These meeting times have since been canceled, related to the time involved in organizing the

experiences.) Jackie kept toiletry items at school so that her student would be able to brush her hair and wash on those days when she had not showered.

Theme Six: Academic curriculum takes precedence over the expanded core curriculum

Theme Six stated that, although the teachers of students with visual impairment (TSVIs) saw value in teaching the expanded core curriculum, their primary focus was on the academic curriculum (Agran et al., 2007) due to time constraints of the school day (Corn & Huebner, 1998).

The goal of all participants was to "level the playing field" for students with visual impairments, meaning TSVIs wanted their students to learn the same skills as their peers who were sighted and to become independent. This goal to keep students on target with peers who are sighted originated in the work of Corn and Huebner (1998). Palmer (2005) reported that regular school curriculum was perceived to be foundational for all teaching and learning programs. Anna found it difficult to decide whether to teach her student advanced math or a simple cooking lesson using the stove, because both activities were equally important (i.e., the student needed to learn skills in both activities).

While the academic curriculum and the expanded core curriculum have two distinct purposes, the curricular areas are not designed to be silos. Palmer (2005) also supports this idea. All of the participants gave examples of how they designed lessons to include academic instruction with the expanded core curriculum instruction. One TSVI incorporated skills in menu planning, estimating cost of groceries, shopping for grocery items, and making a purchase into her orientation and mobility lesson. Consistent and systematic instruction and ongoing checks for understanding were key components to

ensuring that students with visual impairments achieved independence in the areas discussed.

Theme Seven: Limited time and limited access prohibit teachers of students with visual impairments from providing consistent and systematic instruction of the expanded core curriculum within the school district

Theme Seven stated that participants perceived two barriers to providing consistent and systematic instruction: limited time and limited access. Focus on instruction of the academic curriculum left little time for teaching the expanded core curriculum (ECC). Teachers of students with visual impairments (TSVIs) have developed creative ways to address certain areas of the ECC. One TSVI scheduled time to meet with the student after school to teach independent living skills. Eventually, the parents canceled the after school meetings, because they interfered with the parents' responsibilities to their other children. Another TSVI invited her student to family outings to the Dairy Queen to practice social skills and self-determination skills, and to help the student feel less isolated. She discovered that the student had a very difficult time in making a food choice (became very anxious and needed much prompting), because his parents always ordered for him. All participants agreed that students with visual impairments benefited from experiences with other students who had visual impairments. Olivia found that students who were visually impaired gained confidence and felt less isolated when they interacted with other students with visual impairments. Several studies supported the finding that time restrictions and lack of communication were barriers to teaching the ECC (Lohmeier et al., 2009; Wolffe et al., 2002).

Assertion: Educating students with visual impairments in the state of North Dakota, requires an integrative approach in which academic curriculum and expanded core curriculum are addressed through collaborative efforts among all stakeholders and service providers

Collectively, the seven themes provided evidence that the participants of this study agreed instructing students with visual impairments required highly educated team members, parents, professionals, experts, and administrators to work collaboratively utilizing an integrative approach for several reasons. One reason for this collaborative and integrative approach resulted from the itinerant model of instruction. In this model, teachers of students with visual impairments (TSVIs) travel between schools to provide services; the more time spent traveling, the less time spent providing vision services. Additional rationale for this integrative and collaborative approach revolved around the complexity of student needs. Students required purposeful and systematic instruction and ongoing checks for understanding in all areas of their lives, specifically in academic instruction and instruction in the expanded core curriculum. Pre-teaching, post-teaching, and reteaching were also necessary for students with visual impairments to gain competence. Simply put, it was not feasible for TSVIs to be experts in every area of the academic curriculum and every area of the expanded core curriculum and in every age range (3- to 21-year-olds). Furthermore, while TSVIs might possess the knowledge and skills and expertise in all of these areas, limited time for such tasks as assessing student needs; providing direct instruction; consulting with teachers, parents, peers, and other professionals; preparing materials and ordering books; instructing and observing paraeducators; and attending conferences was prohibitive.

All TSVIs agreed that the demands of selecting an appropriate assistive technology device, learning how to use the device, and how to teach the student with visual impairments to use the device were high. It might be beneficial if the North Dakota Vision Services/School for the Blind professionals were more actively involved in the process (e.g., providing assistive technology assessments, making recommendations for technology, teaching TSVIs and students how to operate the tools, updating equipment, and problem solving when issues with technology occur).

