Inclusion in Mainstream Classrooms: Experiences of Students who are Deaf or Hard of Hearing (D/HH)

by

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Abstract

In current educational contexts Deaf and hard of hearing (D/HH) students are being educated in inclusive classrooms. However, academic and social outcomes for these students remain highly variable. To date, there are few studies examining inclusion from the perspectives of students who are D/HH. Research in this area may impact students' future social and/or economic outcomes. This research can inform and enhance pedagogical decisions with respect to inclusion, resulting in increased student engagement, motivation, and achievement. The purpose of this study was to discover the day-to-day experiences of D/HH students (ASL and spoken English users) through narrative research. Study participants comprised 6 junior high and high school students who have severe-to-profound bilateral sensorineural hearing loss and attend inclusive classrooms in Alberta, Canada. Two students communicated in ASL, three used spoken English, and one communicated using Signed English and spoken English. Semi-structured in-depth interviews were conducted with participants focused on their experiences of inclusion. Additional data sources (participant demographic data, pre-interview activities, and the researcher audit trail) were also collected. The findings are demonstrated through four overarching themes: (a) Educational Adaptations; (b) Identity Development; (c) Effect of Communication Style on Social Relationships; and (d) Importance of Language. Findings from this study are also discussed in terms of Universal Design for Learning and the implications for teachers, administrators, parents, and students themselves. This study adds unique evidence about inclusion through the lens of the students' described experiences in, and perceptions of, inclusive classrooms in an Albertan context.

Preface

This thesis is an original work by Natalia Rohatyn-Martin. The research project, of which this thesis is a part, received research ethics approval from the University of Alberta Research Ethics Board, Project Name “Inclusion in Mainstream Classrooms: Experiences of Students who are Deaf or Hard of Hearing”, No. Pro00038960, March 2015.

Dedication

This dissertation is dedicated to all of the participants who were brave enough to tell their stories, and to the educators and researchers who will learn immensely from these varied experiences.

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Glossary of Terms

Definitions of the terms frequently referenced are outlined below.

American Sign Language (ASL): According to the National Association of the Deaf (2013), ASL is a visual language primarily used in North America, which utilizes the shape, placement, and movement of the hands, as well as facial expressions and body movements, to convey information. Sign language is not a universal language, as each country has its own sign language, and regions have dialects, much like the many spoken languages all over the world. ASL is a language with its own unique rules of grammar and syntax, and is a living language that grows and changes over time.

Cochlear implant (CI): A cochlear implant is an electronic device surgically implanted under the skin, with an external part that sits behind the ear. A CI has several parts: "a microphone to pick up sound from the environment, a speech processor, which selects and arranges sounds picked up by the microphone, a transmitter and receiver/stimulator, which receive signals from the speech processor and convert them into electric impulses, and an electrode array, which is a group of electrodes that collects the impulses from the stimulator and sends them to different regions of the auditory nerve" (National Institute on Deafness and Other Communication Disorders, NIDCD, 2016). CIs bypass damaged portions of the ear and directly stimulate the auditory nerve. Signals generated by the implant are sent by way of the auditory nerve to the brain, which recognizes the signals as sound.

deaf: A medical/audiological term referring to individuals who have little or no hearing. It refers to the extent of hearing loss, and the individual's residual hearing and auditory status (Canadian Association of the Deaf, 2012; Humphries et al., 2012).

Deaf: A sociological term referring to those individuals with a hearing loss, "particularly those who use sign language as their natural language" (World Federation of the Deaf, as quoted in Karchmer & Mitchell, 2003, p.135). Deaf culture and society are based on the use of sign language, and those who use the term "Deaf" identity themselves within this culture (Canadian Association of the Deaf, 2012).

D/HH: The abbreviation is used throughout this document in reference to students who are D(d)eaf or hard of hearing. The use of this abbreviation is not meant to suggest that there is/is not a cultural affiliation with the term Deaf, or that every child who falls into one of these categories is the same as another.

FM System: An FM system is a personal amplification device used to amplify sound from a localized microphone (transmitter) to overcome problems with background noise and speaker distance from the listener. The speaker′s voice is transmitted wirelessly to a receiver on a hearing aid or cochlear implant making the speaker′s voice louder than background noise for the listener.

Hard of hearing: Individuals who are hard of hearing have a wide range of hearing loss that may: (a) vary from mild to profound; (b) be unilateral (affecting only one ear), or bilateral (affecting both ears); or (c) be a high frequency loss (a loss of speech sounds such as "f" and "s"), a low frequency loss (a loss of speech sounds such as "m" and "ah"), or a mid-frequency loss (a loss of speech sounds such as "ee" and "oo"). For the most part, however, these individuals access information aurally (through listening) often with the use of assistive listening devices, typically use spoken English as their preferred mode of communication, and may or may not have a cultural affiliation with the Deaf community (Doyle & Dye, 2002; Karchmer & Mitchell, 2003; Reed, Antia, & Kreimeyer, 2008). The term hard of hearing is both a medical and a sociological term (Canadian Association of the Deaf, 2012).

Hearing: Hearing is the perception of sound and according to Pence and Justice (2012) includes both general auditory perception and speech perception. Cole and Flexer (2011) define hearing in those who are D/HH as "acoustic access to the brain; it includes improving the signal-to-noise ratio by managing the environment and utilizing hearing technology" (p. 11).

Hearing aid (HA): A hearing aid is a small electronic device typically worn inside of the ear or behind the ear. It receives sound through a microphone, which converts the sound waves to electrical signals and sends them to an amplifier. The amplifier increases the power of the signals and then sends them to the ear through a speaker (NIDCD, 2016).

Inclusion: Inclusion is defined as an educational approach and philosophy supporting community membership (Antia, Stinson, & Gonter Gaustad, 2002). Inclusion is about ensuring that each and every student feels welcome and that their unique needs and learning preferences are attended to and valued (Hyde, 2004; Power & Hyde, 2002) and is not simply based on educational placement.

Integration: This term describes a student's "attendance at a less segregated setting than a special school" (Power & Hyde, 2002, p. 302) which may include being educated in a special education class in a general education school or being educated in a general education classroom setting. The term integration was typically used interchangeably with the term mainstreaming (Stinson & Antia, 1999).

Language: Pence and Justice (2012) define language as a "system of conventional spoken, or written symbols used by people in a shared culture to communicate with one another" (p. 4). I would add that signed symbols should be added to this definition as sign language is used in a shared culture to communicate. LaSasso and Metzger (1998) add that language is a natural phenomenon that has its own phonology, morphology, and syntax and develops and changes

over time. The brain uses language as a representational tool to store information and to carry out cognitive processes such as reasoning, hypothesizing, and planning (Pence & Justice, 2012).

Mainstreaming: The term mainstreaming is used to refer to the selective placement of students with various exceptionalities in one or more general education classes. As cited in Kavale (2002) mainstreaming is viewed as both the instructional and social integration of children with exceptionalities with peers, based on the individual educational needs of the student.

Overhearing: Overhearing is characterized by the ability to hear what is being said around us, rather than directly to us, and to learn from what was heard (Cole & Flexer, 2016).

Signed Exact English (SEE): SEE is a manually coded system of invented signs or borrowed signs from existing sign languages for the purpose of manually encoding spoken English. The purpose for designing such systems was to make spoken English visually accessible to D/HH students (Thompson, 1997).

Sign System: Hoiting and Slobin (2002) define a sign system as "messages formulated and transmitted according to the lexicon, morphology, and syntax of a spoken language" (p. 269). A sign system is not its own language; it represents manual signs of an existing spoken language.

Total Communication (TC): TC is an approach dedicated to using the language best suited to the D/HH child, whether it be Oral/Aural (speech reading and spoken language), Sign Language, Signed Exact English, or a combination of the above (Stokoe, 1992).

Universal Design for Learning (UDL): UDL is an approach based on neuroscience and education research focusing on diverse learning environments for varying student needs (Meyer, Rose, & Gordon, 2014). The aim of UDL is to modify learning goals, means of assessment, teaching methods and materials for diverse learners.

Introduction

This is inclusion. This is diversity. To be inclusive is to collect stories, and be the detective seeking to understand the full story. The more stories we have, the more we understand. Whether it's ability, culture, experience, language, or knowledge, we all have lenses to see through, and we all have a story to tell (Moore, 2016, p. 75).

The last three decades have seen a trend towards the placement of students who are Deaf or hard of hearing (D/HH) in general education classrooms (see Antia, Jones, Reed, & Kreimeyer, 2009; Siegel, 2000). These types of placements have been referred to as *integration*, *mainstreaming*, and more recently, *inclusion*. Over the past 10 years, schools in North America have been changing their educational approaches toward a philosophy of inclusion – a philosophy that aims to promote (a) community membership for all students (Antia, Stinson, & Gaustad, 2002), (b) an environment where all students' learning needs are being met, (c) students feeling they are socially "welcomed, and valued" (Antia et al., 2002, p. 215), and (d) students learning together in classrooms with their peers, regardless of their particular learning characteristics (Antia, Reed, & Kreimeyer, 2005; Hutchinson, 2007). As McGhie-Richmond and her colleagues state, "in inclusive classrooms, teachers adapt their instructional practices so that all students achieve in ways that are meaningful" (McGhie-Richmond, Irvine, Loreman, Cizman, & Lupart, 2013, p. 197).

Historically, students who were D/HH and who communicated through sign language have been educated in specialized schools or segregated classrooms within mainstream schools. Segregated settings were created due to the perception of administrators and educators that students had difficulties understanding the spoken language of hearing teachers and peers, and communicated in a language that was not understood by the hearing population, and therefore could not be taught in a general education classroom (Jarvis, 2003). Educators who did not have

specialized training in teaching students who were D/HH felt unqualified to support this student population within a mainstream educational context (Crawford, 2005; Porter, 2008).

Approximately 95% of children who are D/HH are born to hearing parents, who typically communicate orally (i.e., spoken English; Mitchell & Karchmer, 2004). These students are typically educated in mainstream schools (Antia et al., 2002), albeit in segregated classrooms separated from their hearing peers. Students who were D/HH were placed in segregated classrooms because many educators and administrators felt unprepared to work with students who typically struggled with clear, intelligible speech, and felt that more teacher training or educational supports (i.e., educational assistants) were needed to support this student population (Avramidis, Bayliss, & Burden, 2000; Buell, Hallam, & Gamel-McCormick, 1999; Horne & Timmons 2009; McGhie et al., 2013). Thus, irrespective of communication mode (sign language or spoken English) administrators and educators felt that they were unable to adequately support students who were D/HH. Thus, to ensure higher academic outcomes, and to provide the perceived necessary supports for D/HH students, specialized, segregated settings were established (Buell et al., 1999). Unfortunately, segregated educational placements have not resulted in universally higher academic achievement and improved social outcomes for this student population. Despite rapidly improving outcomes for children who have had access to universal newborn screening and appropriate amplification use, compared to their hearing peers, lower academic achievement and poorer social outcomes have been reported for students who are D/HH, irrespective of students' communication modality (i.e., spoken English or sign language; Antia et al., 2009; Marschark, 1997; Mayer, 2007; Slobodzian, 2011; Stone, 1997).

Today, inclusive classroom settings have increasing numbers of students who are D/HH with their hearing peers due to: (a) the influence of universal newborn screening allowing for

early diagnosis of hearing loss resulting in earlier intervention and in turn better spoken language outcomes (Nicholas & Geers, 2007); (b) improvements in amplification technology, (i.e., digital hearing aids and cochlear implants) and hence significantly better spoken language outcomes (Nicholas & Geers, 2007); (c) increased parent advocacy for the inclusion of children with disabilities in mainstream classrooms (Marschark et al., 2012); and (d) successful litigation challenges for children with disabilities under the equality provisions in the Canadian Charter of Rights and Freedoms Section 15(1)(2) for inclusion in general education classrooms (Government of Canada, 2004; Williams & MacMillan, 2001; 2003). However, academic and social outcomes for students who are D/HH remain highly variable, in part, because there still remains little systematic research on critical factors (e.g., teacher training and specialized student supports) that aid in determining the effectiveness of inclusive classrooms for individual students with hearing loss (Cole & Flexer, 2011, Geers, Tobey, Moog, & Brenner, 2008; Jarvis, Iantaffi, & Sinka, 2003). One of the critical factors absent in the Canadian research literature, and one that my study addresses, is that of students' perspectives of inclusion.

Rarely have students who are D/HH been positioned as key informants about their own educational experiences, especially in revealing beneficial or potentially disadvantageous educational practices within their classrooms. In order to know if the shift to inclusive practices in schools is perceived as truly beneficial for students who are D/HH, research is needed that includes a focus on the perspectives of the students. Schultz and Cook-Sather (2001) note that "it is crucial to listen to what students have to say because until we truly understand what students are experiencing—what and how education means, looks and feels to them— our efforts at school reform will not go very far" (p. 2).

Currently, student perceptions of, and experiences in, inclusive classrooms are generally absent or marginalized in discussions about how best to support successful educational and social outcomes for students with exceptionalities (i.e., Lightfoot, Wright, & Sloper, 1999; Mitchell & Sloper, 2001; Roose & John, 2003). The focus of the above mentioned group of studies was with students who had learning disabilities, autism, physical disabilities, and chronic illnesses; only one study, Jarvis et al.,(2003), focused on the perceptions of students who were D/HH. Interviews conducted with 61 British junior high school students with hearing loss about their experiences in inclusive classrooms revealed that some students viewed inclusive classrooms to be supportive of their educational and social success while others did not. These results suggest the need to better understand the sources of disparity affecting the perceptions and experiences of inclusion for students who are D/HH.

Statement of the Problem

In North America, including Canada, students who are D/HH are being placed in inclusive educational settings with little research evidence on what students themselves say about their academic and social experiences in these educational contexts. Inclusion is primarily a subjective experience (Spencer-Cavaliere & Watkinson, 2010). According to Schwandt (1997), a subjective experience can be a personal and unique experience to an individual and may involve one's perceptions, beliefs, feelings, and interpretations. Thus, if understood as a subjective experience, inclusion "requires investigation from the perspective of the child who is *to be included*" (Spencer-Cavaliere & Watkinson, 2010, p. 276). Without the perspectives of students, researchers and educators cannot fully understand the benefits and challenges students may perceive and experience within inclusive classrooms.

Purpose of the Study

Building on the research of Jarvis et al. (2003), the main purpose of this study was to explore the perceptions and experiences of inclusion for Canadian students who are D/HH who communicate in ASL, spoken English or Total Communication (TC). The aim was to discover the day-to-day experiences of these students with hearing loss and to identify, and reveal through the students' perspectives, their academic and social outcomes within inclusive classrooms. Narrative methods were selected as appropriate means of addressing the research aims, as the goal of narrative research is to illuminate the stories and experiences of the students in ways that are in-depth and contextualized. This study adds unique evidence about inclusion through the lens of the students' described experiences in, and perceptions of, inclusive classrooms in an Albertan context. Findings from my study offer teachers, administrators, and parents insights into the students' perspectives, which, in turn, may potentially inform and enhance current educational practice within inclusive classrooms.

Research Questions

The key question guiding this inquiry was:

1) How do students who are D/HH perceive their educational experiences in inclusive settings?

Specifically, my research focused on students' perspectives of their successes and challenges in academics as well as their successes and challenges in the social milieu of their schooling within the province of Alberta.

Two subsequent research questions were also addressed:

2) What does it mean to the student to be D/HH within an inclusive classroom?

Specifically, my research focused on students' perspectives on their social-emotional well-being within their inclusive classrooms.

3) How may experiences of students who are D/HH differ from one another?

Specifically, this question addressed the potential for different experiences of D/HH students depending on their perceptions of inclusion, and perceived supports within their classrooms and schools.

Significance of the Study

The significance of this research lies in advancing an understanding of inclusion from the perspective of students who are D/HH. The underlying assumption is that students' perceptions can inform and enhance decisions on educators' pedagogy with respect to inclusion in order to support increased student engagement, motivation, and achievement. Possible benefits of this research include introducing information that will contribute to a better understanding of the day-to-day events a student may experience in an inclusive classroom. Additionally, my research may lead to a better understanding of what successes and/or challenges students who are D/HH may encounter and experience, and how these can be explored further in inclusive education research.

Researcher Background

My passion to advocate for the well-being of students who are D/HH has influenced my desire to pursue graduate education in educational psychology and special education. My desire to learn about D/HH student perceptions of inclusion also derives from my experiences as a teacher, a researcher, and as the sister of a Deaf sibling who was educated in both segregated and inclusive settings.

In my graduate studies, I was introduced to the work of Dr. Donna Mertens (2005) and the *Transformative Paradigm*, which focuses on resilience and social justice. My ontological and epistemological views for this research are constructivist in nature, which is congruent with

narrative methods and the transformative prism. My assumptions and beliefs regarding constructivism, transformative paradigms and knowledge construction with students who are D/HH are areas I journaled about while completing this research.

It is important that I acknowledge my known assumptions and biases about this research (Richardson, 2000). Before conducting this research, I believed (and still believe) the following: that every student who is D/HH would have varying experiences when it came to inclusive educational settings. I also believed that this population would have differing definitions of what an inclusive educational setting is, depending on the types of environments in which they were educated. I believe strongly that you need to know about a person as a whole before you can delve deeper into one aspect of that person's life (i.e., their experiences of inclusion). Finally, due to my orientation toward a Deaf Cultural perspective, I believe that the reason students who are D/HH have not been given a voice about their own educational experiences is due to many educators and researchers not giving enough credit to this population, assuming students who are D/HH cannot achieve the academic and social levels of their hearing peers and believing students cannot express difficulties they may be experiencing in classrooms.

Study Outline

The literature review provides a brief history of deaf education, current issues in deaf education, a review of the educational changes from the philosophy of segregation to the current philosophy of inclusion, and a review of findings focused on the perspective of students who are D/HH from within the framework of inclusive educational settings. Finally, the methods and procedures utilized for this research study will be outlined, followed by a discussion of the research findings and implications for Deaf Education and future research.

Chapter 2: Review of the Literature

This chapter is divided into three sections, and reviews the evolution of Deaf Education, from segregation to inclusion. The first section, Historical Challenges of Deaf Education, provides a review of controversies that have impacted education of D/HH students. The second section, Current Issues in Deaf Education, reviews the current research in the field of Deaf education. The third section, the Importance of the D/HH Student Perspective, provides a review of inclusive education from the D/HH student perspective.

Historical Challenges of Deaf Education

There has been significant controversy surrounding the availability and quality of education that has been provided to students who are D/HH (Johnson, Liddell, & Erting, 1989; Nussbaum, Waddy-Smith, & Doyle, 2012; Slobodzian, 2011; Standley, 2005). The controversy for students who are D/HH involves (a) access to education; (b) instructional language of the classroom; and (c) teaching and learning processes. Unfortunately, as this review will reveal, many of the historical challenges faced by students who are D/HH continue today, and will likely be experienced by my study participants.

Access to Education. Education within formal educational institutions in North America began in the 1600s, but access was denied to students with disabilities, including students who were D/HH. Home schooling was the lone option for students who were D/HH, as school administrators felt that educators were ill prepared to educate this population. Access to formal education was revolutionized in 1817 when Thomas Gallaudet founded the first American School for the Deaf in Hartford, Connecticut (Mayer, Akamatsu, Bibby, Jamieson, & LeBlanc, 2009; Moores, 1996). Gallaudet, an American youth minister interested in Deaf education, travelled to Europe to learn more about the School for the Deaf established in France.

Gallaudet's aim was to return to America with the French teaching methods to provide formal education for students who were D/HH. While in France, Gallaudet met Laurent Clerc, a teacher at the School for the Deaf, and together they returned to the United States to open the American School for the Deaf, a residential school which offered formal primary and secondary education, taught primarily in sign language. Many North American cities and states followed suit and began opening residential Schools for the Deaf, providing students with hearing loss access to formal education and to sign language, albeit away from their family and community.

In Canada, the first School for the Deaf was opened in Quebec City, Quebec in 1831, and Alberta's first School for the Deaf opened in Edmonton, in 1955 (Mayer et al., 2009). With access to education, more students who were D/HH were able to earn high school degrees and hold minimum wage jobs (Winzer, 1993).

Post-secondary access. It was not until 1857 following advocacy from the D/HH community in Washington, D.C. when a residential school for the Deaf was converted into a college, and that signing students who were D/HH in the United States were granted access to post-secondary education. The college, named after the late Thomas Gallaudet, was the first institution providing post-secondary educational opportunities specifically for the D/HH, where instruction was delivered in sign language (Mayer et al., 2009). Due to the success of Gallaudet College, President Lincoln signed the 1864 Enabling Act, which allowed Gallaudet College to confer formal degrees. Twenty years later the U.S. Congress promoted Gallaudet to a university status, allowing Gallaudet students to convocate with graduate degrees. In 1988 D/HH advocacy groups and organizations protested, this time to instate a Deaf President at Gallaudet University. These protests led to the appointment of the first Deaf President, ending what D/HH supporters felt was discrimination against those who were D/HH. In Canada, the first reported account of

signing Deaf individuals obtaining access to oral post-secondary education was in 1987, where students were able to learn with the assistance of support services such as an interpreter or note taker (Erting, 1994).

Instructional Language in the Classroom. When students who are D/HH first gained access to formal education, the primary language of instruction was sign language. However, in the 1870s, a debate commenced over the language of instruction that was more effective for students' academic success, sign language or spoken language. A leading activist in the language of instruction debate was Alexander Graham Bell, who advocated for spoken language (also known as Oralism). Bell believed "that deaf children should be educated through speech and speech reading, preferably in day schools where they could have social contacts with hearing people and their families" (Kaplan, Bally, & Garretson, 1985, p. xi). The majority of the hearing community, including hearing parents whose children had hearing loss, agreed with Bell and favoured spoken language instruction, whereas the majority of the Deaf community opposed exclusive spoken language as the language of instruction in schools. The Deaf community argued that exclusive spoken language instruction denied children the ability to use and learn in what they believed was their natural language, sign language, and resulted in forced participation in speech therapy and listening-skill training (e.g., having mouths shaped by the therapist's hand to "feel" the sound), which some found not only ineffective but also resulted in students who were D/HH missing valuable class time, to attend speech therapy sessions (Stokoe, 1960). The language of instruction debate created a divide that remains today between the hearing and Deaf communities – separating those who favour spoken language versus sign language as the primary language of instruction in schools.

A major turning point in the language of instruction debate occurred in 1880 at the International Congress for the Education of the Deaf (ICED) in Milan, Italy. Following five days of intense and heated deliberations between sign language advocates and spoken language advocates, the congress committee panel determined that spoken language would be the language of instruction for students who were D/HH. In a written statement, the panel concluded that "there was incontestable superiority of speech over signing in restoring the deaf mute to society… and the use of sign… has the disadvantage of injuring speech, and lip-reading, and precision of ideas" (Strong, 1988, p. 83). Despite the fact that there was no published research evidence to support such conclusions, and only Bell's observations and teachings, the congress decision resulted in the adoption of spoken language as the language of instruction in the majority of residential schools for the D/HH in Europe and North America. Unfortunately, this change led to degeneration in the educational outcomes for some students who were D/HH, especially for those who had not learned to communicate through spoken language (Stokoe, 1960). In fact, the removal of sign language as the language of instruction in schools significantly impacted the educational outcomes of students who were D/HH well into the 1900s. Strong (1988) reported that for children educated in these oral classrooms, more than 35% of students who were D/HH were illiterate while 60% of students did not surpass a grade 5 reading level. For the 5% of students who achieved a tenth grade reading level, most were classified as hard of hearing rather than deaf (p. 89). The alarmingly high rates of illiteracy for D/HH students led many parents and researchers to advocate for a change in the language instruction in classrooms.

A blend of two languages. Oral instruction of D/HH students who signed, led to parental advocacy from Deaf parents claiming there was a "lack of a mutually shared language"

(Slobodzian, 2011, p.653) within schools. Parents claimed signing D/HH students struggled to communicate with non-signing students (Slobodzian, 2011), negatively affecting students' education and socialization. Advocacy led to a change in 1967. After almost 100 years of restrictions on the use of sign language in classrooms, Total Communication (TC), a combination of sign language and spoken language, was formally introduced into North American educational systems. The goal of TC was to optimize language development for children with hearing loss by utilizing the most effective instructional method for the individual child (i.e., formal signs, natural gestures, fingerspelling, body language, listening, and speech; Schwartz, 1996).

A positive outcome of the introduction of TC was that American Sign Language (ASL) gained formal language recognition based on parallels found between the grammatical structures and vocabulary of ASL and spoken languages (Humphries et al., 2012; Lederberg Schick & Spencer, 2013; Nussbaum et al., 2012; Stokoe, 1960). The international acknowledgement of ASL as a formal language, led to a growth in research across a number of academic arenas (i.e., sign language, literacy, and English as a second language) from the 1960s onward (Johnson et al., 1989; Nussbaum et al., 2012; Standley, 2005; Stokoe, 1960). The surge of research also propelled investigations into best practices for educating students who were D/HH in neighbourhood schools with their hearing peers (Moores, 1996).

Teaching and Learning Processes. During the 1960s, the D/HH benefitted from strong parent advocacy opposing education of children with disabilities in residential schools, away from families and support networks (Edmonds & Edmonds, 2008). Instead, the argument was made for all students to receive their education in their home communities in general education classrooms. The opportunity for students who were D/HH to attend neighbourhood schools was

further impacted with the passing of US Public Law 94-142, the *Education for All Handicapped Children Act* (Edmonds & Edmonds, 2008), requiring that all students have access to education in the "least restrictive environment." A least restrictive environment was defined as the opportunity for all students, regardless of ability, to have access to the general education curriculum to the greatest extent possible (Sindelar, 1995). The least restrictive environment led to an educational shift known as *mainstreaming*, where students with exceptional learning needs are educated in general education classrooms integrated with peers.

Mainstream education. In the United States during the 1990s, federal funds were allocated to support special services for students with exceptional learning needs, leading to an influx of students who were D/HH in mainstream classrooms (Edmonds & Edmonds, 2008). Under the umbrella of mainstream education, students were placed in general education classrooms with varying levels of support (e.g., ASL interpreters, educational assistants, and amplification devices; Johnson, 2003; Lupart, 2000; Siegel, 2000).

With students who were D/HH now in mainstream classrooms, researchers and teachers began to compare these students to one another and with hearing students to gauge their academic achievement (Buell et al., 1999; Pardini, 2002). Some students who were D/HH were able to achieve academically alongside their hearing peers, which accelerated a shift throughout the 1990's from residential, or day programs to educational placements within mainstream neighbourhood schools (Holden-Pitt & Diaz, 1998). Although in practice, mainstreaming gave more students who were D/HH access to public school education, it was not always within classrooms with hearing peers, or with the amount of support needed for levels of achievement comparable with hearing peers (Antia et al., 2002). For example, mainstreaming was misinterpreted by many administrators and educators as merely the act of placing students in

general education classrooms. Unfortunately the “placement only” focus often resulted in student failure because administrators placed students in classroom settings without consideration of individual students and their needs. Students were often not placed in grade appropriate classrooms, or, if in grade appropriate classes, some students were not completing grade appropriate tasks (Kavale, 2002). Lupart (2000) explains this confound of mainstreaming as placing the onus on students to fit the “one size fits all” model of education, and not recognizing the unique needs of individual students.

From mainstreaming to inclusion. Parental advocacy continued during the late 1990s throughout North America to improve the academic and social outcomes of students who had disabilities.[1] Parents voiced concerns about the processes of mainstreaming and encouraged educators and administrators to shift away from mainstreaming, toward the concept known as “inclusion,” already being practiced in European countries (Cook & Swain, 2001). Although a universal definition of inclusion has yet to be established, in practice inclusion has been operationalized as a placement or a philosophy (Gal & Duramy, 2015; Kavale, 2002; Lupart, 2000).

Inclusion as a placement. Similar to mainstreaming, inclusion as a placement focused on the education of all students, including students with exceptional learning needs, in general education programs with their peers (Horne & Timmons, 2009; Idol, 2006; Porter, 2008). Kavale (2002) explains that inclusion as a placement was meant to differ from mainstreaming in that rather than a single placement option (i.e., general education classrooms), inclusion was intended to provide a continuum of placement options (e.g., pull-out resource rooms, half-day programs at a School for the Deaf, general education classrooms). However, when implemented, some

[1] A term that also evolved with the changing mindset into now referring to students as “students with exceptional learning needs” (Edmonds & Edmonds, 2008).

administrators and educators claimed there was a lack of funding to support the continuum of placement options, and instead students who were D/HH were placed only in general education classrooms (Horne & Timmons, 2009). With the lack of resources and supports, teachers reported feelings of frustration and exhaustion supporting students with varying needs on a daily basis. The lack of evolution in educational practices in the move from mainstreaming to inclusion as a placement led parents and researchers to focus on inclusion as a philosophy.

Inclusion as a philosophy. Doherty (2012) explains inclusion as a philosophy focused on the rights of disadvantaged students in general education classrooms. Cole (2005) further explains that the philosophy of inclusion considers teaching approaches utilized, appropriate support for students, and response to individual needs of students. Inclusion as a philosophy can be successful only if educational practices are centered on individual student strengths and weaknesses and not concentrated solely on the classroom placement of the student (Thompkins & Deloney, 1995). Inclusion as a philosophy implies an educational shift with schools moving from a one size fits all curriculum, to a focus on student diversity and individualized learning potential (Doherty, 2012).

The framework of Universal Design for Learning (UDL) was created to shatter “the one-size-fits-all mold” (Edyburn, 2005, p. 18), and to provide various engaging learning opportunities for students with exceptional learning needs. Students must be engaged in learning over time for significant academic achievement gains, as simply being in an inclusive classroom and having access to education may not lead to meaningful learning (Edyburn, 2010; Rose & Meyer, 2002). The framework of UDL focused on (a) providing flexibility when presenting information to students, and allowing students flexibility to demonstrate their knowledge and skills; (b) providing flexibility in the way students are engaged in classroom settings; (c)

providing appropriate accommodations and supports for all students; and (d) holding all students to high achievement expectations (Edyburn, 2010; Meyer et al., 2014). These principles of the UDL framework centre on curriculum that benefits all students, not just those with exceptional learning needs, and promotes the celebration of individual differences, establishing the culture of a community in schools (Gordon, 2010; Salend & Garrick Duhaney, 1999).

Over the last 15 years, more and more schools in North America are operationalizing inclusion as a philosophy through the UDL framework. To benefit students who are D/HH, administrators and educators require a shift in their philosophies, appropriately exemplifying communicative and social models, standardizing levels of teaching expectations, and providing dynamic learning conditions for teachers and students alike (Rhoades & Duncan, 2010). As stated by Horne and Timmons (2009), many administrators and educators' personal philosophies do not yet reflect these inclusive beliefs because many educators are still working under the assumption that inclusion is placement based.

