

**ENABLING PARTICIPATION OF CHILDREN WITH  
DEVELOPMENTAL DELAYS AND DISABILITIES AT SCHOOL:  
SCHOOL-BASED ALLIED HEALTH PROFESSIONALS AS A  
RESOURCE FOR TEACHERS**

by

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## **Abstract**

Millions of dollars are spent annually in Canada providing school health support services (SHSS) to children with developmental delays and disabilities (DD) as an important support for inclusive education. However, there is limited information about how allied health professionals (AHP) work together with educators to integrate therapy strategies into educational programming for children with DD. This study examines the strategies AHPs, in Ontario perceived to be successful and are implementing with educators to support participation outcomes for children with DD in the primary grades. This study also describes AHPs' vision for the future in order to improve their work practices to support participation of children with DD at school.

Recognizing that the literature on SHSS has emphasized challenges to providing services to children with DD and collaboration with educators; this study actively employed appreciative inquiry (Preskill, & Catsambas, 2006). Individual in-depth interviews with 15 AHPs (11 OTs, 1 PT, 3 SLPs) were conducted via face-to-face, telephone or video conference. Participants were asked to describe how they viewed participation at school for children with DD, their role in supporting it, the strategies they used to work with educators to support this participation and their vision for the future.

AHPs in this study viewed participation of children with DD at school as (a) being in the classroom to provide the opportunity for meaningful engagement with peers and (b) working on similar activities as peers to promote membership and belonging at school. Participants implemented their role to support participation of children with DD by providing equipment, modifying or adapting activities, educating and providing resources to educators. Successful strategies AHPs used to work with

educators to facilitate participation of children with DD at school included: finding a key person, developing trust and rapport with an educator, engaging in shared planning with an educator, seeking feedback from educators about their recommendations and listening to educators regarding information about the child with a DD. AHPs also identified their vision for the future in supporting participation of children with DD. Their vision included being a resource to teachers, by consulting to a whole class and being a member of the educational team.

## **Co-Authorship**

Carrie Hunt (i.e., Hunt, C.) is the MSc candidate. The study proposals and each chapter in this thesis were developed with guidance from her academic supervisor Michelle Villeneuve (i.e., Villeneuve, M.). Patricia Minnes (i.e., Minnes, P.) her co-supervisor also provided insight into framing of the literature review. Carrie Hunt conducted all of the literature review, data collection, data analyses, and writing for this thesis. Michelle Villeneuve contributed to data analysis by supporting analysis through de-briefing. Both Michelle Villeneuve and Patricia Minnes contributed by editing all chapters of this thesis. Overall, Carrie Hunt was responsible for 100% of the material in this thesis.

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## **Reflexivity Statement**

My relationship to the research questions in this study are shaped by the fact that I enjoy working with children with disabilities. During my undergraduate degree in Kinesiology, I volunteered in a community physical activity program where, I worked with children with disabilities. This led me to pursue a career looking at ways to improve the quality of life of children with DD.

I have shared the joy of working together with a child and other student volunteers to accomplish his or her goal. However, there were times when I felt I was unable to help the child achieve their goal as I felt I did not have the knowledge or skills that I needed to facilitate the child's participation. I was intrigued to investigate this topic as I wanted to learn from the therapists regarding the methods they used to adapt or modify a task so that a child could participate at school. When conducting this study I listened closely to the description AHPs provided about how they facilitated a child's participation.

I also have worked as a member of a team as a research assistant, ski instructor and camp counselor. I understand the importance of working together as a team to accomplish a common goal. I recognize that the participants I interviewed may already have had knowledge about the importance of collaboration. This allowed for a richer source of data as I was able to focus on the successful experiences they have had working with educators to support participation of children with DD at school.

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## **List of Abbreviations**

AI	Appreciative Inquiry
AHP	Allied Health Professional
CCAC	Community Care Access Center
DD	Developmental Delays and Disabilities
EA	Educational Assistant
ICF	International Classification of Functioning, Disability and Health
IEP	Individual Education Plan
OT	Occupational Therapist
PT	Physical Therapist
SBOT	School-based Occupational Therapy
SHSS	School Health Support Services
SLP	Speech and Language Pathologist
CAOT	Canadian Association of Occupational Therapists
CASLPA	Canadian Association of Speech-Language Pathologists and Audiologists
OSOT	Ontario Society of Occupational Therapists
CPA	Canadian Physiotherapy Association
P4C	Partnering for Change
U.S.	United States

# Chapter 1

## Introduction

### Defining Inclusive Education

Millions of dollars are spent annually in Canada providing school-based therapy services, which include physical therapy, occupational therapy and speech and language pathology to children with developmental delays and disabilities (DD) (King et al., 2000). In Ontario, children with disabilities are being educated in inclusive classrooms (Bennett, Weber, & Dworet, 2008; Hutchinson & Martin, 2012). Two significant documents have led to children with disabilities being served in general education classrooms. These included *Bill 82 The Education Amendment Act* and *Section 15 of the Equality Rights of The Canadian Charter of Rights and Freedoms* (Bennett et al., 2008; Hutchinson & Martin, 2012). *Bill 82 The Education Amendment Act* stated that all school boards in Ontario were required by law to provide education to both children with and without disabilities. *Section 15 the Equality of Rights of The Canadian Charter of Rights and Freedoms* stated that children with disabilities have an equal right to education similar to their typically developing peers. Both of these documents were significant because they provided access for children with disabilities to attend schools along with their typically developing peers.

The philosophy of inclusion promotes the view that every child has the right, regardless of their ability, to participate in many different activities and contexts as full members of families, communities and society (DEC & NAEYC, 2009). Villeneuve (2009) defined educational inclusion as a means of providing the “services and supports to students with disabilities so that they are served to the optimum extent possible in general education settings; under the responsibility of a regular education teacher and alongside their non-disabled peers” (Villeneuve, 2009, p 207). The expected outcomes of inclusive education for both children with and without disabilities is for a child to: (a) have a full and active part in school life (Farrell, 2000; Mittler, 2004), (b) be a valued member of the school community (DEC & NAEYC, 2009; Farrell, 2000; Freiler, 2002), (c) have a sense of belonging to the school community (DEC & NAEYC, 2009), (d) have positive social relationships and friendships (DEC & NAEYC, 2009) and (e) develop and learn to reach their full potential (DEC & NAEYC, 2009).

With the move towards inclusive education, the roles of allied health professionals (AHP), including occupational therapists (OT), physical therapists (PT) and speech and language pathologists (SLP) have evolved from providing direct services in hospitals and rehabilitation institutions to consultation services in the school setting (Case-Smith & O'Brien, 2010; Fairbairn & Davidson, 1993; Reid, Chiu, Sinclair, Wehrmann, & Naseer, 2006)

In Ontario, AHPs provide services at school through the School Health Support Service (SHSS) Program. According to Deloitte and Touche (2010) who recently conducted a review of the SHSS program it was found that stakeholders including service providers (PT, OT, SLP), educators, parents, and representatives of Community Care Access Centers (CCAC), Children's Treatment Centers, and children and youth services sectors feel that this program enables children to achieve their individual goals and assists them in an increasing access to education. However, research has found that physically placing children with disabilities in inclusive classrooms does not guarantee the children's participation in classroom activities (Hall & McGregor, 2000; Sapon-Shevin, Dobbelaere, Corrigan, Goodman, & Mastin, 1998). Despite improved access to regular education for children with DD, there is limited research about how AHPs provide support and what processes they undertake to facilitate participation outcomes. Further research is required to understand the strategies AHPs implement to work with educators to support participation outcomes for children with DD in the school setting.

### **Overview of Thesis**

This study explored the perceptions of AHPs working in Ontario schools with children with DD in the primary grades (kindergarten to grade 3), regarding the strategies they perceived to be successful and used to collaborate with educators to support participation outcomes. It also described AHPs' vision for the future to improve their work practices to support participation of children with DD at school. The literature review in chapter 2 of this thesis provides information regarding the specific criteria used

in this study to conduct the literature search. Further, the literature review (e.g., chapter 2) of this thesis synthesizes and critically appraises three areas of literature including (a) studies that have been conducted on the participation of children with DD both in school activities and out of school activities, (b) the views of AHPs regarding the service delivery models they use in school-based practice with regards to participation and (c) the perceptions of AHPs regarding collaboration between AHPs and educators. Chapter 3 of this thesis outlines the methodological approach used in this study. Chapter 3 of this thesis also provides a description of participants, outlines the process of analysis and discusses the credibility of the study. Chapter 4 of this thesis presents the findings of this study which have been organized into three sections (1) AHPs views of participation of children with DD and their roles in supporting participation at school, (2) how AHPs work with educators to support participation of children with DD at school and (3) what could work well in the future: being a resource. Chapter 5 of this thesis compares the findings of the present study with the current literature, discusses implications for the SHSS program, AHPs, educators, and program decision makers and concludes with strengths, limitations and directions for future research.

## **Chapter 2**

### **Literature Review**

#### **Literature Search Methodology**

A search for peer-reviewed journal articles on the current practice of school-based AHPs (OTs, PTs, SLPs) supporting elementary school children with DD was conducted through a search of relevant databases (e.g., CINAHL, MEDLINE, EMBASE, ERIC and Google Scholar). Search terms related to (a) children with DD (e.g., autistic disorder, Down syndrome, mental retardation, child disabled, student disabled, handicapped child, cerebral palsy, hearing disorders, vision disorders, developmental disabilities), (b) the type of intervention (e.g., occupational therapy, physical therapy and speech and language pathology) and (c) outcomes (e.g., school health services, elementary schools, mainstreaming (education)).

Studies were included in the review of the literature if: (a) they examined the work of school-based AHPs working with elementary school children with DD in kindergarten to grade 6 and (b) were written in English and published between 1990 to 2012. Articles were chosen to be included published from 1990 onward were chosen as 1990 marked the year where researchers found that AHPs acknowledged the importance of using consultation models of service delivery to support inclusive education (Villeneuve, 2009). Studies included in this literature review were conducted in Canada, the United States (U.S.) and Australia. These three countries were chosen as they all have similar philosophies regarding inclusive education. Articles were excluded if the studies

examined the activities of school-based AHPs working with preschoolers, children transitioning from preschool to kindergarten or adolescents. The search included a manual review of reference lists and cited-reference search of all studies included.

In addition, a search for peer-reviewed journal articles on participation levels of children with disabilities in both school and out of school activities was conducted through a search of relevant databases (CINAHL, Google Scholar). Search terms related to (a) children with DD (e.g., autistic disorder, Down syndrome, mental retardation, child disabled, student disabled, handicapped child, cerebral palsy, hearing disorders, vision disorders, developmental disabilities), and (b) the type of intervention (e.g., social participation, participation, engagement, friendship, activity participation) and (c) outcomes (e.g., school health services, elementary schools, mainstreaming (education), recreational setting, leisure activities, community settings). Articles written in Ontario on participation were also found through the CanChild (Centre for Childhood Disability Research) website ([www.canchild.ca/en/](http://www.canchild.ca/en/)).

All articles on participation of both children and adolescents in the school setting were included as there are four articles in the literature on the participation of children with disabilities in the school setting. Studies examining children's participation in out of school activities mainly included those that were conducted in Ontario. An emphasis was placed on finding studies conducted in Ontario as this study was carried out in Ontario. The search included a manual review of reference lists and cited-reference search of all studies included.

### **Defining Developmental Delays and Disabilities (DD) in the Context of this Study**

Of the total number of children in Canada with a disability, aged 5 to 14 years old, it has been reported by Statistics Canada (2006) that 2.8 percent have a DD. A DD is defined by the American Association on Intellectual and Developmental Disabilities (AAIDD, 2013) as a severe chronic disability that can be cognitive, physical or both and is diagnosed before the age of 22. An intellectual disability is one type of a DD that involves significant limitations in both intellectual functioning and adaptive behavior. An example of a DD that is a physical disability is cerebral palsy and an example of both a physical and cognitive disability includes Down syndrome and fetal alcohol syndrome.

In Ontario, the School Health Support Service (SHSS) program provides services to three categories of children with disabilities, (1) developmental disabilities, (2) physical/multiple disabilities, and (3) mild motor disabilities (Villeneuve, 2009). For the purpose of this study, children who had either a cognitive, physical or both a cognitive and physical DD were the target population. Thus the first two categories (1) developmental disabilities and (2) physical/multiple disabilities were the target population that AHPs were asked about and were referred to in this study as children with DD.

## **Defining Participation**

Research has demonstrated that participation in school plays an important role in promoting a child's development (King, 2004; Law, 2002; Law, Petrenchik, King & Hurley, 2007). The literature has also shown that through participation both children and adults gain skills and competencies, interact with others and find purpose and meaning in life (Law, 2002). The International Classification of Functioning, Disability and Health (ICF) defined, participation as "involvement in a life situation" (World Health Organization, 2001, p18). Similar to the shift in service delivery from direct therapy to consultation, the ICF has shifted focus from a disablement model where the focus is on the individual's impairment, to an enablement model where the focus is on examining how to support the individual to do what he or she wants to do and can do in their environment (Goldstein, Cohn, & Coster, 2004). The individual's status is no longer defined by their impairments but by the individual's participation in daily activities. The ICF provides school-based AHP with a framework to guide clinical reasoning and decision-making (Goldstein et al., 2004) as the roles and responsibilities of AHPs in school-based practice are best informed from a bio-psychosocial perspective on disability. Coster (1998), an occupational therapy researcher, further explored participation in the context of elementary school and defined social participation as "active engagement in the typical activities available to and/or expected of peers in the same context" (Coster, 1998, p341). Furthermore, King (2004) explored participation of individuals with chronic disabilities and found that there were three main ways in which

individuals attain and create meaning in life. These included (1) belonging, (2) doing and (3) understanding. King's (2004) research suggests that it is essential that individuals participate in daily activities in order to feel like he or she belongs, contributes in some way to the world and understands himself/herself and how he or she fits in the world.

### **Significance of Participation of Children with DD in the School Setting**

Children spend a large amount of their time at school. The school setting is an important context to consider when examining children's participation, as involvement in school activities can be critical for growth and development (Simeonsson, Carlson, Huntington, McMillen, & Brent, 2001). The school environment provides an opportunity for all children to learn fundamental skills such as interacting with peers, developing friendships, learning to write, organizational skills and activities of daily living (e.g., dressing) (Case-Smith & O'Brien, 2010). The participation of children with DD in school aligns with the ICF definition of participation since it has been identified that the school setting is an environment where, children encounter many life situations on a daily basis for example those identified by Mancini et al. (2000). Mancini et al. (2000) identified that participation in elementary school involves six different environments a) transportation, b) transition, c) classroom, d) cafeteria, e) bathroom and f) playground. Similarly, Simeonsson et al. (2001) has identified 28 school activities that students with disabilities can participate in from elementary to high school ranging from classroom activities to after school activities.

Research has also suggested, that in order for a child to learn fundamental skills at school, a child needs to be engaged with both the people and objects in their environment (Simeonsson et al., 2001). This view aligns with Coster's (1998) definition of participation as children with disabilities are expected to be involved in the same activities available to their typically developing peers. Further, research has indicated that in order for a child to participate fully, children need to develop multiple roles within their context (Eriksson, Welander, & Granlund, 2007). In relation to King's (2004) definition of participation there is a link to the need for children to develop multiple roles at school because it is important that all children participate in school activities in order to feel that they belong, contribute in some way and understand how they themselves fit in the school environment.