Although TSVIs perceived NDVS/SB to be experts, there appeared to be a lack of consistent communication and expectations among all stakeholders. Factors of time, distance between NDVS/SB and school districts, weather conditions, and access were barriers to equitable and consistent service delivery. Students with visual impairments have complex needs: "No one person can be everything to everybody." Creative and innovative solutions to teaching the ECC are needed (Corn & Huebner, 1998; Huebner, 2000).

Limitations

A total of six teachers of students with visual impairments participated in this phenomenological study. Although the participant size was acceptable, findings represented slightly less than one-half of the overall sample of TSVIs employed in school districts in the state. Therefore, findings of this study cannot be generalized to represent all TSVIs in the state of North Dakota. Because the field of vision impairment is small, participants might have been reluctant to voice their perceptions and experiences of the expanded core curriculum, for fear of being identified.

Recommendations

Skill development in the expanded core curriculum is paramount for increasing the likelihood that students with visual impairments become independent in their homes, schools, and environments. Information gathered through this study might help local and state decision makers, at varying levels, to structure purposeful strategic plans for effective implementation of teaching the expanded core curriculum to students with visual impairments in the state of North Dakota. Findings have the potential to impact service delivery for students with visual impairments in the state of North Dakota, and to serve as a basis for resource allocation. Additionally, this study might identify gaps that lead to attaining more resources and developing new ways of looking at how already existing resources are utilized and integrated. Ultimately, findings might influence how teachers of students with visual impairments (TSVIs) ensure the ECC goals are taught to students with visual impairments in North Dakota.

Recommendations for Teachers of Students With Visual Impairments

It would be helpful for teachers of students with visual impairments (TSVIs) in the state of North Dakota to consistently use the language of the expanded core curriculum and determine why it is important to teach each area. Another suggestion might be to have a meeting with all of the teachers of students with visual impairments and professionals from the North Dakota Vision Services/School for the Blind to determine appropriate assessment tools and curricular tools available in each of the nine areas of the expanded core curriculum. Finally, all stakeholders (through technology when travel is difficult) might be invited to the Individualized Education Programs (IEPs)

meetings to decide who is responsible for teaching in each area and how each goal might be accomplished.

Recommendations for the North Dakota Vision Services/School for the Blind

North Dakota Vision Services/School for the Blind (NDVS/SB) professionals are considered to be the experts in teaching the expanded core curriculum. It would be beneficial for NDVS/SB professionals to maintain collaborative partnerships among all stakeholders vested in providing high quality, timely, and equitable services to students with visual impairments and their families, across the state.

Every participant in this study felt their students would benefit by spending more time learning orientation and mobility skills. Given the shortage of orientation and mobility (O&M) specialists across the country, it might be beneficial to develop, or adopt, a currently existing program to educate paraprofessionals to become certified O&M assistants. In this role, paraeducators would complete coursework (such as modules) and activities that would provide them with certification to teach orientation and mobility skills, under the guidance and supervision of a Certified Orientation and Mobility Specialist. The hours of work would be flexible (potentially after school or weekend hours) to meet the needs of the students. Technology tools might be utilized for livestream during O&M lessons, or to video record the lessons for feedback from the O&M specialist at a later date.

The assistant model might also be used to educate paraprofessionals to become certified in the area of independent living skills. These certified independent living skills

paraprofessionals would work under the direction of an independent living skills professional and provide services in the students' homes and communities as appropriate.

Recommendations for Parents

Every participant reported that they had close relationships with the students with visual impairments and their parents. One way parents can become more involved in their student's program is to inquire about the expanded core curriculum skills that can be worked on in the home environment. In addition, a team approach for assessing these skills, through use of a checklist, could be addressed in the home setting and/or natural environment. Parents might seek assistance from the TSVI or North Dakota Vision Services/School for the Blind for strategies and accommodations.

Recommendations for Future Studies

In this study, I sought to examine the perceptions and experiences of teachers of students with visual impairments in the state of North Dakota, regarding the expanded core curriculum. Results from this study indicate several factors that might be used to develop new ways of looking at how already existing resources are integrated, and how new resources might be obtained.

There is a need for further qualitative research to gain insights into the perceptions and experiences of students who have visual impairments, parents of students with visual impairments, the North Dakota Vision Services/School for the Blind professionals, and paraeducators who work with students with visual impairments. Information gathered from these studies might result in a new model of service delivery for other rural states across the country.