A Decree in the Language of the Classroom Debate. The pedagogical shift to inclusion brought with it a renewed interest from researchers and educators on best practices surrounding language in the classroom for students who are D/HH. One hundred and thirty years after the ICED in Milan, the language of instruction debate in educational settings was finally re-examined and amended to reflect individual student needs (i.e., the use of spoken language or sign language) at the 2010 ICED congress held in Vancouver, Canada. Furthermore, all nations were called upon "to accept and respect all languages and forms of communication" (ICED, 2010, p.1). The ICED declaration is just one of many calls for widespread reform in the educational systems serving students who are D/HH. As Siegel (2000) states, "the issue is not what communication mode is best, but that all language and communication needs must be

addressed" (p. 8), meaning that all individual communication needs of students who are D/HH must be considered in educational settings.

It was hoped that, with the introduction and implementation of inclusion, many of the issues faced in Deaf education history would be resolved. Unfortunately this has not been the case. The following section will review current research issues that continue to impact students who are D/HH.

Current Issues in Deaf Education

Four prominent issues have influenced Deaf education in the 21st century in North America contributing to the variation of needs and experiences of students who are D/HH. These include (a) early identification and family centered intervention; (b) language development; (c) literacy acquisition; and (d) culture. Research shows these issues affect many current D/HH students in inclusive classrooms; thus, each of the four issues will be explored in this section.

Early Identification and Family Centered Intervention

Early identification is defined as detection of hearing loss within the first six months of life (Estabrooks, MacIver-Lux, Katz, & DeMelo, 2004). The purpose of early identification is to initiate intervention at the earliest possible time. Early family-centered intervention describes a system of services, resources, and programs designed around family resources to meet the physical, intellectual, speech, language, social, and emotional needs of children from birth-to-three years who have been identified with, or considered at risk of, a developmental delay, and their families (Cole & Flexer, 2016; Yoshinaga-Itano, 2003b). It is imperative for children with hearing loss to be identified early and given appropriate intervention, to facilitate optimal social and educational outcomes (Luterman, 1999). In fact, several studies focusing on early identification and intervention with children who are D/HH have shown the earlier a child is

identified, the better the child's language outcomes. For example, Yoshinaga-Itano and Apuzzo (1998) examined 40 children with mild-to-severe hearing loss aged 25-60 months of hearing parents. The children were divided into two groups; *early identified* included children diagnosed with hearing loss between birth-6 months, and *late identified* included children diagnosed with hearing loss at 18 months or older. All children received intervention services 2-3 months following diagnosis. Irrespective of degree of hearing loss (i.e., mild to profound), or communication modality (i.e., speech only, or speech with sign language) the early identified group showed better receptive and expressive language outcomes than the late identified group. In fact, earlier identified children performed similarly on oral language measures to same-aged children without hearing loss.

A plethora of studies conducted with children who are D/HH have shown similar findings (i.e., Apuzzo & Yoshinaga-Itano, 1995; Briggle, 2005; Mayer, 2007, Moeller, 2000; Robinshaw, 1995; Yoshinaga-Itano, 2003a; 2003b), confirming that early identification is essential for children who are D/HH so as to ensure access to appropriate amplification and/or supports, services, resources or programs (such as counselling, auditory skill and speech development, sign language development, language and cognitive and social-emotional development) for optimal spoken and/or sign language outcomes.

It is recommended that all infants be screened for hearing loss within the first six months, and the average identification age in the last decade has typically been between 2 and 6.5 months (Ghogomu, Umansky, & Lieu, 2014; Young & Tattersall, 2007). In the United States, earlier identified children showed improved outcomes in language, cognitive, and social-emotional development (Yoshinaga-Itano, 2003b). Legislation was then passed in all 50 states mandating universal newborn hearing screening and early intervention programs (Yoshinaga-Itano, 2003b).

Unfortunately in Canada, universal newborn hearing screening has not been nationally mandated. Only six Canadian provinces and territories (British Columbia, New Brunswick, Ontario, Prince Edward Island, Quebec, and Yukon) routinely conduct universal newborn hearing screening. Manitoba along with Alberta, the province where my study is situated, have only just legislated universal newborn hearing screening, but it has not yet been fully enacted.

Language Development

A significant characteristic separating humans from other species is the ability to comprehend and produce language, enabling the transfer of knowledge within society (Corina, 1998). Siegel (2008) states that language truly defines the human species, as it provides humans with the means to express thoughts, feeling, hopes, and information. Language acquisition typically comes naturally to children who are hearing, as they are surrounded by, and exposed to, spoken language (Mayberry & Lock, 2003; Petitto, 2009; Yoshinaga-Itano & Apuzzo, 1998). Many children who are D/HH acquire language through sign language, and increasingly, spoken language through amplification. Without adequate access to language, whether it is spoken or signed, Humphries et al. (2012) state that "the child will become linguistically deprived" (p. 2). Thus, early access to language is an important factor for children who are D/HH to develop optimal language skills.

A child who has access to language early in life, in a language comprehensible to the child, (e.g., ASL or spoken English, or a modality that is not considered a language, but a system of manual representation of a language, such as Signed Exact English) is more apt to reach important cognitive and linguistic milestones in a fashion typical of children with normal hearing levels (Luterman, 1999; Mayberry & Lock, 2003; Mayer, 2007; Yoshinaga-Itano & Apuzzo, 1998). The later children with a hearing loss acquire language, the less complete is their

understanding of the language, limiting cognitive development, language comprehension and expression, and overall academic and social success (Mayberry & Eichen, 1991; Mayberry, 2002). In fact, Siegel (2008) contends that without early access to language, some children who are D/HH are being denied what most hearing children take for granted "the right to receive and express thought and to cultivate his or her language" (p. 45). Yet, there are children who are D/HH in North America without adequate access to language (Antia et al., 2009; Siegel, 2008; Yoshinaga-Itano, 2003b). For example, children who are D/HH may have difficulty acquiring "the wealth of social and cultural knowledge, which hearing people learn incidentally, through observation and overhearing the conversations of others" (Foster, 1998, p.130). Language deprivation is considered an act of abuse, and rarely happens with children who are hearing, yet is still commonly reported in children who have hearing loss (Humphries et al., 2012; Johnson et al., 1989; Siegel, 2000; 2008). There are many factors that contribute to language deprivation for children who are D/HH: the child's opportunities for social and linguistic interactions, the age of identification and intervention, the type of amplification device used by the child, the child's individual characteristics, and access to language provided by the parents.

Given that each family and child is unique with specific learning and living needs, language development does vary from child to child (Estabrooks et al., 2004). Nonetheless, language typically develops in the course of interactions between parent and child during routine, everyday caregiving and play activities (Cole & Flexer, 2011; Polk, 2012; Siegel, 2000). Since language development is contingent on frequent and consistent access to a language model (Briggle, 2005), it is important for parents to understand that early access to language directly affects their child's language development (Petitto, 2009).

When learning a language, Polk (2012) suggests that the child's brain is not exclusively searching for sound; instead it is searching for patterns. Irrespective of whether children are learning language visually or auditorily, the brain searches for patterns, and for ways to interpret those patterns. In order to be able to interpret patterns, children need access to good language models, along with consistent and meaningful language experiences (Pettito, 2009). Thus early exposure to language is a critical component for all children regardless of whether they are hearing, hard of hearing, or deaf, and the language they are learning (e.g., ASL or spoken English).

The imperative for early exposure is also evident from research showing the existence of sensitive periods for language acquisition during infancy and early childhood (Mayberry & Lock, 2003; Yoshinaga-Itano, 2003a). Sensitive periods refer to developmental periods "during which certain capacities are readily shaped or altered by experience…and must occur within a certain period if the behavior is to develop normally" (Knudsen, 2004, p. 1412). For example, there are certain periods of time that exposure to language must occur, or levels of language acquisition may be reduced (Houston & Miyamoto, 2010). Due to improper or inadequate amplification, or lack of access to appropriate language models, children who are D/HH may have a limited or inconsistent exposure to language during these sensitive periods. Thus, the earlier identification occurs increases the likelihood of adequate access to language during sensitive periods. Some researchers (e.g., Marshark, Green, Hindmarsh, & Walker, 2000; Morgan & Kegl, 2006) believe that inadequate access to language during sensitive periods may also affect a child's theory of mind.

Theory of Mind. Theory of mind (ToM) "is typically used in a relatively limited sense to refer to the knowledge and representation of mental states that allow children to explain human

behavior or demonstrate their belief that mental states play a causal role in the behaviors of others" (Marshark et al., 2000, p. 1067). Morgan and Kegl (2006) add that the ability to demonstrate ToM may be dependent on the child's access to a rich language environment in order for a child to explain their understanding of another's behaviour. Cole and Flexer (2016) argue that *overhearing*[2] is important in the development of ToM as it provides a window into the perspective of others. Optimal application of amplification technologies has improved D/HH children's access to overhearing interactions of others but it is still not equal to the ability of children without hearing loss to overhear conversations and speech intonation.

Typically, ToM is assessed using a false-belief task. A typical scenario involves a child watching a puppet hide an object and leave the scene; another puppet then comes and hides the object in a different location. ToM is demonstrated if the child, upon observing the first puppet return to the scene, understands that the puppet will think the object is in the first place it was hidden. The process is repeated to ensure that the child truly understood the events and did not arrive at the answer by simply guessing.

The last two decades have seen a proliferation of research in ToM with individuals who are D/HH (see Courtin & Melot, 2005; Hughes et al., 2005; Lundy, 2002; Marshark et al., 2000; Milligan, Astington, & Dack, 2007; Peterson, 2004; Peterson & Siegal, 1995; Remmel & Peters, 2009). This body of research has shown that, in general, students who are D/HH struggle with ToM. Lundy (2002) states that the difficulty with ToM with this population may be linked to the ways in which interpersonal communication occurs. Lundy explains that when parents speak about mental processes "having to do with beliefs, attitudes, and knowledge states" (p. 43) indirectly or directly to their children, the children are more likely to communicate using

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[2] The ability to hear what is being said around you, rather than directly to you.

concepts relating to these mental processes and states. However, for children who are D/HH, as discussed previously, access to language and hence exposure to these conversations varies widely.

It has also been argued that the communication modality used in the home (sign language or spoken language) may have a role to play in the development of ToM for children who are D/HH (Hughes et al., 2005; Peterson, 2004; Peterson & Siegal, 1995). de Villiers and de Villiers (2014) explain the cognitive and linguistic demands of the false-belief task, whereby the child is asked where a puppet will look for an object. In order to perform these tasks, the child must "answer an explicit question and make a choice between the reality they know and the location corresponding to another person's false belief" (de Villiers and de Villiers, 2014, p. 315). General language skills may be a necessary means for children to be able to interpret and complete this task (de Villiers, 2005; Schneider, Schumann-Hengsteler, & Sodian, 2005). For D/HH children who communicate in spoken language with appropriate, well-maintained amplification, ToM development appears to follow similar patterns to children without hearing loss (Schneider et al., 2005). For D/HH children communicating in spoken language without amplification (or well-maintained amplification) a potential delay in development of ToM may occur if the child has delayed access to language, and hence may lack both the language and reasoning skills needed to complete false-belief tasks. For D/HH children born to parents who communicate fluently in sign language from birth, language acquisition and reasoning skills also appear to be on par with children who are hearing, and born to hearing parents, as these children's exposure to language has not been delayed. Without a language delay, it is assumed these D/HH children have the skills to express ToM reasoning at an earlier age (de Villiers,

2005; Morgan & Kegl, 2006). Schick, deVilliers, deVilliers, and Hoffmeister (2007), explain their view on the role of language in ToM:

> It is not simply the language of the task that causes deaf children with language delay to demonstrate a delay in such tasks. Rather, the reasoning about the mental states is the problem for the child. Even when the language demands are minimized, deaf children who have hearing families are significantly delayed compared with deaf children who are acquiring ASL from birth from their parents, or hearing children acquiring English (p. 390).

Cole and Flexer (2016) offer a potential rationale for this view. Children gain an understanding of ToM by attending to the various viewpoints of family members through language exchanges. “Therefore a child must be able to track multitalker conversations, a skill that demands the maximum possible auditory brain access to speech at a distance, and in the same language as other talkers in the environment” (p. 235).

Conversely, several studies have argued against the idea that language may have a role in ToM development (e.g., Courtin & Melot, 2005; Lundy, 2002; Marshark et al., 2000), but rather it is the methodologies used to evaluate ToM that create difficulty for the D/HH population. Several researchers have argued that even if children who are D/HH fail the false-belief task, some may in fact still have a developed ToM (Marshark et al., 2000; Remmel, Bettger, & Weinberg, 2001). The false-belief task functions on the assumption that children can understand mental representations, for example, the ability to reason about representations such as beliefs and physical examples, and logical rules (predicting one outcome based on another). It is then argued that “reasoning about events… depends on the cognitive complexity of the situation, and not the child’s understanding of mental phenomena specifically” (Remmel et al., 2001, p. 116).

To overcome the issue with mental representations, Marshark et al. (2000) utilized a narrative context instead of the false-belief task to evaluate ToM. The narrative task required a child to tell a multi-character story about a random topic to another child. Marshark et al. found

that some students who were D/HH (regardless of communication modalities) were able to demonstrate understanding of ToM when evaluated within the narrative context. Therefore, assumptions about a child's ToM may not necessarily relate to their development of language or family communication mode, but to their understanding of mental representations. Further, Marshark et al., (2000) stressed that relying on a single ToM task, such as the false-belief task, can be problematic particularly when it is used to label a child as "deficient in a particular domain" (p.1072).

In summary, making generalizations about the language development of children who are D/HH is difficult as the issues surrounding language development are complex within this population (e.g., ToM development, early access to language, type of amplification used, and family capacity to support children's communication development). Mayberry (2002) suggests that this is due to the multiple sensory forms of linguistic input children who are D/HH receive and the varying kinds and amounts of language input available to them during early childhood. Some children who are D/HH, for example, receive limited language input of any kind (i.e., children who have undetected severe-to-profound hearing losses do not have access to the speech frequencies, and may not be given non-verbal cues; Siegel, 2000). Other children with access to amplification technology, such as hearing aids or cochlear implants, may receive incomplete spoken language input, due to the fact that hearing aids and cochlear implants do not restore hearing to normal hearing levels (Cole & Flexer, 2011; Humphries et al., 2012). Some children will have access to spoken language with amplification, while other children who are D/HH have access to language input visually in the form of sign language (Mayberry, 2002; Mayberry, & Lock, 2003). Such variations can significantly affect a child's language development. The age of identification and access to language can significantly affect language outcomes, and, therefore

this information is pertinent for educators and professionals to know as it may affect educational outcomes and vocational options.

Literacy Acquisition

Literacy is the term most commonly used to describe “a way of conceptualizing children’s encounters with print and their reading and writing development” (Williams, 2004, p. 353). The literacy skills of this population have been one of the most discussed and studied topics among Deaf Education teachers and researchers. Literacy skills are essential for academic success, employment opportunities, and quality of life (Marschark & Hauser, 2012). Thus, when students who are D/HH have delayed access to language, attaining the literacy levels needed for academic success is challenging, and may impact their future vocational options (Marschark, 1997). As indicated in other studies (i.e., Strong and Prinz, 1997), D/HH adolescents have reported difficultly with English literacy. From these results I would assume the same may be possible for participants in my study.

In terms of literacy acquisition, a common assumption has been that students who are D/HH and who primarily use ASL have lower English literacy skills than students who communicate via spoken language. For spoken language users, language and print are comparable, and thus, high literacy skills are considered to be more readily attainable. For example, Wray, Flexer, and Vaccaro (1997) tested 19 children with hearing loss communicating through spoken language. After an auditory-verbal intervention program, 16 (84%) of the children read at or above the level of their hearing peers. ASL however, is a language with unique grammatical structure and syntax, and similar to other English language learners (ELL), the language does not map perfectly onto English print (Goldin-Meadow & Mayberry, 2001). Further, ELL have oral and written versions of their first language, whereas ASL users do not

have a written version of ASL. Thus, when encountering written text, it is in a foreign language, and constantly navigating between two languages positions D/HH students at a linguistic disadvantage (Miller, 2007).

Several studies have revealed that students who are D/HH and whose early environments include quality access to sign language and spoken language develop better literacy skills than those exposed only to one modality or the other (for a review see Marshark et al., 2009). Strong and Prinz (1997) provide support for the notion that there is a positive relationship between ASL and English literacy in their research of the literacy skills of students who were D/HH using ASL. Students (n = 160) between the ages of 8 to 15 years old attending a residential School for the Deaf were assessed through ASL language tests (i.e., classifier production; sign narrative; story comprehension; Strong & Prinz, 1997) and English literacy tests (i.e., *Woodcock-Johnson Psychoeducational Test Battery,* revised Version (WJ-R); Woodcock & Mather, 1990) to measure their comprehension and production of ASL and English literacy outcomes. Strong and Prinz (1997) found that there was a bidirectional relationship formed between ASL and English literacy proficiency. Although no comparison was made to hearing norms, which is the usual comparator in spoken language studies for DHH and literacy, students in this study who had highly developed ASL skills also tended to have stronger English literacy skills, and students who had advanced English literacy skills tended to have stronger ASL proficiency. Further, Strong and Prinz (1997) found that the relationship between ASL proficiency and English literacy proficiency was also affected by an *unknown* factor, which they speculated may be related to family socioeconomic status, quality of teaching, or cause, degree, or age of onset of hearing loss.

Other researchers argue that communication modalities do not predict literacy outcomes. Antia et al., (2005) compared results from the *Test of Written Language* (TOWL-3; Hammill & Larsen, 1996), completed by 110 students who were D/HH and who communicated in spoken English, ASL or a combination of the two. The TOWL-3 task involved spontaneous essay writing, using a picture prompt. Antia et al. (2005) found that 32% of students achieved writing scores commensurate with the average published norm for typically hearing children and 17% scored above average. Notably, approximately 50% of students in the study achieved essay writing scores below the published norms. Generally, students who were D/HH showed strengths in the areas of overall construction of a story, spelling and punctuation, but tended to struggle in the areas of vocabulary and syntax. Importantly, Antia et al., (2005) stressed that the communication modalities of students were not found to significantly predict writing performance.

Regardless of communication modality, studies have generally shown that students who are D/HH struggle with literacy development, although students with adequate and appropriate amplification show higher literacy levels (Cole & Flexer, 2016). Mayer (2007) suggested that to improve literacy outcomes for students who are D/HH creating rich literacy learning environments and opportunities for students to make links between speech/sign and print should be the focus. Williams (2004) suggested that if students who are D/HH were exposed to high quality language models at a young age, development of written language could be similar to that of hearing students, and that instructional approaches in classrooms that support hearing students' emergent writing may also then be appropriate for young students who are D/HH.

Over the last two decades, the advancement of hearing aid technology and subsequent increase in cochlear implantations has led to improvements in hearing, speech, and language

outcomes for students who are D/HH. Due to these improvements, some educators and researchers have come to assume improved literacy outcomes for amplified D/HH students relative to D/HH peers without amplification (e.g., Geers, 2002; Johnson & Goswami, 2005; Nicholas & Geers, 2006; see Spencer & Marschark, 2003, for a review). However, this assumption has not been unequivocally supported in the research literature. In an effort to elucidate this supposition, Marschark, Rhoten, and Fabich (2007) analyzed studies assessing literacy (i.e., reading skills and academic achievement) among children with cochlear implants and found these children frequently surpassed D/HH peers who used hearing aids and children without amplification devices (signers and non-signers) in reading and academic achievement; however, implantation did not guarantee reading and writing skills commensurate to hearing classmates. Marschark et al. (2007) maintain that children with implants do not necessarily have comparable language, hearing or speech skills to their hearing peers; therefore, assumptions of automatically improved literacy achievement as a result of cochlear implantation are not founded.

The relationship between low literacy skills and hearing loss is “complex and appears to be related to a variety of factors including family background, cognitive abilities, language competence” (Strong & Prinz, 1997, p.37), and academic achievement. Given the complexity of experiences in language, communication, and family background of children who are D/HH, as well as the differences in home and school contexts, students’ culture and identity must be also explored.

Culture and Identity

Language, identity, learning, and experience are all intertwined in a child’s development and are rooted in the family culture. Influences of culture have immense implications for the

language (spoken or sign) children who are D/HH are exposed to and subsequently learn. Families of children with hearing loss often struggle with the existence of, and the significant juxtaposition of two cultures: Hearing culture and Deaf culture.

Hearing Culture. As previously mentioned, more than 95% of children who are D/HH are born to hearing parents, and have hearing siblings and peers (Mitchell & Karchmer, 2004). These families feel it is important that their children become part of their hearing community and culture (Mitchell & Karchmer, 2004). Parents typically view having their children who are D/HH learn to speak and hear (via amplification) as the logical choice, as they want their children to be able to communicate and participate with hearing family members. For these parents, teaching their children to function auditorily and orally is often considered a basic human right because "children with all degrees of hearing [loss] deserve an opportunity to develop the ability to listen and to use verbal communication within their own family and community constellations" (Estabrooks, 1994, p. 3). Within the hearing culture, being deaf is considered a disability, wherein the inability to hear interferes with a person's ability to interact within the mainstream culture (Jones, 2002).

Deaf Culture. Culture in the Deaf community is premised on the understanding that being D/HH is not viewed as a "disability" but as a "difference." Luterman (1999) explains that "the Deaf community [views] being deaf not [as] a medical condition that requires correction, but rather a cultural difference that needs to be respected" (p. 1). Sparrow (2005) explains that within Deaf culture, people who are D/HH have a set of shared experiences (culture, history and schooling). Advocates of Deaf culture believe that children who are D/HH have the right to be part of this culture, to have a peer group of D/HH children and D/HH adult role models who use sign language as their first language (Jarvis et al., 2003).

Most children who are D/HH are born to hearing parents, therefore access to Deaf culture typically occurs when directly interacting with Deaf adults and signing D/HH peers (Jarvis et al., 2003). For the majority of children who are D/HH, access to those active in Deaf culture happens most often at schools for the Deaf or in predominantly D/HH social circles.

With such variance within home and educational settings, the perspectives of students who are D/HH are critical to warrant inclusive settings reflect students' diverse needs.

The Importance of the Perspectives of Students who are D/HH

In North America, educational systems, especially Special Education systems have typically operated based on a "failure" model, where children must display educational deficits in order to be eligible for special education services (Cole & Flexer, 2016; Flexer, 1999). This failure model is based on the assumption that "negative" characteristics of a child (i.e., disability, incapability, or weakness) are intrinsic to the child, rendering the child responsible for any educational challenges (Brownlee, Rawana, & MacArthur, 2012; Thomas & Loxley, 2007).

With the failure model, students' educational outcomes or performance dictate perceived ability, and Phillips, Hayward and Norris (2010) affirm that these outcomes may be directly affected by other factors, such as support in their home environment and SES, not simply inherent student ability. If children come to school without support of family members at home who "reinforce the goals of schooling, [students] face expectations that they have not had the opportunity to fulfill" (Harry & Klinger, 2007, p. 19). Furthermore, within the failure model, being labelled with a "disability" holds a stigma for many students, with the assumption that students are unable to fulfill certain tasks or reach certain cognitive levels.

Receiving a disability label before entering school may also negatively affect student educational outcomes (Harry & Klinger, 2007). "The label may alter teachers' and parents'

expectations, and the child may be seen as hopeless by teachers and parents" (Phillips et al., 2010, p. 112), further contributing to barriers of learning, and lowered expectations before students even have an opportunity to exhibit their actual abilities. Researchers argue that the concept of *disability* needs to change, as the deficit orientation seems to be ingrained in many schools, not only the administrative level, but at the classroom level as well (Ainscow, 1997; Harry & Klinger, 2007).

Several researchers, including Luterman (1999), Moore (2016), and Trent, Artiles, and Anglert, (1998) suggest educators and administrators should operate from a strengths-based model, also known as the developmental perspective of education. This model focuses on the whole student, not just their disability, and how best to meet the diverse needs of individual students. The strengths-based model is based on the assumption that all students can achieve academic and social goals, and have individual strengths. It is important to note that supporters of the strengths-based model recognize that some students' strengths may not "represent conventional knowledge, capacities, and resources" commonly associated with academic success (Brownlee et al., 2012, p. 3). A strengths-based education system is needed to accentuate student achievement and strengths in an encouraging manner (Lopez & Louis, 2009). Researchers (Cole & Flexer, 2011; Estabrooks, et al., 2004; Luterman, 1999; Ziv, Most, & Cohen, 2013) argue that a strengths-based perspective will aid in determining appropriate services and supports for students, as each student will be considered on an individual basis. Lopez and Louis (2009) state that students may be aware of the deficit focus in education. Therefore students need to be provided the opportunity to understand and explore their individual academic and social needs for success through the strengths-based model to further elevate their educational experiences.

The perceptions and experiences of students are rarely captured and explored in research, especially for students who are D/HH. To date, the academic and social experiences of students who are D/HH have been studied from the perspectives of educators (Afzali-Nomani, 1995; Antia et al., 2002; Luckner & Muir, 2001), parents (Bat-Chava & Deignan, 2001; Mitchell & Karchmer, 2004), and hearing students (Cambra, 2002; Hung & Paul, 2006). There is no doubt that these studies provide valuable information on what educators and hearing students experience in inclusive classrooms with students who are D/HH, and what parents perceive happens within these classroom settings, but they simply cannot reflect with any credibility or authenticity the perceptions and experiences of the students themselves (Lightfoot et al., 1999). Unfortunately, students who are D/HH are rarely provided the opportunity to communicate perspectives about their education, especially when it comes to "defining and developing their schools and their learning" (Rix et al., 2010, p. 4). All students have a right to contribute to, and be consulted about, their education. As Jarvis et al., (2003) explains, successful education can only happen when students' perspectives are taken into consideration (p. 228).

In the following section studies will be reviewed in which researchers have attempted to investigate the perspectives of students who are D/HH in mainstream classroom settings. The research has been organized into three categories: Academic and social perspectives, Perspectives through surveys, and Qualitative perspectives.

Academic and Social Perspectives

Some researchers have investigated the academic and social experiences of students who are D/HH within their current mainstream classroom settings (Angelides & Aravi, 2006/2007; Cambra, 2002; Hintermair, 2010; Jarvis et al., 2003; Kent & Smith, 2006; Luckner & Muir, 2001; Robertson & Serwatka, 2000; Slobodzian, 2011).

Studies of Academic Achievement. Robertson and Serwatka (2000) examined the perceptions of students who were D/HH and their hearing peers, focusing on students' teacher preference (D/HH versus hearing). The researchers also assessed individual differences in student achievement as measured by subtest scores on the *Stanford Achievement Test* (SAT; Harcourt Educational Measurement, 1996) when taught by teachers who were D/HH or teachers who were hearing. There was no difference found in individual student achievement scores when the teacher was hearing or D/HH. However, students who were deaf preferred being taught by teachers who were D/HH, whereas students who were hard of hearing or hearing did not identify a teacher preference. Unfortunately, the researchers did not indicate why students did or did not express particular teacher preferences, nor did they report communication modes of the teachers (i.e., spoken language, total communication or sign language). Importantly, this study shows that there are students who are D/HH who do succeed in educational settings regardless of whether a teacher is hearing or deaf.

Luckner and Muir (2001) investigated "student success" by interviewing 20 students, who were D/HH ranging in age from 12-19 years, all of whom were considered successful in mainstream settings. The communication mode of participants varied, 10 students used a combination of speech and sign, 9 used only speech, and 1 participant used sign only. The participants were nominated by their classroom teachers as successful based on academic achievement, relationships with friends and positive self-perceptions. Participants attributed their success in school to working hard, asking questions if they didn't understand, encouragement from family and friends, and participating in extracurricular activities.

Within this group of studies, what is not clear is which students (sign language or spoken language users) utilized what supports (e.g., the use of an educational interpreter or amplification

technology), and how these supports may have impacted their educational success. Issues such as these could significantly affect the student's experiences in the classroom. Unless these questions are addressed, it is difficult to form a complete picture of the factors that contribute to the success of individual D/HH students within inclusive education settings. In the current study I addressed these issues by providing a detailed description of my participants and the supports each utilize (see Methodology section).

Studies of Social Achievement. Kluwin, Stinson, and Colarossi (2002) reviewed 33 studies conducted between 1980 and 2000 in which D/HH students were compared to their hearing peers in mainstream educational settings. Kluwin et al. found five similar conclusions across the studies: (a) students who were hearing were perceived by educators as more socially mature than students who were D/HH, (b) students who were hearing were accepting of students who were D/HH, (c) students who were D/HH interacted more with other students who were D/HH than with their hearing peers, (d) students who were D/HH educated in mainstream classrooms did not have lower self-esteem levels than their hearing peers, and (e) students who were D/HH preferred to interact with other students who were D/HH, rather than their hearing peers. In Kluwin et al.'s review they found that students who are hearing were perceived by educators as more socially mature and more accepting than students who were D/HH.

As part of a larger study, Jarvis et al. (2003) focused on the social experiences of 83 junior high school students who are D/HH (61 students who were D/HH and 22 students who were hearing) within inclusive settings in order to identify barriers and factors facilitating effective inclusion. Interview results varied, with some D/HH students stating that they felt inclusive settings were beneficial to their social success, whereas other students felt socially isolated, experiencing communication difficulties with hearing peers. Although this study

focused on the perspective of students who were D/HH and reported students' hearing loss levels, and communication modes, age of diagnosis and amplification were not specified. Without a full description of the participants, useful applications to inclusive settings for students who are D/HH are limited.

Slobodzian (2011) conducted an ethnographic study focusing on the construction of social reality/identity in inclusive educational settings with hearing students, and their peers who were D/HH who communicated through sign language. The aim of this study was to detect the students' patterns of language and social behaviour, through a series of interviews and observations with two D/HH students and their 20 hearing fifth grade classmates. The D/HH participants reported feeling disconnected from their peers in inclusive settings as they were constantly being removed from the classroom for resource room support. Slobodzian concluded that continuously transferring students between specialized and inclusive classrooms resulted in students' perceiving they were not "complete members in either setting" (p. 662). This study reports that these D/HH students attributed being successful in a social setting to being physically part of the classroom community.

Studies of Academic and Social Achievement. A few studies have focused on both the academic and social achievement of students who were D/HH. Angelides and Aravi (2006/2007) conducted a retrospective study to compare the educational experiences of 20 students who were D/HH (aged 19-30) who had been educated in mainstream education classrooms or educated in classrooms in residential Schools for the Deaf. Angelides and Aravi categorized students' responses into three themes. The first theme was academic lessons. Angelides and Aravi found that students reported a modification of academic lessons in residential schools to make lessons easier, whereas academic content of lessons in the mainstream classrooms were not modified.