### **Defining Participation in the Context of this Study**

The literature reviewed demonstrates that participation is a multidimensional concept as it encompasses a number of important factors in a child's life (DEC NAEYC, 2009; Coster, 1998; Farrell, 2000; Freiler, 2002; King, 2004). This study adopted Coster's (1998) definition of social participation to define participation of children with DD at school (i.e., "active engagement in the typical activities available to and/or expected of peers in the same context" p341).

## **What We Know About Participation of Children with DD**

### **1) Participation Outside of School Context**

Studies have found that children with DD participate significantly less and are involved less intensely in social, recreational and leisure activities than their typically developing peers (King, Petrenchik, Law, & Hurley, 2009; King, Law, Hurley, Petrenchik, & Schwellnus, 2010; Solish, Perry, & Minnes, 2010). Moreover, the literature demonstrates that children with DD are more likely to participate in social activities with their parents or a family member than with their typically developing peers (King et al., 2010; Solish et al., 2010). Further research has found that children with disabilities face social isolation, have few friends and report lower life satisfaction due to the fact that they participate less in activities (Newton & Horner, 1993).

### **2) Participation at School**

Four studies have examined the participation of children with disabilities at school. Each study is summarized in Table 1 (included as Appendix A). Research has been conducted in the school setting to describe and compare the school participation and social networks of children and adolescents with disabilities to their non-disabled peers (Raghavendra, Olsson, Sampson, McInerney, & Connell, 2012). Raghavendra et al. (2012) compared three groups of children aged 10 to 15 years of age living in Australia including: a) children with physical disabilities and complex communication needs, b) children with physical disabilities and c) typically developing children. For children with physical disabilities and complex communication needs participation in activities

was lower than children with physical disabilities and their typically developing peers. Further, children with physical disabilities and complex communication needs were found to interact more with a family member compared to their typically developing peers who were more likely to interact with a friend.

Research in Australia has also explored the views of children with disabilities on how they experience friendship in the school setting (Morrison & Burgman, 2009). Morrison and Burgman (2009) interviewed 10 children with disabilities aged 8 to 10 years old and found five themes that reflected the child's experience of friendship in the school setting. The five themes described were: 1) *self-identity* which was illustrated as the child's desire to be considered a valued member of the school community, 2) *meaning of friendship* which described the child's understanding and beliefs about friendship, 3) *classroom experiences*, 4) *playing together* and 5) *longing for friendship*. The last three themes elicited the fact that children with disabilities felt they had few close friends but they desired to be valued and accepted by their peers at school.

Two studies have explored school participation for children with disabilities in the U.S. (Mancini, Coster, Trombly, & Herren, 2000; Simeonsson et al., 2001). These studies have been included in this literature review as they are both nationwide studies that have explored the participation of children with disabilities at school and include participants from across the U.S. Mancini et al. (2000) found that full participation in school activities required that children have both physical capabilities and social skills. It should also be noted that these authors highlighted that information about the child's

functional abilities was associated more with the child's participation than information related to their specific impairment.

Simeonsson et al. (2000) explored the nature and extent of participation at school for children with disabilities from the perspectives of teachers. Teachers perceived that the most common barriers to a child's participation was lack of environmental modifications, the child's physical condition, man-made environmental barriers, nature of activity and timing of activity. In ascending order the top ten activities participated in by children with disabilities were playground games, computer use, pep rallies, physical education, eating in the cafeteria, library use, recess/gym, field trips, school assemblies and class games. It is important to note that this study found that participation varied by gender and ethnicity.

The majority of research on children with disabilities concerning participation in out of school activities and in school activities has been quantitative. Two were cohort studies (King et al., 2009; King et al., 2010), three were cross-sectional (Raghavendra et al., 2012; Simeonsson et al., 2001; Solish et al., 2010) and one was a relational study (Mancini et al., 2000). Only one study reviewed used qualitative methods, specifically phenomenology to describe the perspectives of children with disabilities regarding their experiences of friendship (Morrison & Burgman, 2009).

A strength of the studies reviewed was the use of large sample sizes (King et al., 2009; King et al., 2010; Mancini et al., 2000; Simeonsson et al., 2001; Solish et al., 2010) and control groups (King et al., 2009; King et al., 2010; Raghavendra et al., 2012; Solish

et al., 2010). However there were also a number of limitations to these studies that should be noted. Three of the studies had low response rates to their questionnaires (King et al., 2009; King et al., 2010; Simeonsson et al., 2001) and one was unable to determine the response rate as the questionnaire was administered online (Solish et al., 2010).

It is possible that a greater magnitude of difference would have been revealed between groups with more participation from study participants (e.g., teachers, parents of children with disabilities, parents of typically developing children, and the children themselves).

Another limitation was that although sample sizes were large for all studies the number of participants in the experimental group compared to the control group were unequal in size (King et al., 2009; King et al., 2010; Solish et al., 2010). For example, in the study by King et al. (2009) and King et al. (2010) there were more participants in the group of children with physical disabilities than typically developing children. In addition, the ratio of boys to girls was unequal. Both of these factors may have impacted the study's findings.

Five of the studies had representative samples (King et al., 2009; King et al., 2010; Mancini et al., 2000; Raghavendra et al., 2012; Simeonsson et al., 2001) while two studies samples had discrepancies in terms of representativeness (Morrison & Burgman, 2009; Solish et al., 2010). King et al. (2009) and King et al. (2010) used the same data set collected over a three year time period at nine-month intervals of children with physical disabilities in three age groups (6-8, 9-11 and 12-14) and matched each child with a typically developing child. The sample included in both of these studies was

representative as children with physical disabilities were recruited from 11 regional children's rehabilitation centers in Ontario and one children's hospital. Their age matching typically developing peers was randomly selected through the school board from both urban and rural areas in southwestern Ontario. Two were nationwide studies conducted in the U.S. (Mancini et al., 2000; Simeonsson et al., 2001). Mancini et al. (2000) participants were elementary school children with physical and cognitive/behavioural disabilities from 40 states in the U.S. Similarly Simeonsson et al. (2001) had participants who were special education teachers from across the U.S.

Raghavendra et al. (2012) also had a representative sample across all three groups of participants (e.g., Group 1: children with physical disabilities and complex communication needs, Group 2: children with physical disabilities, and Group 3: typically developing children). Both children with physical disabilities and complex communication needs and children with physical disabilities were recruited from a children's organization in Australia and were from across South Australia. The control group (e.g., typically developing children) was recruited through the principal at the same school as their matched participant.

In contrast it is unknown if Solish et al. (2010) had a representative sample. Participants were recruited by email through organizations (e.g., Autism Spectrum Disorders Canadian-American Research Consortium Research Registry, university electronic mailing list). These authors mentioned that participants were from Ontario however, they did not describe participants' characteristics regarding the proportion of

participants that were from urban or rural areas. Therefore, it is unknown if this was a representative sample. In addition, Morrison and Burgman (2009) had participants from both rural and urban areas of Australia. However, the number of participants from each was unequal causing some discrepancy as to whether the sample was representative.

Four of the studies used self-administered questionnaires, three were mailed questionnaires (King et al., 2009; King et al., 2010; Simeonsson et al., 2001) and one was completed online (Solish et al., 2010). Bias may have occurred from the use of questionnaires. Social desirability bias may have occurred because respondents could have a tendency to answer questions in a manner that would be viewed favourably by others. Learning bias may have also occurred in the studies conducted by King et al. (2009) and King et al. (2010) since they conducted a longitudinal questionnaire taking place over three years and administering the questionnaire at nine month intervals. Participants may have had a learning bias in which the second or third time participants completed the questionnaire they may put the same responses as they did the first time (Choi & Noseworthy, 1992; Last, Spasoff, Harris & Thuriaux, 2001). In addition King et al. (2009) and King et al. (2010) involved an interview with the child. In which case bias may have also been caused by the interviewer's subconscious or conscious gathering of selective information (Choi & Noseworthy, 1992; Last et al., 2001).

Based on the findings from the studies reviewed, very little qualitative research has been carried out on the participation of children with DD in the school setting. From the findings reviewed there are three conclusions one can make about the participation of

children with DD. First, children with DD participate significantly less in both out of school activities and school activities than their non-disabled peers (King et al., 2009; King et al., 2010; Raghavendra et al., 2012; Solish et al., 2010). Second, children with DD are more likely to participate in activities with family members than activities with their peers (Raghavendra et al., 2012). Third, children with DD have fewer friends than their non-disabled peers (Morrison & Burgman, 2009; Newton & Horner, 1993). With these findings come areas requiring further research such as exploring who facilitates and supports children with disabilities participation at school. AHPs are a service provider in the school setting that work with educators to help children succeed at school. AHPs work collaboratively with educators to facilitate participation of children with DD at school. However, few studies have examined how AHPs intervene at school with educators to facilitate participation of children with DD in the primary grades (Nochajski, 2002; Villeneuve & Hutchinson, 2012; Morris, 2013). This study used a qualitative strategy of inquiry to explore the approaches AHPs currently use to work with educators to increase participation of children with DD and friendships at school.

## **Service Delivery Models With Regards to Participation**

There are three models of service delivery that AHPs have used in the school setting to provide services to children with DD (1) direct, (2) indirect (monitoring) and (3) consultation (Bundy, 1995; Lunnen & Geddes, 2008). This section of the literature review defines the model of service delivery used by school-based AHPs. Direct service involves AHPs providing services directly to a child by working one-on-one with the child (Bundy, 1995; Lunnen & Geddes, 2008). Direct service can be provided in the classroom or in a separate room. Indirect service is where AHPs teach others such as the educational assistant (EA), teacher or special education teacher the skills to carry out the program (Bundy, 1995; Lunnen & Geddes, 2008). The AHP monitors the process to check on the child's progress and ensure the educator is carrying out the proper procedures with the child. In consultation, AHPs form a partnership with educators and work with them to provide strategies and recommendations to enable the child to succeed at school (Lunnen & Geddes, 2008). The school environment changes in a way that enables the student to succeed at school despite the limitations imposed by their disability (Bundy, 1995). For example, consultation can involve educators making physical accommodations to the classroom in order to enable the participation of the student in all classroom activities.

Research has explored the perceptions of AHPs regarding the service delivery models (e.g., direct, indirect, consultation) they have used at school when working with children with DD. The literature describes how often AHP's are providing services to

children with DD, and whether the therapy is occurring in or outside of the classroom (Brandel & Frome Loeb, 2011; Case-Smith & Cable, 1996; Kaminker, Chiarello, O'Neil, & Dichter, 2004; Nolan, Mannato, & Wilding, 2004). Factors AHPs consider when deciding on which model of service delivery to use have also been reported. These factors have included: the nature and severity of the child's disability, the family goals, child's age, input from the educational team, past experience, and state policies (Brandel & Frome Loeb, 2011; Kaminker et al., 2004). In addition, both PTs and OTs described that the child's needs, space and equipment were the main variables determining where the service was provided (Nolan et al., 2004).

The literature has used cross-sectional surveys to describe the models of service delivery AHPs are using in school-based practice (Brandel & Frome Loeb, 2011; Case-Smith & Cable, 1996; Kaminker et al., 2004; Nolan et al., 2004). Each of these studies has been summarized in Table 1 (included in Appendix B) listing the study's purpose, design, data sources, and statistical methods. Findings from these studies reflect AHPs perceptions on the factors to consider when making decisions about which service delivery model to use in school-based practice (Brandel & Frome Loeb, 2011; Case-Smith & Cable, 1996; Kaminker et al., 2004; Nolan et al., 2004) However, findings must be interpreted with caution as findings do not necessarily reflect evidence-based decisions that may be considered best practice as they only reflect the view of one AHP and it should be taken into account that decisions are often made as a team.

There is some discrepancy as to whether the samples obtained in the studies were representative samples. One questionnaire involved four fictional clinical cases of children ranging from preschool through school-aged (e.g., 2 preschool girls with developmental delay and a boy with cerebral palsy at age 6 and 12 years of age) and may not have been representative of all children seen by all school-based AHPs (Kaminker et al., 2004). Further, three of the four studies sent surveys out to AHPs who were members of a national organization (e.g., American Physical Therapy Association, American Occupational Therapy Association or American Speech-Language-Hearing Association) this may have biased the sample (Brandel & Frome Loeb, 2011; Case-Smith & Cable, 1996; Kaminker et al., 2004). Perhaps these AHPs were more likely to read current literature, participate in continuing education courses and complete surveys thus responding to the questions differently than non-member AHPs.

No researchers have yet used a qualitative approach to explain how AHPs services enable participation outcomes of children with DD. AHPs are service providers in the school setting that work with children with DD. Investigating their perceptions about how they facilitate participation for children with DD is important as it will help researchers understand the processes AHPs use to successfully support a child at school. This study used qualitative in-depth interviews to explore the rationale behind the ways in which AHPs work with educators to achieve participation goals for children with DD.

AHP's have been taught to use three models of service delivery in the school setting. In this era of inclusive education, AHPs have shifted their roles over the past

three decades from providing direct and indirect services to consulting with educators in ways that enable teachers to support the child's participation at school (Villeneuve, 2009). Researchers have explored the views of AHPs on the use of consultative/integrated models of service delivery. Details include their perceptions of a) the benefits to using a consultative model of service delivery, b) variables that are essential for consultative models to be a successful approach, and c) the challenges to using a consultative model of service delivery. Research has suggested that providing therapy services in the context of the classroom and school programming may result in participation of children with DD in school activities. For example, it has been well documented by AHPs that providing therapy services in the context of the classroom allows children with DD not to miss out on classroom activities or academic learning (Beck & Dennis, 1997; Karnish, Bruder, & Rainforth, 1995). Further, AHPs report that a consultative model can have a positive impact on children's learning. However, no reason was given why AHPs felt this way (Case-Smith & Cable, 1996). A study conducted by Karnish et al. (1995) found that physical therapy sessions with the objective of improving functional motor skills was more effective in a natural setting than in an isolated setting. Another benefit reported by AHPs in using consultative models of service delivery was enhanced carryover of newly learned skills to natural environments (Beck & Dennis, 1997; Elksnin & Capilouto, 1994; Karnish et al., 1995). Further, it has been found that placing children with disabilities in natural settings can promote the acquisition and generalization of critical life skills such as communication, motor and social skills (Mu

& Royeen, 2004). Furthermore, SLPs have reported that therapy services provided in the classroom can allow for peer modeling and increased social interactions with peers (Beck & Dennis, 1997).

The views of AHPs regarding the use of a consultative/integrated model of service delivery have mainly been collected through cross-sectional questionnaires (Beck & Dennis, 1997; Case-Smith & Cable, 1996; Elksnin & Capilouto, 1994). Only one study has used qualitative methods to compare whether a natural setting or an isolated setting is more effective for children with DD in learning motor skills (Karnish et al., 1995). A paper was also reviewed that discussed the implications of research in regards to the best practices for school-based occupational therapy (SBOT) (Mu & Royeen, 2004). Each of these studies has been summarized in Table 1 (included in Appendix B) listing the study's purpose, design, data sources, and statistical methods.

There were a number of limitations to these studies including small sample sizes (Beck & Dennis, 1997; Elksnin & Capilouto, 1994; Karnish et al., 1995), and limited geographical representativeness (Beck & Dennis, 1997; Elksnin & Capilouto, 1994). Beck and Dennis (1997) sent questionnaires to SLPs from three school districts (e.g., southern Wisconsin, Chicago and central Illinois). However, their participants were from only two of the three areas from which they recruited. Further, SLPs in Elksnin and Capilouto (1994) study were all from one school district. It should be acknowledged that the methods these studies used to gather information from AHPs were successful as all three studies had high response rates to questionnaires (e.g., 70-100%) (Beck & Dennis,

1997; Case-Smith & Cable, 1996; Elksnin & Capilouto, 1994). Two of the studies mailed their questionnaires to their participants (Beck & Dennis, 1997; Case-Smith & Cable, 1996) and one had participants complete it during a staff meeting (Elksnin & Capilouto, 1994). The high response rate may also be associated with the length of time it took participants to complete the questionnaire. Both Beck and Dennis (1997) and Elksnin and Capilouto (1994) questionnaire was three pages long, and Case-Smith & Cable (1996) had a 46-item questionnaire.