APPENDICES

Appendix A
Informed Consent Form

UNIVERSITY OF NORTH DAKOTA
CONSENT TO PARTICIPATE IN RESEARCH

TITLE: *Teachers' of Students with Visual Impairments Perceptions and Experiences of Teaching Expanded Core Curriculum*

PROJECT DIRECTOR: *Renae Bjorg*

PHONE # 480-202-3093

DEPARTMENT: *Teaching and Learning*

STATEMENT OF RESEARCH
A person who is to participate in the research must give his or her informed consent to such participation. This consent must be based on an understanding of the nature and risks of the research. This document provides information that is important for this understanding. Research projects include only subjects who choose to take part. Please take your time in making your decision as to whether to participate. If you have questions at any time, please ask.

WHAT IS THE PURPOSE OF THIS STUDY?
You are invited to be in a research study that is interested in learning more about perceptions and experiences of teachers of students with visual impairments (TSVIs) regarding the expanded core curriculum (i.e., compensatory or access skills; career education; independent living skills; orientation and mobility skills; recreational and leisure skills; self-determination skills; social interaction skills; use of assistive technology; sensory efficiency skills). You are being asked to participate because you are 1) currently employed as a teacher of students with visual impairments in the state of North Dakota; 2) work with students in grades K-12; 3) have three or more years of experience as a TSVI.

The purpose of this study is to examine the perceptions and experiences of teachers of students with visual impairments regarding the expanded core curriulum. There is a lack of current research in the nine areas outlined in the exanded core curriculum as noted previously. This study seeks to fill the gap in literature.

HOW MANY PEOPLE WILL PARTICIPATE?
Six to eight people will take part in this study in North Dakota.

HOW LONG WILL I BE IN THIS STUDY?
Your participation in the study will include one individual interview lasting approximately 1-1/2 hours. Interview Questions and Expanded Core Curriculum Descriptions will be emailed to you at least two days prior to the scheduled interview to guide you through the interview process.

Approval Date: DEC 18 2015
Expiration Date: DEC 17 2016
University of North Dakota IRB

Date: _____
Subject Initials: _____

WHAT WILL HAPPEN DURING THIS STUDY?
If you choose to participate you will be contacted to set up the interview at your convenience. The interview will last approximately 1-1/2 hours and be digitally recorded. You are free to not answer any questions during the interview. The digital recordings will be transcribed and returned to you to ensure accuracy of the written document. You may strike any comments you feel would jeopardize your anonymity. No personal identification is used on any written document and all descriptions of persons or places are anonymous. Data is presented in a collective (aggregate) description to assure your anonymity.

WHAT ARE THE RISKS OF THE STUDY?
Although there are no risks in participating in this research beyond those experienced in everyday life, some participants may feel somewhat uncomfortable or embarrassed answering questions regarding their perceptions or experiences as teachers of studets with visual impairments. Should you become upset at any point in the study, you may stop at any time, or choose not to answer any questions. If you would like to talk to someone about your feelings regarding the study, you are encouraged to contact a personal counselor.

WHAT ARE THE BENEFITS OF THIS STUDY?
You may not benefit personally from being in this study. However, I hope that, in the future, other people might benefit from this study because it is important to better understand the perceptions and experiences of teachers of students with visual impairments regarding the expanded core curriculum.

WILL IT COST ME ANYTHING TO BE IN THIS STUDY?
You will not have any costs for being in this research study.

WILL I BE PAID FOR PARTICIPATING?
You will not be paid for your participation in this research study.

WHO IS FUNDING THE STUDY?
The University of North Dakota and the principal investigator, Renae Bjorg, are receiving no payments from other agencies, organizations, or companies to conduct this research study.

CONFIDENTIALITY
The records of this study will be kept private to the extent permitted by law. In any report about this study that might be published, you will not be identified. Your study record may be reviewed by Government agencies, the UND Research Development and Compliance office, and the University of North Dakota Institutional Review Board.

Any information that is obtained in this study and that can be identified with you will remain confidential and will be disclosed only with your permission or as required by law.

Approval Date: DEC 10 2015
Expiration Date: DEC 17 2016
University of North Dakota IRB

Date: _____
Subject Initials: _____

Confidentiality will be maintained by means of anonymous transcripts of all interviews. You have the right to review and edit your transcripts. Consent forms will be kept in a locked and secure location with only Renae Bjorg having access to the consent forms and personal data.

You might be concerned that your responses during the interview process will not be anonymous. To assure confidentiality, you will have the opportunity to review the transcripts of your interview and strike any statements that you wish to exclude.

If we write a report or article about this study, we will describe the study results in a summarized manner so that you cannot be identified.

IS THIS STUDY VOLUNTARY?
Your participation is voluntary. You may choose not to participate or you may discontinue your participation at any time without penalty or loss of benefits to which you are otherwise entitled. Your decision whether or not to participate will not affect your current or future relations with the University of North Dakota.