The second theme was interpersonal relationships, where students reported more opportunities to form interpersonal relationships with teachers and students in residential schools than in mainstream classrooms. Third, was the theme of marginalization. Students reported that being in mainstream schools led to feeling marginalized and isolated. Overall, Angelides and Aravi reported study participants felt more challenged academically and socially in mainstream schools. Although not stated, socializing in residential schools may have been favourable because students communicated in a shared language (likely sign language), leading to more opportunities to feel included.

Hintermair (2010) stated that researchers should examine whether, and to what extent, students who are D/HH can achieve academic and social success, and investigated the quality of life of students who are D/HH in inclusive schools, using the *Inventory of Life Quality of Children and Youth* (ILK; Mattejat & Remschmidt, 2006). Hintermair focused on the participants' perceptions of their state of health in relation to the ability to "integrate socially and to participate in all aspects of life appropriate to one's age" (p. 255), such as family relationships, mental health, peer relationships, and physical health. Clear relationships between health-related quality of life and perceived classroom participation were also found. Students who perceived their classroom participation as satisfying had better quality of life in school, better social relationships with peers, and higher mental health scores. It is also interesting to note that the majority of students rated social relationships with peers as more important than their educational achievement. These study results suggest a direct correlation between the perceptions of students who are D/HH, quality of life, and participation levels in classroom settings.

In a more recent study, Dalton (2013) interviewed three students with mild-moderate hearing loss ranging in age from 18 to 21 years old, two of whom reflected on their high school educational experiences. Students discussed past mainstream educational experiences. Dalton classified students' described experiences into three main themes: understanding hearing loss (others' reactions to the students' hearing loss); identity and disability of the individual student; and advice for educators. Students described their self-identity, stereotypes and struggles with socialization with hearing students. Students also offered advice for educators as to what educational approaches and accommodations were beneficial. Although hearing levels of students were reported, students' communication mode (spoken language or sign language) was not specified. It is also important to note that each participant had varying experiences within each theme discussed, and therefore individual accounts of educational experiences must be understood and valued to improve educational practices.

Perspectives through Quantitative and Qualitative Studies

As mentioned previously, research and practice for those who are D/HH has evolved from the medical and deficit perspective. The majority of research in Deaf Education has been conducted utilizing a quantitative approach (i.e., survey studies), which will be reviewed in the following section. The need for qualitative research is also discussed.

Quantitative Methods: Survey Studies. Some researchers used multiple choice survey studies to examine the views of students who are D/HH (i.e., Byrnes, 2011; McCain & Antia, 2005; Robertson & Serwatka, 2000). Robertson and Serwatka (2000) utilized a 4-point multiple choice survey scale with 90 participants to examine student preferences of their teacher's hearing status (i.e., hearing or D/HH) within inclusive educational settings. McCain and Antia (2005) surveyed five students who were D/HH and 18 of their hearing peers in an inclusive, grades

three-to-five classroom. The survey focused on student perceptions of participation within classrooms, students' academic achievement, and social interactions with peers and teachers. Byrnes (2011), as part of a larger study, surveyed 73 students who were D/HH, focusing on students' views and experiences of inclusive education.

Findings from this group of studies revealed that the majority of students who are D/HH felt that academically, they were not as successful as their hearing peers. Socially, students who are D/HH reported feeling "accepted" by their peers, but felt they had fewer friends than their hearing peers. An advantage of survey studies is that larger numbers of students can be reached in less time; however, Priesler, Tvingstedt, and Ahlstrom (2005) argue that quantitative measures such as multiple choice surveys may not truly capture the students' perspective because surveys do not provide participants a way to explain the rationale for their responses.

The reviewed studies recruited D/HH participants based upon similarities in their schooling experiences (academic or social), but in the majority of these studies, students were not identified in terms of hearing loss, (i.e., deaf or hard of hearing), or their mode of communication in the classroom (i.e., sign language or spoken English). A single group identity for students who are D/HH may be assumed by researchers and educators, which does not take into account the individual differences among students (Byrnes, Rickards, Brown, & Sigafoos, 2002). Identifying individual characteristics such as students' levels of hearing loss, communication mode, family dynamics and levels of support are essential to understanding students, and their perspectives of their educational experiences.

Qualitative Methods: Finding the Perspective of Students who are D/HH. In the present study qualitative methods were utilized, as students who are D/HH are not a homogeneous group sharing identical educational encounters and understandings, but rather

individuals expressing unique experiences. Byrnes et al., (2002) state that there is a need for qualitative research that elicits the perspectives of students to ensure varying views are acknowledged. Failure to capture the individual student experience limits the expression of unique attitudes and opinions that students possess about their educational experiences (Gordon, 2010). Students are seldom asked about their perspectives on issues concerning their own lives, and by listening to students themselves, the students' experiences can be used to inform parents, teachers and researchers (Preisler et al., 2005).

Researchers have found that students are keen to explain their experiences (Kent & Smith, 2006). While conducting a study with 16 adolescent D/HH students (hearing levels ranging from moderate-to-profound), Kent and Smith focused on students' hearing aid usage and benefits to wearing amplification. However, Kent and Smith found that students wanted to talk about their mainstream schooling experiences, providing further validation for the appropriateness of qualitative methods that allow for student expression of both unique and common themes and occurrences.

In North America, schools are now focused on building classroom environments that include all students and are structured to meet every student's needs (Angelides & Aravi, 2006/2007), but the individual needs of students may not be completely understood if students themselves are not being asked what they require to be successful in inclusive educational settings. The sociological and political debate over the inclusive experiences of students who are D/HH can sometimes appear to be "primarily concerned with the social good rather than addressing the needs of the individual" (Powers, 2002, p. 232). Antia et al. (2002) highlight the need for educational settings where students' individual needs are met within the school. Accomplishing this goal necessitates an investigation of students' perspectives and individual

needs of students. Acknowledging and listening to the perspectives of students who are D/HH in educational settings render students as experts on their own lives (Spencer-Cavaliere & Watkinson, 2010). Byrnes et al. (2002) suggest student perceptions should influence educational policies and educator practices, alongside outsider speculation of student experiences. Gordon (2010) adds that integrating student perspectives into educational choices and experiences may be a valuable way of moving education practices forward. Paying attention to students' views provides a powerful mechanism for connecting with students whose perspectives are "often marginalized at school... and recognizes that students are genuine citizens of their schools, not merely temporary captives of them" (Gordon, 2010, p. 5).

Summary

The research in this literature review focused on the history of Deaf education particularly, access to education, instructional language in the classroom (e.g., ASL, spoken English, and Total Communication), and teaching and learning processes (e.g., mainstreaming or inclusion). A review of controversies significantly impacting the education of D/HH students was presented, such as early identification; language development; culture; family considerations and identity. Unfortunately, even in the present day many of these controversies have not been resolved. The topic of inclusive classroom placements with students who are D/HH has been widely researched, however inclusion is typically examined from the perspectives of teachers and hearing students. There remains a dearth of research examining the D/HH student perception.

Understanding the D/HH student perspective has strong potential to contribute to the development of practices that will best support students, based on methods perceived beneficial by current students. The research to date has focussed on academic and social outcomes utilizing

predominantly quantitative methods of research, typically missing considerable context, and not capturing the nuanced voice of students who are D/HH. It is crucial to hear the detailed, varied experiences of students who are D/HH who are being educated in inclusive classroom settings to better understand their social and academic needs, and to support the development of best practices of administrators and educators in the education of those with hearing loss.

Chapter 3: Methodology

This chapter is focused on the methodologies utilized in my study and is presented in three sections. The first, Philosophical Foundations, provides a review of the philosophies upon which my study was grounded, including my theoretical perspective. The second, Methodological Framework, reviews the processes I undertook to execute this study. The third, Determining Trustworthiness of Study, provides a review of the procedures that were followed to ensure trustworthiness while conducting this research.

Philosophical Foundations

Braun and Clarke (2006) have stated that when selecting a methodology, especially when focused in the realm of qualitative research, a researcher must be in tune with their beliefs, and make assumptions explicit. Thus, I have sought out a framework to best display my ontological and epistemological beliefs. To position this section logically, it will be organized following Crotty's (1998) tiered framework of four ideologies (epistemology, theoretical perspective, methodology and methods), each of which influence the ideology of the subsequent tier and culminate in the selection of specific research methods.

Epistemology. According to Crotty (1998), epistemology provides a philosophical grounding for "deciding what kinds of knowledge are possible and how we can ensure that they are both adequate and legitimate" (p. 8). In order to complete this study I needed to consider my knowledge base and how it was created. From this viewpoint, it was important that as a researcher I developed a paradigm that signaled a particular worldview, shaped by my ontological, epistemological, and methodological assumptions (Crotty, 1998). The paradigm that best aligned with my research was *constructivism*.

Constructivism. Epistemologically, constructivists are “transactional and subjectivist” (Denzin & Lincoln, 1994, p. 109) meaning that knowledge is created from the interaction between the researcher and participant (Clandinin & Connelly, 2000; Guba & Lincoln, 1994; Lincoln & Guba, 2000) and that the perspectives of both are reflected in interpretations within a study. In the constructivist paradigm, there is the potential for multiple perspectives. As a researcher I maintained that all participant perspectives were equally valuable, and sought to ensure that interpretation in the first round of analysis captured the unique perspectives and meaning of each participant.

As with all paradigms, constructivism holds a particular worldview. Ontology is the nature of reality, and ontologically, constructivism aligns with the notion that realities are psychosocial “constructions that are local and specific” (Guba & Lincoln, 1994, p. 169) to persons. Within the constructivist paradigm, realities are based on individual experience and, therefore, are multiple rather than singular in nature (Lincoln & Guba, 2000). As I am exploring how students who are D/HH experience learning and socialization in inclusive classrooms, epistemologically, constructivism is the ideal paradigm to guide my research. Constructivism allows for researching the individual experience of the participants in my study, while also exploring the potential for students’ shared realities within inclusive education.

Theoretical Perspective. A theoretical perspective provides the means to understand and to explain society and the world (Crotty, 1998). Some of the basic assumptions influencing my theoretical perspective are that understanding of a phenomenon arises through experience, and that there may be multiple interpretations from each experience. Therefore the theoretical perspective that best matches my assumptions, and that influenced my research is *hermeneutics*.

Hermeneutics. Hermeneutics derives from the Greek word *hermeneuein* which means to interpret or to understand (Crotty, 1998). Denzin and Lincoln (1994) explain that hermeneutics includes the belief that there is no single way to interpret truth. Under the theoretical paradigm of constructivism, the purpose of a hermeneutic perspective is for both participants and researchers to holistically interpret understanding of context and meaning emerging from one's conveyed experiences (Ellis, 2006; Smith, 1991). Within this study, I created interpretations about participants' stories, based on my storied understanding of their perspectives. I then checked with participants about how my interpretations fit with their experiences.

Hermeneutics is operationalized around three characteristics: (a) part-whole relationships; (b) language and history; and (c) creative interpretation (Smith, 1991). These features support the ideas of Ellis (1998, 2006) that as a researcher I needed to work in a holistic manner to clarify the importance of participant experiences by examining and interpreting the data with these three characteristics in mind.

Part-whole relationships. The hermeneutic understanding is based on the notion of the *hermeneutic circle.* In this circle, the researcher "moves back and forth between the part and the whole" of the text (McLeod, 2006, p. 27) allowing the whole to shape the understanding of the part and vice versa. Researchers utilize an iterative process through the medium of language, in which the spectrum of one's own understanding is fused with another's viewpoint to create a new understanding and interpretation expanding one's original perceptions (Crotty, 1998; Gadamer, 1975; Smith 1991). Hermeneutics thus allowed me to clarify my original interpretations and understandings, interpret implicit nuances, and understand the meaning of the participant's experiences.

Language and history. In addition to the researcher, participants are also co-constructors and co-interpreters of knowledge (Clandinin & Connelly, 2000). While in the hermeneutic circle, as the researcher I must be cautious when seeking to understand the emotional and interpersonal worlds of participants (McLeod, 2006). It was important that I did not assume that my participants, nor I, always meant the same thing when using certain words throughout the interview. This required being sensitive and explicit while probing further during the interviews to seek clarification and corroboration of my understanding of participants' particular words.

Creative interpretation. Additionally, researchers must understand the meaning participants attach to experiences in their worlds (Patton, 2002). Within the hermeneutic circle, I bring my own *forestructure*, which Heidegger (1953) explains as one's pre-understandings, stemming from one's beliefs, values, interpretations and relationship to the question or problem. As recommended by Ellis (2006), to avoid bias within my interpretations, I provided participants the opportunity to represent themselves in a modality in which they were comfortable, so as not to assume what was best for each participant. Modalities consisted of utilizing different languages (i.e., ASL or spoken English), and pre-interview activities (see Methods). Hermeneutic interpretation does not necessarily provide a means to an end or definitively answer a research question, but it provides the researcher an avenue to further investigate an area of interest (Ellis, 1998). It was important then to take my interpretations back to the participants to ensure my understanding was aligned with participants' accounts and descriptions.

Methodological Framework

According to Crotty (1998), a methodological framework provides a plan of action and rationale behind the choice and use of particular methods in a study. One's chosen methodology impacts interactions with participants, data collection, and data analysis (Crotty, 1998). I utilized

narrative research in order to capture the unique experiences of my participants through the constructivist and hermeneutic lens.

Narrative Research. Narrative research refers to a qualitative approach in which life stories and artifacts are used to describe meaning through language (Casey, 1996). There is the belief that narratives are the foundation for experience, and that the stories participants tell about themselves are the realities they are currently living (Bruner, 1991). A researcher utilizes a narrative approach to gain an appreciation of what is important to participants, such as values, likes, dislikes, interests, fears, hopes, and also to aid in the comprehension of the participants' own descriptions and understandings of their experiences (Ellis, 2006).

Narrative research fits within the scope of hermeneutics as narratives are heuristic, meaning that creating and interpreting a narrative can show a researcher's understanding of the phenomenon or story under study (Denzin & Lincoln, 1994). My narrative research study demonstrated the hermeneutical ideas of the circle at work as I utilized the central themes vital for hermeneutics: examining part-whole relationships (e.g., how a student's language modality affected his or her communication within the classroom), examination of the key role of language within the students' learning environments, and creative interpretation of each participants' telling of his or her experiences (Smith, 1991).

Clandinin and Connelly (2000) speak of narrative research in terms of interaction, continuity, and situation of an experience. To research a story is to experience it simultaneously. This occurs by exploring and situating each participant's understanding of "*personal* and *social* (interaction); *past, present,* and *future* (continuity); and the notion of *place* (situation)" (Clandinin & Connelly, 2000, p. 50). Organizing narrative data with a "beginning, middle, and an end" (Denzin 1989, p. 76) creates a cohesive and comprehensive account of participant

experiences. In my study, participants' narratives were expressed through personal stories describing a significant encounter, event, or personal experience (Chase, 2005). Participants relayed their narratives during formal interviews and through expressions of art, weekly schedules, and lists of important words during pre-interview activities (see Interviews).

In the current study, I used an assortment of methods in an active manner, rather than passively, to gain new and various perspectives of the research topic (Kincheloe, 2005). In keeping with the constructivist mentality of multiple realities, based on one's experiences, researchers must "understand a basic flaw within the nature and production of monological knowledge: unilateral perspectives on the world fail to account for the complex relationship between material reality and human perception" (Kincheloe, 2005, p. 326). If narrative research is conducted in a singular or pure form, researchers may run the risk of having "thin, reductionist descriptions of isolated things… [which] are no longer sufficient" (Kincheloe, 2005, p. 334) when conducting a research study and interpreting the data. A constructivist approach is thus required to understand the complexity of a participant's perception that life consists of the multifaceted interaction of their cultural, physical, and social beliefs and experiences.

Methods

Methods can be understood as the tools and processes used to collect and analyze data in response to a hypothesis or research question (Crotty, 1998). As a researcher, these techniques or procedures help to better examine my topic of study. The following section will address the ethical considerations adhered to throughout this research, as well as the processes of participant recruitment, data collection, and analysis.

Ethical Considerations. Approval was obtained from the University of Alberta through the Research Ethics and Management Online system and participating school board ethics review

boards prior to the commencement of the study. The main ethical considerations addressed in the research applications were participants' informed assent, parent consent, the right to withdraw, and confidentiality. This study adhered to the *Tri-Council Policy Statement* (Social Sciences and Humanities Research Council of Canada, 2014) for research involving humans, focusing on respect for participants and concern for their welfare.

Assent and consent forms (see Appendices A and B) outlined the study purpose, procedures, confidentiality, and explained to participants and parents their right to withdraw from the study at any time without penalty (also see Step Two: Identification of potential participants). Assent forms were signed by participants under the age of majority, and consent forms were signed by participant parent(s) and participants over the age of majority. Signed consent and assent forms were kept in a locked cabinet at the University of Alberta, accessed only by the researcher, until five years after the study completion.

Participant recruitment. The sample size and selection criteria were chosen to achieve purposive sampling, necessary to accomplish my study goals (Merriam, 2009). Utilizing purposive sampling signifies sampling as a series of strategic choices about with whom, where, and how to do research (Palys, 2008). The two types of purposive sampling I employed were *typical*, and *extreme* sampling. Typical sampling illustrates characteristics that are average or normally occurring in a phenomenon (Patton, 1990). According to Patton (2002) extreme (also known as deviant) sampling allows a researcher to learn from unusual or noteworthy displays of the phenomenon of interest, such as outstanding successes or failures, unusual events that may have occurred, or personal or environmental crises. In my study, typical sampling was represented by the students' communication modality. American Sign Language (ASL), spoken English, or Total Communication (TC) are the three primary communication modalities of the

majority of individuals with hearing loss; therefore these are not viewed as unusual, but as typical of the phenomenon of interest. Extreme sampling was represented by student achievement, that is, whether the students reported their academic achievement as average to above average or below average.

This research also focused on the early adolescent age range to capture participants' recollection, insights and interpretations of their educational experiences. Understanding students' experiences at these grade levels can help researchers and educators have a deeper understanding of academic and social strategies and effective tools for junior high school and high school students who are D/HH (Reese, Yan, Jack, & Hayne, 2010).

Participant recruitment involved a three-step process. Step one consisted of identifying potential school sites. Step two included identifying potential participants, and step three involved screening potential participants.

Step one: Identification of potential school sites. A list of 24 potential school sites including students who were D/HH who fit the inclusion criteria, was provided to the researcher by participating school boards. Once potential school sites were identified for the researcher, contact with school principals was initiated via telephone to coordinate an in-person meeting. Meetings consisted of a detailed explanation of the study and the distribution of information packages, including a letter of information for the potential participants, and their parents (see Appendices C and D). Teachers were requested to send student information packages home to potential participants and their parents.

Step two: Recruiting participants. Inclusion criteria consisted of students (a) with severe-to-profound bilateral sensorineural hearing loss; (b) enrolled in junior high or high school; and (c) enrolled in inclusive classrooms in Alberta. Exclusion criteria included students (a) diagnosed

as hard of hearing or with mild-to-moderate hearing loss; (b) who were in elementary school, home schooled, post-secondary institutions or currently not enrolled in school; and (c) who were not enrolled within an inclusive school in Alberta, Canada.

Students and parents who were interested in participating were instructed to contact the researcher by email or telephone. Sixteen consent/assent forms were distributed, of which ten were signed and returned.

Step three: Screening potential participants. Step three involved meeting with potential participants and their parents to describe and discuss the study and consent procedures. The participant demographic survey (see Appendix E) was also completed at this time. The survey served two purposes: to confirm potential participants met the study inclusion criteria, and to gain additional information about the students and their educational settings. Participant survey questions consisted of participants' age, level of hearing loss, student perceptions of their academic achievement, and if there were additional students who are D/HH within their schools or classrooms. Of the ten interested participants, six met the inclusion criteria. All participants who met the inclusion criteria were invited to participate in the study. Of the four interested participants who did not qualify for the study, three had hearing levels ranging from mild-to-moderate, and one had recently decided to withdraw from school.

Participants. The six participants comprised two junior high school students (Grades 7 and 8), and four high school students (one student in grade 10, one student in grade 11 and two students in grade 12) who attended inclusive classrooms at 5 different schools within a large urban city in Alberta. Two students communicated in ASL, three students communicated in spoken English, and one student communicated through Total Communication (TC), utilizing

spoken English supported by Signed Exact English (SEE). Participant demographics are provided in Table 1.

Data Collection Instruments and Procedures. Data collection procedures entailed interviews focused on participants' day-to-day experiences and perceptions of inclusion. Additional data sources were provided from participant demographic data, and a researcher audit trail (Patton, 2002; Stake, 1995, 2005; Yin, 2009).

Interviews. There were three phases to the interview process in this study: pre-interview activities, the interview itself, and member checking interviews.

Phase 1: Pre-interview activities (PIAs). Use of PIAs is consistent with research informed by philosophical hermeneutics because it enables the participants to reveal their understandings about their encounters in a way that they prefer, and to identify the central ideas of their experiences as these relate to the research topic (Ellis Janjic-Watrich, Macris, & Marynowski, 2011). Ellis (2006) notes that PIAs can help create the conditions for participants "to recall significant experiences, analyze them, and reflect on their meaning" (p. 112). Researchers typically wish to know how people have felt about and interpreted their experiences. Words (especially those of children or teenagers) can often fall short of communicating strong or complex feelings or perspectives (Ellis, 1998). Without an opportunity for recollection and reflection during an interview, participants are more likely to respond to the expectations of the researcher, rather than describing or reflecting on their actual experiences.

One to two weeks prior to the face-to-face interviews, participants were provided a series of pre-interview activity options to complete (adapted from Ellis, 2006). Each participant was asked to create artifacts designed to support their ability to reflect upon his or her understanding of the topic (Ellis, 2006). Artifact examples included creating schedules of their daily activities,

Table 1
Participant demographics

Participant	Caitlyn	Billy	Wilden	Mark	Sarah	Kohli
Gender	F	M	F	M	F	M
Age Category/ (Grade)	17-18/ (12)	17-18/ (12)	16-17/ (11)	11-12/ (7)	14-15/ (10)	13-14/ (8)
Academic Achievement[a]	Average to above average	Below average to average	Below average to average	Above average	Average	Average to above average
Level of Hearing Loss	Severe	Profound	Profound	Profound	Profound	Profound
Age of Diagnosis	Birth	12 months	11 months	13 months	6 months	6 months
Age of Amplification (HA)[b]	18 months	12 months	13 months	13 months	12 months	6 months
(CI)[c]	-	-	3 years (right ear) 16 years (left ear)	19 months (left ear) 7 years (right ear)	4 years (both ears)	5 years (right ear) 12 years (left ear)
Mode of Communication[d]	Oral	ASL[e]	Oral TC[f]	Oral	Oral ASL	ASL Oral

Note. [a] Academic achievement= based on student perception not academic marks. [b]HA= hearing aids. [c]CI = cochlear implants. [d]Mode of communication=language used at home/school from most to least. [e]ASL = American Sign Language. [f]TC = Total Communication (spoken English supported by Signed Exact English for this student).

drawing places participants felt were important to them, creating illustrations of school activities they enjoy, or providing a list of 10 words that come to mind when thinking about school. The PIA compromised a total of 11 activity options within two categories (personal, school). Within the personal PIAs, activities focused on participants' personal and familial background, whereas the school PIAs contained activities focused on experiences with inclusive education. Participants were asked to select and complete at least one PIA from the personal category and at least one from the school category (see Appendix F).

Phase 2: Interviews. Interview questions were meant to help make known what was meaningful for my participants, and to reveal ways in which they thought about inclusion (Ellis, 2006). My interview questions were considered a guide rather than a rigid list that must be adhered to, as hermeneutic interviewing involves a "collaborative conversational structure" (van Manen, 1990, p. 63) in which questions are to have a conversational tone, as opposed to a question-and-answer format, in order to produce the onset of a deeper understanding and perspective of the participant's experiences. I spent considerable time refining my list of open-ended questions when planning for interviews. I first pilot tested the questions with five hearing students (grades five to nine), and two junior high school teachers. Pilot testing resulted in revisions to questions. For example, several questions were combined to circumvent questions being perceived as prying, decontextualized or exhausting. My final list of guiding questions (see Appendix G) resembles the open-ended interview questions suggested by Ellis (2006).

All interviews were audio and video recorded to allow for the creation of written transcripts. Audio recordings were made for all participants to ensure that all verbal information was collected, and to facilitate accurate transcription of the interviews. Video recordings were made for all participants to document any nonverbal communication and gestures, and for students who signed, to verify the students' ASL/SEE responses with the educational

interpreter's interpretations. Kitchin and Tate (2000) state that interviews should be sufficiently recorded to ensure appropriate analysis and validity of a study. For participants who are D/HH, this includes capturing all sign language, body language or physical prompts (Kitchin & Tate, 2000). Camera angles must guarantee participants' hands are visible if outstretched sideways or above their head. Expressions on a participant's face also need to be captured in order to interpret meaning/expression behind any signs or movement. A location with good lighting was also essential to ensure light from a window or overhead light was not casting a shadow on the interviewer's face to facilitate speech/lip reading. Participants were also seated away from direct light to ensure they were able to see the researcher or interpreter to facilitate conversation via ASL or spoken English (National Technical Institute of the Deaf, 2015). When utilized for the three participants, the interpreter was seated next to the researcher to ensure comfortable interaction for the participant with both the interpreter and the researcher throughout the interview.

Prior to the interviews, I met with a D/HH Educational Consultant from a local school board, to understand video camera set-up specifications for the interviews (see Figure 1).

The audio-video recordings were transcribed verbatim by myself, the researcher. I also paid special attention to observed nonverbal communication in the video recordings to further assist in the interpretation of the participants' emotions throughout the interviews.

For students who communicated in ASL/SEE, recordings and original transcripts were given to a certified interpreter to review and edit if necessary, as advised by Kitchin and Tate (2000). A meeting occurred between the certified interpreter and the researcher to review original transcripts and modify any errors or misinterpretations.

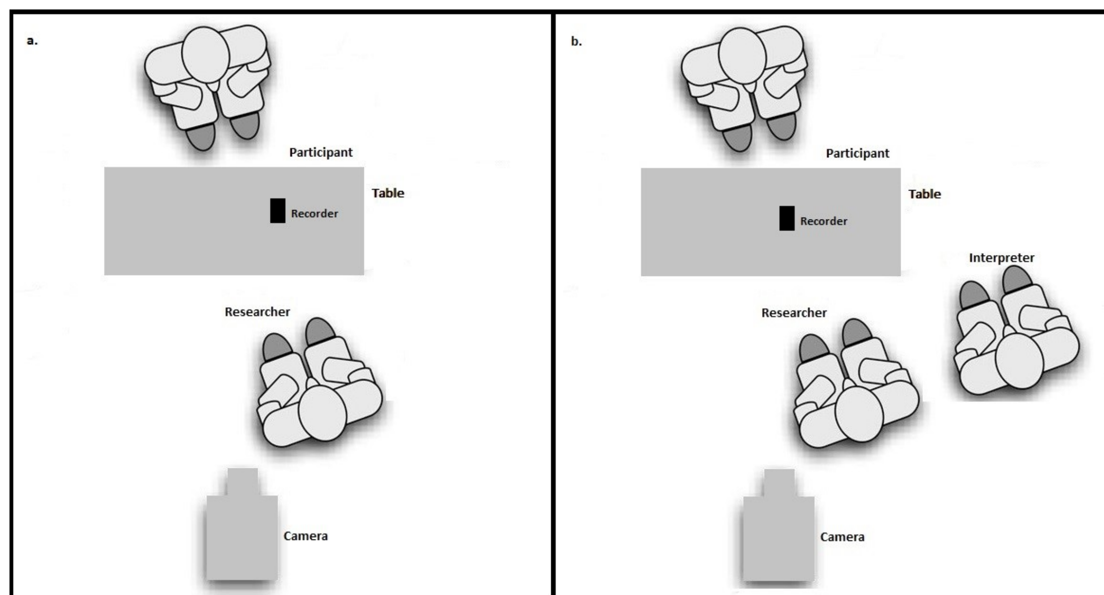

Figure 1. Details of the interview set up. Schematic drawing of a bird's eye view of the interview set up (a) without interpreter and (b) with the interpreter.

Interviews were scheduled at the convenience of the participant, school principals, parents, and the researcher. Interviews were approximately 55 to 75 minutes long, and took place in a comfortable environment for the student. Several participants indicated a preference to meet at their respective schools. In these cases permission was acquired from school principals before the interview took place. Other participants requested to meet in their home environment, or a public location such as a community centre, which was arranged between the researcher and the participants' parents.

The researcher communicated during the interviews in spoken English, but for students (n = 3) who communicated via ASL or SEE, the researcher introduced herself in ASL and utilized an ASL Educational Interpreter for the remainder of the interview[3]. Although the researcher is fluent in ASL, an interpreter was present to clarify any possible misunderstandings and to ensure that the researcher was able to make appropriate notes throughout the interview

[3] The ASL interpreter met with the student who communicated via SEE to ensure that understanding of ASL interpretation would be sufficient, and the student consented stating full comprehension.

(National Technical Institute of the Deaf, 2015). For the students utilizing an ASL interpreter, an educational interpreter with no connection to the students or school was selected to ensure that participants would feel comfortable expressing their experiences without fear of disclosure or repercussions.

Follow-up interviews were scheduled to clarify or expand narratives. During the follow-up interview, participants were also asked to select a pseudonym that would be used to represent their narrative. This strategy was employed to give students a sense of ownership over how their narrative was presented (Ellis, 2006). A third interview was scheduled with 4 of the 6 participants when the participant or researcher felt it was needed.

Phase 3: Member checking interviews. Once analysis of the data was completed, a final meeting was scheduled with each participant. Transcripts and themes were shared with participants through the process of member checking to: (a) determine if the researcher's interpretations were congruent with their own perspectives; (b) add to the content of the transcript; (c) clarify any misunderstandings; and (d) identify any potential researcher bias (Lincoln & Guba, 1985). Participants requested transcript edits in person or by email, and the researcher returned edited transcripts to participants for final review.

Researcher Audit Trail. The researcher kept an audit trail throughout the data collection phase. A journal was maintained and added to after every conversation with a participant and his or her parent, and after each meeting and interview. Within the journal, key notes were made including interesting stories participants told, medical information provided by parents, reactions to questions asked, and general participant observations. The audit trail was used as an additional data source to contribute to the narratives of each participant.