The literature reviewed promotes the move towards providing consultative services to support participation and inclusion. As the study conducted by Karnish et al. (1995) was the first piece of empirical evidence to show that providing therapy in the classroom is more effective than in an isolated setting. Findings from the questionnaires provide information regarding AHPs perceptions and attitudes toward the use of consultative model of service delivery and factors that influence their use and effectiveness (Beck & Dennis, 1997; Case-Smith & Cable, 1996; Elksnin & Capilouto, 1994). Although the literature describes the views of AHPs about using consultative model of service delivery to be positive, to date no evaluation has been undertaken to assess how the services and supports AHPs provide in the school setting impact participation outcomes for children with DD. This study explored the perceptions of AHPs on their views regarding their role in facilitating participation outcomes for children with DD.

Despite the shift to inclusive education and the emphasis placed on AHPs to implement a consultative model of service delivery AHPs continue to use direct interventions (Fairbairn & Davidson, 1993; Spencer, Turkett, Vaughan, & Koenig, 2006). There is substantial concern in the literature pertaining to whether the model of service delivery being used matches the function being served (Giangreco, 1995; Villeneuve, 2009). Investigating the strategies AHPs implement to work with educators to support participation goals for children with DD at school will help us to understand if and how a consultative model of service delivery leads to participation outcomes for children with DD.

### **School Health Support Service (SHSS) Program Guidelines on Participation**

The shift in AHPs working in school settings also led to the establishment of the SHSS Program in 1984 with the ultimate goal of ensuring that no child would be unable to attend school due to a special health support need. The SHSS program is administered through the Community Care Access Centre (CCAC) in the school board's district and funded by the Ontario Ministry of Health and Long Term Care. Today, the purpose of the SHSS program is to support children to “receive effective services appropriate to their needs, to attend school, and participate in school routines” (Deloitte and Touche, 2010, p18). However, the SHSS program review demonstrates that stakeholders (e.g., CACCs, service providers (PTs, OTs, SLPs), educators, Children's Treatment Centers, children and youth services sectors, and parents) perceive that there is a discrepancy with regard to the methods and manner in which AHPs facilitate the participation of children with

disabilities in the classroom (Deloitte and Touche, 2010). Stakeholders perceive that AHPs have specialized expertise needed to support the rehabilitation goals of children with DD and their skills do contribute to the child achieving their educational goals and guide the child's development. Nonetheless, where the discrepancy lies is in the different philosophies among stakeholders on the supports that are needed for children with DD to participate at school.

The SHSS program has adopted a consultative model of service delivery in which collaboration between the AHP and the educator is an important component to enabling a child's participation (Deloitte and Touche, 2010). It is important for the educator and the AHP to work together as the AHP can provide the educator with expertise on how to adapt activities, develop specific skills and modify the environment in ways that support participation outcomes for children with DD. However, there is limited empirical evidence to support whether a consultative model of service delivery has truly been adopted in school-based practice and if in fact it is achieving participation goals for children with DD at school. This study employed a qualitative methodology to describe the strategies AHPs are implementing with educators working under a consultative model of service delivery to support participation.

## **Collaboration between AHPs and Educators**

The literature has also described key elements that AHPs have identified to be required for collaboration between educators and AHPs to thrive. The majority of literature describing the key elements has used qualitative methods (Bose & Hinojosa, 2008; Morris, 2013; Villeneuve & Hutchinson, 2012). Studies have used in-depth face-to-face interviews (Bose & Hinojosa, 2008; Nochajski, 2002; Suter et al., 2009), ethnographic case studies (Villeneuve & Hutchinson, 2012) and writing in an online diary about the experience (Morris, 2013) to derive the essential ingredients AHPs perceive to be important for collaboration with teachers. One study used a cross-sectional survey to examine OTs perceptions about working with teachers (Kennedy & Stewart, 2012). Key elements included: forming a relationship (Kennedy & Stewart, 2012), effective communication (Kennedy & Stewart, 2012; Morris, 2013; Nochajski, 2002), respecting one another roles (Kennedy & Stewart, 2012; Morris, 2013; Suter et al., 2009) and mutual decision-making (Morris, 2013). In addition, OTs valued the opportunity to have time available to interact with educators (Bose & Hinojosa, 2008; Villeneuve & Hutchinson, 2012).

Limitations to the studies reviewed included small sample sizes (Bose & Hinojosa, 2008; Morris, 2013; Nochajski, 2002; Villeneuve & Hutchinson, 2012) and limited geographical generalizability (Bose & Hinojosa, 2008; Kennedy & Stewart, 2012; Morris, 2013; Nochajski, 2002; Villeneuve & Hutchinson, 2012). Only two of the five studies had representative samples (Morris, 2013; Nochajski, 2002). Morris (2013)

had participants (e.g., OTs) from rural towns, suburbs and large cities. Nojchaski (2002) also had a representative sample with AHPs from five schools: two rural, two suburban and one urban. In contrast, Villeneuve and Hutchinson (2012) had participants who were from two different schools but the authors did not report where the schools were located so it is unknown if their sample was representative. Similarly Bose and Hinojosa's (2008) reported that their participants were from the New York City area but their manuscript lacked information regarding the proportion of participants that worked in urban, rural and suburban areas. Kennedy and Stewart (2012) included participants from both urban and rural areas. However, the majority of participants were from large cities in South Australia (e.g., 64%) impacting the ability to generalize findings to other AHPs.

Although there were limitations to the studies reviewed it is important to recognize strengths of the studies such as Nochajski (2002) who included participants from all three professions (e.g., OTs, PTs and SLPs). The literature has also reported the main challenge AHPs have found in collaborating with educators is finding time to meet and plan with the classroom teacher (Beck & Dennis, 1997; Bose & Hinojosa, 2008; Elksnin & Capilouto, 1994; Nochajski, 2002; Nolan et al., 2004; Villeneuve & Shulha, 2012). Despite the key elements that have been reported in the literature as essential ingredients for collaboration to occur and the challenges AHPs face in collaborating with educators, limited research has investigated the current ways AHPs work with educators to facilitate participation outcomes for children with DD.

## **Purpose Statement and Research Questions**

This study had two purposes. First, to describe the strategies Ontario elementary school AHPs perceive as successful to collaborate with educators to support participation goals for children with DD in the primary school grades (kindergarten to grade 3). Second, to describe AHPs' vision for the future to improve their working practices to support participation. There were three main research questions guiding this study.

1. a) How do AHPs view participation of children with DD at school?  
b) How do AHPs view their role in supporting participation?
2. How do AHPs work with educators (e.g., teachers, special education teachers and educational assistants (EAs)) to support participation of children with DD at school?
3. How do AHPs envision improving collaboration with educators to support participation of children with DD at school?

## **Chapter 3**

### **Methods**

#### **Research Design**

Few studies have explored the current practices of school-based AHPs using qualitative methodology, and none specifically describe the processes by which AHPs work with educators to facilitate participation outcomes for children with DD in the primary school grades. A qualitative approach offered the opportunity for AHPs to describe first hand in-depth information about their individual experiences working with children, their interpretations, reflections and feelings about their unique roles and significant responsibilities they implemented to support participation of children with DD.

#### **Research Paradigm**

This study was grounded within in an interpretive paradigm. The interpretive paradigm is based on the philosophy of idealism (Higgs, 2001; Higgs & Titchen, 1995). An interpretive paradigm offers a way to explore everyday experiences (Higgs & Titchen, 1995). The goal of interpretive research is to understand and describe the meaning of human experiences and actions (Fossey, Harvey, McDermott, & Davidson, 2002). Consistent with this paradigm, the purpose of this study was to describe the first-hand experiences of school-based AHPs regarding the processes they used to collaborate with educators to support the participation of children with DD at school. Within this paradigm, knowledge is generated through meaning, values and beliefs and by looking

for wholes and relationships with other wholes (Higgs, 2001; Higgs & Titchen, 1995). Using a qualitative methodology the researcher was able to understand the phenomena deeply and in detail. The researcher was able to interpret how professionals related to one another, patterns in their responses and how they worked with others (e.g., educators).

### **Appreciative Inquiry**

This study employed in-depth qualitative interviews that were framed using appreciative inquiry (AI) methodology (Preskill & Catsambas, 2006). AI was first developed by David Cooperrider and has been used since the mid-1980s in many different settings to support program improvement (Coghlan, Preskill, & Tzavaras Catsambas, 2003). It is an approach that focuses on an issue or problem by examining the successful, effective and energizing experiences individuals have had with a situation in order to determine what is working well in the program (Preskill & Catsambas, 2006). AI shifts focus from having individuals focus on the negative aspects of a problem to look at the hope and possibilities based on what has worked in the past (Preskill & Catsambas, 2006). The literature on the SHSS program has highlighted many challenges to providing services to children with DD (Beck & Dennis, 1997; Bose & Hinojosa, 2008; Elksnin & Capilouto, 1994; Nochajski, 2002; Nolan et al., 2004; Villeneuve & Shulha, 2012). Therefore, AI was used in this study to ignite change in a positive way. AI principles suggest that when individuals are asked affirmative questions, share past successful experiences, they will have more energy, hope and excitement about creating their desired future (Preskill & Catsambas, 2006). In this study, AHPs were asked to

reflect and imagine what resources and strategies they would need to better support participation of children with DD at school.

The first model of AI, the 4-D model was created by, David Cooperrider and his colleagues to illustrate the phases of the AI process (Cooperrider, Whitney & Stavros, 2003). The four phases, in the 4-D model, are Discovery, Dream, Design and Destiny (Cooperrider, Whitney, & Stavros, 2003). This study builds on this model by using the 4-I model (Preskill & Catsambas, 2006). This model uses different terms to describe each phase of AI however, it is important to recognize that both models share the same core principles. The model has shifted terminology over the years as AI researchers have found another term to be more descriptive in describing the phase (Preskill & Catsambas, 2006). The four phases in the 4-I model include Inquire, Imagine, Innovate and Implement (Preskill & Catsambas, 2006). The first phase, Inquire, examines the best of “what is.” It asks individuals to tell a story about when things were successful. The second phase, Imagine, is where individuals are asked to develop a vision for the future of the program. Innovate, is where individuals realize how change can occur and acknowledge what is required to implement the change. Implement, is where individuals act on and make changes based on the recommendations they made during the other three phases. This study emphasized the first three phases of AI. The fourth phase, implementation, was beyond the scope of this study.

## **Recruitment**

Following ethical approval from Queen's University Health Science and Affiliated Teaching Hospitals Research Ethics Board participants were recruited by email. Participants in this study included a convenience sample of AHPs with experience working with young children with DD in school-based practice. Participants were all females, fluent in English, and from different regions of Ontario.

The researcher invited AHPs from each of the three disciplines including occupational therapy, speech-language pathology and physical therapy. The researcher used OT Finder on the Canadian Association of Occupational Therapists (CAOT) website ([www.caot.ca](http://www.caot.ca)) as part of the recruitment procedure. OT Finder is an online database that allows the public to search for an OT who is a member of the CAOT by providing information such as the province, city or postal code where the professional works, funding they receive (e.g., private or public), client age they work with and the services they provide. Using OT finder, the researcher selected the following search terms.

Province: Ontario

Funding: Public

Client Age: School age (4-17 years)

Services: School-based care

Language: English

This approach yielded 40 school-based OTs from across Ontario. The researcher sent the letter of recruitment (see Appendix C) by email to all OTs who had emails listed (24 OTs). The researcher followed the same procedure when recruiting SLPs through the Canadian Association of Speech-Language Pathologists and Audiologists (CASLPA) website ([www.caslpa.ca](http://www.caslpa.ca)) and OTs through Ontario Society of Occupational Therapists (OSOT) website ([www.osot.on.ca](http://www.osot.on.ca)). In addition, the researcher went on the Toronto District School Board website ([www.tdsb.on.ca](http://www.tdsb.on.ca)) and found the emails of the heads of each department (e.g., speech and language pathology, occupational therapy and physical therapy services) and sent emails to each of them. These emails included a brief outline of the study, and asked them to send a letter of recruitment to any school-based OTs, PTs, SLPs that they knew. All databases (e.g., CAOT, CASLPA, OSOT) mentioned in this section are publically available sites. AHPs interested in participating in research would have indicated that they were willing to making their emails available through the database.

A limitation to this study was the small number of participants who were PTs. The researcher only managed to recruit one PT through another participant. The researcher was unable to recruit PTs using the same method as other professions because the researcher was unable to access an email list of school-based PTs working in Ontario through the Canadian Physiotherapy Association (CPA) website.

## Participants

Data were collected from 15 school-based AHPs. Participants were 11 OTs, one PT and three SLPs. All participants were female. Participants ranged in number of years of experience they had worked as a school-based therapist from 5 months to 36 years (see Table 1 below). The mean number of years working as a school-based therapist was 12 years. The only PT participating in this study worked as a school-based therapist for 16 years and when interviewed had been retired for 4 years.

Table 1.

### *Years of Experience*

Years of Experience (years)	AHP		
	OT	PT	SLP
<5	4		1
5-10	3		1
11-16	1	1	
20>	3		1

Participants varied in their level of education. Five OTs had a Bachelor of Science in Occupational Therapy degree, while eight of the participants had Master of Science degrees (5 OTs, 3 SLPs) and two had diplomas (1 OT, 1 PT). In addition two of the participants were certified teachers as well as being a registered OT. One OT had a Masters degree in kinesiology in addition to being a registered OT.

All participants provided consultation in a school setting. The majority provided services at school through the SHSS program (8 OTs, 1 PT). Five were employed by a school board (3 SLPs, 2 OTs). However, two of the SLPs provided services in schools

district wide. One SLP worked in one school setting and was responsible for three classes of children who came from different areas of Ontario. Both OTs who worked for school boards had offices at the school and they delivered their services as a member of the educational team. It should also be noted that one of the OTs who participated in this study worked in a segregated school with children with very complex needs. In addition, one OT had worked in the past in the SHSS program but currently provided consultation to children in kindergarten classrooms.

### **Data Collection**

Fifteen individual in-depth interviews were conducted by the researcher in person, on the phone or through video conferencing over a 3-month period between December 2012 and February 2013. Overall, four interviews were conducted in person, eight on the phone and three using video conferencing. Prior to the start of each interview participants signed the consent form (Appendix D) and any questions were answered to their satisfaction by the researcher. Participants who completed interviews on the phone or using video conferencing signed the consent form and sent it back to the researcher by mail, email, or fax. Participants who completed the interview in person signed the form at the interview. Interviews ranged from approximately 30 minutes to 1 hour and took place at a time and location that was most convenient for the research participant.