If you decide to leave the study early, you are asked to inform Renae Bjorg that you would like to withdraw.

CONTACTS AND QUESTIONS?
The researchers conducting this study is Renae Bjorg. You may ask any questions you have now. If you later have questions, concerns, or complaints about the research please contact Renae Bjorg at renae.bjorg@mayvillestate.edu or (480)-202-3093 during the day. If you have further questions about the study, my doctoral advisor, Dr. Kari Chiasson, will be happy to answer them. Her phone number is (701) 777-3236 and her email is kari.chiasson@email.und.edu.

If you have questions regarding your rights as a research subject, you may contact The University of North Dakota Institutional Review Board at **(701) 777-4279.**

- You may also call this number about any problems, complaints, or concerns you have about this research study.
- You may also call this number if you cannot reach research staff, or you wish to talk with someone who is independent of the research team.
- General information about being a research subject can be found by clicking "Information for Research Participants" on the web site: http://und.edu/research/resources/human-subjects/research-participants.cfm

Approval Date: DEC 18 2015
Expiration Date: DEC 17 2016
University of North Dakota IRB

Date: _____
Subject Initials: _____

I give consent to be audiotaped during this study.

Please initial: ____ **Yes** ____ **No**

I give consent for my quotes to be used in the research; however I <u>will not</u> be identified.

Please initial: ____ **Yes** ____ **No**

Your signature indicates that this research study has been explained to you, that your questions have been answered, and that you agree to take part in this study. You will receive a copy of this form.

Subjects Name: _____

_____ _____

Signature of Subject Date

I have discussed the above points with the subject or, where appropriate, with the subject's legally authorized representative.

_____ _____

Signature of Person Who Obtained Consent Date

Approval Date: DEC 18 2015
Expiration Date: DEC 17 2016
University of North Dakota IRB

Date: _____
Subject Initials: _____

Appendix B
Interview Protocol

Demographics

1. (Pseudonym):
2. Place of employment:
3. Years as a teacher of students with visual impairments:
4. Describe your caseload.
5. Describe the size of the community in which you work.

Student Description

As you share your thoughts about the different areas of the expanded core curriculum, I would like you to think about specific students you are currently teaching or whom you have taught in the past. Information such as the students' age, grade, eye condition, reading medium, strengths/weaknesses, personality, and learning style may be useful in understanding the ECC.

1. **Compensatory Skills**
   Tell me about your experiences with your student's compensatory skills.
   - What types of skills have you taught in this area?
   - How do you decide what skills are taught?
   - Who is the primary person who teaches compensatory skills?
   - What do you perceive is the role of the parents?
   - What do you perceive is the role of NDSB?
   - I want you to rate teaching compensatory skills, on a scale of 1-4, the importance of each of the components of the expanded core curriculum.
   - On a scale of 1-4, (1= very low, 2 = low, 3 = high, 4 = very high), how important is it to teach compensatory skills?

2. **Social Interaction Skills**
   Tell me about your experiences with your student's social skills.
   - What types of skills have you taught in this area?
   - How do you decide what skills are taught?
   - Who is the primary person who teaches social skills?
   - What do you perceive is the role of the parents?
   - What do you perceive is the role of NDSB?
   - On a scale of 1-4, (1= very low, 2 = low, 3 = high, 4 = very high), how important is it to teach social interaction skills?

3. **Orientation and Mobility Skills**
   Tell me about your experiences with your student's O&M skills.
   - What types of skills have you taught in this area?
   - How do you decide what skills are taught?
   - Who is the primary person who teaches O&M skills?

- What do you perceive is the role of the parents?
- What do you perceive is the role of NDSB?
- On a scale of 1-4, (1= very low, 2 = low, 3 = high, 4 = very high), how important is it to teach orientation and mobility skills?

4. Independent Living Skills

Tell me about your experiences with your student's independent living skills.

- What types of skills have you taught in this area?
- How do you decide what skills are taught?
- Who is the primary person who teaches independent living skills?
- What do you perceive is the role of the parents?
- What do you perceive is the role of NDSB?
- On a scale of 1-4, (1= very low, 2 = low, 3 = high, 4 = very high), how important is it to teach independent living skills?

5. Recreation and Leisure Skills

Tell me about your experiences with your student's recreation and leisure skills.

- What types of skills have you taught in this area?
- How do you decide what skills are taught?
- Who is the primary person who teaches recreation and leisure skills?
- What do you perceive is the role of the parents?
- What do you perceive is the role of NDSB?
- On a scale of 1-4, (1= very low, 2 = low, 3 = high, 4 = very high), how important is it to teach recreation and leisure skills?