Data Analysis

Patton (1990) states that there is not one singular way to conduct qualitative research, rather there are suggested methods. Researchers must use their previous experience and judgement when analyzing and interpreting their data. As qualitative research is an interpretive process, I used my experience and judgement to create and revise codes, themes, and interpretations. Given the nature of this hermeneutic approach, I utilized the back-and-forth movement of the hermeneutic circle not as a prescription, but as an interchange between field text (i.e., interview questions and PIAs) and research text (i.e., researcher audit trail) occurring from start to finish, until a point was reached where I felt my data and organizing system held together in a sensible way (Ellis, 2006). Within the constructivist paradigm an interactive interpretive process is compatible with thematic analysis as it moves beyond counting explicit words or phrases and focuses on a method of identifying and describing both implicit and explicit ideas within the data, lending itself to the creation and interpretation of a storied understanding of a phenomenon or narrative (Braun & Clarke, 2006). Bruner (1986) differentiated between two methods of thinking and working narratively in analysis: paradigmatic cognition and narrative cognition. Polkinghorne (1995), drawing on Bruner's work, described paradigmatic cognition as classifying an event or occurrence as "belonging to a category or concept" (p. 9). This approach explores common characteristics shared by participants, whereas narrative cognition explores the comprehension of actions taken by participants (Polkinghorne, 1995). The actions of participants result in the outcome of "the interaction of a person's previous learning and experiences, present-situated presses, and proposed goals and purposes" (Polkinghorne, 1995, p. 11). Both of these approaches were employed in my analysis of participant narratives.

Participants' stories were first transcribed, after which codes and themes were generated in order to explore the paradigmatic and narrative cognition modes of thought. Codes were created based on paradigmatic cognition, where codes are utilized to assist the researcher in grouping participants' experiences and narratives into related ideas or categories. According to Saldaña (2013) a code is a "researcher-generated construct that symbolizes interpreted meaning to each individual datum for later purposes of pattern detection, categorization, theory building and other analytic processes" (p. 4). Themes were generated, grounded in narrative cognition, by the creation of codes, categories or outcomes of analytic reflection. Rossman and Rallis (2003) explain the differences: a code may be a word or phrase that explicitly describes a part of the data, whereas a theme is thought of as a description of implicit patterns. Braun and Clarke (2006) state it is necessary for a researcher to use his/her judgement to determine different themes, as a theme could appear in an individual interview or could be determined based on the number of different participants who articulated the theme. Therefore, I utilized thematic analysis to focus on "what" was being said by participants.

In order to focus more on the "way" the story was told, representative of paradigmatic cognition, I was inspired by the work of Clandinin and Connelly (2000) and Ollerenshaw and Creswell (2002) to help sensitize me to aspects of "story" to attend to, in order to look across all participant narratives, and enable my analysis of individual narrative data as well as discover trends across multiple narratives (Kohler Reissman, 2001).

Clandinin and Connelly (2000) speak to the need to analyze personal and social conditions: "personal" meaning participants' internal feelings, hopes, reactions and morals, and "social" meaning conditions in the environment with other people and their intentions, assumptions and points of view. Ollerenshaw and Creswell (2002) describe how characters and actions can affect

the structure of a narrative. Characters refer to "participant" as personality type, behaviours and potential recognized patterns, while "actions" explain illustrations of participants' feelings, intentions and reactions to situations within their described experiences. I felt that with my participants these were important aspects to attend to and to compare across narratives to analyze how these conditions may change based on one's experiences and storied understanding.

Initially, the aforementioned elements of stories were my focus, but as I was analyzing my data it was obvious that the ideas of problem and resolution from Ollerenshaw and Creswell (2002) were part of the aspects I was hoping to compare across narratives. "Problem" referred to the research phenomenon to be described. In my study, this was the idea of inclusion, and how the participants' understanding of, and experiences may have affected this definition, and how these definitions may vary across participants. "Resolution" may have affected the problem, as it focuses on answering the question and describing what may cause participants to potentially change their behaviours or understandings due to their experiences. I felt it was imperative to focus on these aspects, especially when comparing and contrasting themes within narratives surrounding participant experiences with inclusion and inclusive settings.

Throughout my analysis I followed the phases of "familiarizing myself with the data, generating initial codes, searching for themes, reviewing themes, and defining and naming themes" as suggested by Braun and Clarke (2006, p. 87). A 15-point checklist of criteria for conducting thematic analysis from Braun and Clarke (2006) was also used, which included reviewing themes to the original data set, providing a good balance between analytic narrative and illustrative extracts, and ensuring transcription includes an appropriate level of detail.

Determining Trustworthiness of Study

Within qualitative research, Lincoln and Guba (1985) suggested the use of the term *trustworthiness* over *validity* and separated trustworthiness into several categories: dependability and confirmability; credibility; and transferability, each of which is described below. Several of these strategies were employed to enhance each aspect of trustworthiness in the present study.

Dependability and Confirmability. Lincoln and Guba (1985) advocated for the terms *dependability* and *confirmability* over reliability, and argue that a demonstration of dependability ensures confirmability (Shenton, 2004). Instead of emphasizing the replication of a study, these terms refer to the consistency between the data collected and the inferences drawn. Lincoln and Guba (1985) suggested the use of an audit trail to describe the details of how and why decisions are made and how data is coded. Coding memos also provide such information. Both were employed in this study. Additionally, to maximize consistency and ensure errors or misunderstandings during analysis were minimal, transcripts of each interview were created (Miles & Huberman, 1994; Morse, Barrett, Mayan, Olson, & Spiers, 2002).

Credibility. Credibility refers to how congruent the findings of a research study are with the data that has been collected (Merriam, 2009). There are several strategies to enhance the credibility of a study. Two commonly used strategies, utilizing multiple data sources and data triangulation (Patton, 2002; Stake, 1995; Yin, 2009), were not appropriate for my study. My study sought to understand the student voice. Therefore, multiple data sources (or the perceptions from others in the participant’s life such as parents or teachers) and data triangulation were not appropriate. Instead, I identified and analyzed my personal rhetoric through research reflexivity and crystallization (as defined below). Rhoades and Duncan (2010) explain that researchers and

educators are in need of recognizing and examining their reasoning for working with parents and children who are D/HH.

Reflexivity refers to the reflection of one's self as the researcher at every step of the research process, or self-awareness of one's biases (Lincoln & Guba, 1985). To accomplish this, I stated my known biases in advance regarding my experiences, assumptions, theoretical framework, and worldview, which can all affect the credibility of interpretations of the data (see Researcher Background, p. 6). Secondly, I wrote journal reflections throughout the research process to critically reflect on my own biases, experiences, and challenges.

I utilized purposive sampling to search for alternate explanations and to allow for the potential for differing participant perspectives and understandings. Patton (2002) maintains that credibility is ultimately related to purposefully looking for variation or alternative perspectives to understand the topic that is being studied. As Patton (2002) states, researchers must search for data that support varying accounts and help to clarify explanations, and that "failure to find strong supporting evidence for alternative ways of presenting the data or contrary explanations helps increase confidence in the original, principle explanation you generated" (p. 553).

Crystallization is a process co-constructed by researchers and participants, and Ellingson (2009) explains, "since researchers [co-]construct knowledge and representations (narratives, analysis, etc.), all accounts are inherently partial, situated and contingent… [and therefore may] celebrate multiple points of view of a phenomenon" (p. 22). Utilizing crystallization, the researcher is one of the instruments through which complete ways of knowing can be produced (Richardson & St. Pierre, 2005). Viewing my data from varying sources with multiple lenses allowed me to create a deep understanding of my participants' experiences, and to reflect and search for more depth, and clarity within each of the narratives (Richardson & St. Pierre, 2005).

Crystallization lends itself to the credibility of a study as it provides multiple views of understanding and links the participants' views and experiences to the topics, themes and codes created by the researcher. Crystallization was beneficial in this study as different methodological perspectives were utilized (e.g., interviews, PIAs, researcher notes, reflexivity notes; Richardson, 2000). Each of these methods produced data, and interpretations of these data changed depending on the angle from which it was examined (Richardson, 2000). Janesick (2000) suggests crystallization also includes the incorporation of various disciplines as part of a multifaceted research design. I included journaling (arts and humanities), artistic techniques (fine arts), and the writing of the narrative (psychology) itself. When combining perspectives from differing modalities, the goal was to generate a clear and storied understanding of each participant's expressed experiences.

Transferability. Transferability is likened to the concept of generalizability, or external validity. Merriam (2002; 2009) states that transferability is concerned with the extent to which the findings of one study can be applied to other situations. As qualitative research typically utilizes a small number of participants in order to produce a comprehensive understanding of the expressed experiences, generalizability is never assumed. Nonetheless, Bassey (1981) proposed that if other researchers or practitioners believe their situations to be similar to that described in the study, they may relate to the study findings. Lincoln and Guba (1985) similarly suggest that it is the responsibility of the investigator to ensure that sufficient contextual information about the fieldwork sites is provided to enable a reader to make such a transfer. This stance has found favour within the field of qualitative research. For example, Shenton (2004) states, "after understanding the description within the research of the context in which the work was undertaken, readers must determine how far they can be confident in transferring to other

situations the results and conclusions presented" (p. 70). To allow readers to have a full understanding, a detailed description of this study has been provided. Presenting an in-depth account enables a comparison of participants' experiences described in the research with those readers may encounter in educational settings. As recommended by Shenton (2004), information was provided at the outset of the study for readers including: the number of organizations (schools) taking part in the study, locations of the organizations, inclusion/exclusion criteria, the number of participants involved, data collection methods that were employed, the number and length of the data collection sessions, and the time period over which the data were collected.

Confidentiality. Throughout the study, participants' anonymity was protected through the use of pseudonyms in place of their real names and by removing all personally identifying information from the transcript. Audio and video recordings were downloaded to a computer and deleted from the recording device. Electronic files, audio and video recordings, and all other study documents were stored on a password-protected computer or in a locked filing cabinet at the University of Alberta. Interpreters utilized for interviews and transcriptions maintained confidentiality of the participants and the content in the study, as per the interpreter's code of conduct, and a signed confidentiality agreement within the Alberta Code of Ethics.

Chapter 4: Findings

Our lives are stories, and the stories we have to give to each other are the most important. No one has a story too small and all are of equal stature. We each tell them in different ways, through different mediums – and if we care about each other, we'll take the time to listen (Charles de Lint, 1994, p.19).

This chapter comprises narratives of 6 students who are D/HH. Each narrative introduces the student, illustrates familial relationships, uses students' PIA's to describe feelings of school and socialization, and ends with students' plans for the future. Following the narratives is a section on common themes that were found among the participants, and then a section on how the participant narratives answer the posed research questions. Please note when reading the interview excerpts, the letter "P" represents the participant speaking or signing, and the letter "I" represents the primary investigator.

Participant Narratives

Caitlyn.

Being included is like if somebody is in a group with their own friends, and they see somebody else by themselves, like eating by themselves, and then they invite that person to come eat lunch with them, just including people that are just… that don't have anybody… then you're included. Then you're no different than anybody else. And you get to feel the same.

Caitlyn, May 2015

While volunteering with a parent organization for children with hearing loss I met Caitlyn's mother, and she indicated that Caitlyn was interested in being a participant in this study. To ensure Caitlyn's principal was aware, I followed the ethics protocol and sought Caitlyn's participation in the study through her school administration. Living in a rural area of a major metropolis, Caitlyn requested that the interview be close to her home. The interview took place in a meeting room at a community center ten minutes from Caitlyn's rural town. Caitlyn

arrived and spoke softly, admitting she was nervous. She fidgeted with her fingers throughout the first interview and wore her hair covering her ears and the majority of her face.

Caitlyn described herself as a grade 12 student, who was born on the East Coast of Canada and moved to Alberta at the age of 2 years. She worked part time at a movie theatre, and exclaimed excitement for the conclusion of her grade 12 school year, in anticipation of moving away from a small-town to attend college. As the conversation proceeded, Caitlyn cautiously revealed details of her life at home and at school, slowly warming up to the interview process.

Caitlyn spoke fondly of her family, explaining that her mother became pregnant with her while completing her undergraduate degree in university. At birth Caitlyn was diagnosed with a profound hearing loss but Caitlyn's parents were convinced that her hearing was gradually improving. Re-testing at 18 months revealed her hearing had indeed improved and her diagnosis was changed to reflect a moderate-to-severe hearing loss. After researching different amplification options Caitlyn's parents chose to enhance her residual hearing by amplifying Caitlyn with hearing aids.

Caitlyn explained that in her home, her family uses Spoken English, and at the age of 4 years, Caitlyn intermittently attended speech therapy sessions for approximately 5 years. Caitlyn described her perceptions of her speech therapy outcomes:

> P: Because of my good speech, people always say I don't sound deaf. They've always said that. My parents were like no… I guess because my parents asked doctors if they should sign because they found out I was deaf when I was born so then they were like, well should we sign, and [the doctors] were like "No! Don't get her to sign or she'll be lazy and won't speak." So [my parents] made sure [I spoke].
>
> I: And so how do you feel about that?

P: Good, because I don't think I want to... knowing that I could talk and not talk, it would just be weird. But then I don't know how to sign, and that would be cool, so...

I: It would be cool to sign?

P: Yeah. I know the alphabet, but that's it. It would be cool to know more.

Caitlyn also spoke about her love of traveling. Some of Caitlyn's favourite childhood memories were family vacations, whether it was to Disneyland, or camping, Caitlyn enjoyed getting away from her everyday life.

> We camped a lot. We had seasonal lots, and then we lived in our travel trailer for 6 months while our house was being built, so… we did a lot of camping. It was pretty fun, I prefer tenting, but… my dad [doesn't], so we don't tent, we have a trailer.

Caitlyn explained that traveling occurs now only with her mother as her father is not fond of longer trips, although he is involved in the planning process of vacations.

Caitlyn spoke affectionately about her parents. I sensed through her descriptions that Caitlyn felt loved and supported by her family as she spoke about instances of advocacy. Caitlyn described her mother's advocacy for her, especially in educational settings, along with the encouragement of Caitlyn to advocate for herself.

> My mom always says I need to talk more. She was like, "you [have to] start standing up for yourself." She's like, "I can't keep doing that!"

Caitlyn further explained that her parents, mostly her mother, advocates for her at the beginning of every school year:

> Well my mom, every school year, she goes in and has a meeting with the teacher and tells them about all my medical issues and stuff, and how my learning style is and everything.

Caitlyn told me that choosing her PIAs were fairly easy for her, as she wanted to choose the PIAs that played to her strengths.

PIAs. Caitlyn's first PIA consisted of creating a weekly schedule. She listed items here such as waking up and getting ready for school, the order of her classes, time allotted for studying and work, and downtime, such as watching television. Caitlyn also spoke about a tutor that she saw on a weekly basis for her struggles in math.

> My tutor is for math because math is brutal. I don't like math. So I go there, I bring work to him, like my textbook or my notes and we work through it. And whatever I don't get, he goes over it, [and] writes all over my notes. My teacher always says "whose writing is that? That's not yours!" I'm like… that's my tutor's. He takes it and doodles all over it. It helps a lot even though it's expensive. I've seen improvement in my marks.

In her second pre-interview activity, Caitlyn chose to list 10 words that reminded her of school. As she read the 10 words (boring, friends, homework, finals, stress, teachers, questions, lunch, home time, long) 3 stood out to me, reflected by a change in her tone of voice, so I asked Caitlyn to talk about these: *boring, stress,* and *long.*

> P: School is pretty boring... not very fun.
>
> I: Talk to me a little bit about "boring".
>
> P: Well there's a lot of sitting... and just listen[ing] to the teacher talk and talk, and I like more hands on stuff and doing projects, and it's mostly exams, quizzes, and essays... the boring stuff.
>
> I: And what about "stress"?
>
> P: Stress. Studying, it's really hard for me to comprehend stuff sometimes.
>
> I: Ok. And why is that? What do you find hard about that?

P: Because sometimes you have a whole bunch of stuff get piled on you at once, and it's like whoa I don't want to do this. And it just stresses you. Then homework on top of that… it can be a lot.

I: And what do you mean by "long"?

P: I don't know... my schedule is online learning[4], then math, then I have work experience in the elementary school, then I have a spare, so... not really long. Just sometimes feels like that I guess… maybe busy is a better word.

When Caitlyn spoke about school experiences, there was a shift in her demeanour, as she scowled, shook her head, or rolled her eyes recalling certain incidents. Caitlyn confessed to me that she was not fond of school and she spoke very openly about her experiences.

> Elementary was good, I loved school, like oh yeah school was awesome, school's going to be great! It was easy and people were friendly. And junior high came and I'm like... no. School was terrible. Classes were tough, people were horrible… I was like I'm done with it. High school came and it started getting a little bit better. Grade 10 and 11 was good, it was good years, and Grade 12… [you] know when it's your last year, you just want to be done, it's like... I'm done with school, time to get out of here.

Caitlyn also explained how her educational experiences differ from the majority of her classmates as several of her classes are completed through a distance learning center in Alberta. Caitlyn explained the process to me:

P: I seem to learn better... just by doing it myself and just letting me figure it out myself, that's why the online learning centre helps me a lot. I'm doing it by myself, no teacher… well there's a teacher, but he's somewhere in the province.

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[4] Online learning, as Caitlin refers to it, means an asynchronous completion of a high school course that can be taken online, independently, where an instructor is available via email to answer questions.

I: Right. So talk to me about how the online centre works.

P: You go on the website and there's a bunch of courses, like you can take psychology, or cores, everything. So I'm taking Social and LA[5]. I took LA through it last year, and I finished with a mark of around 80 I believe. And then the year before, when I was in a classroom, I was at like mid-sixties I finished with. So that's when mom [and I] learned that maybe that's a better option for you. So now I'm taking Social this year too, and it's like above 70. When it was like a 60-ish last year. So it just seems better teaching myself.

I: So talk to me about why you think it works best for you, what is it about it?

P: It's more project-based (laughs), it's not... like there's essays and stuff, but you can send feedback in, and get some feedback from the teacher, and they'll send it back, and you'll make some adjustments, whereas in classroom, you don't really do that. The teachers are there once you need help, like you call them or email them, and they'll help you with the question, but you're pretty much on your own, which is nice.

I: Oh ok, so then how do you learn the material that's there?

P: With the modules you get like a booklet, and you get to answer the questions and everything, instead of listening to the teacher talk and trying to absorb the information, you actually got questions. So I learn it by reading it and writing the notes out. And then you have like a midterm and a final, so then you can study the first half for the midterm, and the final the second half, not all of it together... like a classroom. It's just better for me.

I noticed that Caitlyn enjoyed talking about her academic experience when it came to

[5] LA is an acronym for Language Arts

learning through the online centre, as she smiled when exclaiming her higher grade averages within subjects.

Caitlyn also expressed that one of her favourite parts about school was being around her friends. Caitlyn described her social interactions during the school day:

I: What would you say is the best part of your experience in school, now?

P: The interaction with people... your friends. Sometimes it can be awkward, but at least there are people you can talk to.

As the interview progressed Caitlyn was more relaxed, she fidgeted less and spoke more confidently. Caitlyn began to openly share her unfavourable experiences about school, and frequently mentioned a particular teacher with whom she had several negative experiences. One instance she explained in detail:

P: Well once in junior high I missed a couple days because I was sick and I went to go talk to my teacher, he's like "Okay you're back, that's awesome." So I went and sat down, then I was learning a new concept the [class] learned over time and I'm like I don't know how to do this, so I asked him a question and he told me to figure it out myself. So then I turned around and there was an EA[6] and she looked at me and she's like "Wow!", and I'm like yeah... So then I told my mom and my mom told the principal. I don't think they did anything about it... but they told me they did something about it, but I don't think they did... so that was kind of... hard.

I: Did you ever talk to the teacher about it?

P: Oh, we met with him countless of times... It just never ended well. One parent-teacher interview didn't go very well. It wasn't very good. They were like yelling at each other

[6] EA is an acronym for Educational Assistant, who works alongside a teacher in the classroom providing assistance to students with exceptional needs.

(laughs)… It was pathetic, but we just came to expect that from him. Really made junior high crappy.

I met with Caitlyn a total of three times, continuing to expand on the ideas and stories she shared with me during the previous interviews. Each time I saw Caitlyn she appeared more relaxed and even wore her hair in a ponytail on our last meeting, exposing her hearing aids. Caitlyn now seemed comfortable revealing her hearing loss, rather than hiding her hearing aids behind her hair. She explained that this is something she exposed when she felt a person needed to know about her hearing loss.

P: The worst part is letting the teachers know that I have a hearing aid and they have to wear a FM that they [probably] never even heard of before and letting them know that I'm hearing impaired, especially with substitutes… it's like no... (laughs) it's hard with substitutes.

I: Tell me more about this.

P: Maybe because they don't know you, and if you tell them they're probably never going to come back again, so it's like should you tell them? Or just go the day without the FM and them knowing? So... I usually don't tell them (laughs). They don't need to know anything about me and my hearing loss so why bother?

Caitlyn confided that her initial hesitancy during the interview process wore off half way through the first interview when she felt she was in a safe place to tell her stories, and her hope was that her educational experiences would help students and teachers in the future.

Billy.

> I hate waking up if I have to go to school. Yeah, I'm always tired. But here at school I like dance class, I find it fun. I'm not doing it this semester, but last year when I did it, it was fun. I find, in terms of work, I find English class boring, science is not too bad, I find that fun.
>
> Billy, May 2015

Billy and I initially met during my information meeting with the Special Education coordinator at Billy's school. The coordinator asked if I would like to meet the potential participant, to explain the study. The coordinator told me that Billy communicated through American Sign Language (ASL) so his interpreter would be coming with him to meet me. When Billy and his interpreter came into the coordinator's office, I introduced myself to both of them in ASL. Once the interpreter saw that I was fluent in sign language, she sat back and only interpreted if either Billy or I didn't clearly understand something one another said, or if the coordinator was talking to either Billy or myself. Billy stated at the outset that he felt comfortable to participate in the study, and brought the information package home to obtain parental consent.

After returning the consent/assent forms, Billy requested we meet during his spare period at school. The school's coordinator provided me a resource room to conduct the interview. Despite having met me prior to participating in the study, Billy appeared guarded at the beginning of the interview. He admitted that he was a little nervous about the questions I would be asking, but warmed up quickly the more we conversed.

Billy explained to me that he is currently in grade 12 and is looking forward to working after high school completion. Billy was born in a major metropolis in Western Canada, but moved to the Middle East for a few years when his parents divorced. Billy was diagnosed with a hearing loss when he was approximately 1 year of age, and with the move of his family, he was

not amplified with digital hearing aids until the age of 4 in the Middle East. After receiving hearing aids, Billy's mother enrolled him in speech therapy to learn Arabic, but Billy found it very difficult and not enjoyable. At age 6, Billy, his mom, and siblings moved back to Western Canada, and moved in with his now step-father and step-siblings. After returning to Canada Billy did not receive any further speech therapy, and learned to communicate manually at home.

> P: When I came back from the Middle East I had no English signing or language.
>
> I: So how did you communicate with your family at home?
>
> P: Always sign language, but sometimes it's kind of like "baby" sign right? [For example] "go" (points to a location) are you ready to go for food (hands to mouth)? Or "drink" (cupped hand to mouth). Sometimes it's writing back and forth. And it'll be that type of gesturing. It's kind of like baby sign. But my step-sister, she graduated last year, she's pretty good at sign language, she can sign pretty well, and she knows her ABC's, and fingerspelling. So, yeah. She's pretty good.
>
> I: So tell me about communicating with that sister and your other siblings?
>
> P: You know, when I was growing up... it just seemed fine, you know, we just got along, figured it out (laughs). So they would say things like "you-go-away" and then wave, I guess. "You're going to go to a movie" that's what we would sign for a movie right? (draws a square box in air with fingers). You know that kind of thing… not "*real"* ASL.

Billy also talked about his love of hobbies: dancing and swimming.

> P: I [have] always liked dance! I've always liked dance, even when I was young. When I was in the Middle East, we danced there, I loved it.
>
> I: What kind of dancing?
>
> P: Belly dancing, and dabkeh.

I: What kind of dancing is that, dabkeh?

P: From the Middle East. You just, you have these special steps with it.

I: Was there anything else that you liked?

P: I like swimming, I used to swim a lot more, and I used to be a competitive swimmer and had a coach. I still like to swim but not competitive.

When Billy was describing his PIAs, I noticed that he was more relaxed and eager to talk about what he had produced.

PIAs. Billy's first PIA was the creation of his weekly schedule. It consisted of blocks of time labelled as breakfast, school, bus, TV, dinner, and shower. Billy explained that he wakes up daily for school at 6:00am, so that by the time he is home from school, he is tired and unwinds by watching television. Billy's second PIA pointed to the activities within school that he really enjoyed. Billy decided to draw himself at school and used speech bubbles to show what he was thinking. He explained his drawing to me:

P: I like school when we have fun activities like Wii games, food days, ASL club, those things.

I: Tell me more about each of those activities.

P: When we have the taste of school, like food days, I like that because there's lots of different cultural foods that come out, and that's a fun event. The students bring the food in. I never have because someone always brings in food from the Middle East. But I still like it.

I: Okay and what about Wii games?

P: I like what we do at lunch. Just Wii, games, hanging out. That doesn't happen every day, it just happens every so often. In the leadership room or if there's a lot of people,

what they'll do is they'll set it up in the auditorium. So it's a Wii dance game, and whoever wants to go can go and enjoy and dance.

I: Neat. And what is the ASL club?

P: I'm in charge of that one. It's fun. I taught them about alphabet, numbers, vocabulary, video and games. Every Thursday at lunch from September to February. I [feel] wonderful that students at my school were learning about sign language, but they sometimes forget the words so I try to help them.

Billy described starting school in Grade 1, attending a provincial School for the Deaf in Canada. Billy learned to communicate in ASL through a program at this school. Billy was educated until Grade 6 at the School for the Deaf when he decided to move to a mainstream school. He explained to me why he decided to switch schools:

P: When I got here, I didn't know the sign language here at all. And then [on the] first day of school, I started learning sign language then. So that school helped me learn ASL.

I: Why did you decide to switch to a mainstream school?

P: I never did want to go to the deaf school. I don't know. I went to this other school to try and it was fine. Then when I got registered here, and I liked it. And… I didn't really want to go to the deaf school. There's some nice people there but I didn't want to go.

I: Explain to me how the schools were different.

P: In elementary I was in a deaf class, in junior high we were mixed, deaf and hearing, and the same here. I like this better for me.

I: Did you always have an interpreter?

P: So I had an interpreter from grade 1, and then I had both a teacher who could sign, and an interpreter in grade 1, and the same interpreter until grade 6. In grade 7 I had a new

interpreter and a teacher who knew a little bit of sign. For grades 8 and 9 I had the same interpreter. And in grade 9 I had the same interpreter until half of 11 we changed interpreters... and so since 11 to 12 I've had the same interpreter, which is the one I have now. But in grade 11 when we changed to the different interpreter, and then another new interpreter... that first change, I didn't understand her... that interpreter. And then we got this interpreter and that's better for me.

Billy used ASL to communicate at school. He confided that it was easier to communicate with those who knew the language, and he preferred teachers who made the effort to learn the language.

I can remember when I was young, the kindergarten teacher was very nice to me. She was hearing, but she signed some, and she was very nice to me. I've had nice teachers throughout, but the Grade 9 teacher was a nice teacher, I liked her. She also knew some sign, she'd already learned some sign. And so the ones in 10 and 11 didn't but 7-to-9 had some sign, but the other ones were hearing and didn't sign. It makes a difference when they try to sign. I like it.

When Billy communicated about his educational experiences he often laughed, shrugged his shoulders, and rolled his eyes. When I asked Billy how he felt about school, he answered in a very nonchalant way.

P: It's fine. (laughs) I don't care.

I: What don't you care about?

P: I don't really look forward to school that much. I just have to go to school, just have to put up with it. Yeah, no, it's fine, it's fine. I'm not excited to be here. I want to be done

with school. I am excited about the graduation dinner. Yeah, I am looking forward to that.

Billy also explained how he felt his educational experiences differed from his classmates as several of his classes are at the Knowledge and Employability (K&E) level. Billy explained his understanding of K&E classes to me, and how his future may be affected by having classes at this level.

P: I'm in K&E, so it's different.

I: What is the difference with K&E?

P: You'll get a certificate after K&E for school. So, to get into college or university you have to have Math 30, Science 30, and that's what those kids take. But I'm not.

I: So what are you taking then?

P: Yeah, because I'm taking science you know, 14 and 24, which is different. I'm going more for work experience, not college or university. I don't know if I would be able to get in. Yeah, I think it'll be a problem for me. I think it would be hard.

I met with Billy a total of three times, and progressively, Billy greeted me in the second and third interviews with a big smile and I was able to see he enjoyed the interview process. When I asked Billy if he was comfortable at our third meeting, he exclaimed that he was and offered reasoning for his initial hesitation:

P: It's all good, I am comfortable. I just wanted to make sure that I understood everything.

I: And have you understood?

P: Yep, yep. I knew I understood your sign so when I saw the interpreter I was nervous I won't understand her. But it's been fine, if I don't understand [I'll] ask you.

At our final meeting, Billy could not contain his excitement and exclaimed that there was only one day left of school until Billy was set to graduate. He told me that the work placement he had throughout the school year was going to continue as a summer job for him, but he had other plans for the future.

P: I'm working at a clothing store in the mall, I like it, it's fine. It can be hard with customers or workers sometime.

I: How do you communicate with them?

P: We would either write notes back and forth or gesture. But I think I want another kind of job, probably something to do with food. Not a restaurant, maybe like in a grocery store, or in a butcher store, or something like that. I think that would be good for me.

When our final interview was over, Billy asked if he could give me a hug, and thanked me for letting him tell his story.

Mark.

Inclusion is up to you. Just wait a little bit, see what others are doing, and then try to hop in, do your best, and then you'll feel included.

Mark, June 2015

The first time I met with Mark was at his home with his mother and step-father. Mark was chatty from the beginning. He seemed eager to show me around the house, introduce me to his dog, tell me about the current video game he was mastering, and talk to me about a recent trip his family had taken in Mexico. Mark and his family asked several questions about the research process, and when comfortable, signed the consent/assent forms.

Mark described himself as a Grade 7 student, who was comfortable asking and answering questions in class, and professed that even when he didn't try in school, his achievement levels

were among the top in his class. Mark, with some assistance from his mother, explained that he was diagnosed with a hearing loss around the age of 13 months, and was amplified with hearing aids immediately. Mark's parents noticed hearing aids were not very beneficial for him, and opted to implant Mark with one cochlear implant at 19 months of age, and the other around the age of 7. At the age of 3, Mark's family decided speech therapy would be beneficial as his communication skills were lagging behind his hearing siblings, and he continued in therapy for 5-to-6 years.

My impression was that Mark was excited to tell me about his family. He lived mainly with his mother, step-father, sister, and two step-brothers, and lived with his father every other weekend. Mark explained to me that he spends a lot of time with his step-father, as he completes his homework at his step-father's workplace every day after school. He clarified that when he did not have homework, his step-father would assign him home-reading tasks:

> I have to do 10 minutes of home reading a day. I like home reading, but when I'm done reading there's just questions you have to answer, and mini questions, like a mini sentence. My step-dad has homework sheets that he prints at work, and I have to fill [it] out about my reading.