Participants were interviewed individually using a semi-structured interview guide. Participants received the interview guide prior to the formal interview. The researcher sent this package to participants with the consent form. The interview guide

was developed based on a review of the literature and consisted of four open-ended interview questions that were framed using AI (Preskill & Catsambas, 2006). The interview guide began with a series of demographic questions. The researcher asked the participant to state their occupation, number of years of experience working as a school-based therapist, how they provided services at school, their highest level of education, and how their education or training had prepared them to work with children with DD in schools. The interview consisted of four main questions (see Appendix E). AHPs were asked about (1) what participation at school means for children with DD, (2) their role in supporting participation at school, (3) their experiences working with others and (4) their vision for the future in supporting participation of children with DD at school. Probing questions were developed within these four key questions to have participants draw on examples from school-based practice when they were working with a child with DD. This was done in order to illustrate the experiences AHPs perceived to be successful in facilitating participation of children with DD and to allow AHPs to reflect on their experiences and envision how they could enhance participation of children with DD at school in the future.

The first three questions of the interview guide emphasized the first stage of the AI process having AHPs identify elements in school-based practice that worked well. It enabled AHPs to share successful experiences by describing situations in which they felt a child with DD was truly participating in the classroom and the strategies they perceived to be successful when working with educators.

In order to help the researcher understand what we can learn from these successful experiences, the fourth question was framed using the second and third stages of the AI process. It encouraged AHPs to reflect on their current practices and imagine ways they could change their practice to enhance participation of children with DD at school in the future.

### **Data Analysis**

The interview guide was reviewed by the researcher's thesis supervisors and pilot tested. The researcher conducted the pilot test interview over the phone and after the interview clarified the questions with the participant. Some questions were reworded and a probing question (e.g., What are two strategies you used to help promote a child's participation in the classroom?) was added.

When conducting the interviews, the researcher used a conversational tone, followed up by asking probing questions, and took notes using the participants' own words. All interviews were audio recorded with the consent of participants.

All interviews were transcribed verbatim by the researcher. All interviews were checked with the original recordings to ensure accuracy. To ensure participant confidentiality, transcripts were made anonymous. Each transcript was assigned a number and participants were assigned a pseudonym (e.g., their profession). In addition, any names mentioned in the interview were also assigned a pseudonym. For example, any individual names mentioned were replaced with their roles (e.g., regular education teacher, special educator, principal, vice principal, PT). In addition, if the participant

mentioned the school that they worked at or their employer, these were removed from the transcripts and replaced with a pseudonym. In addition, audio files and transcripts were stored in a locked filing cabinet in a locked office at Queen's University. When transcripts or audio files were in use they were stored on a password protected computer.

AI guided the analysis of the data. First, the researcher read over the transcripts in their entirety. Using the phases of AI, the researcher coded the data based on the four interview questions. This supported organization and reduction of data into four main areas: (a) AHPs' views of participation of children with DD at school (inquire) (b) AHPs' roles in supporting participation (inquire), (c) strategies for successful participation (inquire) and (d) opportunities to improve the SHSS program to enhance participation of children with DD at school (imagine and innovate). Data from each area were then coded to identify common ideas emerging across all study participants in light of the research questions. A process of constant comparison was used (Creswell, 1998; Patton, 1990). Constant comparison was first developed for the use in grounded theory studies but has since been widely adopted for use in other qualitative methodologies (Glaser & Strauss, 1967; Patton, 1990; Thorne, 2000; Willis, 2007). Constant comparison is a qualitative analytic strategy that was used in this study to provide a description of how AHPs collaborate with educators to support participation of children with DD at school. Constant comparison involved first coding information from each interview into emergent ideas and then comparing the ideas identified in each interview with one another to identify similarities and differences (Creswell, 1998; Given, 2008; Hewitt-

Taylor, 2001; Patton, 1990). Ideas identified from initial coding that had common elements were merged together to form themes (Given, 2008). Data analysis was completed when all data had been reviewed and no new themes emerged (Hewitt-Taylor, 2001).

For example two key themes emerged from data concerning AHPs' perspectives on participation of children with DD: (a) being in the classroom to provide the opportunity for meaningful engagement with peers and (b) working on similar activities as peers to promote membership and belonging at school (see Appendix F. Table 1). Using a similar process of constant comparison, three ways in which AHPs viewed their role in supporting participation were identified as (a) providing equipment, (b) modifying and adapting activities, and (c) educating others and providing resources (see Appendix F. Table 2).

The coding process for the third interview question (e.g., strategies for successful participation) was carried out by reading the responses of participants and coding the data into two areas: (1) challenges AHPs perceived to facilitating school participation (e.g., school staff not following through with AHPs recommendations, limited time at school to consult with educators, large caseloads, and shortage of Educational Assistants) and (2) successful strategies they used to facilitate participation (e.g., finding a key contact person, developing trust and establishing rapport). After the initial coding of the data the researcher engaged in a peer debriefing (Lincoln & Guba, 1985) with the researcher's primary thesis supervisor. The discussion in the peer debriefing involved

trying to identify how the challenges were associated with the successful strategies. The researcher then revisited the data to examine what AHPs say they need to work effectively (e.g., successful strategies) and the constraints that affect how they work (e.g., challenges). The researcher compared the initial codes of each interview to one another and managed to group the constraints into two main categories (1) sharing information and resources and (2) receiving feedback on the utility of AHPs recommendations. In addition, each strategy that was emerging from the data was given a code. Once all transcripts had been reviewed the researcher compared the strategies identified in each transcript to one another. Strategies that were similar to one another were grouped together to form a theme.

The fourth interview question (e.g., vision for the future) analysis included coding each individual interview regarding the variables AHPs envisioned changing in school-based practice to enhance children with DD participation at school. Each variable was given a code. Participants' visions were compared and contrasted to one another. Variables that were similar to one another were grouped together to create a theme. Two main themes emerged as ways in which AHPs felt they could be a resource for educators including: (1) consulting to a whole class and (2) being a member of the educational team.

### **Audit Trail, Member-Checking & Credibility**

The researcher took into consideration the recommended sample sizes of other qualitative methodologies to determine the appropriate sample size to choose. Creswell (1998) states that the recommended sample size for a phenomenological study is 10 participants and for grounded theory the sample size is 20 to 30 participants. These sample sizes are based on the fact that once this number of interviews have been completed data will have reached saturation (Creswell, 1998). Data saturation was reached in this study after eight interviews with OTs as very little new information emerged from the data. However, it is important to recognize that data saturation (Creswell, 1998; Richards & Morse, 2007) was not reached with the PT and SLPs due to low sample sizes nevertheless the similarity in findings among professionals should be noted. Member checking was used to ensure accuracy in data gathering (Creswell, 1998; Wertz, 2005). Member checks occur when researchers provide information from their study to the research participants who participated in the study. Participants review the information they provided in order to ensure accuracy (Creswell, 1998). Member checks are considered to be an important technique used to establish credibility in qualitative studies (Lincoln & Guba, 1985). Participants in this study were sent a hard copy of their transcript and a table with their demographic information and asked to verify the accuracy of the information and to make any necessary changes (see Table 2 for example of email that was sent to participants). No changes in transcript content were made and

minor corrections on the number of years working as a school-based therapist were made by two study participants.

Table 2.

*Email Sent to Participants to Verify Information*

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*Dear, <Research Participant>*  
*Thank you for taking the time to participate in my study. I sincerely appreciate it. Below is a table with your demographic information if you could verify that this information is correct and make any necessary changes I would appreciate it. (Table included information regarding participants occupation, years of experience, type of service delivery, highest level of education). Attached in this email you will also find your interview transcript please verify that the transcript is capturing what you meant to say. If there is any information that you feel you would like to elaborate on please feel free to do so. I look forward to sharing with you the final results of my study. Thanks again for your time. Look forward to hearing from you soon.*  
*-Carrie*

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The researcher engaged in peer debriefing (Lincoln & Guba, 1985) with the primary thesis supervisor throughout the analysis phase. The researcher also kept an audit trail to substantiate trustworthiness. The researcher documented information about the context of the study, methodological decisions (see Table 3), data analysis procedures (see Table 4), reflections about the interview process (see Table 5).

Table 3

*Decisions on Inclusion Criteria*

January 11 <sup>th</sup> 2013	I decided to change my inclusion criteria from school-based therapists who current work or have worked as a school-based therapist within the past 3 years to school-based therapists who currently work or have worked within the past five years. In order to include PT as she had been retired for 4 years.
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Table 4

*Data Analysis Procedures*

Questions Answered During Analysis
1. How do AHPs define participation?
2. What are the perspectives of AHPs role to facilitate participation at school?
3. Describe the strategies AHPs use to support participation at school.
4. Describe the perspectives of AHPs of how they could better work in the future to support children with DD at school.

Table 5.

*Reflections about the Interview Process*

AHP	Researchers Notes
OT	<p>Setting</p> <ul style="list-style-type: none"> <li>• Study room in library, big room, quiet</li> </ul> <p>Characteristics of Research Participant</p> <ul style="list-style-type: none"> <li>• Interviewee likes to talk- can tell enjoys talking</li> <li>• Uses hands to talk with</li> <li>• Participant happy to participate</li> <li>• Often talked for a long time on one topic</li> <li>• Participant states upfront that she often goes on tangents so feel free to put her back on track- kept an eye on this throughout the interview.</li> <li>• Participant told me she appreciated receiving questions before hand.</li> </ul>
SLP	<p>Setting</p> <ul style="list-style-type: none"> <li>• Went to the building buzzed at front door asked Office to call SLP</li> <li>• SLP came from her office with coffee in hand I said Hello to her from down the hall, mentioned how are you she responded good.</li> <li>• Interview took place in a large conference room</li> <li>• SLP sat beside me, facing me</li> <li>• Office building across from high school</li> <li>• Interview 45 minutes</li> </ul> <p>Characteristics of Research Participant</p> <ul style="list-style-type: none"> <li>• Enthusiastic about answering questions</li> <li>• Participant very willing to participate</li> <li>• Always asked “Does that answer your question” after responded to question I tried to reassure her it did.</li> <li>• SLP stated had looked at interview questions a while ago. When asked probes questions she was looking at the page but they were not on there wondering whether I should have given her interview questions with probes on it in interview so she could refer to it.</li> </ul>

## **Chapter 4**

### **Findings**

The first objective of this study was to understand the approaches AHPs perceive to be successful when working in Ontario elementary schools, to collaborate with educators, to facilitate participation of children with DD in the primary grades. The second objective was to describe these AHPs' vision for the future to enhance participation of children with DD at school. Findings have been organized into three sections corresponding to the three research questions and organized according to the phases of AI. First, an overview of AHPs' experiences and views on participation of children with DD at school are described. This section includes AHPs perspectives on how they viewed their role in supporting the participation of school children with DD. The second section, reports on the challenges AHPs faced when working with educators to support participation and describes the strategies participants used to navigate them. The third section, presents AHPs' visions for the future in order to support the participation of children with DD at school. In this chapter, each of these three sections are explored in more detail.

## **AHPs Views of Participation of Children with DD and their Roles to Support It**

All participants in this study were invited to share their perspective about how they viewed participation of children with DD at school. Participants described two key components to school participation for children with DD: (1) being in the classroom to provide the opportunity for meaningful engagement with peers and (2) working on similar activities as peers to promote membership and belonging at school. The reader is encouraged to refer to Table 1 (in Appendix F), which includes quotations of how AHPs viewed participation of children with DD at school throughout the discussion that follows.

### **Being in the Classroom to Provide the Opportunity for Meaningful Engagement**

All three professionals described participation of children with DD at school as “being in the classroom” and “working alongside peers” (OT1; OT2; OT6; OT7; OT11; PT; SLP1;SLP2). An OT explained,

“I would like to see children with developmental delays being fully integrated into the classroom ...we can be doing activities that are working on the specific skills they should be working on but alongside and as part of the group” (OT1, p2, line 49-53).

Another OT commented,

“Participation means that he or she is eating with her peers at the table. Being able to manage their food okay. That they’re actually sitting at circle time participating in class activities versus being off on their own somewhere else” (OT7, p2, line 80-82).

Similarly the PT described, “I think that children that you’re seeing have to be able to do as much as possible with their peers” (PT, p1, line 50-51). Further, the SLP viewed being in the classroom as a minimum requirement for participation,

“At the very least they’ve got to be in the classroom with their peers because, that’s you know sometimes I’ve seen kids who do a fair bit of work outside of the classroom in the hallway and that certainly doesn’t help with participation (SLP1,p5-6, line 223-225).

Based on participants’ responses it is evident that these AHPs viewed being in the classroom and working alongside their peers was a key component of participation of children with DD at school.

### **Working on Similar Activities As Peers to Promote Membership and Belonging**

The AHP’s responses also suggested that when children with DD work on similar activities as their peers this promotes membership and belonging (OT1; OT2;OT3; PT).

This theme was reflected by an OT who stated,

“Working on activities that are similar ‘cause if you’re working on a task that’s completely different from what everybody else is doing it’s really hard to be a member of the class” (OT1, p2, line 73-75).

Another OT explained,

“Feeling like they are part of a community, that is local; that they go to locally see their friends see their neighbours’ kids, going to school [who] they know, they’re the same age and so they’re doing the same activities” (OT2, p3, line 128-131).

The PT further touched upon this idea of being both a member of a class and a member of the school community,

“I think that the children that you’re seeing have to be able to do as much as possible with their peers. So that they do feel part of their classroom and outside their classroom in the school setting as well (PT, p1, line 50-52).

These findings suggest that AHPs viewed participation as more than placement in a classroom setting. For them, children with DD become members of the class and school community when they work on similar activities alongside their peers in the context of regular classroom programming and school routines.

### **AHPs Roles in Supporting Participation**

Consistent with their view of participation of children with DD at school, these AHPs described three ways that they use their role to support children with DD to be in the class and working on similar activities alongside their peers. First, they described the importance of providing equipment to enable children with DD to remain in the classroom (OT4; OT5; OT11; PT; SLP1). Second, they described their role in adapting activities so that the child with DD could participate in similar classroom learning alongside their peers. (OT1;OT3;OT4; OT6;OT7;OT8; PT; SLP1). Third, since these providers worked on a consultative model of service delivery, a critical component of their roles (e.g., whether they are providing equipment or modifying classroom activities) involved sharing information with educators. Each of these ways of working has been further elaborated upon below.

## **Providing Equipment**

Participants described situations where, they provided equipment that enabled the child with DD to participate more fully in classroom activities (OT4; OT5; OT11; PT). For example, assistive technology (e.g., communication device ipad, alternative access to devices to use school computers) specialized equipment (e.g., ceiling track, wheelchair swing, adapted seat, floor seater), and adaptive tools (e.g., adapted scissors) allowed students to actively participate.

The PT provided an example whereby, a ceiling track lift was installed in the classroom to support children with DD to stay in the classroom instead of children having to be removed from the class to do range of motion exercises.

“They had three or four very high needs wheelchair kids. And they were basically stuck in their wheelchairs for most of the time and then they would be taken out to do their range of motion, which was in a back room. So they weren’t with any of the other kids” (PT, p4-5, line 221-224).

The ceiling track facilitated the child’s participation as it enabled the child to remain in the classroom with their peers.

“We did get a sling and these kids who were stuck in wheelchairs all the time could go in a sling on the ceiling track in the classroom and actually walk around it” (PT, p5, line 226-228).

This example demonstrates that the PT used equipment in order for children with DD to stay in the classroom and work alongside their peers.

An OT described providing a student with assistive technology in order for the student to participate in writing activities with their peers. As the OT stated,

“So if they have a really slow writing speed we give them assistive tech with the appropriate programs so that they can keep up with expectations of written work” (OT4, p2).

The OT provided adaptive equipment to make it easier for the child so that they could participate in writing activities expected of all other learners. This illustrates how AHPs support children with DD to work on similar activities as their peers with the aim of promoting their class membership and role as a learner.