6. Career Education Skills

Tell me about your experiences with your student's skills in career education.

- What types of skills have you taught in this area?
- How do you decide what skills are taught?
- Who is the primary person who teaches skills in career education?
- What do you perceive is the role of the parents?
- What do you perceive is the role of NDSB?
- On a scale of 1-4, (1= very low, 2 = low, 3 = high, 4 = very high), how important is it to teach career education skills?

7. Sensory Efficiency Skills

Tell me about your experiences with your student's sensory efficiency skills.

- What types of skills have you taught in this area?
- How do you decide what skills are taught?
- Who is the primary person who teaches sensory efficiency skills?
- What do you perceive is the role of the parents?
- What do you perceive is the role of NDSB?
- On a scale of 1-4, (1= very low, 2 = low, 3 = high, 4 = very high), how important is it to teach sensory efficiency skills?

8. **Assistive Technology**
   Tell me about your experiences with your student's use of assistive technology.
   - What types of skills have you taught in this area?
   - How do you decide what skills are taught?
   - Who is the primary person who teaches use of assistive technology?
   - What do you perceive is the role of the parents?
   - What do you perceive is the role of NDSB?
   - On a scale of 1-4, (1= very low, 2 = low, 3 = high, 4 = very high), how important is it to teach assistive technology skills?

9. **Self-Determination Skills**
   Tell me about your experiences with your student's self-determination skills.
   - What types of skills have you taught in this area?
   - How do you decide what skills are taught?
   - Who is the primary person who teaches self-determination skills?
   - What do you perceive is the role of the parents?
   - What do you perceive is the role of NDSB?
   - On a scale of 1-4, (1= very low, 2 = low, 3 = high, 4 = very high), how important is it to teach self-determination skills?

Continue to next page.

Ranking Importance of Expanded Core Curriculum Areas

Rank the nine areas of the expanded core curriculum in order of importance (1 being most important; 9 being least important).

ECC Skill Area	Ranking
Compensatory or access skills	
Career education	
Independent living skills	
Orientation and mobility skills	
Recreation and leisure skills	
Self-determination skills	
Social interaction skills	
Use of assistive technology	
Sensory efficiency skills	

Final Questions

1. Have you ever had a paraprofessional? Did the paraprofessional have any training in visual impairments?
    - If yes, how did you utilize him or her?
    - If no, how would you utilize him or her?

2. If money were not an issue in your school district, what would you like to see happen so that you can serve your students?

3. What advice would you give to a newly hired TSVI regarding teaching the ECC?

4. Is there anything else you want me to know?

Appendix C
Expanded Core Curriculum Descriptions

This document is designed to provide a common language for expanded core curriculum terminology. It may be used as a reference when considering your responses to the interview questions.

Compensatory Skills	Social Interaction	Orientation and Mobility
• concept development • spatial understanding • communication modes • speaking and listening • study and organization (p. 18)	• appropriate body language • social communication • effective conversation patterns • cooperative skills • interactions with others • social etiquette • development of relationships and friendships • knowledge of self • interpretation and monitoring of social behavior (p. 326)	• body concepts • environmental concepts • spatial concepts • perceptual and sensory skills • mobility skills • orientation skills • interpersonal skills • decision-making skills (p. 252)
Independent Living Skills	**Assistive Technology**	**Self-Determination**
• organization • personal hygiene and grooming • dressing • clothing care • time management • eating • cooking • cleaning and general household tasks • telephone use • money management (p. 284)	• access to information (skills to use multiple tools, systems, and applications) • knowledge of basic general technology skills • communication (reading electronic books, writing, searching using the Internet, tasks that require unique access – math, science, graphics) • personal productivity (use of apps to improve personal efficiency, productivity, and independence) (pp. 197-201)	• self-knowledge • self-advocacy • assertiveness • informed decision making • problem solving and goal setting • self-directed and self-regulated behavior (p. 473)
Career Education	**Recreation and Leisure Skills**	**Sensory Efficiency**
• career awareness • career exploration • career preparation • career placement (p. 416)	• play • physical activity • health, fitness, and individual sports • leisure activities and hobbies (p. 371)	• visual function • auditory function • tactile function • gustatory (taste) function • olfactory (smell) function • proprioceptive function • vestibular function (p. 120)

Note. Adapted from *ECC Essentials*: *Teaching the Expanded Core Curriculum to Students with Visual Impairments* by C. B. Allman and S. Lewis (Eds.), 2014, New York, NY: AFB Press.

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