Mark also described some behavioural problems he used to have at home and school, but he feels he is better able to manage them now. Mark described an incident he remembered well:

> P: There was a time I didn't like when my brothers were able to play on their video games and I couldn't because of my attitude. I started yelling and hitting the wall. I even made a hole! So, and they want to be fair to my brothers and I couldn't understand. So that's why I got upset a little bit, but I walked away, took a break, and I came back in and apologized. So I needed to be walking away... taking myself away to calm down, because before I would yell and get mad, but that's what I do now.

I: What helped you change your behaviour?

P: Because my parents said that if you keep on doing that stuff you'll get your punishments worse and worse and they're like taking away stuff if you get mad, the punishment comes but, after you keep getting mad, and then on top of the punishment you already had… it adds on and adds on and adds on. So I didn't like that so I thought of a way to help me stop.

It seemed as if Mark was not shy when speaking about himself, or his family, and I noticed his enthusiasm when he was describing his PIAs.

PIAs. In Mark's first PIA he decided to draw a weekly schedule. He created a colour-coded legend with colours and symbols indicating categories such as chores, school, lunch, homework, chores, reading, video games, and bedtime. When I asked Mark about his favourite part of the school day he told me that he really enjoyed field trips, drawing on his iPad, and reading.

In his second PIA, Mark chose to list 10 words that reminded him of school. Out of the 10 words (fun, academics, music, dislike, friends, Wi-Fi, homework, play, park, teacher) I asked Mark to pick out the 3 he found most important. He chose to group them into three categories: *fun/Wi-Fi, academics/teacher,* and *music.*

P: So it's for "fun" like [using my] iPad time at lunch, and stuff like that. I take my iPad to lunch. The only thing I don't like is that the Wi-Fi in school is low so I can't play all the games that I want to. "Academics" because I have really good grades… I think because my teachers [are] so nice, and especially to me because [of my] special abilities, like these (points to cochlear implants). And they pretty much let me to do things [when] I want. And "music", so I play in the band, I play the clarinet.

I: So what made you choose the clarinet?

P: Because I was trying so many instruments, so first I picked out a clarinet, and then after I was kind of bored with clarinet, so I picked up the trumpet, and then after I picked up the trumpet, I picked out the flute. So I tried that out, it's pretty hard to make it louder because you have to blow harder and while you're blowing harder you have to adjust it. So yeah, you can't play if you blow like (demonstrates blowing hard), you can't really adjust it too much. And after the flute, I went back to the clarinet. It was the easiest to play.

Mark spoke more about his academic experiences, and which subjects he preferred.

I like math and science, because in science you get to experiment and stuff like that, and math I love math because I love adding and subtracting and all that stuff. I don't like learning, but I have to learn so I can get a job.

Mark explained to me that his behaviour problems used to affect his schooling as well.

I remember in elementary school like in a lower grade I had a classmate that was super super not nice. He was like one of the most terrible kids. Like, he was not very nice because he just distracts everyone, making like not funny stuff like it's actually inappropriate… things that are not supposed to be there. And I [would] always get mad at him because he's like ruining the teaching, and I'm just getting tired of it. So one time in 6th grade I almost blew up and… not good. I had to get sent home.

Because of some of his behavioural outbursts, Mark was placed in a specialized segregated class within his elementary school. Now that Mark was in junior high school, he went to a specific school that had a separate classroom for students who had "special abilities" as Mark explained. He proceeded to tell me about how he loves being in his classroom:

P: Usually big classes are like normal classes. I'm in a special class because of my special abilities, my hearing and stuff like that, so it's much smaller. It's much easier to hear and much easier to control my moods, so I like it. Yeah, I like it, because every single time when they switch periods, [there are] people, walking everywhere! I have to scoot around… like why do we need to walk, we should just all stay in one class.

I: Is there anything else you like about being in a smaller class?

P: If I need something I would say to my teacher like mouth reading one-on-one. That means like talk with me, only me, and the teacher outside the class. [The teacher asks] what's the problem, and then I explain what's happening and they say that's okay let's settle down and then go back to class and work it out. You can't do that in a big class. Yeah, it really helps me.

Mark told me that the biggest change for him from elementary school to junior high was the means in which he coped with his anger.

In elementary, they used to have time-out rooms and a quiet room, whenever I'm mad or need to take a break. But in that school we have right now there isn't that. That's why I will just tell my teacher that I need a one-on-one.

I met with Mark a total of three times, and every meeting he appeared eager to talk to me and wanted to know what questions I would ask next. Mark spoke about his future with specific goals in mind:

Things I want to accomplish… my grades, making sure they are high and… to try high school and university. I like doing everything, like fixing things or taking apart and learning, so I will want to get a new job, and live longer. Probably what I would do is be

> a vet. That is my dream job because I love animals. So I have to accomplish to live longer so I can do these things!

At the end of our final interview Mark told me that he was a little sad that our meetings would end, but he hopes he helped, and hopes other kids with special abilities will have as good of experiences as he has.

Wilden.

Well, I'm more interested in reading than school because, just sometimes the uncomfortable to socialize, and I'm more comfortable home.

Wilden, May 2015

Wilden and I initially met during my information meeting with the Special Education coordinator at Wilden's school. The coordinator explained that Wilden communicated through Spoken English and Signed Exact English (SEE) and her interpreter would accompany her to our meeting. I introduced myself to both Wilden and her interpreter simultaneously in Spoken English and American Sign Language. Once the interpreter saw that I was fluent in sign language, she sat back and only interpreted if there was a miscommunication between Wilden and I, or if the coordinator was talking to either Wilden or myself. Wilden seemed excited to participate in the study, so I gave her the information package to review at home, and obtain parental consent. After returning the consent/assent forms, Wilden requested we meet during her spare period at school. The school's coordinator provided me a resource room to conduct the interview.

Wilden was excited to participate in the study from the moment she walked into the resource room, and barely took a breath between sentences. Widen described herself as a grade 11 student who's a bit of a loner. She likes to read, draw, and travel, and has an avid interest in

photography. In fact, Wilden spent the initial part of the first interview showing me pictures she had taken on a family vacation the previous summer.

Wilden explained that she lived with her parents, younger sister, and her guinea pig. As Wilden's parents often travelled for work or leisure, she described her role in the family as a "sometimes mother of the house", in charge of cooking for her sister and herself.

> Well I cook at home too. Like now my mom's gone to Spain for 12 days, I was pretty much the cook of the house. My sister, she does cook but not [to] the same degree because she's four years younger. And she doesn't like cooking apparently. Judging by how much she says "no no no, I'm not going to cook." Like while my mom's gone, I ['ve] made three things so far. Beef stew with dumplings, shepherd's pie and beef loaf.

Wilden also spoke about her love of travel.

> Well I do like travelling, but… there's many places I want to go to. I mean, my family has already went to Hawaii, Paris, Mexico, and I went to Denmark when I was a baby, but my family is going to go there this summer. Yeah, [I've] been to Mexico I think six or seven times, and Paris and Hawaii one time.

Wilden appeared comfortable from the first interview describing her home experiences and explained that she felt her parents struggled raising her, because they felt like they did not know how to best support her.

> It was pretty tough times for them, according to them, because… all this… spending all the money on my CI and [learning] how to take care of a deaf kid or something like that. They didn't know I was going to be deaf so they didn't know what to do.

Wilden spoke about the reasoning behind her learning Signed Exact English (SEE) over ASL. She explained that her family attempted to learn ASL, but found it was too difficult, so

decided to learn SEE instead, as it was more similar to the English language. Around the age of three, Wilden was implanted in one ear with a cochlear implant (CI), and received her second CI around the age of 16. Wilden explained how her technology affected her communication:

> I don't really have much experience with sign language anymore because I kind of lost some knowledge on how to sign. My dad's kind of saying he knows absolutely nothing about it anymore since I learned how to talk, after I got my CI. My mom she knows a bit, but my sister, she barely knows [any]. She doesn't even know anything. Probably just "hi" (waves hi). So I only really use it at school to help me when I can't hear something.

Wilden used the description of her PIAs to truly express her feelings about her passion.

PIAs. For the first of Wilden's PIAs she drew a diagram of a place that is important to her. Wilden described that she drew a picture of her Japanese-themed bedroom. She explained that the artwork on her bedroom walls was her deceased Grandfather's paintings and drawings. I asked Wilden about the importance of her bedroom, and she explained:

> P: Well the place is secure, or something like that.
>
> I: What do you mean by secure?
>
> P: I don't know, just feels more comfortable than the rest of the house. Less people enter my room so I get to be alone a lot. Get to do what I want. [I] can read and escape, just get away.

Wilden's second PIA consisted of listing 10 words that reminded her of school. Of her 10 words (education, knowledge, friends, culture, fun, activities, challenge, experiences, achievement, discovery) Wilden chose to focus on two, *friends* and *discovery:*

> P: Well even though I don't really have that [many], friends are kind of important.
>
> I: Important?

> P: Yeah like for support, so there's people that you know, and not be alone. I don't have a lot, but I'm not alone. And for "discovery", well… you kind of discover new things, like history, I really like history, kind of learn things that you never knew happened in the past. And it's just so unbelievable that some of these things actually happened. And it kind of makes you more interest[ed] to learning more about it. These are the two things I like best about school.

Wilden discussed her feelings of indifference to school. She explained that she felt her classes and peers were tolerable, but navigating the building itself was hard to manage.

> The hallways are too crowded. People always crowd in one spot and make it even harder to walk by. Many times I want to yell at them to stop crowding the hallways! And then there are people that need to get to their class, like for instance, you know how the school's like (draws shape with her hands) wide and one person has a class in a gym all the way over there, and they have to go all the way over the other side to go to the workshop. That would be even harder. It's really frustrating. Big time.

Wilden spoke about her socialization with peers, and explained to me that it has always been a difficult task for her:

> When I was in elementary, I was more socialized, maybe just because [at] school, there was two other deaf kids there. I was more [socialized] because of those two and then when I was transferred to another school near my house, there was not really any other deaf kids, so it was kind of really hard, less friends I guess. But I did have some, and it was kind of hard to understand them. Yeah. As I grew the socialization got more difficult, and I was pretty shy. Well I [had an] easier time talking to adults than kids my age because they're too immature.

Wilden also explained that although she feels she is achieving at average levels academically, she struggles with some of her school work.

> Ugh, I don't like school work at all, just because sometimes, some questions don't really make sense. Like Science is sometimes hard, LA too, because sometimes the writing part, essays… Well, I learned a lot more about how to write essays than in my LA class last year. You could say that I learned more in this class than the one last year, but I still think it's hard. I'm no good with writing stories. I prefer to read. And I think I have a very big, major writing block. And in junior high my marks in science were like ugh… bad. I guess, maybe because I didn't really like it because some of the stuff that happened… about the human body… very disturbing. I get sick pretty easily, learning about those kinds of things.

Wilden did however, describe the classes she enjoyed while at school:

> I took Food class since junior high, and took one every year. I really like cooking quite a lot. Just [a] bit calming I guess, and the teacher makes class fun. I like Social too because of the history, [I] like learning about that a lot. And Digital Art. I really liked that class.

Wilden's demeanour appeared to change, as she smiled and became giddy when speaking about being a member of certain school clubs. Wilden expressed her disappointment about not knowing if the clubs would continue the next school year.

> I enjoy the clubs at school. Well I'm not really involved in one now because apparently the club was kind of cancelled because of graduation. Yeah, and there's also a signing club here too, but because the student who leads it is graduating this year, he cannot really lead it anymore. And I'm not really interested in leading it, so I'm not sure if it will continue.

Wilden joyfully articulated her excitement for the future, and explained her plans of following in her grandfather's footsteps and attending college to major in Digital Art. Wilden admitted that she did not feel that her academic and social narrative contributed greatly to the research study, but hoped that someone would benefit from her experiences.

Sarah.

> When I was young I don't really care about education, but now when I was in junior high school I realized it's really important for me, and because I had educational assistants telling me that this is really important. And I'm like oh okay, so I started focusing [on] it.
>
> Sarah, June 2015

I was in communication with Sarah's mother to coordinate meeting with Sarah. Sarah has a large family and a very busy schedule. To facilitate family commitments and participation in the study Sarah's mother asked if we would meet in a community centre near their home. When they arrived, Sarah's mother asked many questions about the study, and the videotaping specifically. She told me that although Sarah had cochlear implants, Sarah would be able to understand me when I spoke to her, and that she would communicate back to me via spoken English. When I addressed Sarah, she spoke very softly, almost timidly, but her mother assured me that Sarah was excited to share her educational experiences. When Sarah's mother left the room, Sarah started to joke around with me and said she was ready to begin the interview. Sarah remained fairly soft spoken for the first half of the first interview.

Sarah described herself as a typical Grade 10 student, who loves to travel, drive, volunteer, play soccer, and spend time with her immediate and extended family. She explained that her family immigrated to Canada from Africa when she was a young child, and her goal was to return to her native country.

P: My goal... I really want a car, because I got my learners, and I really want a car by grade 11 or 12. Especially I want to, like volunteer more, more programs, events, I really want to do that, so I can get new experience[s], and I really want to go to Africa, and help other peoples.

I: What would you do in Africa?

P: I see a lot of people like helping Africans, and I'm like wow they must feel proud about theirself, and I want to feel that too, so I'm like, I want to go to Africa and help them. Actually I want to go to the country I came from, and help, so I can actually help and so I can feel proud of myself.

Sarah spoke admiringly about her older siblings. She explained that her siblings were her role models and advocates. Sarah also described her weekends which consisted of spending time with her extended family.

Every Saturday I work out with my sisters, hangout with my cousins, and my grandma, and sleep over at my cousins' house and talk and watch movies. I really like to be close to my families because if I don't then I'll feel… you know, lonely. So [I like] being close to my family, spend time with them, laugh, smile with them. My parents work a lot so it's nice to be around families when I can.

When I asked Sarah about favourite family memories, she progressively became more excited.

I remember me and my other cousins, like we used to live in an apartment, so like my cousins lived in there and we lived in another part, so we were really close. And every day after school we go... there was like a big field in the middle, and we'd make snowballs... I remember that time, it was [a] really good remembrance. And we used to

> go to road trips, and we went like to different lakes around the province, we went to [a major metropolis[7]], or to the mountains with my families, I really enjoy[ed] that one because it's really beautiful. Beautiful mountains and lakes, and stuff.

Sarah spoke to the advocacy and support she receives from her mother and her sisters, and explained that she confides in them when she has any issues.

> Any times I have problems I just go talk about it with my sisters, my mom, so they understand you know, about me and support me. They're not at school with me so I try to explain everything that happens so they better understand.

Sarah explained to me that she struggled with choosing her PIAs, as she did not want to miss specific details she felt were important.

PIAs. In Sarah's first PIA she drew a schedule of her typical week. Besides her daily routine of going to school, doing chores, and homework, she told me that she sees a tutor once a week.

> I go like around 2 o'clock every Sunday and I ask questions, about mostly about my math, because he teaches, or tutors math only, so I ask questions about math, and I tell him I have [a] test coming up, and I ask him questions. I need this help. And, it definitely helps with the math classes I'm taking.

Sarah's second PIA consisted of listing 10 words that reminded her of school. Of her 10 words (learning new things, friends, lunch, homework ☹, tests, desks, teachers, lockers, offices, and classroom), Sarah focused on her experiences with friends, lunchtime, and homework.

> P: I like "lunchtime". That's the only time I can spend with my friends, and talk, and talk about you know like, what we should do this weekend, like we should have this, and

[7] Major metropolis is substituted for city name to protect participant anonymity.

sometimes birthday parties and stuff like that. I love my "friends", they're very nice, chill, and yeah, they keep me happy.

I: Okay. For homework you have a little sad face next to your homework, can you tell me why?

P: I don't like "homework", sometimes I don't like it. Sometimes I do, because it makes me like, I get it, and I get happy when I have the right answer you know? But sometimes I don't like homework.

Speaking about her experiences in school, Sarah confided that she did not always like school, but found now that she was in high school, it was much more enjoyable.

Well I think high school is much easier because I [am] focusing [more during] it, and I like the teachers who explain [things to] me more. Because the teachers are letting me [work], like on my own, it's my responsible, and I like that because I don't like when people say "you have to do this, you have to do that". I don't like that so I like doing my own [work] and then I know how to do it, you know? That's what I like.

Sarah explained that she was in the advanced stream of classes for each subject, and during her spare period, she would go to the resource room and work with her Educational Assistant (EA). Sarah described the different EAs she had worked with previously:

P: So, this year, that EA is amazing. I remember the first day of school and I had my first EA, she was pregnant and she still helped me, I['ve] know her since I was [in] junior high. But I remember in early junior high I had my EA, which I had last semester, but she left in the middle of junior high to go work at my high school now. So for the last year of junior high I had a nice EA and she actually used to work at my school in elementary. She worked for the special needs kids. The principal hired her for me to help me. I like

her, she helped me a lot, and I got good marks. And in high school I had my EA same thing as early junior high. But I used to like her a lot, she helped me a lot, she's you know, very organized, I like her, but she changed. She just, I don't know, she doesn't help me a lot as [much as] she used to, and she got sick, and then she went back home. She's going to stay for a year, and then she'll give birth in another year, so she's probably not [going to] come back [until] December 2016. Yeah. But for like almost [a] couple weeks we didn't have [an] EA, and then finally the principal found one. Then she helped me and I like her, and I learn a lot of things from her, and she helped me a lot. She works hard for us.

I: What types of things does your EA do for you?

P: I remember, I had it difficult in my first semester, I was in class but the teacher talked a lot, and she was using hard words, and I keep getting a bad mark, like below passing, you know? But she had a [lecture] that was really hard for me, and I don't get that. So I keep asking her can you expand it for me, I don't get this, but she not really help[ing] me a lot. So the EA would break the work into modules for us and work with us during the spare period. It really helps a lot.

Sarah spoke fondly of most of her classes, stating that she was academically achieving above average in all of her classes except for Language Arts and Science, where she felt she was just average.

I have foods class, and I like to cook, and hang out with my friends while cooking, and yeah… that's the class I enjoy most. And I used to take ASL class, or sign language class last semester, and I already know signing, because I taught myself one summer because I have three deaf cousins, so like I help other people who doesn't know how to sign, so I

teach them how. And I remember the teacher was deaf too, she told me that would you take your CI, cochlear implant, and show [it] in front of the class so they can learn. And I'm like yeah definitely, sure. Because they already know I'm deaf, so I show them this I wear every day. They're like wow, they were interested by it, and I teach them how to sign every time when they're having difficulties signing, they always ask me, I feel like I'm a teacher in that class too (laughs).

Sarah also spoke affectionately about the majority of her teachers, exclaiming her teachers made learning fun.

P: I like all my teachers, except one, because I don't really learn a lot from that teacher, but I learn a lot from my other teachers, because that's the only thing I enjoy. They make learning fun.

I: How is that one teacher different from the others?

P: Well my teacher is a difficult teacher that I don't know… but I remember me and my mom, we went to speak to the principal, tell them what happened, but, and then the teacher came and we tell them this is how I feel. You know that FM system? I remember the first day, second semester, I go to that class, and gave [the teacher] the FM to wear then teach him how to wear the FM but he said no. I'm like oh, okay. I don't know what just happened, but okay, and then the next day I told my mom what happened, and then [we decided] we're going to go talk to the principal, so we went to talk to the principal and we told them I like them wearing [the] FM because I actually learn a lot from it. And I told them, please wear the FM. He's like no because he doesn't like wearing any like [a] necklace or earrings or stuff like that. And I'm like oh, okay. That doesn't [make sense]... okay. And the principal said please just wear it, and he's like okay fine because he's the

> principal, the boss. And I gave it to him, and teach him how to wear it, but he doesn't wear it properly. He wears it like really low, but I tell him and he'd be like you know… [and make an excuse] but okay I can still hear him, so it's fine, and yeah, and then the next day he does the same thing, so I don't learn anything.

Despite having a teacher from whom Sarah feels she does not learn, this has not discouraged her love for education. Sarah explained to me that she is taking advanced level math classes, and may even graduate early.

> I decided to take extra math classes because they're all connected and I don't want to forget for next year. So I'm like, I think I should do it in second semester, so I can finish it and then focus other things. So yeah, I didn't plan the time, all of a sudden [I] realized, the EA told me that you're going to graduate early. I'm like oh, wow. So yeah, [the EA said] "I think you can do that", and I'm like okay perfect, thank you. So I'm going to have like two spares, so I can put like any classes in that spare, or I can take all my classes with no spares and graduate early. But then I won't graduate with my friends, so I'm not sure yet.

Sarah spoke very passionately about her plans for the future, including going to university and career plans.

> For my career... I want to be [in] physical therapy, like because I remember my aunt was in the hospital and she had diabetes, but she had strokes, so she can't walk, she can't talk, so when I look at her I'm like wow, she can't walk, and so I'm like maybe I want to like help her [learn] how to walk and you know, move the body... so that's what I want to do and I'm like, maybe I should you know, open a business for physical therapy.

Due to Sarah and her family's busy schedules, she and I only had the chance to meet on two occasions.

Sarah told me that she hopes her overall positive experiences in school, and her learning from a difficult teacher will help other teachers and students who are D/HH across Canada.

Kohli.

> I guess if I don't understand what I'm doing I'm supposed to ask the teacher and they can help me understand, they can teach me. Sometimes when I didn't understand I didn't like the teacher.
>
> Kohli, July 2015

I was contacted by Kohli's ASL interpreter, and once communication was made with his family, Kohli's father invited me to join his family at their home to discuss the study. Kohli's father also informed me that Kohli would be in need of an ASL interpreter, even though at home he mainly communicated in spoken English or Hindi.

As we waited for the interpreter to arrive, I was able to observe the way Kohli interacted with his family, the conversations he had with his parents, and the way in which he played with his brother. When the interpreter arrived, we began the interview. Kohli explained to me that he grew up in South East Asia, and his family moved to Canada when he was 10 years old. Kohli was diagnosed as being profoundly deaf when he was six months old, and was amplified with hearing aids almost immediately. Kohli doesn't remember ever having hearing aids, but he remembered the day he received his first cochlear implant (CI) at the age of five.

> It was a day I remember, my head really hurt, but I could hear things I never did before. It's good, I can hear some. I can hear when the TV's on, but I can't always hear everything.

Kohli received speech therapy immediately after receiving his first CI, and his father explained that the speech therapy was to assist him with learning spoken Hindi. Kohli learned some spoken English while he was living in South East Asia, but he described it as how French is taught in Canada, learning the language in one class, once a week. After moving to Canada, Kohli received his second CI, but he expressed that the hearing in his second implanted ear is weaker than the first.

Kohli spoke fondly of his family, explaining that he lived with his father, mother, and younger brother.

> It's a good family, we spend a lot of time together, we watch TV together, we play together, and sometimes we go outside and play.

I asked Kohli about communication at home and he explained to me that in the home they communicate through either spoken Hindi or written English.

> I don't speak much at home, just once in a while. But now that we're here in Canada, I use some sign language here at home and some made up signs, mostly gestures like "over there" (points across the room) or "quiet" (puts finger to lips).

Kohli explained to me that it wasn't until his family moved to Canada that he learned American Sign Language (ASL).

Kohli was proud to show me his PIAs. He joked while exclaiming he was not a great artist, but the smile on Kohli's face when describing his activities was full of pride.

PIAs. For Kohli's first PIA he chose to draw a picture of a place that was important to him. He drew himself playing basketball at school with his friends. Kohli explained to me that an important part of his school day is his basketball practices. Kohli has been on the basketball team

since elementary school and enjoys it. When I asked Kohli why basketball was so important to him, he explained his feelings of acceptance:

> I like to play basketball, I like being on the team, to be part of the team you know? We are all equal. Well some play basketball better than others, but because we are teammates we are equal and help each other.

Kohli's second PIA was completing a list of 10 words that made him think about school. Kohli spoke about his word choices (fun, enjoy, happy, positive, funny, teasing, smile, overwhelming, mad, and annoying).

> P: School is fun, like for fun, I like to be with friends, I like laughing with my friends, teasing, joking. So I find it positive. But sometimes overwhelming, yeah. Yeah I do feel overwhelmed sometimes, then I do feel bothered and I do sometimes feel angry.
>
> I: Why might you feel overwhelmed or angry?
>
> P: Because something wrong might happen, or I forget something. Like sometimes like if I forgot my homework then that would make me mad at myself. Or if I can't remember questions that come up on the test, then I feel overwhelmed. I can't... you know if I can't remember it coming up in my studying and I miss the answer.

Kohli also described similarities and differences in his schooling in Canada and South East Asia.

> P: They're different because well there's a different language... they speak different languages, English here and Hindi in [place name[8]]. But some of the courses were the same like social studies, math, art, computer technology. But then there was different [ones] like music, and cooking… I was a little bit surprised that this was a class here.

---

[8] Place name is substituted for city name to protect participant anonymity.

> Yeah, I was like cooking? And field trips, I like these, we didn't have those in [place name], well maybe once, mostly just the core classes like math and science.

When his family first immigrated, Kohli was placed in the provincial School for the Deaf. Kohli described his experiences:

> P: When I came to Canada when I was younger, I went to the School for the Deaf for two months. But I didn't like it, I liked the hearing school better. When I was in [place name] I was in a hearing school so I wasn't used to the deaf school. I decided to change when I wasn't very comfortable. I was upset, mad… I got teased by kids, and the teachers told me I was wrong but didn't know what was going on. The thing I liked about the deaf school was that I learned ASL.
>
> I: Tell me what it was like learning ASL at the School for the Deaf.
>
> P: The teacher taught me sign language. They put me in a class and taught me sign language one-on-one. So I had my own class everyday where I would learn it by myself. It was challenging, but I enjoyed it.

Overall, Kohli told me that he feels he is doing fairly well in school. He finds math and science somewhat easy and fun because he understands the subjects well, but admitted that he struggles with reading and writing.

> Reading the books I find hard... reading the textbooks, sometimes writing... I find writing hard. Well reading's not so bad but it's hard to think of what to write in English. You have to think of something to write and I find that hard. I try though. Sometimes I struggle with English, making mistakes. Just, just writing it wrong in English, you know? I have to fix the mistakes and then I have to come up with what I want to write. I struggle with this.

I asked Kohli about his communication in the classroom with teachers, interpreters and classmates. Kohli looked sheepishly at the interpreter as he explained that sometimes he feels nervous correcting interpreter mistakes.

P: It's good, you know it's good working with the interpreter I understand, some I don't understand.

I: What don't you understand?

P: Sometimes I think they're using a wrong sign or something. And so I have to correct them or I don't understand what they're signing, so… usually I wait until they're done… until the teacher's done and then I'll tell them what it was. Or I ask them to make me understand.

Kohli and I met for a total of three interviews. Every time we got together, I noticed that Kohli couldn't help but smile when he talked about his friends at school. He explained in between giggles that he loved joking around with his friends, and playing pranks on them.

P: I don't know, they're funny. They write things when the teacher is not there, you know we make jokes, we kind of tease about the teacher or each other, maybe... it's fun! We hang out a lot at lunch, play soccer, play basketball, fool around, have fun.

I: How do you and your friends communicate?

P: We write notes, or use a phone... texting on a phone. But some try to sign, try (laughs). They'll sometimes ask me the sign for something and I'll teach them. It makes me feel good, but sometimes I tease them about the wrong signs, or I'll fool around and teach them the wrong thing. So they will sign to the interpreter and I will laugh!

When Kohli spoke about the future, he knew two things for certain, he wanted to go to high school and play on the basketball team, and he wanted to pursue a career in computer

technology, as a computer technician. As our interviews came to a close, Kohli said he was glad he was able to participate and liked being able to tell his experiences.

Thematic Analysis

Through thematic analysis I interpreted and identified common themes from the participants to reflect participant shared experiences and views. Upon analysis of the stories, I found patterns in the data which I have grouped into four themes: (a) Effect of Communication Style on Social Relationships; (b) Importance of Language; (c) Identity Development; and (d) Educational Adaptations and Supports. Table 2 provides a summary of the four themes and the subthemes within.

Table 2

Themes and Subthemes

Theme	Subtheme
Effect of Communication Style on Social Relationships	Social Isolation Split Social Networks: School Friends versus Home Friends Difficulty Taking Others' Perspectives
Importance of Language	Struggles Navigating Multiple Languages
Identity Development	Identity of Self and Others Assertion of Independence Desire to be Viewed as Normal
Educational Adaptations and Supports	Classroom Supports Fatigue Improving Curriculum Access

The Effect of Communication Style on Social Relationships. During the interviews several students referred to their social relationships and sense of belonging, mainly explaining how relationships with friends and peers were affected by how they communicated. When I asked about a typical school day, most participants expressed frustration or elation about communicating or socializing with friends.

Social isolation. It was evident to me that communication with peers, teachers, and support staff varied for the participants, as some participants signed and others communicated through spoken English. Participants provided me with vivid accounts of times when communication affected their inclusive education experiences, and left them feeling socially isolated.

Wilden described the difference in communicating with friends who are deaf versus those who are hearing. She explained to me that she feels so out of place at school that she has given up trying to converse with hearing peers:

> P: When I was in elementary, I was more socialized, maybe just because school, the first one I went to, there was two other deaf kids there. I was more [socialized] because of those two and… then when I was transferred to another school near my house, there was not really any other deaf kids, so it was kind of really hard.
>
> I: Why was it hard?
>
> P: Because, just… it's kind of harder to understand [hearing] kids, because I kind of don't really do things that they like to do, like listen to music, and with gossip… hear things that goes on in school.
>
> I: So tell me a little bit about that. So you said you don't necessarily hear things that go on in school.

P: Well because, I guess I gave that up years ago because, I just gave up listening to them because they're harder to understand, because they're talking quite a lot, and when I try listen to them, they just talk really fast and (sigh) they just talk about boring things, like about music, ugh! Or talk about like what happened to this person or that person.

Billy explained that he had superficial friendships at school, and longed for deeper friendships with hearing peers:

Yeah [at school] I've got lots of friends… I've got lots of friends where I'll say hello in the hallways, but not really close friends I communicate a lot with. But there are some friends who I write notes back and forth to in the classroom. But everybody's nice to me, no one's mean to me because "I'm such a nice person" they say.

He also went on to explain:

P: I don't really hang out with the people here, I just, you know, it's too hard. I'm mainly, you know, alone.

I: Can you talk to me more about why that's so hard?

P: I'm alone here, no friends signs. They try sometimes in our sign club but then they forget about it and go back to not signing. Without signs they don't know me much.