Another OT shared an experience when she was working with a child who had a neurodegenerative disorder and was non-verbal. She provided the child with a portable recording device (OT11, p3, line164) that enabled him to contribute during classroom learning activities. As the OT reported, “by the end of the year [the child] was involved in saying what day of the week it was, [and] he was involved in circle time songs”(OT11, p3, 165-168). In this case, the OT used her role to support classroom participation by recommending equipment that would allow the child with DD to communicate with his teacher and peers during calendar and circle time; routines that all children are expected to engage in at school.

### **Modifying or Adapting Activities**

All AHPs regardless of profession, described the importance of modifying or adapting classroom activities to enable participation of children with DD. The reader is encouraged to refer to Table 2 (included in Appendix F), which includes all quotations provided by AHPs of how they viewed their role in adapting classroom activities to facilitate the participation of children with DD. One OT captured this view as she stated,

“From an OT point of view, going in, one of the main things we’re always looking at is ways to adapt activities so that [children with DD] can be sitting at the table with their peers doing the same activity that other kids are doing even if it needs to be modified, or adapted” (OT3, p2, line 51-54).

The PT view of her role also aligned with the theme of adapting activities as she stated, “so being able to adapt [activities] outside as well at play time and so on” (PT, p1, line 52). In addition, the SLP had a similar view as both OT and PT participants as she mentioned,

“I think you know really looking at being creative at how they can participate really using the same word but, really in their regular activities of the classroom even if that needs to be modified significantly” (SLP1, p6, line 225-228).

All professionals viewed adapting classroom activities to the child’s capabilities as an important component of facilitating a child’s participation.

Several AHPs described the importance of task analysis in their work with children with DD at school. They described numerous instances of “breaking down” classroom tasks (OT1;OT3;PT; SLP3) to support children with DD in their role as learners. An OT described how she modified a scissor cutting activity (OT1, p3, line 89). The OT reported that often when children are cutting they are “given an eight and half by eleven sheet of paper” (OT1, p3, line 91). She recommended that educators provide the child with DD with a thicker piece of paper and “mak[e] the lines darker and heavier” (OT1, p3, line 91) as a way of simplifying the task demands so that “the [child] can still be working on cutting at the same time as their classmates” (OT1, p3, line 91-92).

A PT described adapting an activity for a child in a wheelchair so that they could participate with their peers to make snow angels at recess. The PT modified the task

demands for a child who used a wheelchair by having the child make a snow angel by “doing a figure eight in his wheelchair” (PT, p2, line 61).

One SLP also described a situation in which a child had “difficulty maintaining attention and concentration so he would often get very distracted and fidgety and he would act out behaviourally” (SLP3, p4, line 171-172). The SLP broke down instructions for this child so that it was easier for the child to process instructions and participate in the class activity. The SLP further explained,

“Break it down so instead of asking...three-part instructions, like after you go hang up your bag I want you to go grab a book and sit on the carpet.” (SLP3, p5, line 258-259) “Break it down to one instruction: get a book” (SLP3, p5, line 263).

Participants in this study exercised their professional expertise in task analysis to modify movement, learning, and communication activities so that children with DD would have greater success participating in learning activities that are expected of any child at school.

### **Educating Others and Providing Resources**

It is important to recognize that these participants in this study worked using a consultative model of service delivery. As a result, a significant component of their role involved sharing information and working together with teachers and other members of the educational team to support the participation of children with DD at school.

Participants described consulting with educators by providing education and resources to teachers so that they could use the child’s equipment effectively and modify classroom activities to support participation of children with DD (OT2; OT5; OT6; OT8; OT10; SLP1). Participants described providing resources to educators such as informal

educational sessions (OT5;OT6;OT8;OT11), websites, apps, software (OT2), handouts (OT8;OT10), and videos (SLP1) to help them understand how to adapt activities.

An OT provided an informal education session where, both she and a PT were working with a child with a physical disability to adjust the child's wheelchair in order for the child to "be able to sit and eat their lunch or sit and colour with the rest of their classmates" (OT5, p4, line 168-169). An important component to facilitating the child's participation included both the OT and PT providing education to the EA and teacher to "make sure they understand why the child needs the equipment, when they need to use it, how it works,[and] what to do if it is not working" (OT5, p4, line 184-185). In this particular, scenario enabling the child's participation was dependent on the OT and PT providing the proper education to the teachers and EAs about how to use the equipment so that the child could be an active participant in the classroom.

Another OT expressed her view that "by sharing what we have with the people in the school system they are going to be better able to work with all children" (OT2, p11). She further explained how she used her time to share important resources with educators such as websites, technology applications, and software programs.

Other participants reported providing handouts to teachers. One OT reported having "packaged little units that can be attached to writing center around pencil skill development or arts and crafts center that is about using scissors and the graded scissor program" (OT8, p10, line 526-527). This illustrated an innovative approach that one participant used to provide teachers with written information that they need in order to

adapt activities for children with DD. This approach may be one way in which AHPs are working within the time constraints of a consultative model to exchange information with teachers to support them to enable participation of a child with DD.

The SLP found having educators watch a video to be an effective strategy to educate teachers and EAs to promote a child's participation.

“[As she] showed a video of picture exchange in action so it's sort of a commercially developed video by the people who created the picture exchange communication system. So rather than me just describing what I want them to do it's helpful to kind of look at it” (SLP1, p9).

Providing resources, showing how equipment or activity modifications work, and explaining why it works were described as ways that these AHPs worked with educators for the ultimate aim of supporting the participation of children with DD at school.

### **How AHPs Work with Educators to Support Participation of Children with DD**

This next section focuses on the successful components AHPs have identified to effectively work with educators to successfully support participation of children with DD at school. Although, this study used AI in order to focus participants on successful experiences, participants did comment on current challenges they faced within their roles of consulting with educators to support participation. Participants described challenges they faced working under a consultative model to include limited time to consult with educators, and to follow-up with educators (e.g., teachers, EAs, special education teachers) regarding their recommendations.

There are two sections that follow: (1) sharing information and resources with educators and (2) obtaining meaningful feedback from educators on the utility of their

recommendations. In each section, first challenges associated with how AHPs work with educators to implement their roles to support participation will be discussed. Second, the strategies AHPs implement to successfully navigate the challenges will be addressed.

### **Dilemma 1: Sharing Information and Resources**

Participants reported challenges associated with having large caseloads and limited time for consulting with educators affected how they implement their roles to support participation of children with DD at school (OT8; SLP1). As an OT explained,

“I only have a certain number of visits so you know you can email me, or call me if you got any problems but I won’t be back for two months. Then you come back in two months and you found that, well, this didn’t work well “why didn’t you call me?” And even if you would have called me I don’t know if I would have had enough visits to come in and see you anyway” (OT7, p4, line197-201).

This comment depicts that these AHPs were constrained by their role as they described that having limited time at school was a barrier to support participation of children with DD.

Further, participants reported that teachers have roles assigned to them within the educational system that limited their availability to meet with them. Participants described challenges in finding sufficient time to meet with the teacher, because teachers have responsibility for day-to-day classroom management and curriculum delivery. An OT reported,

“The teachers are busy they don’t have time. As much as the school says you know the teacher is in charge of the program. They are there with 20 other kids while I am there to work with one” (OT7, p5, line 235-238).

Further, a SLP stated,

“It’s always challenging in schools to kind of find that time to sit down with the teachers and EAs when they’re not kind of responsible for [a classroom of] students” (SLP1, p12, line 532-533).

As a result, these AHPs found themselves providing education and resources “on the fly.” An OT stated,

“You kind of just squeeze [in talking to the teacher] in between lessons and I do a lot of observing and kind of just talking to them while they’re doing other things.” (OT4, p5, line 218-220)

Another OT reported,

“I try to pull them aside to say “hey this is what we did or what not” but I am hoping that the visit notes and I mean we do have lots of handouts... with explanations of whatever strategies we were trying to do or other ideas to kind of work that hopefully help [to] communicate [them]” (OT9, p9, line 469-474).

Consequently, these AHPs reported dissatisfaction with the outcome at times (OT1;OT3). As an OT described,

“[Providing resources] on the fly and I feel like I never do it quite good enough. Like I think I am madly writing out some instructions to a teacher and attaching some resource pages and I think there must be a better way to do this” (OT8, p10, line 518-521).

Another OT mentioned,

“Giving handouts and stuff I found has not been helpful because, school [staff] are very pressed for time and resources” (OT4, p7, line 294-296).

Another OT described that as a result of providing resources on the fly she often found her recommendations were not being adopted by educators. As she explained,

“I try to give suggestions on how to adapt the tasks the classroom is doing. I don’t often see if it gets followed through on. When we do, it’s really exciting. But, I mean most of the time I come back and I often only get to see the kids once a month or even less. I come back the next month and nothing has changed as far as adapting the tasks.” (OT1, p3, line 119-127).

In essence, participants viewed limited time and differences in service delivery models between teachers and AHPs (e.g., teachers work with a classroom of students versus AHPs who work with one student at a time) to be barriers to sharing meaningful information and resources with educators that could potentially improve participation opportunities of children with DD in classroom programming and school routines.

### **Strategies to Navigate Dilemma 1**

This next section highlights the strategies that AHPs reported implementing to effectively share information and provide resources to educators.

#### **Finding a Key Person who has Primary Responsibility for the Child with DD**

All AHPs identified forming a relationship with an educator (e.g., classroom teacher, special education teacher, EA) as a successful strategy to support participation.

An OT further highlighted this idea as she stated,

“I think to me in all the experiences where, it worked well I think the key factor is that you had a strong contact person at the school that you were able to connect with at each visit” (OT3, p5, line 205-207).

Similarly another OT mentioned,

“If I am lucky I have a whole gamut of people, but it really does depend on who has the primary responsibility for supporting that child. So sometimes it’s an EA who I work through and keep the teacher informed of the plan. Sometimes it’s the teacher who is going to be the implementer and sometimes it is the special education teacher who is able to do added value to the class and some individual support or who is going to be the person that has power to influence the classroom because, they’re there on a regular basis” (OT8, p 2, line 105-110).

In addition, participants described the key person to be someone who took ownership to follow through with their recommendations. (OT2; OT3; OT4; OT6; OT7; OT9; SLP1;SLP2). As an OT suggested,

“In all the experiences where it worked well I think the key factor is that you had a strong contact person at the school ...who then took the ownership in carrying through the activities or recommendations that you were making” (OT3, p5, line 205-208).

Based on the perspectives of these AHPs, it is evident that in order to overcome the challenges of limited time and differences in service models between AHPs and teachers. AHPs have adopted the strategy of finding someone at the school who could take on the primary responsibility for the child with DD. This approach would appear to be a key component of working successfully with educators to support participation of children with DD.

### **AHPs Responsibility in the Relationship: Developing Trust and Rapport**

Consistent with their view of forming a relationship with an educator, these AHPs described their role in developing trust and rapport (OT2;OT3; OT5; SLP1; PT).

Participants reported that open communication facilitated developing trust and establishing rapport. An OT explained,

“You need to connect with and you need to be on really good terms with [school staff member] and you need to let them know when you’re coming”(OT3, p6, line 232-233).

For instance the OT mentioned,

“I always like to email or set up a time so they know I am coming so they can clear the decks if they need to meet with me they are there to meet with me” (OT3,p6, line 236-238).

These statements suggest that participants recognized that teachers have busy schedules and have many responsibilities within a classroom. Study participants described how it worked well when they were able to schedule a meeting in advance with an educator who took on the primary responsibility for the child with DD. Participants reported this strategy to be successful as they had time to share information and resources with educators regarding ways to adapt activities for children with DD to facilitate their participation in classroom activities.

The PT also provided an example of developing rapport as she stated, “When I went into the school I always touch base with everyone.” (PT, p7, line 348-349). She demonstrated establishing rapport by using a communication book as she mentioned,

“If I was in there every week I would say to the EAs and the school teacher as well this is for you to use too so if anything comes up write it in the communication book because, you often forget by the time you see me. ... to ask questions or say what happened” (PT, p6, line 328-331).

The PT demonstrated that, in the absence of time to talk to educators, the communication book supported communication between the AHPs and educators. The PT was able to answer educator’s questions and provide them with strategies to support a child to have a successful learning experience.

## **Shared Planning with a Teacher**

Further, participants reported successfully supporting participation of children with DD at school when they engaged in shared planning with a teacher (OT3; OT8; SLP1; SLP2; SLP3). This strategy was best captured by an OT who stated,

“Times when situations have gone more smoothly ...typically when first of all the teacher or the EA or the [special education teacher] whoever is that important link for that child had the time to be available for collaboration.” (OT8, p3, line 161-162).

As the OT further described a situation in which “a child has some real physical barriers to be able to participate in the program” (OT8, p3, line 163-164) and explained how having time available to collaborate with the teacher and share her recommendations about how to modify classroom activities for the student was effective in supporting the student’s participation. The OT explained in this situation that the teacher “was able to make time before class or be freed up at times [as] someone else would step in and support her during class time” (OT8, p3, line 160). This approach was effective as the OT was able

“to sit down [with the teacher] and together we developed a plan with her identifying her classroom goals and for me to be able to give her strategies and suggestions that would make a difference in supporting the child to do the task and together we developed some program activities that would enhance [the] program” (OT8, p3-4, line 166-169).

A SLP also provided an example of how having time to take part in shared planning with a teacher enabled a child’s participation. She described meeting regularly with the student support teacher to look over the child’s Individual Education Plan (IEP). She described the experience as,

“We were actually working as a team to look at the IEP and the goals on it so that they really meet his needs and they’re really kind of achievable goals for him” (SLP1, p8, line 342-345).

A SLP also mentioned the importance of requesting a case conference to share information with teachers. As she found,

“I always ask for a case conference to share the information from the assessment. Because, it’s really difficult to share information with teachers when they’re trying to teach” (SLP1, p7, line 279-282).

In summary, making time to meet with educators by scheduling time in advance, engaging in regular meetings and having formal meetings were viewed by AHPs as effective strategies to support meaningful participation of children with DD.

### **Dilemma 2: Receiving Feedback on the Utility of AHPs Recommendations**

Since a critical component of these AHP’s role involved sharing information with educators, study participants valued the opportunity to follow-up with educators to receive feedback regarding the utility of their recommendations in the context of classroom programming and school routines (OT1;OT3;OT4; OT5;OT7;OT8;OT9; SLP1). However, participants described challenges in finding the right person who could provide feedback. As an OT described,

“I have had some instances where teachers, and I totally get this, they are totally overwhelmed; they’ve already got 24 other little bodies and when you’re there she’s kind of like, “You’re going to have to talk to somebody else.”...they’re happy to listen, but it’s sort of like you know I am not the one that is going to be overseeing this, it’s really the [special education teacher] who overseeing her programming so she’s the one you need to talk to” (OT3).

Further, both an OT and a SLP reinforced this statement as they reported that in their experience, the classroom teacher typically has a less prominent role with educational

programming for children with DD (OT3; SLP1). Another OT mentioned, “If the student does have an EA, I guess more of the communication is through them than the actual classroom teacher” (OT9, p9, line 487-488). Consistent with this finding, participants described the special education teacher to be responsible for developing the child’s programming and monitoring progress of goals (OT1;OT3; SLP1). As an OT explained “the [special education teacher] is the one who is primarily responsible for setting the goals or writing the IEP.” (OT1, p9, line 371) Based on the experience of these AHPs’, it evident that the special education teacher was the ideal contact person for the AHP to communicate with about their recommendations because, they hold responsibility for how those recommendations get integrated into the student’s IEP. However, AHPs shared that ultimately, it was more important that the key contact be someone who provided meaningful feedback on the utility of their recommendations in practice.