Conversely, Sarah seemed excited to talk to me about her friends. She explained that she made friends quite easily, showing no signs of communication struggles:

I do have a lot of friends, because… I don't know how I get a lot of friends, but maybe because I like making people laugh. I always make silly [faces], and teaching them [how to do them], that's what I like.

Split social networks: School friends versus home friends. Participants were explicit when describing differences in the relationships they had with neighbourhood friends and friends

at school. I noticed that most participants had friends outside of school that had similar communication modes to them. Billy spoke about the friendships he had at school and explained to me the differences in his communication with hearing peers at school and deaf friends outside of school:

> P: Well at school, [with friends] it's basically a "hi", I don't really… you know, people are nice, that's all fine, but… we don't talk much. And then at home, I have two best friends. They're both girls, they're twins, and deaf and we've known each other since kindergarten, so those are my two best friends.
>
> I: Okay, so how do you communicate with them, your best friends or friends at school?
>
> P: The twins, sign, yeah, they're deaf so they can sign. At school they write it down or they talk, like "hi" or smile.

Similarly, when I asked Caitlyn about friendships outside of school Caitlyn confessed she felt more accepted:

> I guess I made more friends [at home] because they don't really judge you I guess. They [are] just like whatever! And yeah... when you got to hang out with your friends, and talk about how the day's going on, or like if there was something on TV, we talk about that, or like, if some of them had an event the other day, they talked about that, and bounce ideas off each other.

In school Caitlyn felt her interactions with peers were much more difficult:

> P: The interaction with people... well [I] try to, even though I don't interact that much, but... the interaction with the classmates, your friends... your classmates, you don't really talk to them that much, but in that one class you can talk to them, and then when you walk [by] each other in the hallway you're like, you don't talk to each other (laughs).

I: And why don’t you talk to each other?

P: It's just weird, it's because they're with their own group of friends that aren't in the classroom, so then you stay with yours. Just, the social groups.

I: And how do you feel about switching social groups like that?

P: A little [hard], because you don't know the people in their group, other than that one person. So then it's kind of awkward. You don't know if they like you or they think you're weird.

Conversely, Kohli expressed satisfaction communicating with hearing peers at school. In one interview with Kohli, I asked specifically about how he communicates with hearing friends.

P: We mostly write things down and texting… communicate using the phones.

I: Okay so do any of your friends sign?

P: Sometimes they ask me the sign for something and I’ll teach them. Yeah, it feels pretty good.

I: So would you prefer to communicate with your friends in sign language or in spoken English?

P: Well I don’t know, I guess both. Signing would be easier, but talking is good too.

Difficulty taking others perspectives. I observed the two students who communicated primarily in ASL appeared to struggle with the concept of taking the perspectives of their classmates. Each participant stated their difficulty with putting themselves in classmates’ shoes and answering questions from others’ perspectives. For example, when each of the participants was asked “What could a teacher change in the classroom to help you succeed?” they responded with practical answers. But when asked “What could a teacher change to help other students in the class?” they struggled to respond. Billy stated: “I don’t know. I’m sure they would want

something changed. But we are not the same." Kohli also had difficulty with answering this question, but he was more specific as to why the question was challenging for him or why he might not be able to answer this question:

P: I don't know. I don't know if I get it. I've never seen it so… how could I know?

I: What haven't you seen?

P: Other students need help. If I [have] never seen it how do I know what they need?

Importance of Language. Participants in this study referred to the importance of language and its effect on educational success, particularly if they were English language learners and ASL was their primary language.

Struggles navigating multiple languages. Two participants utilized ASL as their primary language. Several participants communicated in three or even four languages, and in some families English was the second or third language utilized in the home. Several participants revealed to me their fear of being misunderstood, as they were conversing in a language other than their primary language at school. As English was not Billy's first language, Billy expressed that he found writing in English difficult, and that he would like to work on his writing skills:

P: I guess I just need more practice learning English. That's what I need.

I: English when it comes to writing, or speaking?

P: My writing needs to improve.

I: Can you tell me more about that?

P: Well for sure English. I always found that hard, and I'm not very good at writing, I think because I sign better than writing. English is harder.

I: And so do you think there's a big difference between ASL then and writing English?

P: Yes! And teachers, they don't… they understand that English is hard for me, and I mean they try to tell me not to write like you would [sign it] in ASL.

Kohli also expressed that he struggled when it came to reading and writing in English, as he communicated in three different languages between home and school, and was also beginning to learn French at school.

I: How many languages would you say you communicate in on a daily basis?

P: Well… Hindi at home and sometimes English, ASL and then French in French class. But that one is really hard for me, it's a whole new language that I'm learning.

When I asked Kohli about what he might find difficult when it comes to learning at school he replied:

P: Reading the books I find hard… reading the textbooks, sometimes writing… I find writing hard.

I: Okay so tell me about the reading and the writing.

P: It was always… sometimes it was hard before too. It's hard to write in English.

I: Okay so tell me a little bit more about that. Tell me what you find difficult about reading some of the books or writing.

P: Well reading's not so bad but I have to… it's hard to think of what to write in English. You have to think of something to write and I find that hard. I try though. And sometimes I struggle with English, making mistakes.

I: Can you give me an example of maybe a mistake that you've made before?

P: Just writing it wrong in English, you know? I have to fix the mistakes and then I have to come up with what I want to write. It's different than ASL so you really have to think and that's hard.

Identity Development. Each of the participants in this study had varied family and educational experiences and backgrounds which affected their development of self. The socio-emotional sub-themes I interpreted from participants' stories included: (a) identity of self and others; (b) assertion of independence; and (c) wanting to be viewed as normal.

Identity of self and others. While interviewing the participants, some spoke about their perceptions of themselves and their identities as Deaf (identifying with the Deaf culture) or deaf (having a hearing loss, but not identifying with Deaf culture). Participants also explained to me the differences in identity of others, especially if they were hearing or Deaf/deaf. Caitlyn revealed a bias doctors presented to her parents about those who use sign language:

> P: I'm hearing impaired, but because of my good speech, people always says I don't sound deaf. They've always said that. My parents were like no, I guess because my parents asked doctors if they should sign because they found out I was deaf when I was born so then they were like, well should we sign, and [doctors] were like "No! Don't get her to sign or she'll be lazy and won't speak." So [my parents] made sure I speak...
>
> I: And so how do you feel about that?
>
> P: Good, because I don't think I want to... knowing that I could talk and not talk, it would just be weird.

Billy had a different perception of the identity of those who were Deaf, believing that only those who are Deaf, or part of the Deaf Community use sign language, and want to preserve the Deaf culture:

> I: So do your friends [outside of school] sign?
>
> P: Yeah, because they're deaf, they're not hearing.
>
> I: Tell me more about that, is it only deaf individuals who sign?

P: Mostly, yeah, and interpreters.

I: What about someone like me? I'm not an interpreter.

P: But you're part of the Deaf community because you have a family member who is Deaf, so you care about us and our culture.

Assertion of independence. I asked participants what advice they would offer a new student who was Deaf/deaf at their school. Several participants communicated the need to advocate for their own independence. Caitlyn and Billy both suggested ideas for how students could advocate for themselves in order to be successful in school:

Caitlyn: Let your teacher know… it's just good to know, to hear from the student themselves that you're deaf, and then, if you have like an FM system or something, to explain a little bit about it to them, and what it does, and how it helps you personally.

Billy: Well you'd need to go to student services and get an interpreter, you need to talk to your teachers, and you need to get a friend to write notes for you. Those are the kinds of things you have to do if you need them for yourself.

Wilden spoke about advocacy in a different light. She explained that one of her deaf friends is not independent and needs to advocate more for herself as her mother is overprotective:

One of my friends… another deaf girl…she cannot really cook at all, but she says she really wants to, but her mother doesn't want her to cook. And I even told her…maybe she should cook in her home, but her mother doesn't want her to. So I guess she doesn't want her to grow up at all. She really needs to tell her mom that she can do it.

Sarah also expressed her views on independence and advocacy with teachers. She described how her self-advocacy contributed to her educational success, and made her feel less like a child being told how to complete a task:

> The teachers are letting me [complete tasks] on my own, its my [responsibility], and I: like that because I don't like when people [say] you have to do this, you have to do that, like I'm a kid. I don't like that, so I like doing [things on] my own and then I know how to do it, you know? That's what I like, and it helps me do really good.

Desire to be viewed as normal. Caitlyn and Wilden each spoke about the fear of being perceived as different from other students in their classes. Caitlyn spoke about the use of her FM system and how it made her feel isolated.

> P: I don't use [the FM system] in math, I used it in Bio[logy] because of the information, and so it helped me hear the information better. But, yeah I never really did like the FM system.
>
> I: And what about it did you not like?
>
> P: I guess the teacher wearing it, and then the students knowing that there's... that kid in class.
>
> I: "That kid?"
>
> P: Yeah... especially not when [the teacher] will go "what is that?" Yeah...
>
> I: Tell me more about that.
>
> P: The students would say "why are you wearing that?" Like that even happened I think in grade 10. So...the teacher would say "it's just a microphone I have to wear." They would say that. And then people might see I was the one who needed it.
>
> I: And how did you feel about that?

P...I don’t know, just makes you feel different when people know...

I: Explain how you feel different?

P: I mean, I guess it makes you feel like kind of an outcaster, like not normal like everyone else. Even though you don't feel like one, when you don't tell them and they don't know... so it's just better. But if they know, it’s not [a] good feeling.

Wilden also recalled a time when she felt like she was not the same as others in her class:

P: Well, you know, [when I was] younger, it was kind of hard [to] socialize you know, [when I was] younger, it was kind of hard [to] socialize… because they probably knew that I would not be able to understand them… I wasn’t like every other kid.

I: Tell me more about that.

P: I would be happy if they thought I was just normal. Sometimes I guess I just bother[ed] that people don’t think I’m the same.

I: Tell me what bothers you about it.

P: Don’t know. Just makes me wish I was normal. I know I’m strange but I can’t help it, it’s just me.

Educational Adaptations and Supports. Participants in this study viewed educational adaptations as essential to their academic success. This included various classroom supports, assistance when feeling fatigued, and the ability to provide educators advice for success of students who are D/HH.

Classroom supports. Classroom supports were an integral component of participants’ experiences. Examples of classroom supports included: assistance from classroom personnel, note taking procedures, closed captioning, and assistive technology. Phrases such as “they help me a lot,” “expanding what I know,” and “they’re so frustrating” were repeated throughout

participants' accounts. Two supports students specifically spoke to at length as contributing to, or impeding their educational success were (a) classroom support staff (i.e., educational assistants and interpreters), and (b) assistive hearing technology.

Educational assistants (EAs). Two of the participants utilized EAs and reported that the availability of working one-on-one with an EA contributed positively to their educational experiences. Both participants recalled events when they felt working with an EA alleviated the power inequality they experienced when relating to their teacher. For example, Caitlyn expressed that working one-on-one with an EA eased her fear of appearing foolish asking questions of her teacher and provided her a safe place to ask for help:

> P: Well teachers terrify me. I don't like asking questions to them. So with the EA I'm more comfortable with them, so they come and help me. I don't mind that, but when [it's] a teacher… I don't know they just terrify [me].
>
> I: What's the difference between an EA and a teacher?
>
> P: [A] teacher… you just don't want to be wrong with them I guess… with an EA you're just like, whatever! They don't know more than you do, they're just in there helping, but a teacher knows everything, and you don't want to feel stupid… even though you know they're there to help.

Similarly, Sarah expressed that one-to-one assistance from the EA furthered her understanding of English literacy to a greater extent than whole group instruction from her teacher.

> I have an educational assistant, so I go her office and then my educational assistant can help me with English and writing, so I like that. I like working with EAs. I like it because they help me a lot and [I] learn a lot of things. I like the way the EAs expand things. And

> I keep passing because of the EA helping me, expanding things that I can't remember on my own.

When asking participants about a time a teacher or staff member made school more enjoyable for them, Sarah spoke about having a close relationship with her EA:

> I'm really close with my EA, because I always joke [with] them, because I don't like being very nervous or you know like with teachers. I don't like that. I like being close with EAs, so we can make things fun. It's enjoyable when she's helpful and like helps me understand all of my work and is silly with us.

Of the two students who utilized the services of an EA, only Sarah recalled a time when she felt an EA negatively impacted her education, although she found it difficult to clearly articulate the specific issue:

> So, this year, that EA is amazing. I remember the first semester, I came to school, [and on] the first day of school I had [the same] EA in grade 10 as grade 7. I used to like her a lot, she helped me a lot, she's you know, very organized, I like her, but she changed. I don't know how because, she doesn't help me a lot that much, as she used to. It made school hard, I didn't like coming because it was too confusing [in] some classes. Then she left for like almost [a] couple weeks we didn't have [an] EA, and then finally the principal finally found one. And we have her now and she helped me and I like her, and we get a lot of things from her, and she helped me a lot, she works hard for us.

Sarah appears to be expressing her need for an EA who is organized and structured. Her frustration about not having an EA for several weeks was evident as she rolled her eyes recalling this instance.

Interpreters. Three participants utilized the services of an ASL or SEE interpreter during school hours. When I asked the participants specifically about having an interpreter in the classroom, each explained that their interpreter went above and beyond simply interpreting; some assisted with note taking, correcting English grammar, or providing friendly support.

Billy explained that his interpreters assisted him with note taking:

I: So tell me what it's like working with an interpreter every day.

P: I actually get two! The first interpreter will interpret what the teacher says and the second interpreter is taking notes about what is being said and the tests and that kind of thing. And then that interpreter takes the notes and when they switch off, then the other interpreter takes the notes.

I: And what is that like for you?

P: It's good, I like it. I need them to be there or I won't understand anything of the teacher or sometimes the classmates.

Kohli explained that his interpreters assisted him inside and outside of the classroom. He expressed appreciation for their correcting his spelling and grammar and supporting his successful participation in extracurricular activities.

I: What is the role of your interpreter in the classroom?

P: Well they're there for communication, and writing… they'll look at your writing.

I: Talk to me a bit more about what they do communication-wise.

P: Well she sign[s] the words the teacher is saying so I can understand better. And even when I have basketball practice the interpreter's there so I learn the plays.

I: Okay, and what about writing?

P: When I ask them sometimes she will look at my English writing and helps me to fix it when I have mistakes. It can be helpful.

Wilden spoke to the importance of familiarizing oneself with an interpreter, and how that can benefit a student's understanding of an interpreter's signs:

P: The interpreter… she's a better interpreter than the others that I had before. Because I knew her for a long time, it's more easier to understand [her]. Before with interpreters sometimes they're not understandable if I'm not comfortable with them, so I think it's important.

I asked all three participants if they had ever had an experience with an interpreter in the classroom that did not support their learning needs and two participants admitted they had, and attributed the issues to interpreter inexperience:

Wilden: She didn't have enough knowledge of sign language even though she had a deaf daughter that doesn't wear any hearing aids. She had less knowledge and she had [to use a] sign language dictionary a lot.

Kohli: Yeah, some of their signs. Sometimes I didn't know what they were… like what they were singing was the wrong sign. So I would say what was that and they would tell me and I would correct their signs. Like they would just choose the wrong sign.

Assistive hearing technology. All six participants utilized some type of assistive hearing technology. During the interviews, participants were asked about technology supports used throughout their school day. Participants placed great emphasis on their hearing technology (hearing aids, cochlear implants, and FM systems) and the effect on their educational outcomes.

Hearing aids. Billy communicated his appreciation of being able to hear with properly functioning hearing aids. He also described how amplification enhanced his sense of independence:

P: Grades 10 and 11 I did not actually have my hearing aids, because they weren't working. And now in the summer, I finally got these fixed. I can hear some now, and I like to hear.

I: What types of things do you like to be able to hear?

P: I can hear sounds, I can hear alarms. In grade 10 and 11 I couldn't hear the alarms, so they had to let me know when it's time to change classes, and so people would tap me on the shoulder and let me know when class was done. So it was hard, it's just easier to hear.

Cochlear implants. Two students spoke about their cochlear implant (CI) use. One student was grateful for his implant, and being able to hear, whereas the other student was nervous about using her device at times. Kohli described what he felt were some benefits of having two cochlear implants:

P: Well it felt more or less the same. The one side I can hear more than the other side. So my left ear I hear less. It's good, I can hear some and I like it. I can hear when the TV's on, but can't really hear what they're saying.

I: How do you feel being able to hear things?

P: I can't always hear everything. Sometimes it's scratchy or when it's not clear. It kind of sounds wet. So it's confusing, it's not clear. It just happens once in awhile. I think it doesn't help because my hearing levels are too low.

Sarah admitted not knowing much about her cochlear implant and her lack of knowledge appeared to contribute to her fear of using it near water:

I: You said you struggle sometimes wearing a cochlear implant?

P: Yeah, sometimes I go to [the] audiologist to fix my volume, that's annoying. I don't know nothing about CIs and my mom knows everything. But I know how to put this together because that's the only thing I know. But she knows how the brain works, and stuff like that. Like I don't know how to do that (laughs). Like the volumes, and… sometimes I forgot to take it off when I go in shower, and oh... I'm scared to go in water because I remember when I go to West Edmonton Mall, we had water and I looked at it and I'm like oh my God I'm scared with the CI. But if [the CI is] off, I'm not scared.

FM systems. Another hearing technology students discussed was the ability to access sound via classroom FM systems. I asked Mark not only to describe the benefit of using his FM system in the classroom but how it may benefit other students who are D/HH:

It's a thing to make me hear better. Like if the class is super loud and [the teacher] talks to me only through the FM, I could hear it, and the noise doesn't really bother me. And when they say it's hard to hear, just say, turn on your FM and hear it better.

Sarah also described how she felt the FM system helped her to concentrate more in her classes by amplifying what her teachers were saying:

P: When the teacher's wearing a FM, I'm really good at classes, concentrating and putting my hands up for questions and make sure I get it and so I can put it in my notes and study at home with my tutors. And if other students [are] talking, I remember the teacher always repeating what the students saying. So I'm like oh okay, I get it. The FM, it has three buttons, so I always put the first one[9], where [I hear] only [what] the teacher [is] saying.

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[9] Some FM systems have the option for three different microphone and hearing programs for optimal listening in a variety of settings.

I: And why's that?

P: Because I feel the teacher's always just talk a lot, so I don't want to miss any of it. So that's why. I feel like it's annoying because like I just want to hear what they're saying. I don't like missing what the teacher's saying. Yeah, I feel I concentrate more if I don't have an FM with me and I forgot [it] at home, I feel like I'm missing something, you know? I don't like that, I just like wearing [my] FM.

Other participants felt they struggled using their FM systems in the classrooms due to system malfunctions, or having the sole responsibility of bringing the FM to each class. Caitlyn explained how the quality of her FM system affected her perception of amplification devices:

P: I use an FM system, never did like it, from the time since kindergarten. I just never really liked it. But this one I have now is probably one of the better ones I've had. Like when I switched from the last one to this one… a huge difference in sound. I'm not sure if the other one was working right, and I just didn't know it, but this one is really good even though it looks old fashioned but... I still don't use it.

I: You still don't use it though, even though you like how it works?

P: Well I only have Math... and I don't use it in Math, I used it in Biology because of all the information I need to learn, and so it helped me hear the information better. But, yeah I never really did like the FM system.

Wilden explained that she felt the FM system contributed to her distractibility in the classroom because it amplified sounds other than the teacher's voice. Wilden's voice lowered as she spoke about her difficulty, and appeared to be embarrassed about struggling to use the FM system, whether it was because she did not know how to use it properly, or because it was on an

incorrect setting. She also spoke about the difficulty of dividing her attention, hearing through the FM system, paying attention to the interpreter, and writing notes:

> I had an FM system… I really didn't like the FM system because (sigh) it distracted me too much, I guess. Sometimes it doesn't work and [it's] just too loud and it's kind of harder for me to focus on my work. It was too distracting because if I tried [to] focus, it distracts me, and I cannot really write down everything (sighs) and it doesn't help get the loud noise, and the interpreter signing, and trying to write down things from the board, and be listening and watch at the same time… so it was really incredibly irritating. So I'm pretty much glad that my FM is in kind of the dusty area of the room. I just stopped using it in grade 10, somewhere around that, because it's so troublesome. Because they're so frustrating carrying around everywhere and having to change it. It's troublesome to carry it, and handing it to the teacher in elementary and on... ugh, it was a nightmare. I never, never, want to go through that again. I'd rather chuck it out the window than touch it again.

Fatigue. Regardless of whether participants used amplification or an interpreter, several revealed feeling higher levels of effort expenditure than peers without hearing loss, especially when locating sound sources, understanding teacher instructions, and following classroom discussions. Billy explained that being constantly engaged in a lesson with an interpreter caused him to experience fatigue:

> P: Well you know, working with the reading and working with the interpreter is just tiring.
>
> I: Okay, so talk to me more about that.

> P: So the interpreter interprets what the teacher is saying, and I just get tired watching. I just get tired, I get sleepy, and I start to fall asleep. I *try* to stay awake (laughs) but it can be any of my classes, English or Science, I can be tired. Depends on what the teacher's talking about, and how long they talk for.

Similarly, Kohli explained that he felt that he always had to work harder and faster in class, especially when taking notes:

> I have to work harder watching the interpreter. There's just so much to catch up on… I have to rush to get my notes down then learn it on my own. I don't have time to learn it at the same time I write it because I'm too busy writing what the interpreter says.

Kohli also explained that learning a large quantity of new information contributes to his fatigue. "Sometimes in Social Studies or classes like that I feel like I need a nap after." When asked about the particular class that increases his fatigue he replied, "because there's a lot of information. There's a lot of new stuff to learn and it can be tough to keep up sometimes."

Mark described experiencing high levels of fatigue, and explained that after school he often took naps as a coping strategy to alleviate feeling fatigued.

> After school I get a ride to my step-dad's work, and when I'm done [I] explain what I did in school, what did I do, what I had for lunch and stuff like that, and after that (yawns) he will say do you want to have a nap and I'll say yes or no, depends on how hard my day was. Just thinking about it now is making me tired!

Kohli also spoke about the challenges of writing in English, and the amount of cognitive energy used, resulting in fatigue:

> Sometimes if I'm not paying attention I miss a sign and I have to ask about what I missed… also reading the books I find hard... reading the textbooks for a long time. I find

> writing hard. When you have to write so much it can be tiring… trying to think of something to write.

Mark professed that he experienced varying levels of fatigue while using his FM in the classroom, especially during loud activities.

> When the kids are very very loud, [and the noise is] like echoing [in] the room, then, if [the teacher] tries to talk, I won't hear because of the [noise] echoing in the classroom. [All the noise] can make it really hard to hear sometimes.

It was interesting to note that it was not until I specifically asked Mark about using a malfunctioning FM system in class that he realized concentrating to hear in a noisy environment contributed to him feeling fatigued. He elaborated:

> Yeah, it's like I'm trying to listen but… sometimes it's too noisy… I didn't know I got tired because I was wearing my FM unit… it's probably that. I try really hard to listen… because a whole bunch of kids that were like…really loud. I never thought about that before, but yeah, probably that's why.

Improving curriculum access. During the interviews every participant had suggestions for teachers to adapt classroom environments and instruction to meet the variability of needs for students who are D/HH. I specifically asked participants what teachers could do to make difficult or complex activities in class accessible for them. I also asked participants what they feel teachers could do to help other D/HH students in the classroom. Participants recalled experiences in which teachers' proclivities in the classroom resulted in student success or difficulty. I interpreted and classified participant experiences and suggestions into five categories: (a) learning preferences, (b) visual reinforcement, (c) pace of instruction, (d) note taking, and (e) supportive relationships.

Learning preferences. Of the six participants, two attributed difficulties in the classroom to their learning needs being different than their teacher's educating approach or educator expectations of assignments to be completed without an option of differentiation. For example, Caitlyn spoke about preferring a more hands on multi-media assessment approach, but typical classroom assessments focused more around essay writing only.

> Like some [teachers] like essays more than hands on projects, and I think they should give an option, but... (whispers) they don't. Like my math teacher… her teaching style is not… great. Like she teaches you it, and expects you to know it and… that's it. It's like one style and that's it. It can be frustrating sometimes.

Sarah explained to me that she felt she learned best when she was able to use digital technology as a support, and recalled a time where she felt disadvantaged when that option was no longer offered:

> I remember in grade 9 we used iPads, we downloaded an app [with] flashcards, especially for science and social. So we put a definition and then picture, and then tap it and you memorize. So that helped me too, but grade 10, I don't know why we stopped using it. We [were] writing our notes, and then remembering… that's the same thing, I guess but I enjoy the iPad better, because, it['s] easier for me, I like digital better.

Visual reinforcement. To mitigate communication challenges in the classroom participants expressed that lesson content and classroom instructions should be visible and clearly communicated. Billy described how teacher utilization of visual reinforcement contributed to successful educational experiences:

> P: I wish I could tell my teachers that I learn best when I can see the information.
>
> I: Can you tell me what you mean by that?

P: Well, I learn best with captions, notes and writing on [the] board.

I: What is it about these three things that helps you in the classroom?

P: That way I know exactly what the teacher wants me to do and I won't forget.

Similarly, Wilden expressed her need for teachers to have important lesson content reinforced on the board. Additionally, she would like teachers to physically address each item by pointing to the information they are referring to, so she does not miss pertinent content:

> If the teacher point[s] at things that the teacher [is] doing so I'll know what the kinds of things that they're talking about. Because sometimes the things that are already written down, they're talking further on that… and the student would not know which one they're talking about.

Sarah explained how one of her teachers uses visual reinforcement to explain and expand on lessons in the classroom:

> I prefer on the board while the teacher [is] explaining it. That's the number one [thing] I like. My math teacher does that, and keep[s] giving me notes, and questions, but she write[s] on the board so we can actually write it in my own words. Yeah, that's what I like, paper and on [the] board, and then [the teacher] explaining it [to] the whole class.

Pace of instruction. Billy and Wilden both expressed the need for teachers to slow down their lesson delivery:

> Wilden: If the teachers talked really fast, [it's] kind of harder for the kids to understand and it's makes them lose focus of the work they're doing. Then they don't know what the information is and could not do good on tests. It's not a good feeling, I hate it.
>
> Billy: Well if they could just slow down, I think, whatever they're talking about, if they could slow down. And then if the interpreter's there, sometimes the interpreter isn't clear

if [the teacher is] going too fast, so they [have to] make sure they slow down. Sometimes I miss things if the interpreter doesn't understand because it's too fast and I have to ask what the interpreter said.

Caitlyn spoke of another way teachers could change the pace of instruction, with assignment due dates. She made it clear that large assignments are often due all at once, making it hard to complete at times. Caitlyn suggested teachers break assignments into smaller chunks:

P: I don't know, like break it up. Like if they had a very hard assignment instead of having it due like all at once, like separate it, over the course. Like make one section due one day, one section due the other day.

I: Okay, and how would that help?

P: Because then you're not doing all this stuff at once, and then it happens to be all due the same time. So then you just break it up... you work on that section, hand it in, work on this section and hand it in on the day it's due. It'll just help everyone.

Note taking. Two participants suggested the note taking process in class could be modified for students who are D/HH so students can focus on the lesson content rather than writing down the information. I asked Kohli specifically what the note taking process was like for him:

P: It's fine, the interpreter writes the notes and I copy them sometimes. But sometimes it's hard when I'm trying to copy the notes I can't pay attention to [the teacher].

I: Tell me more about that. Why can't you pay attention?

P: Well if I am writing my notes I can't pay attention to what the interpreter is saying. The teacher sometimes gives me the notes before and I like that better.

In my interview with Caitlyn, I asked her how a teacher could modify lesson delivery and she responded that she felt the note taking process was difficult not only for her but for her hearing classmates as well:

> P: The note taking... I know [it's] probably not only me, like when writing notes and while they're talking at the same time, you don't absorb the information... So if everybody had like a complete set of notes handed out, and while the teacher [is] talking they can like read it and then at home they can fill out the notes, and they can still learn, and because they're still writing it.
>
> I: Yeah. So how do you think that would help you?
>
> P: Because in classrooms, I can listen to the teacher and make eye contact, instead of focused on trying to finish the notes, because they'll be blank spaces. And then make sure I get the information. Like I'm pretty sure a lot of people miss information, they just don't know it. Yeah, and they're talking away, and you're like what are you saying? I'm trying to finish this.

Supportive relationship. Three participants explained they needed their teachers to show understanding and respect, and to be someone whom they can trust. Sarah explained why having a good relationship with an educator is so important:

> It's important having a great relationship with my teachers, because if I don't, it's hard. Because I don't like having a bad relationship with my teachers because I want to have a good relationship with my teachers so the teacher can help me and pass my marks. Like help me in class and stuff. I can't ask [for] help if it's a bad relationship.

Both Mark and Kohli described instances where they felt frustrated with a teacher and how it affected their classroom experiences. Mark spoke to a time when he felt ignored by a teacher, and expressed his irritation in having to repeat his work:

I: Was there ever a time a teacher made school maybe not enjoyable for you?

P: When they get mad at me a little bit.

I: Can you tell me about a time when that happened?

P: Yeah, one time in grade 5 when I do a wrong question, yeah, and then they say it's wrong and I need to repeat it. The teacher was not nice and didn't help me to get the question right, so it repeats and repeats and I get frustrated.

Kohli also expressed frustration when feeling ignored by a teacher, but explained that he was determined to show his teacher that he could accomplish a task without assistance:

P: I guess if I don't understand what I'm doing I'm supposed to ask the teacher and they can help me understand, they can teach me. But sometimes when I didn't understand, I didn't like the teacher.

I: What didn't you like?

P: They just ignored me, you know I just had to do it all on my own. I had to be patient through it and do it myself. It makes me feel, they think, I can't do it. But I did it.

Chapter 5: Discussion

"In contrast to [the] types of approaches that focus on a discipline through the lens of a microscope, a kaleidoscope offers a perspective that is informed by the reflection of multiple lenses. Considering the interaction of multiple lenses when examining the knowledge base might provide a more holistic understanding" (Edyburn, 2013, p.10).

The kaleidoscope analogy offered by Edyburn (2013) provided an ideal perspective from which to interpret my participants' stories. It was important that participants in my study were viewed in a holistic manner, with their multiple lenses, in order to truly understand their perspectives of their unique educational experiences. I begin this chapter with a summary of the analysis of themes and subthemes that arose from the current study, and a discussion of the findings of my study in relation to my research questions and relevant literature. Next, I discuss implications of the study findings for teachers, administrators, parents, and students, while illustrating the potential impact for students who are D/HH. Finally, I conclude with suggestions for further research.

The goal of my study was to explore the perceptions of students who are D/HH in inclusive schools. My intent was to develop in-depth, well-rounded narratives of the individual experiences of six students who were D/HH and to explore themes within each of the narratives, as well as common themes across the narratives. The research questions relate to themes and subthemes that I categorized from the interview data, and reported in Chapter 4. My three research questions were: 1) How do students who are D/HH perceive their educational experiences in inclusive settings? 2) What does it mean to the student to be D/HH within an inclusive classroom? 3) How may experiences of students who are D/HH differ from one another? These questions focused around three fundamental areas: students' perceived educational experiences, student perspectives of emotional well-being, and the diversity of educational experiences reported by students.

Utilizing a hermeneutic lens, I analyzed the experiences and perceptions of participants who were D/HH in inclusive educational settings. To this end, four common themes were identified: (a) the effect of communication style on social relationships; (b) the importance of language; (c) identity development; and (d) educational adaptations. Table 3 provides an overview of the interpreted themes and subthemes as they relate to my research questions. An in-depth discussion will follow explaining participants' experiences with the identified themes and subthemes in relationship to my research questions.

Students' Perceived Educational Experiences

My first research question focused specifically on students' perspectives of their successes and challenges in academics as well as their successes and challenges in the social milieu of their schooling within the province of Alberta. Several concepts resonated throughout participants' narratives with respect to perceptions of their educational experiences: the need for diverse and varied supports; the use of amplification technology; descriptions of mental and physical fatigue; and the meaning of inclusion.

Educational Adaptations and Supports. The availability and quality of adaptation supports was an important element impacting students' educational experiences. Participants in this study found that supports were typically available to them, but not always beneficial, (e.g. "I had an EA but she didn't know how to break things down for me"). Examining the descriptions of the participants' storied experiences, it was evident that all of the students utilized supports within the classroom, but the supports varied significantly in quality. Two predominant supports were classroom support staff [Educational Assistants (EAs) and interpreters] and amplification technology.

Table 3

Relationship of Themes and Subthemes to the Research Questions

Research Question	Themes	Subthemes
1) How do students who are D/HH perceive their educational experiences in inclusive settings?	Educational Adaptations and Supports	a) Classroom Support Staff b) The Use of Amplification Technology c) Fatigue d) Inclusion
2) What does it mean to the student to be D/HH within an inclusive classroom?	Identity Development	a) Identity of Self and Others b) Assertion of Independence c) Desire to be Viewed as Normal
	The Effect of Communication Style on Social Relationships	a) Social Isolation b) Split Social Networks: School Friends versus Home Friends c) Difficulty Taking Others' Perspectives

3) How may experiences of students who are D/HH differ from one another?	Importance of Language	a) Struggles Navigating Multiple Languages
	Educational Adaptations	a) Improving Curriculum Access

Classroom support staff. While all participants stated they had positive experiences with support staff, all admitted that at some point in their education they dealt with an EA or interpreter who they assumed had limited experience, which negatively impacted their learning in the classroom. Within the Alberta Standards for Special Education (ASSE; 2004) the use of support staff for students who are D/HH is not only encouraged, but also compulsory. In fact, the standards call for staff to be "knowledgeable and [to] use strategies that enhance [opportunities for] communication (e.g., provide [assistance with] class notes to allow ongoing visual access to the speaker's verbal and/or signed communication)" (p.6). My participants described experiences in which they perceived that support staff lacked knowledge of how to suitably communicate with students, or how to support student understanding of specific course information. For example, participants described times when they felt interpreters did not have enough experience with ASL and were using "incorrect" signs in the classroom. Participants described instances when they had to teach the interpreter alternative ASL signs. Although students should be comfortable self-advocating when communication issues arise, staff must be cognizant of changes in ASL vocabulary (if the student communicates via ASL), aware if a student has a differing dialect of ASL, and proactive when supporting student communication to support

access to the curriculum. It is also important to note that if an interpreter is unable to clearly and accurately communicate the lesson to the student, the subject content is unavailable to the D/HH student, compromising the student's educational opportunities.

The use of amplification technology. Rose, Meyer and Hitchcock (2005) state that technology has the power to assist individuals with disabilities in overcoming educational barriers such as access to classroom instruction, and socialization experiences with peers. All six of my participants utilized personal amplification technology (2 used hearing aids, 4 used cochlear implants). Five participants described the benefits of being able to hear with their personal amplification devices in the classroom. For example, one participant stated, "I like being able to hear through [my hearing aids], but when they don't work they suck." Participants also explained that albeit imperfect, access to sound through their personal amplification devices contributed to their ability to understand teacher instruction and classroom discussions. "If I have [both CIs] on at the same time, it kind of [turns] down the echo [in the room], and I can hear what's being said."

Classroom amplification technology (i.e., FM systems), are designed to amplify the teacher's voice and minimize background noise. Two participants explicitly described the benefits of isolating and amplifying the teacher's voice while utilizing the FM system. For example, "if the class is super loud and [the teacher] talks to me only through the FM, I could hear it, and the noise doesn't really bother me." Another participant described a time when his technology allowed him to hear environmental sounds, giving him independence instead of relying on peers for assistance. "I can hear sounds, [especially school] alarms. In grade 10 and 11 I couldn't hear the alarms, so [classmates] had to let me know when it's time to change classes,

and so people would tap me on the shoulder and let me know class was done. So it was hard, it's just easier to hear."

However, participants most often described that their FM systems frequently failed to reduce educational barriers, leaving them frustrated and fearful. Some of the problems included: (a) malfunctioning technology; (b) educators refusing to wear technology; (c) educators improperly wearing technology; (d) financial cost of the technology; (e) standing out from other students; and (f) lack of training in use and maintenance of the technology.

Four participants in this study reported that they felt their FM systems were often malfunctioning, limiting access to curriculum content and classroom conversations. For example, students described hearing only static or that the background noise was louder than their teacher's voice. This phenomenon is known as "signal-to-noise ratio," (Howard, Munro, & Plack, 2010), when the volume of the teacher's voice (the signal) is amplified more than background sounds (noise) in the classroom. FM systems are designed to alleviate this barrier but if malfunctioning, students may have difficulty hearing their teacher in a noisy classroom, and greater listening effort will be required. Since greater listening effort is required in loud environments, fewer cognitive resources are then available to complete other tasks, and fatigue levels may be increased.

Two participants spoke about teachers who refused to wear the FM system. When an educator refuses to wear amplification technology, a student's ability to learn is compromised, creating barriers to curriculum content, and class discussions. One participant explained that one of her teachers refused to wear the FM system, calling it "jewellery", so rather than trying to explain why she needed the technology, she just stopped asking him to use it. She also described a time where another teacher did wear the FM system the entire class, but wore it incorrectly

(i.e., the microphone constantly rubbed against the teacher's necklace), which resulted in excessive noise and interfered with the amplification of the teacher's voice. The participant explained that the improper use of the FM system resulted in her experiencing a headache, because of the increased effort needed to listen through the background noise. Educators need to be aware that if the FM system is not utilized, or worn correctly, students will not hear or understand class content, nor be able to participate in discussions or conversations. The educator may also be violating the ASSE guidelines (2004) which indicate that responsibility falls on the educator to ensure that amplification equipment is worn correctly.

Two participants also felt responsible for having to fund their FM systems. While the ASSE (2004) states that students should have access to assistive technology that supports learning, it does not specify who is responsible to supply the technology. One of my participants feared that due to her parents' lower income, paying for her FM system and potential repairs or upgrades was not always possible. If technology cannot be properly repaired issues may arise and the signal-to-noise ratio may decrease, resulting in compromised learning of the student.

Two participants also described feeling embarrassed when utilizing the FM system in class, as it made them stand out. One participant recalled an instance where her teacher explained that she wore the FM microphone to amplify her voice for a particular student. The participant stated that she felt embarrassed and different, as she felt all of her classmates were now aware of her need for amplification. If a student is feeling socially isolated using classroom amplification technology, the student may refuse to utilize it. Teachers need to be aware of this, and work to increase acceptance and understanding of all supports (e.g., glasses, wheelchairs, computers, FM systems) in their classroom environment.

Three of the participants felt that the majority of their teachers were unaware of how the FM system functioned and thus the maintenance of the FM was left solely in their hands. The ASSE does call for students to be taught to recognize when technology breakdowns occur, and to implement strategies to repair the device. Unfortunately, there is no specification as to who is responsible for teaching students to recognize when there is a device malfunction, or how to resolve the issue. Until both teachers and students who are D/HH are educated on correct use and maintenance of classroom amplification devices students may continue to find themselves in learning environments that do not adequately support access to information that their hearing peers and educators take for granted.

Due to the aforementioned difficulties, most participants described problems hearing and understanding novel information, leading to a dislike of utilizing classroom amplification technology. Participants also reported difficulty understanding or maintaining the functioning of their amplification devices, creating frustration when technical problems occurred in the classroom. Unfortunately, a lack of education on the benefits, correct use and maintenance of FM systems lead to students opting to forgo access to learning opportunities by not utilizing technology that would support their learning. Students, educators and administrators need to be aware of how to combine personal hearing technology with classroom amplification devices, including maintenance of technology, as any other support in the classroom, to ensure optimal access to classroom instruction and socialization opportunities for students on a daily basis.

Fatigue. An unexpected subtheme of cognitive and physical fatigue emerged during my pilot study interviews. To investigate these issues with study participants, I included specific questions about fatigue levels experienced throughout their school day. Johnson and Doyle (2011) reported high levels of fatigue for university students who are D/HH, and that as a result

of fatigue, many students requested formal breaks during lectures and changes to the pace of lecture delivery to alleviate feelings of exhaustion. In fact, the ASSE (2004) state that educators need to provide flexible scheduling to support students who are D/HH by providing periodic breaks or rests after long periods of speech reading or sign language interpretation (p.6). None of the students in my study reported that they were offered or permitted breaks throughout the school day. To mitigate the absence of breaks, participants described a variety of coping strategies utilized when facing high levels of fatigue during class time (e.g., pretend to listen, nod throughout a long lecture to seem interested, turn amplification devices off, and completely disengage in the lesson). Rohatyn-Martin and Hayward (2016) described these coping strategies as "survival mechanisms" and found that students may engage in behaviours that while mitigating fatigue, also negatively impact learning opportunities and teacher perceptions of their motivation and engagement in the classroom.

During my interviews with three participants, I asked them about what specifically they felt caused their fatigue in the classroom. All three participants dismissed the idea of fatigue resulting from amplification issues or listening effort, stating that it was likely due to a lack of sleep, or because they felt the class was boring. Although at times, fatigue may have resulted from a lack of sleep or disengagement, I realized, that participants might not possess an understanding of "fatigue" and "listening effort" in order to identify where some of their exhaustion may have originated. Therefore, participants did not appear to have the language to articulate their understanding that fatigue was what they were experiencing. Rohatyn-Martin and Hayward (2016) explain that students need language that enables them to describe personal experiences of fatigue, so as to not always internalize causes, and to not use ineffective coping mechanisms to deal with fatigue. If students are not able to clearly identify all potential causes

of their fatigue, educators and professionals may not be able to correctly resolve potentially fatiguing activities.

Inclusion. Inclusion has been practiced in some form for almost 20 years in Alberta schools, yet half of the participants in this study did not feel like they were fully included in classroom and social settings in their school. Inclusion was described by participants in terms of "feeling that you're no different than anyone else and you get to feel the same", being "friendly to others and having others be friendly to you", "having others talk directly to me", "being equal and doing things together", and "getting the support you want". The findings from this study are congruent with the literature suggesting that the majority of students studied who are D/HH define inclusion as acceptance from their peers (Hyde & Power, 2006; Jarvis et al., 2003; Kluwin et al., 2002; Slobodzian, 2011).

Of my six participants, three felt they were included at all times by peers, educators, or community members. The remaining three participants described their experiences as one of exclusion, rather than inclusion, with statements such as, "I feel excluded if someone is mean to me or [is] a bad person", "[If you're] not getting help and you feel left out, [because] you're not learning new things, when your classmates do, like in class, [when] people [are] laughing at the teacher's jokes and I don't know what's happening", and "If a deaf person doesn't know that a person that's not deaf is speaking to them, [you feel] like a third wheel. I'm not part of their conversation and I don't really understand what they're talking about." As elucidated in Hyde and Power (2004), inclusion needs to reflect a community wherein all students feel they belong and can fully participate in the school, classroom settings, and extra-curricular activities. In order to feel wholly included in school settings, three participants explained they needed their teachers

to “show understanding”, “respect”, and to be “someone who[m] they can trust”, all elements considered essential of inclusive classrooms (Moore, 2016).

Summary. Overall, student perceptions of their educational experiences were mixed, with some expressing positive experiences, and some conveying negative encounters, particularly surrounding perceived barriers to their education. For educational adaptations and supports, students spoke predominantly about classroom support staff, classroom amplification technology, fatigue, and inclusion. Participants experienced positive encounters with support staff overall, but stressed the importance of the knowledge, skills and experience an EA or interpreter should possess. Classroom amplification technology was seen to help students when it was functioning properly, and was well maintained. However, more assistance and training is needed for both students and educators to ensure optimal functioning. Fatigue appeared to be significantly impacting students’ day-to-day experiences, and needs to be further explored. Although many students stated they felt included in their schools and classrooms, several related experiences when they felt excluded. Participants’ descriptions reveal several barriers in their inclusive schools. My participants perceived that the available educational supports did not always meet their needs.

Supports are meant to help put those who are struggling on an “even” playing field with their peers. Unfortunately, my participants have all encountered barriers trying to access necessary supports, and described feeling embarrassed and astonished when use of supports was refused. Unfortunately, there remains a bias attached to students receiving or utilizing supports in classroom settings. Supports are often viewed as a form of cheating or viewed as giving students an unfair advantage. Moore (2016) calls for an end to the bias against educational supports, stating that everyone relies on daily supports (i.e., alarm clock, GPS device, day planner), and

education supports are no different. As educators, administrators, policy makers and researchers, it is our duty to ensure access to supports for all students in need, whenever they need it. However, many mainstream educators have not been supported or trained to eliminate these barriers, which is a fundamental part of inclusive education. Every student should have access to the content in the curriculum, and when schools are unable to offer this, they are not providing a student with their basic right to an education, which will then impact future academic and vocational success and opportunities.

Student Perspectives of Emotional Well-being

My second research question focused on individual perspectives of well-being in inclusive settings. When participants described what being included meant to them, two concepts arose: identity development, and the effect of communication style on social relationships.

Identity development. Student perceptions of identity were typically complex, and consisted of a range of elements including ethnicity, gender, and age. In addition to the aforementioned characteristics of identity development, students who are D/HH must also contend with how their hearing loss impacts "communication, educational placements, and family and peer relationships" (Hyde & Power, 2006, p. 59). Under the umbrella of identity development, participants discussed their: (a) identity of self and others; (b) assertion of independence; and (c) desire to be viewed as "normal".

Identity of self and others. Israelite, Ower, and Goldstein, (2002) describe identity of individuals who are D/HH as typically falling into two categories: (a) feeling alienated in the hearing culture in some way, or (b) feeling compatible with Deaf culture. Two categories can be limiting and oversimplified at times, as not all of my participants' experiences fit into these categories. However, several participants did reveal similar descriptions of identity, as some

described instances of feeling alienated in the classroom, whether it was being inadvertently excluded from group discussions or peer conversations in the hallways between classes. Participants also expressed how feeling separated from peers in the classroom affected their perceptions of being a valuable and contributing member to the school community. For example, one participant recalled a time where the class was brainstorming ideas for a performance during an assembly. According to the participant, the teacher did not list any of the ideas on the board, and when the class voted on the options by a show of hands she decided not to vote because she was unable to keep up with the conversation. She described feeling so excluded that she decided to not go to school the day of the assembly.

Participants who identified with Deaf culture, explained that attending a mainstream school had no bearing on their beliefs or identification with Deaf culture. As Israelite et al. (2002) argue, feeling secure with one's identity may be viewed as a way to challenge past societal rejection of those who are D/HH and to equalize power relationships. Due to the association with their culture, I assumed participants would feel more comfortable attending a school for the Deaf rather than a mainstream school. Interestingly, in this study I found the reverse to be true for one participant. Kohli explained that when he was enrolled at the School for the Deaf, he was tirelessly bullied, and felt it was due to the fact that he was implanted and would sometimes try to communicate through spoken English. Even though he was secure with his identity as a Deaf adolescent, because of this bullying, he felt unwelcome in the Deaf community, and it was not until he transferred to his current school that he felt he was a valued member of an educational community.

The medical community has also impacted how those who are D/HH are perceived once diagnosed with a hearing loss (Humphries et al., 2012). One student who communicated through

spoken English described a time when a medical professional labelled individuals who are D/HH and used sign language to communicate as “lazy”. It was this comment that discouraged her learning of ASL even though she was very curious to learn how to sign and communicate with the Deaf community. Marshark and Hauser (2012) believe that the primary basis for the “anti-sign language position [from the medical community] for children with cochlear implants is the assumption that using sign language, because it is considered much easier to learn than spoken language, deaf children will become ‘lazy’ and sign rather than speak” (p. 35). Unfortunately, misinformation from medical professionals about Deaf culture or communication modalities may negatively affect perceptions of those who are D/HH who use ASL, potentially leaving a lasting impression on hearing children and their families, or families’ first encountering hearing loss. McConkey Robbins (2001) states that although there may be conflicting messages from clinicians, all must agree that “well-developed strong language abilities are essential to the success of every [D/HH] child” (p. 1), and may contribute to a strong sense of identity.

Assertion of independence. Adolescence is typically a period where students become aware of the requisite to develop unique identities and assert independence from parental influence (Akamatsu, Mayer, & Farrelly, 2006). Caitlyn explained that she now feels comfortable talking to educators and peers about her hearing loss, which has made her experiences at school “a lot easier”, but that her mother was nervous to have Caitlyn advocate for herself. Wilden also described a time where she asked her mother if she could order her own supper while out at a restaurant. Wilden’s mother was nervous about how she would communicate with the server, but when Wilden asked the server for a piece of paper and wrote down her order successfully, her mother never ordered for her again. Akamatsu et al., (2006) state that hearing parents of D/HH children may inadvertently hinder their child’s self-growth by

placing restrictions on activities inside and outside of the home due to worries about their child's capabilities and ways of communicating.

During interviews, study participants described times, whether at home or in the classroom, where they were proud when a task was accomplished while working independently, and without assistance. Test, Fowler, Wood, Brewer, and Eddy (2005) assert that all adolescents, regardless of disability must be able to experiment with self-advocacy and independence in order to develop knowledge of self, knowledge of rights, communication and leadership skills.

Desire to be viewed as "normal". Kent (2003) acknowledges that the concept of feeling abnormal among adolescents may be typical, but for teenagers who are D/HH the social stigma attached to being deaf may influence peer perceptions of difference, increasing the likelihood for social isolation. Several participants shared their need to be perceived as a "normal" student, rather than one who has a disability. These participants perceived themselves as "different" from their hearing classmates and would alter particular behaviours and activities to normalize themselves. For example, participants stated in order to not stand out, they would forgo utilizing their FM systems in class. For all students, in particular students who are D/HH, adolescence is an important time in which exploration of friendships, conformity to peer groups, and sensitivity to one's appearance is of high priority (Punch & Hyde, 2005). It is understandable then, that participants in this study may be sensitive to appearing "normal" and not different from the majority of their teenage peers in an educational setting.

The Effect of Communication Style on Social Relationships. Punch and Hyde (2011) found that their study participants who were D/HH reported difficulty relating to hearing peers, and although some did develop friendships with hearing peers, there may have been little or no interaction outside of school. Similarly, in the current study, three concepts emerged in

participant descriptions: (a) social isolation; (b) split social networks: school friends versus home friends; and (c) difficulty taking others' perspectives.

Social isolation. Stinson and Lang (1994) define social isolation as a feeling of loneliness, little participation in activities, and rejection (perceived or actual). Several participants described the challenge of social isolation in their schools. According to my participant Wilden, not being able to hear conversations, snickers and whispers, and music playing in hallways left her with the sense that she was lacking a connection to "common knowledge" of her hearing peers. She also described feelings of isolation and a lack of opportunities to make friends with hearing peers, because she had such difficulty communicating with them. Wilden's experiences are reiterated by Wolters, Knoors, Cillessen, and Verhoeven (2011) and Antia, Kreimeyer, and Reed (2010) who reported that due to communication issues, adolescents who were D/HH seemed to have more difficulty making hearing friends and feeling emotionally secure, often leading to perceptions of social isolation.

Another participant, Sarah, spoke of social isolation not only from peers in the classroom, but also from her teacher. She described a time when her teacher was facing the board while lecturing in class, and happened to make a joke. She saw the entire class erupt in laughter, but felt out of place, as she had not heard the joke. Punch and Hyde (2011) state that students who are D/HH may be at a social and academic disadvantage in situations when hearing or being able to see/speechread is hindered. When students are feeling socially isolated by peers and educators they may disengage or "give up" as Wilden articulated when she exclaimed "I just stop[ped] caring about those people and what they had to say."

Split social networks: School friends versus home friends. Research focused on the socialization of students who are D/HH has typically found that students are isolated in inclusive

schools or have few friends and do not socialize with peers outside of school hours (Antia, et al., 2010; Bain, Scott, & Steinberg, 2004; Kluwin et al., 2002; Slobodzian, 2011; Wolters et al., 2011). Most of the participants in the current study reported feelings of loneliness or "feeling like a loner" at school. In fact, four of the participants reported having few friends at their school, and indicated that there is no contact with these friends outside of school hours.

In a study of junior high school D/HH students, Jarvis et al. (2003) reported that some D/HH students experienced social isolation at school, while others found that education with hearing peers enhanced their social success. Students experiencing social isolation typically communicated in a different language than their hearing peers (through sign language, rather than spoken language; Antia et al., 2010; Bain, et al., 2004; Kluwin et al., 2002; Slobodzian, 2011; Wolters et al., 2011). All participants in the current study described similar social experiences to the findings of Jarvis et al. (2003). Caitlyn, Billy and Wilden reported feelings of isolation, whereas Kohli, Sarah, and Mark felt socially accepted with the majority of their peers. There was not, however, a tendency for participants who communicated through ASL to feel more isolated than those who communicated through spoken English, leading me to conclude that communication modality was not the only causal factor for social isolation. Kohli confessed that being able to communicate fluently in Spoken English like his hearing peers may be easier, however he felt his peers still understood him when he signed or wrote down his thoughts.

Five participants explained that their friendships with school peers did not extend past the typical school day times. These students explained that their friends outside of school were completely different than their school friends. When I asked these participants what was different about their neighbourhood friends, all described their friends as communicating in their primary language. For example, Billy's friends communicated via ASL, and Caitlyn's friends

communicated via spoken English. All five also stated that they felt more comfortable with their neighbourhood friends. I interpreted the idea of "comfort" in two ways: (a) as feeling more at ease communicating in the same language with neighbourhood friends; and (b) the length of time participants had known their friends, and the investment in their friendship. Both of these factors could account for more allowances if communication breakdowns did occur at times.

Difficulty taking others perspectives. Another observation I found noteworthy was that the two students in this study who primarily communicated through ASL, seemed to struggle with theory of mind. As discussed in the literature review, research has shown that students who are D/HH who use ASL and struggle with spoken language tended to have delays in their theory of mind acquisition (Cole & Flexer, 2016; Lundy, 2002; Marshark et al., 2000). Both students, when asked about what general teacher practices other students in their class would benefit from, replied similarly: "I don't know because I haven't asked them". These two students seemed unable to draw inferences into what their classmates may be struggling with academically, simply by observing peers in the classroom. I also asked the participants to consider how their personal recommendations for teachers to specifically aid students who are D/HH may also benefit their hearing peers. Both of these participants also struggled deducing how individualized supports for students who are D/HH may generalize for hearing students, further displaying potential difficulty with ToM development. Peterson (2004) explains that delayed ToM development in students who are D/HH "highlights the significance of peer interaction and early fluent communication with peers and family, whether in sign or speech, in order to optimally facilitate the growth of social cognition and language" (p. 1096). Both participants in this study explained that their exposure to fluent language models did not occur in early childhood. In fact,

language exposure did not occur until mid-childhood (ages 4 and 5 years old). This delayed contact with language may be a contributing factor in explaining possible ToM difficulties.

Summary. Overall, students' perceptions of their emotional well-being were mixed, some being positive and some being negative, especially when encountering instances of exclusion from social or educational settings. Identity development was a major theme identified, with students discussing their identity of self and others, assertion of independence and their desires to be viewed as "normal". Social isolation affected some participants' identity, whereas a strong connection to a culture or community strengthened others'. Assertion of independence was a strong characteristic that every participant admired in themselves, or were striving to continue developing as they felt it was important for all teenagers, especially those who were D/HH. All participants had a compelling desire to be viewed as "normal." Four went so far as to forgo wearing their FM systems, and reported pretending to understand a conversation to not be perceived as different than their peers.

Another theme identified was the effect of communication style on social relationships, where participants discussed social isolation, split social networks: school friends versus home friends, and difficulty taking others' perspectives. Instances of social isolation were confirmed by several participants; however, in many of the instances recalled, isolation by peers or educators was inadvertent. This suggests that more training and assistance may be needed for hearing peers and teachers when conversing with students who are D/HH to avoid intentional or unintentional isolation. Participants described relationships with neighbourhood peers where ultimately a higher comfort level was reported potentially due to longevity of friendships and bonds created, or similar modes of communication. If students who are D/HH are more comfortable communicating in their first language, this should be taken into account in inclusive

classrooms to ensure students are able to feel at ease and not worry about language barriers with hearing peers and educators. With students who are D/HH, Marshark (1993) concludes the success or failure of interactions with peers is dependent on the student's flexibility, the individuals with whom they are interacting, and the contexts of social interchange, so these too must be considered in a classroom setting.

Lastly, two participants who communicated in ASL showed difficulty taking their peers' perspectives, or a potential delay in their ToM. If a lack of early exposure to language is indeed a confounding variable to delayed ToM, parents and educators must be aware of the lack of opportunity for incidental learning and linguistic isolation even for students who have optimal access to sound. Educating parents and teachers on the need to converse directly with the child about mental states and perceptions and to make conversations accessible to the child to give them the ability to learn about different perspectives would be beneficial (Moeller & Schick, 2006). The potential for delayed ToM due to lack of early language exposure and optimal access to distance hearing also lends support to the argument for newborn hearing screening. This screening would be valuable to ensure language input (whether through auditory/oral methods or sign language) is offered at the earliest possible opportunity.

Students' Diverse Educational Experiences

My third research question revolved around the potential for varying experiences for D/HH students, depending on their perceptions of inclusion, and perceived supports within their classrooms and schools. Participants in this study varied greatly (for example, by grade level, first language, amplification technology, and gender), so it is fair to assume that there would be differences in perceptions of educational experiences. Edyburn (2011) states "if we begin with the premise that every classroom is composed of diverse learners, we start from a different point

than traditional instruction [which is aimed at homogeneous learners]… we begin to think about [supporting] diverse learners" (p. 38). Two main themes reinforced the diversity of the participants' educational experiences: the importance of language and improving accessibility.

Importance of Language. The research and controversy around language utilized by students who are D/HH continues to be widely debated. Participants in this study also referred to the importance of language and its effect on educational success, particularly for students who fluently communicated in multiple languages.

Struggles navigating multiple languages. Three of my participants reported communicating fluently in several languages. For Sarah, English was not the first language utilized in her household, and Billy and Kohli both revealed that their first language at home was not ASL or English. Each of these students revealed difficulties translating from his or her native language to spoken English, and expressed struggling with assignments, when they required reading and writing in English. Billy and Kohli explained their difficulty of having to interpret ASL signs (their third language) from their interpreter in the classroom to English (their second language), and then sometimes interpreting the English into their first language, to support their comprehension of the subject material. Each of these participants explained that processing information takes much longer than if they were processing in a single language. In fact, each of these participants described several instances where their teacher asked the class a question, and by the time they had processed the question and had formulated an answer, the class had already moved on to another topic. This is consistent with the literature surrounding English-language learners; some students may be in need of more time to process curriculum information in order to succeed in classroom settings (Freeman & Freeman, 2002; Harper & de Jong, 2004; Proctor,

Dalton, & Grisham, 2007). Thus, the request for extra time by the participants in the current study is highly warranted.

Improving curriculum access. The participants in this study described how their educational experiences were impacted by several factors, surrounding a need for improvement in access to the curriculum. Access to education is a right for all students, and a diversity of needs and interests for students is to be expected, as students vary in copious ways (Hyde, Nikolaraizi, Powell & Stinson, 2016). Participants in this study described how teacher expectations affected student access to curriculum information. A link between teacher expectations and student outcomes has also been found by Rubie-Davies, Hattie, and Hamilton (2006) and Rubie-Davies (2010). These studies surveyed 220 students and nine teachers in inclusive classrooms, it was found that teachers who had higher expectations for their students resulted in more positive student outcomes, and when teachers had lower expectations, student achievement was lower. In the current study, it was reported by students that they felt teacher expectations affected some participants' understanding of assignments; for example, one student felt her teacher did not care about her outcome in that subject. Participants explained that if they felt their teachers were truly invested in them, they were motivated to work harder on assignments, and ask for help when they did not understand. When educators were perceived as distant, dismissive or confrontational, participants reported, "zoning out in class", "not handing in assignments" or even "not want[ing] to go to that class at all".

Access to language and/or hearing was also a factor that affected whether language supports were being used as a learning aid or if access to language was a barrier. Some students in this study depended on sign language and visual supports (such as pictures on the Smart board, visual task lists, and concept maps) to support their learning, whereas others relied on FM

systems to make spoken language more accessible. For students who relied on visual supports, some participants stated that they found their teachers were cognizant of the value of visual learning aids, and utilized them on a daily basis. Other participants felt their teachers were not incorporating enough variety in their lessons, and stressed that teachers should be aware of how beneficial visual supports could be for many students in the class, not just those who are D/HH. Providing access to curriculum through multiple modalities has shown to benefit all students in inclusive classrooms (Rose & Meyer, 2002), therefore educators must do all they can to ensure access is being provided for all of their students. Some participants who relied on the FM to provide a clear auditory signal reported frustration with FM malfunction and teacher misuse.

Summary. The individuality of each of my participants was evident, not only within their personal characteristics (i.e., level of hearing loss, use of amplification device, communication modality) but also with their educational experiences. Through their differences, the importance of language was apparent, especially when navigating multiple languages, as well as the need for improved access to the curriculum.

Participants who had to process multiple languages described difficulty in English reading and writing, especially those participants who communicated in ASL. English literacy may be a problematic for the students who are D/HH who sign, as "natural sign languages do not have parallel writing systems, and thus, although they may be fully appropriate for educating deaf children, they are not equivalent to written/spoken languages" (Knoors and Marshark, 2012, p. 3). Thus, for students who are D/HH who communicate in ASL as their primary language, it is likely that difficulty with literacy will continue, unless students are given explicit support. Providing students additional time for processing was also connected to the idea of improved accessibility to classroom instruction for students. Participants explained that they would benefit

from longer processing information in the classroom in order to accommodate the time needed to convert ideas from spoken or written language to their native language. Academic expectations and educator effort in utilizing visual supports were described to have a positive impact on the quality of students' work. It is important for educators to understand the impact of their expectations and efforts, as this could lead to improved learning opportunities for students in supportive classroom environments, as well as higher levels of student motivation and engagement (Rubie-Davies, 2010).