## **Strategies to Navigate Dilemma 2**

### **Reliance on the EA for Contextual Information**

As a result, these AHPs typically relied on the EA to provide input and feedback on their recommendations. In their view, the EA knows the child, the dynamics of the classroom and has “time to talk.” (OT4, p5, line 202) As an SLP described, “the teacher has a number of children but then the EA is responsible for one or two.” (SLP3, p3, line 155-158). Another OT further explained,

“It is really nice when there is an EA because, a lot of the time the teacher is busy teaching the other children so you really get to figure out what’s working and what’s not when you come in for your consultative visit” (OT4, p5, line 200-202).

## **Accountability and Follow-through on AHPs Recommendations**

Further, study participants reported the EA most often to be the educator who carried out AHPs recommendations. An OT described a successful experience where she observed “the student either doing an activity in the classroom or doing activities with the EA” (OT2, p8, line 341-343) and then provided programming suggestions to the EA. She recalls her recommendations being implemented as she stated,

“Yeah the nice thing is that it was being carried out. I could maybe not come back for 6 weeks or whatever and I’d come back and she’d be so excited the EA just to show me look what we’ve been doing and look what she’s done” (OT2, p8, line 344-346).

A SLP also described an experience in which, the EA was receptive to following through with the AHPs’ recommendations. As she stated,

“[The student had an] EA who is just like a sponge and she really wants to do the best she can for this little guy ...and she asking for you know what activities can I do with him. And how can I get him in there and do more with his peers and really you know looking for the information” (SLP1, p7, line 310-314).

Based on the responses of these AHPs’, it is evident that another key component to successfully supporting participation of children with DD is having an EA who carries out AHPs recommendations.

Consequently, if the child has an EA, participants described seeking feedback about whether or not their recommendations were successful in the classroom as an essential component of promoting participation goals for children with DD (OT4; OT6; OT9; SLP3; PT). For example, an OT described,

“[The] EA was able to get to know the child really well... and anytime I made any kind of recommendations or provided you know ideas [the EA] would try it and then the next time I came in [the EA] would be providing me feedback you know about what worked, what didn't, anything new or interesting you know engaging to that child” (OT6, p5, line 245-250).

Another OT recalled,

“Every time I go in for another visit [the EA and I] sit down and it's like okay do we need something new, what's working, what's not working” (OT4, p5, line 211-213).

Further the PT highlighted,

“You'd have to get the EAs involved because... they knew whether or not it would work in the classroom. They knew the dynamics of the [classroom]” (PT,p5, line 258).

Furthermore, study participants provided examples of feedback they received from EAs' that enabled them to promote participation of a child with DD. An OT described obtaining feedback from an EA to facilitate a child to participate in a scissor cutting activity. As she explained,

“The [EA] might come in [and say] he's done really well with scissors since, you were here last and he can cut a straight line now. So I'd say well if his master[ed] straight lines let's move on to wavy lines and here are some suggestions for helping him turn the paper” (OT4, p7, line 273-280).

Another OT reported, assisting a child to learn to eat independently so that the child could eat with their peers. She described teaching the EA how to help the child learn to use the spoon. The OT described,

“Both of us were asking questions back and forth and providing answers. Like us trying to get an idea of how things are being done right now as well, as her looking for strategies to kind of initiate him to start using the spoon” (OT9, p6, line 306-308).

In addition, the PT described seeking feedback from EAs as to where it would be best to install a ceiling track in the classroom so that the child with DD would be able to use the equipment and engage in classroom activities with peers. The PT recalls asking EAs questions such as “Would that corner [of the classroom] work?” (PT) These findings suggest that AHPs viewed obtaining information from EAs about the child’s progress and what strategies have been successful as a key variable to support participation of children with DD at school.

### **AHPs Responsibility: Listening to Input from Educators**

Consistent with obtaining feedback from EAs, participants shared that an important component of their role involved listening to input from educators on information about children. Participants reported it was important for them to take the information educators provided about the child into consideration when making their recommendations (OT2; OT3; OT4; OT6; SLP3). For example an OT described,

“Listening to what the interests of the student are and trying to understand sort of the culture of the classroom and what they do in the class and then trying to figure out how you can make it so that the [child] is able to participate to the best potential in that class environment” (OT6, p3, line 151-153).

The SLP also highlighted her role in listening to insights from educators as she stated,

“I really value the input from anyone else who is doing the assessment or spending time with the child at school who can provide more information about what is going on with the bigger holistic picture is and then when you discuss it collaboratively and talk about things that have worked in the past or that we can try to see the best outcomes” (SLP3, p6, line 289-293).

Without exception, the findings suggest that these AHPs viewed receiving feedback from EAs’ about their recommendations and collecting information about the child from

educators to be key ingredients to successfully facilitate participation of children with DD at school.

### **Challenges Associated with Strategy: Not All Children with DD have an EA**

Although study participants described a successful strategy to supporting participation of children with DD at school to include obtaining meaningful feedback from EAs' on their recommendations, it was found that this strategy could not always be used as AHPs reported that not all children with DD have one-to-one EA support. As an OT mentioned,

“That’s often the problem too you do not have the school’s support or you do not have the school resources available to you basically a person. So it’s really hard to meet those goals” (OT1, p12, line 510-514).

Further the PT mentioned, “[schools] are reducing the number of EAs in schools” (PT, p9, line 480). In addition, AHPs reported that often children with DD have EA support that is shared among several students. An OT mentioned,

“If you’ve got one teacher and twenty kids [and] we’ve got EAs who are shared between six to eight kids. I think [that is] where, things start getting really rough” (OT1, p12, line 518-520).

Further another OT stated,

“One EA sharing their time between four kids with developmental disabilities or different disabilities in the class” (OT7, p7, line 388).

As a result of EAs' being shared between children, AHPs reported their recommendations were not being implemented. As an OT stated,

“I mean some of the kids I work with have one EA in the morning and one in the afternoon and then for a certain part of the day they don’t have any EA support

and for another part of the day they end up working with the [special education teacher] so you've got a lot of people. And if they're all approaching a task completely different we just get confusion (OT1, p13, line 528-539).

Another OT stated recommendations are often not followed through because even when there is an EA, they have limited time with individual children. As the OT stated,

“[EAs] have 20 minutes with this child and then they have to ...move on and they have to do coverage for here and then have to go here and they're just being pulled in so many different directions” (OT6, p10, line 529-535).

Additional challenges to having the EA as the key contact at school included their lack of participation in formal meetings. As an OT stated,

“The EA may not be [at the case meeting] because, they are busy working with the student in the classroom or because the EA has two kids to look after (OT9, p9, line 496).

These findings further highlight the tension between the ideal key contact person, the special education teacher and the actual key contact person as AHPs in this study relied on, the EA. EAs' are not involved in formal planning but are relied on by the AHP to obtain relevant information and provide feedback on the utility of their recommendations in the context of classroom programming and school routines. EAs' are familiar with implementing the child's IEP and therapy recommendations can be very helpful to AHPs but EAs' often change from year-to-year. A SLP mentioned,

“One of the challenges working in the school system is that the players do change frequently. Right? So you typically have a new teacher every year and often [the] EA will change too so that you're kind of trying to deal with lots of different personnel when a child is in the primary grades” (SLP1, p7, line 302-306).

This finding further reinforces the fact that although, AHPs identified the EA as the key

contact person, it suggests that the special education teacher is the ideal contact person as EAs' frequently change from year-to-year.

Despite the challenges AHPs reported to be associated with relying on the EA to obtain meaningful feedback to promote the participation of children with DD. These findings demonstrate that AHPs viewed the EA to play a critical role in helping them to implement specific recommendations with the child in the class and school context, which is important for facilitating participation of children with DD at school.

### **What Could Work Well in the Future: Being a Resource**

Study participants imagined being a resource to schools to support participation of children with DD in the future by: (1) consulting to a whole class and (2) being a member of the educational team.

#### **(1) Consulting to a Whole Class (OT1; OT3;OT4; SLP2)**

AHPs provide services to children one at a time based on an individual referral for AHPs services. AHPs found that their service delivery model to support participation contrasted with the way teachers delivered their roles because teachers are responsible for a whole class of children. AHPs envisioned changing the service delivery model for school-based practice from providing services to one child in the classroom to consulting to a whole class to improve participation not only for children with DD but, for the benefit of all children (OT1;OT4;OT3; SLP2). An OT explained,

“Ideally I think we should be able to consult almost to a class... So, I don't have to come in and give specific suggestions to Johnny. I can come in and just give general strategies on how do we grade tasks for the multitude of students in your class” (OT1, p15, line 623-628).

In addition, a SLP highlighted “we need more teams that have those resources immediately accessible not on an individual basis but to a classroom as a whole” (SLP2, p10, line 439-440).

Participants further provided examples of ways in which they envisioned providing education to teachers on ways to adapt activities. A SLP stated,

“We need [AHPs] to be educating our teachers regarding here’s a normal thing that you can integrate into supports for every kid in a classroom” (SLP2, p10, line 439-440).

For example, the SLP suggested having modified tools available in every school so that children who are having trouble with pencil grasp or scissors “have a pencil grip or they have scissors that are for left hand or right hand or have the right grip control on them” (SLP2, p10, line 443-444). Similarly an OT described by helping one child improve their pencil grip she would be able to educate the teacher on signs to look for in other children that may be experiencing this problem and strategies to use to solve it. As the OT stated,

“I often give a suggestion we are working on pencil grip let’s say again nice easy little one. Johnny is having difficulty holding his pencil try doing this, this and this and by the way you probably have lots of other kids in your class who have the same problem. You can do the same thing with them it’s not going to hurt them. You know this is what the kids that this would be appropriate for look for this. So you know then the teacher can provide those strategies” (OT1, p15, line 628-636).

Further, study participants envisioned conducting workshops and additional education sessions to share strategies with teachers on ways to adapt activities (OT6; OT8; SLP1). As an OT stated,

“Certainly a workshop or some discussion and interaction is probably much more effective than giving somebody a handout or a website and hoping they’re going to do it” (OT8,p10, line 535-536).

The SLP also provided her view,

“I think we’ve got to continue to kind of reach teachers and you know bring up their knowledge and skill level in terms of how to provide these communication opportunities for students” (SLP1).

Another OT further reinforced this idea as she mentioned,

“There is always new technology coming out and it’s hard for teachers to you know on top of the regular curriculum trying to adapt and come up with new you know learning tools and devices for all children...so providing that to teachers would be great” (OT6, p12, line 637-643).

Conducting workshops and educational sessions would, in the view of study participants, allow them to share their expertise with teachers on how to modify activities so that children with DD could be in the classroom with their peers working on similar activities.

Participants also described how consulting to a whole class would be beneficial for children with DD. An OT explained that if they were able to consult with the teacher about all of the children in the classroom, the teacher might be more likely to make modifications to their lesson plans. As the OT described,

“So I think we’re really limited in trying to give to our suggestions to one student. I think it’s hard again to meet sort of a participation goal when again you’re talking to one student in a class. If you could address a whole class and how to grade in terms of like skill grading...If you could be doing that with respect to a whole range of abilities I think teachers might get it a bit more” (OT1, p15, line 637-642).

This comment illustrates the importance study participants placed on the need to work with whole class to benefit children with DD. Participants felt that that teachers might

then be more receptive to recommendations that they adapt classroom activities if there was improved alignment of their service delivery approach with how schools function. Participants connected classroom consultation approaches of AHPs to enabling children with DD to be in the classroom working on similar activities as their peers.

One OT who worked for the school board demonstrated that she was consulting to an entire classroom rather than an individual child. As the OT stated, “I see it more as a classroom than students...because, a lot of the strategies are generic and they can be used over more than just one student” (OT10, p7, line 366). This participant’s experiences substantiated the vision other participants had for consulting to a whole class.

## **(2) Being a Member of the Educational Team**

As mentioned earlier in the first section of the findings AHPs viewed participation for children with DD to include being a member of the class. Similarly, participants imagined being a resource to teachers to support participation of children with DD in the future by being a member of the educational team (OT1; OT3; OT6; OT7; OT8; OT9; SLP1; SLP2). A SLP explained,

“We need to have those health related services within schools and we need to have those people collaborating with teachers and we need them to be part of the educational support team” (SLP2, p8).

This idea was further reinforced by an OT who described, “In an ideal world I’d like to see therapists be much more integrated as part of the school system” (OT8, p9, line 452-455). These statements highlight that not only do AHPs want children with DD to be a member of their class, they themselves want to be in the classroom working alongside

educators as members of the educational team to support participation of children with DD. These findings illustrate that not only do AHP aim to facilitate inclusion of children with DD they too want to be included as a member of the educational team.

Participants recognized that being able to spend more time in the classroom was an important component of being a valuable resource to teachers, EAs and children (OT1; OT2; OT3; OT8). One OT explained that having more time in the classroom would allow her to demonstrate to educators her recommendations for the child. As the OT stated,

“I would like to be able to spend more time actually in the classroom with teachers, the students and the EA. Just to help implement and help show how it really works...if I were there more then I could be providing more of the resources instead of just saying you know here’s some examples”(OT1, p16, 692-704).

Further, another OT envisioned being a resource by having time available to answer teachers’ questions.

“I would rather be able to go into a classroom and spend a couple of hours there without it being tied to a visit so that if everything was going well if the teacher called me in two months and said can you come back again cause, I have got some more questions for you. Then I would go back again.” (OT3, p10, line 396-400).

Study participants also described how they could enhance the participation of children with DD by answering teachers’ questions and by providing them with assistance on how to use equipment and technology effectively. In fact, one OT who reported that she does work as a member of the educational team (e.g. works for the school board) explained that she did have time to answer teacher’s questions. As she reported,

“I think one of the benefits and one of the other really nice things about what we are able to do because, we are based in house in the school. When teacher[s] have questions anytime they stop by, they call us.” (OT11, p9, line 481-483).

This same participant explained how being a member of the educational team also allowed her to help educators with the child’s equipment. As she stated, “we are based in house in the school...if anything goes wrong with the technology we are always there to support them.” (OT11, p9, line 482-484).

Another OT, who works under the CCAC’s SHSS Program stated that having more time at school would allow AHPs to be more available to meet with educators.

“I think in [a] better coordinated system where, therapists are part of the system, recognized as part of the system then those partnerships or more our communication would be better. The scheduling and coordination would be more effective” (OT8, p9, line 467-469).

Further this OT mentioned that being at the school would allow her to meet with teachers during their planning time, and thereby be responsive to teachers’ schedules. Another OT that worked in the school system as a member of the educational team described how being able to meet with teachers during the teacher’s planning time worked well. As the OT stated,

“Some of the teachers are open to spending 5, 10 minutes after the visits for me to update them. Other teachers I have to go back during their prep time to meet with them. But, I make a point of always ensuring that I speak to all teachers at least once a week during that time” (OT11,p7, line 358-362).

In summary, participants viewed being able to spend more time at school to demonstrate their recommendations to educators, to answer teachers’ questions and to meet with teachers to share information as key ingredients to being an effective resource. Working

in the class and supporting educators and EAs was reported to be an important role in supporting participation outcomes for children with DD referred for AHPs services.

Participants who worked under the SHSS program also suggested that having more time at school would allow them to see children more frequently (OT3) and to be “proactive towards goals versus responding where you have a school calling you and saying well so and so is decreasing in function” (OT7, p7, line 350-352). Similarly another OT mentioned, “we plug in and plug out of classrooms... we often get left out of situations that we really should be part of. Well we are left out until things become a crisis” (OT8, p8, line 396-398). Being a member of the educational team would be beneficial for children with DD as they would be able to follow-up on their recommendations and ensure they are being implemented accurately. For example, one OT described “in an ideal setting I would be able to say you know what I want to follow up on this more closely I am going to check back on you next week” (OT7, p4, line 195-197).

Further an OT who worked in the SHSS program provided an idea to ensure a proactive approach and that children are receiving AHP services effectively. As she stated,

“The process of screening children [should be] part of the educational evaluation so that children that are at risk are identified quickly and referred to an OT that is part of the classroom team” (OT8, p8, line 394-396).

In addition, this OT also suggested that being able to spend more time at school would allow her to observe children in their natural environment. As the OT explained,

“I could do an assessment and observe a child in their full school day. I would have a much better picture of when things work well and when things don’t work well” (OT8, p9, line 476-478).

This OT described that she would be able to do a more thorough assessment, as she would be able to observe the child throughout their school day as opposed to only for one hour during the day. Being part of the educational team, in the view of these study participants, would improve participation outcomes for children with DD, because they would have greater opportunity to support the child’s participation in all aspects of classroom activities (e.g., lunch, recess, writing and reading etc.).

### **Summary of Findings**

This study investigated the perspective of AHPs working in Ontario elementary schools regarding the strategies they perceived to be successful and used to collaborate with educators to support participation of children with DD at schools. Using the AI framework this study also explored AHPs’ vision for improving collaboration with educators.

Two themes emerged that described how AHPs viewed participation of children with DD at school including: (a) being in the classroom to provide the opportunity for meaningful engagement with peers and (b) working on similar activities as peers to promote membership and belonging at school. Study participants described three ways in which they implemented their role to enable children with DD to participate in classroom activities. First, they provided equipment such as assistive technology, specialized equipment and adaptive tools thereby allowing children with DD to remain in the

classroom and participate in activities with their peers. Second, they adapted or modified activities so children with DD were in the classroom working on similar activities as their typically developing peers. Third, they provided education and shared resources with educators.

Participants described two ways in which they collaborated with educators to implement their role to facilitate participation for children with DD at school:

(1) sharing information and resources and (2) receiving feedback on the utility of their recommendations. However, participants reported limited time to meet with educators, resulted in sharing resources “on the fly.” They described many successful strategies they have adopted into their practices in order to overcome time limitations. Finding a key person who has primary responsibility for the child with DD, developing trust and rapport with an educator and engaging in shared planning with an educator were reported to be effective strategies. A further challenge identified was finding the right person to receive feedback from about their recommendations. The EA was viewed by AHPs as the “right person” to communicate with for feedback because they worked with the child on a daily basis and had direct experience implementing AHPs recommendations in practice.

AHPs envisioned improving collaboration with educators in the future by being a resource to educators rather than providing resources as they do now. AHPs envisioned being a resource by consulting to a whole class and being an active, contributing member of the educational team.

## **Chapter 5**

### **Discussion**

#### **Study in Context**

This study was conducted to learn how AHPs work with educators to promote participation outcomes for children with DD in the primary grades. An appreciative approach to inquiry was used in this study in order to emphasize the successful experiences AHPs have had and to obtain the perspectives of AHPs regarding what could work well in the future. Findings provide valuable insights from the perspectives of AHPs (including, OTs, SLPs, and PTs) working in Ontario elementary schools regarding strategies they perceive to be successful and have implemented in order to support participation of children with DD. Findings were reported in three sections (a) perspectives of participants about participation of children with DD at school, (b) strategies AHPs perceived as successful that they used to collaborate with educators to support participation goals for children with DD and (c) their vision for the future organization of service delivery to optimize participation outcomes for children with DD at school.

In this chapter, first findings will be reviewed within the context of the literature. Next implications for the SHSS program, AHPs, educators and program decision makers will be considered. Finally strengths, limitations and future directions for research will be discussed.

## **Findings in Context of the Literature**

Consistent with the literature, AHPs in this study viewed participation for children with DD as more than being placed in a classroom with their typically developing peers (Hall & McGregor, 2000; Sapon-Shevin et al., 1998). Existing literature has highlighted five key variables that play a role in enabling a child's participation at school. Findings from this study support the literature as the two themes that emerged regarding how AHPs viewed participation of children with DD at school reflected four of the five variables. AHPs viewed participation for children with DD as (1) being in the classroom to provide the opportunity for meaningful engagement with peers and (2) working on similar activities as peers to promote membership and belonging at school. The first theme aligns with two of the key variables: having a full and active part in school life (Freiler, 2002; Mittler, 2004) and having positive social relationships and friendships (DEC & NAEYC, 2009). The second theme was also consistent with previous research as it corresponds to two of the five key factors that play a role in enabling a child's participation: being a valued member of the school community (DEC & NAEYC, 2009; Farrell, 2000; Freiler, 2002) and having a sense of belonging to the school community (DEC & NAEYC, 2009; King, 2004). The fifth variable that plays a role in enabling a child's participation (i.e., develop and learn to reach their full potential) was not found in this study (DEC & NAEYC, 2009).

The views of AHPs regarding participation of children with DD at school are also consistent with Coster's (1998) definition of participation (i.e., "active engagement in the

typical activities available to and/or expected of peers in the same context” p341). AHPs viewed participation of children with DD to be in the class and working alongside their peers and highlighted the importance of having children participate in activities similar to their peers to promote the child’s membership and belonging at school. Further this study aligns with Coster’s (1998) definition and builds on the current literature by illustrating three ways AHPs implemented their role (e.g., providing equipment, adapting or modifying activities and providing education and resources to educators) to enable children with DD to participate in activities similar to their peers.

Limited time to consult with educators has been well documented in the literature as a barrier perceived by AHPs to affect their ability to work collaboratively with educators (Villeneuve, 2009). Consistent with previous research study participants reported that their interactions with educators often occur “on the fly” as conversations were reported to take place in the hallway, during lunch, before or after school or while providing therapy (Barnes & Turner, 2001; Bose & Hinojosa, 2008; Villeneuve & Shulha, 2012). Others have also highlighted that since AHPs provide services to children one at a time with their responsibility being for individual children referred for service, there is a mismatch with the way that teachers work (with responsibility for a whole classroom of students). This mismatch in service delivery limits opportunity for collaborative working (Villeneuve, 2009; Villeneuve & Shulha, 2012).

Findings from this study build on current literature by illustrating specific strategies that AHPs used to work with educators to successfully support participation of

children with DD in school activities with their peers. Villeneuve and Hutchinson (2012) conducted a study that investigated the nature of collaborative working in two cases of children with DD who were receiving school-based occupational therapy (SBOT) services. These authors found in one of their case study participants that when a member of the educational team took on a leadership role and acted as a liaison between the OT and other members of the educational team, there was more meaningful inclusion of the child at school. Similar to the findings of Villeneuve and Hutchinson (2012), this study indicated that strategies that worked effectively included finding a key contact person at school who held primary responsibility for the child with DD. This was most often reported to be the classroom teacher, EA or special education teacher. Regular communication with the key contact person at each visit, implementation of therapy strategies in the context of classroom programming, and feedback on AHPs recommendations were found to be important strategies reported by participants in this study. This study suggests that in order for AHPs to successfully support participation of children with DD, it is imperative that they work collaboratively with all members of the educational team, including the EA.

Research by Bose and Hinojosa (2008) described that OTs perceived their interactions with teachers to be successful when they led to an exchange of information and their recommendations were implemented in the classroom. Bose and Hinojosa (2008) stated that young teachers were more receptive to their recommendations than teachers who had been teaching for a long time. In contrast, to the literature AHPs in this

study communicated most often with the EA to receive feedback on and to follow-through with their recommendations.

Further, Villeneuve and Hutchinson (2012) found in one of their case study participants that collaboration and communication with educators was successful when the key contact person (e.g., special education teacher) was someone with responsibility and decision-making authority. Findings from this study illustrate that AHPs emphasized having the EA as a key contact as they could supply relevant information to them about the details of how a recommendation was working in the classroom. This finding contrasts with findings from Villeneuve and Hutchinson (2012) as EAs have no decision-making authority and are not included in planning meetings or formal meetings such as case conferences with AHPs and other members of the educational team (e.g., vice principal, special education teacher, case managers). Findings from this study illustrated that participants relied on feedback from the EA regarding the utility of their recommendations and to carry out their recommendations to successfully implement their role.

Findings from this study suggest that AHPs identify the EA to have a critical role in the collaborative partnership when providing school-based AHPs services to children with DD. However, it should be recognized that although AHPs expect EAs to provide feedback on their recommendations and implement programming for the child. EAs are excluded from formal meetings where important discussion regarding the child's progress and programming decisions are made.

The literature has explored how EAs provide services to children with physical disabilities (Hemmingsson, Borell, & Gustavsson, 2003). Research has found that support provided by EAs to children with disabilities can limit their participation as an active member in classroom activities (Giangreco, Edelman, Luiselli, & MacFarland, 1997; Hemmingsson et al., 2003; Giangreco, Yuan, McKenzie, Cameron & Fialka, 2005). It has been found that having EAs in close proximity to children with disabilities can limit the child's opportunity to interact with their peers and teachers (Giangreco et al., 1997; Hemmingsson et al., 2003; Giangreco, 1995).

In contrast to the findings in the literature this study found EAs play a vital role in working collaboratively with AHPs to successfully facilitate participation of children with DD at school. AHPs viewed EAs as an integral member of the educational team who they communicated with in order to successfully execute their role to support participation of children with DD.

Without exception, the literature demonstrates that making time, scheduling formal meetings, effective communication and mutual trust and rapport are all key elements that support working collaboratively (Bose & Hinojosa, 2008; Kennedy & Stewart, 2012; Morris, 2013; Nochajski, 2002; Suter et al., 2009; Villeneuve & Hutchinson, 2012; Villeneuve, 2009). Consistent with the literature on collaborative consultation, this study indicated that specific strategies (e.g., developing trust and establishing rapport, shared planning with a teacher, listening to input from educators about the child's progress) are foundational to a collaborative partnership (Villeneuve &

Hutchinson, 2012; Villeneuve, 2009). Similar to research on inclusive education that reported the success of inclusive education was dependent on the collaboration between adults (Irvine, Lupart, Loreman, & McGhie-Richmond, 2010; Villeneuve & Shulha, 2012), this study's findings demonstrated that enabling participation outcomes for children with DD was more about developing relationships among adults than working with the child.

Findings from this study indicate that study participants envisioned improving participation of children with DD by being a resource to educators. The two ways in which AHPs imagined being a resource align with characteristics identified in the Partnering for Change (P4C) model of service delivery developed by Missiuna et al. (2012) for children with developmental coordination disorder. First, the P4C model corresponds with AHPs' vision for the future to support participation outcomes as they shift from working with one child in the classroom to educating teachers on developmental differences and ways to teach motor-based skills to all children (Missiuna et al., 2012). Second, the P4C model parallels AHPs views about improving participation, as it involved AHPs spending time at the school and becoming a member of the educational team in order to develop a relationship and establish trust with educators and other members of the educational team. In addition, the P4C model highlighted two benefits to being a member of the education team that were also described in this study: being able to spend more time in the classroom meant that OTs' recommendations were more likely to be implemented by educators and OTs were available to support teachers

on a regular basis (Missiuna et al., 2012). Further, the P4C model described OTs and educators sharing information and resources with one another as another key component of the model. The fact that the vision of participants in this study aligns with the P4C model validates the need to re-evaluate the way in which school-based therapy services are being delivered. This study suggests that changing the way in which services are provided would enhance participation for all children.

Furthermore, the vision of AHPs as consulting with a whole class corresponds with research carried out by Villeneuve and Shulha (2012). These researchers used the same methodological framework that was employed in this study (i.e., AI) to develop principles that would inform planning and decision making about the delivery of SBOT services. Like the findings of this study, participants (i.e., program administrators, parents, educators, an OT and case managers) involved in that study envisioned having OTs providing educational sessions on disability to educators during professional development days. In addition, participants envisioned OTs supporting educators by providing them with strategies to adapt activities for all students in the classroom.

Although AHPs in this study described a desire to be a member of the educational team which suggests a desire for collaboration. Findings from this study suggest that AHPs wanted to be a member of the educational team to follow-up on their recommendation to ensure their expertise is being used well. This suggest that AHPs in this study are showing a preference towards an expert model.

## **Implications for the SHSS Program**

Findings from this study contribute to the recommendations made by the Deloitte and Touche (2010) in their review of the SHSS Program in Ontario. Deloitte and Touche (2010) reported that the “SHSS facilitates children to access the educational curriculum and participate in all activities” (Deloitte and Touche, 2010, p40), and recommended clarifying the scope of services delivered under the mandate of the SHSS program.

This study provides a more complete understanding of participation of children with DD in school contexts and the contribution of the SHSS program to achieve this goal.

This study obtained the perspectives of AHPs regarding the successful strategies they are currently implementing in the current service delivery model to support participation of children with DD. In addition, findings outline changes to the service delivery model that would enable AHPs to better support participation of children with DD in the future.

AHPs described changing from consulting about individual students referred for service to consulting with educators for the benefit of the whole class. Participants recognized the importance of being a member of the educational team as important in enabling them to support participation outcomes for children with DD in school contexts.

### **Implications for AHPs**

This study has implications for experienced school-based AHPs, AHPs who are entering school-based practice and educators of AHPs professional programs as it illuminates effective strategies when working with educators to support participation outcomes for children with DD. Strategies reported by AHPs included: finding a key person, developing trust and rapport with an educator, engaging in shared planning with an educator, seeking feedback from EAs about their recommendations and listening to school staff regarding information about the child with a DD. Researchers could consider developing practice guidelines to help practitioners (e.g., OTs, PTs, SLPs) adopt these strategies into their practice to facilitate participation of children with DD. Further educational programs training AHPs could consider embedding the successful strategies AHPs use to collaborate with educators to promote participation into the curriculum.

### **Implications for Educators**

Findings from this study indicate that AHPs identified having a key contact person at school who took on leadership and responsibility for the child with DD to be an important component to supporting participation outcomes. AHPs perceived the ideal key contact person to be the special education teacher, however study findings demonstrated that AHPs regularly communicated with the EA regarding their recommendations. The findings of this study suggest that educators could consider determining who they think may be the best member of the educational team to take on this role in order to effectively work with AHPs to support participation. Findings from this study suggest the

EA may be best suited to take on this responsibility. Further, based on the findings of this study, educators could consider pre-scheduling meetings in advance with AHPs so that both educators and AHPs are able to share information and resources with one another to enhance participation of children with DD in the classroom.

In addition, educators could take into consideration the valuable contribution AHPs could provide to them if they were a resource as they could help them to work in inclusive ways. AHPs in this study viewed supporting educators with curriculum modifications as an important component in their role to supporting participation at school. AHPs felt these supports are needed to support the learning of children with DD and may help educators to develop inclusive strategies, which is consistent with the universal design for learning, a model widely adopted by educators (Klinger, Campbell, & Knight, 2009).