Implications and Recommendations for Practice

Each of my research questions focused on students' (a) perceived educational experiences; (b) perspectives of emotional well-being, and (c) diverse educational experiences, and implications for practice follow these foci. All participants clearly described successes, challenges and barriers with learning environments or learning materials that affected their access to knowledge or their ability to attend to teacher instruction. Unfortunately, meeting the variety of needs for students who are D/HH continues to be challenging for many general education teachers. Bowe (2000) argues that educators need to consider making education more convenient and comfortable for students with diverse cultural backgrounds, and more flexible for students with differing learning preferences. Thus, to address the barriers participants described, and to assist educators with planning their "curriculum, teaching, learning, and assessment of [diverse] learners" (Montgomery, Hayward, Dunn, Carbonaro, & Amrhein, 2015, p. 265), Universal Design for Learning (UDL) will be a framework I use to discuss supports for students who are D/HH in inclusive contexts. Rose et al. (2005) describe UDL as a framework aimed to address "potential barriers to learning in a curriculum or classroom and to reduce such barriers through initial designs, designs with the inherent flexibility to enable the curriculum itself to

adjust to individual learners" (p. 508). UDL also helps to address learner variability by evoking flexible methods to empower educators, and to maximize learning for students (Centre for Applied Special Technology (CAST), 2011).

UDL has three essential principles: (a) multiple means of representation (MMR); (b) multiple means of engagement (MME); and (c) multiple means of action and expression (MMAE; Rose & Meyer, 2002). These three principles address specific barriers to student learning; MMR aims to ensure a variety of ways for students to access curricular information, MME encourages teachers to incorporate student interest and increase motivation, and MMAE addresses the need for flexibility for students to display understanding and learning of curricular content (CAST, 2011). Edyburn (2011) describes UDL as providing educators with a framework to respond to learner differences, to proactively utilize varying supports required by specific students into their teaching environments and materials, to assist all students who may benefit from them. Implications of my study will be discussed with a focus on removing barriers through the UDL framework and its three principles for teachers and administrators, parents, and students. It is imperative to note that although I am focusing on implications as they relate to challenges and barriers, participants reported that some educators were already providing classroom and curriculum adaptations. Students in this study described the benefits they felt when educators provided flexibility in their lessons and materials as a necessity to their educational and social success in their inclusive classes. Nevertheless, participants also reported a lack of consistency with teachers utilizing varied supports in each school.

Implications for teachers/administrators. Educators and administrators must plan, design and teach with diverse learners in mind at the outset in order to provide opportunities for increased student success (Tomlinson, 2014).

Multiple means of representation (MMR). Orkwis (2003) describes multiple ways educators and administrators can utilize MMR in the classroom. Some examples Orkwis provides are: adapting for different sensory needs, and adjusting the environment to ensure all students have physical access (i.e., all can hear and see). This barrier can be addressed through teachers utilizing alternative representations of curriculum content and by having hearing peers take notes for the student who is D/HH, while ensuring important messages during classroom lessons are highlighted and visible on the board and repeated orally (Schaaf, 2013).

Several of my participants stated that they were occasionally teaching peers, educators and interpreters' ASL terminology in classes rather than focusing on their own learning. If the skills and knowledge of the educational interpreters are lacking, such as information being presented incorrectly, students who are D/HH may be missing valuable classroom information (Schick, Williams & Kupermintz, 2005). Administrators need to ensure that qualified interpreters are available in the classroom if needed. Additionally, students who are D/HH need to be aware of various dialects of sign language, and the possibility that interpreters' signs may differ from the signs that the students originally learned. In order to ensure accessibility, clarity and comprehensibility for all learners, dialogue must occur between all parties about the utilization of multiple means of representation (CAST, 2011).

Multiple means of engagement (MME). Occasionally, participants in this study described feeling disengaged from the lesson and classroom community because they did not feel: (a) connected with the learning topic; (b) engaged with the educator, or (c) they understood the information being delivered. In order to connect with students and enhance engagement, educators need to consider student interest when planning instructional material. Orkwis (2003) describes multiple ways educators and administrators can utilize MME in the classroom. Some

examples Orkwis provides are: offering flexibility in adjusting content for student interests and cultural backgrounds, collaborating with other educators or parents in the classroom and school, and allowing for access to technology.

Powell, Hyde and Punch (2014) believe that the majority of educators and administrators have little-to-no understanding of the cultural needs of students who are D/HH, so collaboration with interpreters, EAs, parents, and students themselves about modifying instruction and instructional materials based on cultural needs would be beneficial in keeping students who are D/HH engaged in inclusive classrooms. An example from my study would be amplification technology training. If training for technology (e.g. FM systems) is completed as a team, including educators, parents and students, rather than separately, or not at all, a collaborative approach would enhance understanding of use, maintenance and care of such technology. Further, if educators were supportive about amplification technology, this may eliminate student embarrassment in wearing amplification devices.

Participants in this study also discussed social isolation in classroom settings and during extra-curricular activities. Hyde (2004) suggests in order to keep students engaged, especially those who are D/HH, they must be included in every aspect of school life, including opportunities for socialization within the school, and in events and interactions between the school and community. Katz (2012) adds that social inclusion means ensuring every child feels good about who they are and has a sense of connection to their learning and also to their peers. Educators and administrators must have open dialogues with students and be aware if they are experiencing social isolation, and work to rectify these scenarios. Students may then feel that they are a welcomed and valuable member of the classroom community, enhancing their engagement and motivation.

Multiple means of action and expression (MMAE). Orkwis (2003) further describes multiple ways educators and administrators can utilize MMAE in the classroom. Some examples include: offering flexibility in how students respond to information presented, flexibility in providing assessment options that can be easily changed to accommodate individual and preferred modes of expression, and flexibility in assessing student knowledge of content. My study highlights the need for including student perspectives when considering adaptations of classroom assessments. In order for students to feel included in classroom settings, Johnson and Doyle (2011) suggest that educators bring students into the conversation about their individual needs and strengths, and keep an open and running dialogue about best practices throughout the school year. This act of inclusion could show students that educators respect their voices in creating positive change and may value the individual strengths of students, and encourage unique displays of knowledge and understanding.

Implications for parents. The focus of UDL is primarily in educational settings, but when parents and educators advocate together promoting the use of UDL and its principles in today's schools, students' educational experiences have the potential to be transformed into more positive outcomes (Katz, 2012). According to Hall, Strangman and Meyer (2004), in order to support the three principles of UDL, parents can be a resource to educators and their children in two important ways: as volunteers and advocates.

By involving parents in educator decisions on cultural practices in the classroom, educators can develop a support system of informed individuals who can assist with, and advocate for, students who are D/HH. Parents can support students and teachers by volunteering in the classroom and supporting their child at home. For example, parents may assist in preparing

classroom materials, assist with maintenance of technology, and support students' homework assignments (Province of British Columbia, 2011).

In this study, some participants described the powerful influences family members had on their schooling experiences, (i.e., assistance with homework, advocacy, etc.), whereas some participants had to rely on their own personal motivation. One participant stated that she learned how to self-advocate from her mother, and that it had been very beneficial throughout her educational journey thus far. The ability to advocate for oneself, rather than waiting for others to address their needs is a beneficial skill for students who are D/HH (Reed, Antia, & Kreimeyer, 2008). If parents instil understanding and proficiency in self-advocacy, their children will be more likely to have the skills and language to ask for specific accommodations to address their learning needs.

Implications for students. UDL has many implications for students: bridging the gap in learner skills, interests and needs, and most particularly, making learning accessible and engaging (Tomlinson, 2014).

Multiple means of representation (MMR). MMR is particularly advantageous for students who are D/HH as educators in junior and senior high school conduct the majority of classroom instruction through auditory/oral means of communication. Jackson (2005) argues that relying on speaking and listening in a classroom setting may limit access to the general curriculum for students who are D/HH. If a student is continually missing pertinent information in a lesson, the strictly oral presentation needs to be altered to better support these students. For example, in the current study, several students expressed satisfaction when educators utilized multiple teaching methods for a single concept: "I learn best with written notes and highlighting of key concepts."

Students should be supported to advocate for UDL and multiple means of representation while teachers are instructing in a classroom in order to meet their varying needs (Katz, 2012).

Participants in this study also described symptoms of fatigue throughout the school day. Students need to be aware of the symptoms and potential fatigue contributors in their daily classes. Once students are able to identify the source of their fatigue, they may be able to better communicate their needs to their teachers for rectification (Rohatyn-Martin & Hayward, 2016).

Multiple means of engagement (MME). If curriculum and lessons are modified to reflect student interests and cultural backgrounds, students who are D/HH can only benefit. In fact, to advocate for supportive and engaging educational settings, several researchers (Martin, Huber-Marshall, & Maxcon, 1993; Pocock et al., 2002) feel students should: (a) describe their own skills and needs for their teachers; (b) set their goals and create plans to attain them; and (c) know when, and who, to ask for assistance. Participants in this study described their need to advocate for themselves. In order for students' interests and cultural backgrounds to be recognized in education, students must be supported in acquiring self-advocacy skills.

As mentioned previously, collaboration between students, educators and administrators is needed in the education of use of assistive technology. Participants described instances where educators, administrators, parents and even peers were unable to assist them when a technology malfunction occurred. If students are educated alongside their teachers and parents, a more cohesive, collaborative approach could be utilized for troubleshooting issues.

Multiple means of action and expression (MMAE). Several participants expressed difficulty with note taking when the teacher instructed in spoken English, without visual reinforcements. Students stated that they had not been taught to discern what to write, and therefore they felt overwhelmed when taking notes in class, and difficulty synthesizing

information to study for tests and exams. Participants also stated they needed additional time to complete exams and assignments, and to participate in class discussions. It would be beneficial then that students be supported to advocate for the need for MMAE to understand a topic and to demonstrate their knowledge and (Katz, 2012). For example, if a student has weak English writing skills, they could advocate for presenting their understanding orally (e.g., presenting oral demonstrations), or through other means in which they feel comfortable. It is only through student self-advocacy for strength-based learning that educators will come to understand the uniqueness of individual students and the need for variation in inclusive classrooms.

Limitations and recommendations for future research. Some limitations within this study surrounded issues with: (a) utilizing an interpreter unknown to the participants; (b) collecting self-reported data; (c) evolving narratives; and (d) geographic location.

Utilizing an interpreter unknown to participants. While conducting interviews in the current study, students' personal educational interpreters were not utilized; rather, an independent educational interpreter was hired. The reason for hiring an independent interpreter was to allow participants a sense of comfort when disclosing personal experiences. Unfortunately, participants were not always comfortable interacting with the independent educational interpreter as they had not met her previously. Due to the lack of familiarity, clarifications of certain signs were needed several times throughout the interview process, both from the participant and the interpreter. As I am able to communicate in ASL all issues were mitigated, but for future research, I would recommend having the students and interpreter meet before the actual interviews to ensure familiarity.

Collecting self-reported data. Narrative research relies on self-reported data, the experience of the participant, which may contain several potential sources of bias. Bias may

occur with selective memory (remembering or not remembering experiences that occurred in the past), and exaggeration (embellishing events as more significant to appease the interviewer). Through analysis of responses and participant stories, I feel that these participants described experiences that were authentically theirs. I believe I was able to establish a level of rapport with each participant that produced a safe environment necessary for them to reveal to me something well beyond a public face. However, participants may have been intentionally or unintentionally biased in their responses, withholding or embellishing parts of their narrative unbeknownst to me.

Evolving participant narratives. Another limitation in this study is the evolving nature of narrative research. One cannot present fixed results when participants' narratives are constantly changing. For example, some participants have yet to graduate junior high, and will still experience inclusive education in a high school setting and potentially post-secondary education. Another example would be the evolving education and understanding of participants. Interpretations and understandings participants may have in present day may evolve and change into a deeper understanding or acceptance of their journey thus far. However, with narrative research, this also highlights a large benefit – the purpose of highlighting new directions essential to inclusive education and recording the present chapters of the participants' stories.

Geographical limitations. A further limitation was the constraint of participants to a particular geographical region. The participants all resided in a large city in Alberta, and/or surrounding counties. For a more diverse sample, future research should focus on obtaining participants from varying cities, towns and counties within a province.

Recommendations for future research. Based on the themes and implications in this study there are many topics that can be explored. Many questions about students who are D/HH

included in mainstream schools need further research. Specifically, questions regarding the social interactive experiences of included students, the student's perspective on what is happening, and classroom discourses among D/HH students, hearing students, teachers and interpreters (if used) under all modes of communication need to be investigated. Another valuable area of research that should be examined would be questions focused on academic and social outcomes under different communication modes, especially when sign language interpreters are used, whether the signing is in a native sign language, or Signed Exact English, and whether and how the outcomes of these inputs might differ.

Studies have emerged from this research focusing on levels of fatigue for junior high, high school and post secondary D/HH students. Collaboration has also begun between myself, audiologists and educators for the development of a standardized fatigue rating scale for students who are D/HH in educational settings, with the intention of developing a mixed methods study utilizing the scale and interviews with students who are D/HH on their experiences of fatigue.

Another area of research to be considered is the role that mediated language plays in qualitative research, for example, the interview transcripts of students who are D/HH who use an interpreter, versus those who communicate through spoken language. Does one include exact quotes with grammatical errors, or does one present a polished and interpreted version of the transcripts? Also, is there a difference in perception of student quality of work by teachers who have students who are D/HH communication through an ASL interpreter versus those using spoken English?

Contributions. My dissertation aimed to critically examine the experiences and perceptions of participants who were D/HH in inclusive educational settings, making empirical and methodological contributions to the field. Empirically, I have addressed the almost total

absence of research on inclusion through the perspectives of students who are D/HH in inclusive settings by creating a summary of experiences students may face in inclusive settings in a major metropolis in Alberta, Canada. As such it achieves the objective of outlining participants' perspectives of academic experiences and social well-being in inclusive schools.

Further, through this research, potential implications of my study support the use of UDL as a framework for navigating and supporting varying academic and social barriers in classroom settings. Through the perceptions and perspectives of my participants, the use of multiple means of representation, multiple means of engagement, and multiple means of action and expression seem to capture and address the needs and desires of students to alleviate many difficulties within their inclusive classrooms. As such it achieves the objective of outlining how experiences may vary for individual students. I have also outlined several ways in which UDL can be utilized for parents of children in inclusive classrooms. Often, teacher collaboration with parents is overlooked, but can be an essential part of ensuring best practices with students who are D/HH.

Fatigue was identified as a significant barrier to educational experiences of students who are D/HH, and highlighted a significant gap in D/HH research literature. Fatigue has been acknowledged in previous research as a potential explanatory factor to low academic outcomes for students who are D/HH, however, there is sparse research focused specifically on how physical and cognitive fatigue might affect this population. With participants in this study, and participants from my pilot study, negative effects of fatigue for students who are D/HH were confirmed; thus emphasizing the need for further research into best practices for interpreters, educators, parents and students who are D/HH in inclusive classroom settings.

The difficulty of English as a second or third language for most of the participants in this study was also exposed, revealing the need for more research in this area. Parallels can be drawn

from the participants in this study to English Language Learners (Enns, 2006) as students described having difficulty with spoken and written English. Literacy issues are well researched within Deaf literature surrounding the impact of translating ASL to spoken and written English, as there are no ASL comparatives. However, it was found that some students utilizing spoken English also struggled with English literacy, prompting the question of alternative contributing factors.

As well, a dearth exists in the literature of deaf education utilizing qualitative methods with students who are D/HH. Research in this field is overwhelmingly quantitative and empirical in nature, which often overlooks the contribution of individuality in education. To counteract this, my dissertation sought to utilize purely qualitative methods to seek collaboration of meaning between the researcher and participant of experiences in inclusive settings. This resulted in first-hand information on the state of inclusive education for the participating students, particularly, the quality of education for D/HH students, socialization with hearing peers, and the need for vocational training.

Reflexive Afterword

In attempting to capture the day-to-day experiences of inclusive education from the perspective of students who are D/HH, my hope is that the reader will cognize an understanding that the perception of inclusion varies depending on the perspective and experiences of the student. I also hoped to instill recognition of how valuable a contribution the student perspective makes to research in education. Each of my participants' stories contributes to a shift in my learning and understanding of inclusive education, and its translation to everyday classroom settings. I feel it fitting to conclude with the words of Shelley Moore, an inclusive educator:

> I am reminded to never lose sight of the underlying philosophy of why any of this matters. It is the belief that all students belong that drives us forward in our quest to better address diversity. My students and my colleagues remind me of this everyday: all students cannot only exist in, but be contributors to, their classrooms, schools, and local communities (Moore, 2016, p. 31).

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Appendix A
LETTER OF PARTICIPANT ASSENT

AGREEMENT TO BE IN THE STUDY

Your signature below means that you have read the above information about the inclusion study and have had a chance to ask questions to help you understand what you will do in this study. Your signature also means that you have been told that you can change your mind later if you want to. You will be given a copy of this assent form.

Please check every box if you understand what it is asking of you.

YES NO

☐ ☐ I understand that if I participate in this study it means I will spend about 5 hours (2-3 times over the course of a month) answering questions or participating in activities

☐ ☐ I understand that I do not have to participate in this study and can stop at any time.

☐ ☐ I understand that no one will know that the answers I give are mine and that only the researchers will be able to see anything I say.

☐ Yes, I will be in this research study. ☐ No, I don't want to do this.

______________________	______________________	______________
Participant's name	Signature of the participant	Date

______________________	______________________	______________
Natalia Rohatyn Primary Investigator	Signature	Date

Appendix B
LETTER OF PARENTAL CONSENT

AGREEMENT FOR YOUR CHILD TO BE IN THE STUDY

Your signature below means that you have read the above information about the inclusion study and have had a chance to ask questions to help you understand what your child will do in this study. Your signature also means that you have been told that you or your child can change your mind later if wanted. You will be given a copy of this assent form.

Please check every box if you understand what it is being asking of your child.

YES NO

☐ ☐ I understand that if my child participates in this study it means he/she will spend about 5 hours (over a couple of days) answering questions or participating in activities

☐ ☐ I understand that my child does not have to participate in this study and can stop at any time, but data cannot be withdrawn within 4 weeks of my child reviewing his or her transcripts.

☐ ☐ I understand that my child's responses will be anonymous and that all identifiers will be removed

☐ Yes, I allow my child to participate in this research study.

☐ No, I do not allow my child to participate in this research study

______________________	______________________	______________
Parent's name	Signature	Date

______________________	______________________	______________
Natalia Rohatyn Primary Investigator	Signature	Date

Appendix C

INFORMATION LETTER FOR PARTICIPANTS

Project Title: Inclusion in Mainstream Classrooms: Experiences of Students who are Deaf or Hard of Hearing (D/HH)

Principal Investigator: Natalia Rohatyn

What is a research study?

- My name is Natalia and I'm interested in talking with junior high school students who are Deaf or Hard of Hearing about their experiences at school.

- I am going to give you information and invite you to be part of a research study. You can choose if you want to participate. I have discussed this research with your parent(s)/guardian and they know that we are also asking you for your agreement. If you are going to participate in the research, your parent(s)/guardian also have to agree. But if you do not want to take part in the research, you do not have to, even if your parents have agreed.

- You may discuss anything in this form with your parents or friends or anyone else you feel comfortable talking to. You can decide whether to participate or not after you have talked it over.

Why are you being asked to be part of this research study?

- You are being asked to take part in this research study because I am trying to learn more about students who are Deaf or Hard of Hearing in schools. I am asking you to be in the study because your teacher and principal have said you might be a student who may be interested in participating. About *four to eight* students will be in this study.

If you join the study what will happen to you?

I want to tell you about some things that will happen to you if you are in this study.

- You will be in the study for about five hours total (2-3 times over the course of a month)
- I will ask you to complete two activities (which could be creating a drawing, a schedule or a list of words). It will take about 1 hour to do this.
- I will then have you sit with me and talk about your experiences in school. This may happen a few times.
- I will ask you to answer some questions about your classes and time with your friends.

Will any part of the study hurt?

- This study will not hurt you at all. I will meet wherever you feel comfortable, whether it is at home or at school. If you choose to meet at school, and you need to miss an hour of class time, we will be sure to tell your teacher about this so that they know it is okay.

Will the study help you or others? This might not change what happens in your classroom this year, but if you decide you want to participate, telling me about your school experiences may help teachers in Alberta to understand what would help other students who are Deaf or Hard of Hearing in their classrooms in the future.

Do your parents know about this study?

- This study was explained to your parents and they said that we could ask you if you want to be in it. You can talk this over with them before you decide.

Who will see the information collected about you?

- The information collected about you during this study will be kept safely locked up. Nobody will know it except the people doing the research.
- The study information about you will not be given to your parents or teachers. The researchers will not tell your friends or anyone else. But if I feel at any time you might hurt yourself or someone else, I will have to tell someone.

Do you have to be in the study?

- You do not have to be in the study. No one will be upset if you don't want to do this study. If you don't want to be in this study, you just have to tell us. It's up to you.

What if you have any questions?

- You can ask any questions that you may have about the study. If you have a question later that you didn't think of now, either you can call/text or email or have your parents call or email Natalia at 780-884-8577 or rohatyn@ualberta.ca

- You can also take more time to think about being in the study and also talk some more with your parents about being in the study.

Other information about the study.

- If you decide to be in the study, please write your name below.
- You can change your mind and stop being part of it at any time. All you have to do is tell the person in charge. It's okay. The researchers and your parents won't be upset.
- You will be given a copy of this paper to keep.

Appendix D

INFORMATION LETTER FOR PARENTS

Study Title: Inclusion in Mainstream Classrooms: Experiences of Students who are Deaf or Hard of Hearing (D/HH)

Research Investigator:

Natalia Rohatyn
5-137 Education North
University of Alberta
Edmonton, AB, T5G 2E5
rohatyn@ualberta.ca
780-884-8577

Supervisor:

Dr. Denyse Hayward
6-123H Education North
University of Alberta
Edmonton, AB, T5G 2E5
dhayward@ualberta.ca
780-248-2019

Who am I?

- My name is Natalia Rohatyn and I am a PhD student at the University of Alberta. I am researching experiences of students who are D/HH in inclusive classrooms.
- Your child's classroom teacher and principal have suggested your child as a possible participant for this study.
- The results of this study will be used in support of my PhD dissertation, and results may be shared at conferences, and in research articles.

Purpose

- Alberta Education aims for inclusive schooling, but the effects of inclusion on children who are D/HH have not been researched. In this study I will talk to junior high school students who are D/HH about their experiences within their neighbourhood schools. I will ask them to share their experiences so that teachers can find ways to meet the needs of students in their local schools.

What I am asking for

- Your daughter/son will take part in interviews with me, as well as complete 2 pre-interview activities, which are made up of creating drawings, diagrams or schedules.
- If your child does not want to answer any of the questions during the interview, she/he may say so and I will move on to the next question.
- The interview will take place in a comfortable place for your child (either at school or at your home), and no one else but myself will be there unless your child asks for someone else to be there (such as an educational interpreter).
- I am asking your child to take part in 2 to 3 interview sessions, with each one lasting about 1 hour. We can do this outside of school/work hours if you would prefer. There is also potential for a follow up interview for your child to look over the transcripts of the previous interviews, and this may take about an hour. The pre-interview activities will also likely take an hour to complete. Altogether, I am asking for about 4-5 hours of your child's time.

- The interviews will be audio and video recorded in order to make transcripts of the interview.
- The transcripts will be given to your son/daughter to review and make any changes as to what was said.
- The information recorded is confidential, and no one else except Natalia Rohatyn, and her supervisory committee will have access to the information from the interviews.
- The recordings will be destroyed after at least a 5 year period of time according to ethics guidelines.

Benefits

- Your child may benefit from being able to share their daily experiences at school. This study will have no direct benefit to you, but having your child participate is likely to help find out more about the needs of children who are D/HH in Alberta schools, and I hope that this will help teachers to meet those needs better in the future.

Risk

- There are no known risks from participating in this study. If I learn anything during interviews that may affect your child's willingness to continue being in the study, you will be told right away.
- Your daughter/son may choose to tell you about the interview but she/he does not have to do this. I will not be sharing the responses given to us by your child with you.

Participation

- You and your child do not have to participate in this study; it is completely voluntary.
- Your child does not have to answer any question or take part in the interview if he/she feels the question(s) are too personal or if talking about them makes him/her uncomfortable.
- You and your child may decide to leave the study without penalty. If you agree to have your child participate in the study and interviews have already taken place, you and your child will not be able to withdraw from participation after 4 weeks of your child reviewing his or her transcripts. After that point, the data may already have been analyzed and will be extremely difficult to remove.

Confidentiality

- Your child will be protected through the use of a different name in place of his/her real name and by removing any personal information (such as school name or neighbourhood) from the transcript.
- Audio and video recordings will be downloaded to a computer and deleted from the recording device. Electronic files, recordings, and all other documents will be stored on a password-protected computer or in a locked filing cabinet at the University of Alberta.
- When this research is completed, all recordings and transcripts will be kept for five years for any future research.
- If your child would like, I can share a copy of the research study with him/her.
- The data from this study may be used in future research, but if used, it will have to be approved by a Research Ethics Board.

- There are times when I would have to break confidentiality. For example, if I have reason to believe the child is (or is at risk of) being abused or neglected, or if I have reason to believe that the child plans to harm himself/herself or someone else, I am bound to report this.

Further Information

- If you have any questions about this study, please contact Natalia Rohatyn at 780-884-8577 or rohatyn@ualberta.ca
- This study has been approved by a Research Ethics Board at the University of Alberta. If you have questions about your child's rights, please contact the Research Ethics Office at (780) 492-2615.

Appendix E

Participant Demographic Survey

Please circle your answers to the following questions:

1. Age: 11-12 13-14 15-16

2. Current grade level in school: Grade 6 Grade 7 Grade 8 Grade 9

3. Sex: Male Female

4. Ethnicity: Caucasian(white) Black East Indian Asian Other ____________

5. Level of hearing loss: mild moderate severe profound

6. How do you primarily communicate: ASL only Spoken English only
   Signed English (SEE) Total Communication Other: __________________

7. What language(s) are used in your home: ASL only Spoken English only
   Signed English (SEE) Total Communication Other: __________________

8. Do you use amplification devices: Yes No
   If so, do you use (circle all that apply): Hearing aids Cochlear Implants

   BAHA FM Systems Other: __________________

9. How many years did you attend an elementary school or School for the Deaf:
   1-2 2-3 3-4 4-5 5-6 6-7 7-8 8+

10. Which elementary grades did you complete in a school:
    1-2 2-3 3-4 4-5 5-6

11. How do you feel you are achieving academically in your classes:
    Language Arts: above average average below average
    Mathematics: above average average below average
    Science: above average average below average
    Social Studies: above average average below average
    Physical Education: above average average below average

12. Are there other Deaf or hard of hearing students in your classes: Yes No

13. Are there other Deaf or hard of hearing students in your school: Yes No

Note. Demographic survey adapted from Jarvis et al. (2003); Mertens (1989)

Appendix F

Pre Interview Activities

In order to prepare you for our interview, I would like you to complete one of the four Personal Pre Interview Activity Choices and one of the four activities in the Schooling Pre Interview Activity Choices. We will begin our interview by having you talk about these. If you would like to create more than one activity for each group, you may.

Personal Pre Interview Activity Choices: choose ONE

1. Make a drawing, map or diagram of a place that is important to you. Add key words or hashtags (#) to show the parts of your drawing, map or diagram.

2. Draw a schedule of a typical week in your life from when you wake up to when you go to bed (Sunday through Saturday). Use colours to indicate how time is spent, and label what each colour means. For example blue = watching TV.

3. Think about an important event in your life. Make two drawings, one showing you before the important event, and one showing you after the important event. Add speech/thought bubbles or hashtags (#) to show what you are thinking, feeling or doing in each drawing.

4. Think about two places you spend a lot of time. Make two drawings, one of you in each place. Add speech/thought bubbles or hashtags (#) to show what you are thinking, feeling or doing in each drawing.

Schooling Pre Interview Activity Choices: choose ONE

1. Make a drawing of yourself at school. Add speech/ thought bubbles or hashtags (#) to show what you are thinking or feeling in each drawing.

2. Make a list of 10 important words that come to mind for you when you think about school.

3. Think about a typical school day. Make two drawings, one of you before school in the morning, and one of you at school. Add speech/thought bubbles or hashtags (#) to show what you are thinking, feeling or doing in each drawing.

4. Draw a schedule for your week at school. Use colours to indicate how time is spent and label what each colour means. For example pink = lunch time.

Note. Adapted from Ellis (2006)

Appendix G

Guiding Questions

Group 1 – Pre-Interview Activities

1. Tell me about the activities you chose to complete. Explain to me why you chose these particular activities.

Group 2 – Getting to know you

1. When you were younger, what were some of your favourite activities?

2. If you had one week off a month from school, what are some of the things you would like to do with your extra time?

3. What would you like to be really good at doing?

4. In the year ahead, what are some things that you would like to accomplish or try for the first time?

Group 3 – Learning about general experiences in school

1. Was there anything you liked best about school when you were younger?

2. What are some of the best parts of the school day?
   Reframing questions: What are some of the kinds of things you like to do in school? What are some things that you might not like to do in school?

3. If you could plan the school day or week for the class how would you make it different? Would you keep anything the same?

4. What are you looking forward to the most when you think about being in other grades in the years ahead?

Group 4 – Learning about experiences of being in an inclusive environment

1. When you think about school over the years do you have any special memories that stand out in any way?

2. As you think back to school over the years, how has it changed for you?
   Reframing questions: What has become easier, more difficult, more enjoyable, less enjoyable, or different? Does anything come to mind about how school has changed for you?

3. What would you say is the best part of your experience in school?
   Reframing question: What are you looking forward to in school?

4. What would you say is the worst part of your experience in school?
   Reframing question: What do you not look forward to in school?

5. Tell me about your friends at school and outside of school. What are some activities you like to do with them?

6. What do you think the teacher could do to make some of your classes more enjoyable for students?
   Reframing question: What kinds of things are enjoyable to do in school? Tell me about them. Do you remember any teachers or staff that made school enjoyable somehow?

7. What do you think the teacher could do make some of the difficult things in the class easier for you or other students?

8. If a student from another school was going to join your class, what would you tell him or her about different activities or rules in your classes?

Note. Adapted from Ellis (2006); Ellis et al. (2011)