### **Implications for Program Decision Makers**

This study also has implications for program decision makers to consider regarding how services could be better organized and delivered to enhance participation for all children at school. Participants in this study recommended changing the way they provide services at school by shifting their role from providing resources to educators to being a resource to educators. There were two ways in which participants imagined changing their role to be a resource to educators by (1) consulting to a whole class and (2) being a member of the educational team. Program decision makers could take into account having AHPs consult to a teacher about the whole class as opposed to a teacher

about one child at a time as AHPs perceive that if services were implemented this way they could better support participation for all children. Program decision makers could also consider having AHPs as a member of the educational team as this would create opportunities for collaboration among AHPs and educators to flourish. As they would have time to develop relationships with one another and time available to meet, two key elements that are needed to support meaningful collaboration and participation outcomes for children with DD (Villeneuve & Hutchinson, 2012; Villeneuve, 2009; Villeneuve & Shulha, 2012).

It is also important to note that two of the OTs who participated in this study were employed by the school board and worked as members of the educational team. Both of these OTs provided explicit examples of how working within the educational system allowed them to promote meaningful participation outcomes for children with DD. It is critical to recognize that the vision of AHPs who worked under the CACC's SHSS program reflected the current work conditions that the two OTs were working under. This demonstrates the need for program decision makers to re-evaluate the way in which services are being delivered in order to determine the best model of service delivery to support participation goals for children with DD at school.

Further findings from this study reinforce the need for program decision makers to evaluate the way in which school-based AHP services are organized as this study illustrates what inclusion is all about. Participants in this study described a desire for children with DD to be in the class working alongside their peers to experience true

participation. Similarly they themselves wanted to be in the classroom working alongside educators as members of the education team to truly support participation of children with DD. This means that AHPs feel in order to successfully achieve participation goals for children with DD not only do children with DD need to be in their classroom working on similar activities as their peers but AHPs need to be a member of the educational team.

### **Study Strengths**

Using AI methodology as a framework for the qualitative interviews strengthened this study. It allowed the researcher to recognize challenges AHPs face when working in school-based practice but also to concentrate on what AHPs do that works well. AI enabled participants to provide descriptions of strategies they perceived to be successful and have used and allowed them to expand on how they could support participation in the future.

Another strength to this study was that the interview guide was pilot tested. This ensured that participants would understand the questions the researcher was asking. In addition, the researcher documented information regarding the study's design, data analysis procedures and interview process to enhance trustworthiness.

## **Study Limitations and Directions for Future Research**

Although, this study gathered information from the perspectives of AHPs across Ontario about their roles in supporting participation for children with DD there were several limitations. The majority of study participants in this study were OTs. Therefore, the findings of this study cannot be generalized to all AHPs (e.g., PTs, SLPs, psychologists). Despite the fact that the majority of participants in this study were OTs this appears to be representative of AHPs working in Ontario schools. Deloitte and Touche (2010) reported that over 50 percent of therapists providing services through the SHSS program are OTs.

Further the researcher faced challenges in this study regarding the recruitment of school-based PTs. Unlike professional bodies for OTs and SLPs, the researcher was unable to access an email list of school-based PTs working in Ontario through the Canadian Physiotherapy Association (CPA) website. Therefore, it was not possible for the researcher to recruit participants using the same approaches across disciplines. Future research should consider other methods to recruiting PTs such as through the “Find a Physio” link on the College of Physiotherapists of Ontario website ([www.collegept.org](http://www.collegept.org)). Other recruitment methods could include telephone contacts, and flyers posted in schools and on the association websites (e.g., CAOT, CPA, CASLPA).

Although the interview guide was pilot tested, it was only used by one of the three professions (e.g., an OT). Future research should consider pilot testing the instrument

with all three professions (OT, PT, SLP). In addition, it is important to recognize that there may have been bias in the way interview questions were worded.

It is also important to acknowledge that this study only looked at the perspectives of AHPs regarding how they viewed their role in supporting participation.

The perspectives of educators (e.g., EAs, special education teachers, and teachers) regarding how they viewed their role in supporting participation was not explored.

Future research should investigate the perspectives of educators regarding the strategies they use to collaborate with AHPs to facilitate participation outcomes for children with DD. Exploring the strategies educators use to collaborate with AHPs to achieve participation goals for children with DD would allow researchers to truly appreciate the collaborative ways educators and AHPs work together to achieve participation goals.

In addition, future studies should evaluate educators perceptions regarding how effective they found AHPs resources (e.g., handouts and educational materials on how to adapt activities for children with DD) to be.

Results from this thesis suggest that EAs need to become a more integral member of the educational team to enhance participation of children with DD at school. Future research could explore having EAs take on more prominent role on the educational team and investigate the impact this change has on children with DD participation. Future research could also use an appreciative lens to investigate how AHPs can work with EAs to successfully implement their role as support staff to enable participation outcomes.

This study provides a foundation for future research as it provides information regarding the first three phases of AI. Further research is needed to expand this study by examining the implementation phase of AI to determine whether AHPs' vision of changing the service delivery model would enhance participation goals for children with DD in the primary grades.

### **Conclusions**

Qualitative interviews were conducted using AI as a theoretical framework to explore the perspective of AHPs on how they work with educators to support participation outcomes for children with DD in the primary grades. AHPs in this study identified many strategies they perceived to be successful when working with educators and described their vision for the future to better support participation. These findings contribute to understanding how AHPs viewed participation at school for children with DD and how they viewed their supporting role. The findings demonstrated several ways in which AHPs and educators work collaboratively. The findings also suggested AHPs viewed changes to the model of service delivery could better support participation outcomes for all (e.g., educators, children with DD, and typically developing children).

Participants in this study emphasized two key components to school participation for children with DD: (1) being in the classroom to provide the opportunity for meaningful engagement with peers and (2) working on similar activities as peers to promote membership and belonging at school. There were three ways in which AHPs used their role to support participation of children with DD which included: providing

equipment, modifying or adapting activities and educating others and providing resources. In spite of the challenges, AHPs reported supporting participation of children with DD by implementing several strategies with educators to share information and resources (e.g. finding a key person, developing trust and rapport, shared planning with a teacher) and receive feedback regarding their recommendations (e.g., relying on the EA for information on the utility of their recommendation and follow-through, and obtaining information from educators about the child). Participants also recommended changes to the current model of service delivery from providing resources to being a resource by consulting to the whole class and being a member of the educational team to increase participation of all children. Further participants described successful participation of children with DD to include being a member of the class and they themselves expressed a desire to be included as a member of the educational team to truly facilitate participation outcomes for children with DD.

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## Appendix A

Table 1

Summary of studies examining children with disabilities participation at school

<b>Author (s)</b>	<b>Purpose</b>	<b>Design</b>	<b>Data Sources</b>	<b>Key Findings</b>
Mancini, Coster, Trombly, & Herren (2000)	To obtain information on the important predictors of participation in school activities for children with disabilities.	<ul style="list-style-type: none"> <li>• Quantitative cross-sectional</li> <li>• <math>n = 341</math> children with physical or cognitive behavioural impairments in kindergarten to grade 6 from 40 states in the US. (urban (23%), suburban (51%), rural (26%))</li> <li>• Children classified into two groups limited participation (<math>n = 117</math>) and full participation (<math>n = 224</math>)</li> </ul>	<i>School Function Assessment (SFA)</i>	<ul style="list-style-type: none"> <li>• Full participation in school activities requires the physical capabilities (whole-body and postural control) and a specific set of social skills.</li> <li>• Children classified as full participants if they had social skills and could show general good manners (i.e., please and thank you)</li> </ul>

<b>Author (s)</b>	<b>Purpose</b>	<b>Design</b>	<b>Data Sources</b>	<b>Key Findings</b>
Simeonsson et al. (2000)	To investigate the nature and extent of participation in school for children with disabilities.	<ul style="list-style-type: none"> <li>• Quantitative cross-sectional</li> <li>• <math>n = 1180</math> Random sample of special education teachers and teachers of students with mobility impairments from 50 states in US and District of Columbia.</li> </ul>	<i>National Survey of School Environments</i>	<ul style="list-style-type: none"> <li>• Barriers to participation: lack of environmental modifications, student's physical condition, attitudes of sponsor, man-made environmental barriers, nature of activity and scheduling of activity</li> <li>• Top 10 activities children with DD participated in included: playground games, computer use, pep rallies, physical education, eating in the cafeteria, library use, recess, field trips, school assemblies and class games.</li> <li>• Participation was found to be multi-faceted ranging from social, recreational, communal, creative, civic and academic activities.</li> <li>• Participation varied by gender and ethnicity.</li> </ul>

Author (s)	Purpose	Design	Data Sources	Key Findings
Morrison & Burgman (2009)	To examine the views of children with disabilities on how they experience friendship in the school setting.	<ul style="list-style-type: none"> <li>Qualitative-Phenomenology</li> <li><math>n = 10</math> elementary school children with disabilities (aged 8 to 10 years old).</li> <li>Two children attended rural schools and eight urban schools.</li> </ul>	Semi-structured interviews conducted at child's home.	<ul style="list-style-type: none"> <li>Five themes emerged:               <ol style="list-style-type: none"> <li>(1) self-identity,</li> <li>(2) meaning of friendship,</li> <li>(3) classroom experiences,</li> <li>(4) playing together and</li> <li>(5) longing for friendship.</li> </ol> </li> </ul>
Raghavendra et al. (2012)	To describe and compare the school participation and social networks of children and adolescents with disabilities and their typically developing peers.	<ul style="list-style-type: none"> <li>Quantitative, cross-sectional, matched, multi-group comparative study design</li> <li><math>n = 39</math> Children with disabilities and their typically developing peers (aged 10 to 15) from Australia</li> <li>Classified into 3 groups: complex communication needs and physical disabilities (<math>n = 14</math>), physical disabilities (<math>n = 11</math>) and typically developing (<math>n = 14</math>).</li> </ul>	<ul style="list-style-type: none"> <li><i>International Classification of Functioning, Disabilities and Health-Child and Youth Version</i></li> <li><i>Students Engagement in Activities at School-An Observation Measurement Tool</i></li> <li><i>Social Networks: A Communication Inventory for Individuals with Complex Communication Needs and Their Partners</i></li> </ul>	<ul style="list-style-type: none"> <li>Children with physical disabilities and complex communication needs participation in activities were lower than children with physical disabilities and typically developing children.</li> <li>Children with physical disabilities and complex communication needs were found to interact more with a family member compared to their typically developing peers who were more likely to interact with a friend.</li> </ul>

## Appendix B

Table 1

Summary of primary studies reviewed

Author (s)	Purpose	Design	Data Sources	Statistical Methods
Elksnin & Capilouto (1994)	To examine the perceptions of SLPs regarding integrated speech and language services provided at school.	<ul style="list-style-type: none"> <li>• Quantitative cross-sectional</li> <li>• <math>n = 31</math> female SLPs from US south eastern school district (South Carolina)</li> <li>• 11.3 years of experience as SLPs and 8.21 years in the schools</li> </ul>	<ul style="list-style-type: none"> <li>• Questionnaire completed during staff development meeting</li> </ul>	<ul style="list-style-type: none"> <li>• Descriptive statistics</li> </ul>
Karnish, Bruder, & Rainforth (1995)	To determine which setting natural (the classroom) or isolated (hallway) is more effective for physical therapy sessions targeting functional motor skills for children with DD.	<ul style="list-style-type: none"> <li>• Qualitative descriptive</li> <li>• <math>n = 3</math> children with DD (e.g. cerebral palsy) aged 4, 6 and 14 attending 3 different public schools in the US.</li> <li>• One PT who had 5 years experience working as a school-based PT.</li> </ul>	<ul style="list-style-type: none"> <li>• Children were videotaped and observed.</li> </ul>	<ul style="list-style-type: none"> <li>• Descriptive observation</li> </ul>

Author (s)	Purpose	Design	Data Sources	Statistical Methods
Case-Smith & Cable (1996)	To investigate the amount of time SBOs spend using direct and integrated/consultative model of service delivery and the attitudes of OTs towards the two models of service delivery.	<ul style="list-style-type: none"> <li>• Cross-sectional</li> <li>• <math>n = 216</math> (211 females; 3 males) randomly selected sample from members of the American Occupational Therapy Association from Ohio and who had worked for a minimum of 1 year in a public or private school.</li> </ul>	<ul style="list-style-type: none"> <li>• Mailed questionnaire</li> </ul>	<ul style="list-style-type: none"> <li>• Descriptive statistics</li> </ul>
Beck & Dennis (1997)	To obtain information on the perceptions of teachers and SLPs on classroom-based interventions.	<ul style="list-style-type: none"> <li>• Cross-sectional</li> <li>• <math>n = 72</math> teachers (51) and SLPs (21) from three school districts: southern Wisconsin, suburban Chicago and central Illinois State University Laboratory School.</li> <li>• 17 SLPs were members of the American Speech-Language-Hearing Association</li> </ul>	<ul style="list-style-type: none"> <li>• Mailed questionnaire</li> </ul>	<ul style="list-style-type: none"> <li>• Survey question data analysis was conducted by a research assistant and double checked for accuracy by one of the authors.</li> <li>• Open-ended questions analysis were carried out by two SLPs.</li> </ul>

<b>Author (s)</b>	<b>Purpose</b>	<b>Design</b>	<b>Data Sources</b>	<b>Statistical Methods</b>
Kaminker, Chiarello, O'Neil & Ditcher (2004)	To investigate the perceptions of school-based PTs regarding the service delivery model used, contexts of therapy, frequency and intensity of therapy, used with children with DD.	<ul style="list-style-type: none"> <li>• Cross-sectional</li> <li>• <math>n = 626</math> physical therapists all members of the American Physical Therapy Association Section on Pediatrics who identified themselves as school-based PTs from all 50 states and the District of Columbia.</li> <li>• Females and mean experience working in schools was 11.2 years.</li> <li>• Worked in suburban settings.</li> </ul>	Nationwide survey (mailed)	Descriptive statistics
Nolan, Mannato, & Wilding (2004)	To investigate the perceptions of both pediatric PTs and OTs about the use of integrated models of service delivery.	<ul style="list-style-type: none"> <li>• Cross-sectional</li> <li>• <math>n = 107</math> (45 PTs; 60 OTs) non-random sample of pediatric PTs and OTs working in early intervention, preschool and school.</li> <li>• Worked in suburban, rural and urban settings.</li> </ul>	Mailed questionnaire	Descriptive statistics

<b>Author (s)</b>	<b>Purpose</b>	<b>Design</b>	<b>Data Sources</b>	<b>Statistical Methods</b>
Brandel & Frome Loeb (2011)	To examine the factors SLPs consider when determining the service delivery method to use when working with children with disabilities.	<ul style="list-style-type: none"> <li>• Cross-sectional and qualitative</li> <li>• <math>n = 1,897</math> SLPs randomly selected from each of the 50 states and District of Columbia using the American Speech-Language-Hearing Association website directory.</li> <li>• Of the participants 20 received a follow-up email and completed qualitative survey.</li> <li>• SLPs had an average of 15 years of experience working in schools.</li> </ul>	Online survey	<ul style="list-style-type: none"> <li>• Descriptive statistics and logistic regression.</li> <li>• Qualitative questions (follow-up email) analyzed for themes across all participants.</li> </ul>

## Appendix C

### Letter of Recruitment

**Title of Project:** School-based allied health professionals' perceptions of their role and responsibilities in supporting participation outcomes for elementary school children with developmental delays and disabilities

Dear Research Participant,

You are being invited to participate in an interview as part of a study examining the roles and responsibilities of allied health professionals (AHPs; which include occupational therapists, physical therapists and speech and language pathologists) in supporting participation outcomes for elementary school children with developmental delays and disabilities (DD). This research is being conducted by Carrie Hunt in fulfillment of a Masters of Science degree in Rehabilitation Science, under the supervision of Dr. Michelle Villeneuve, in the School of Rehabilitation Therapy and Dr. Patricia Minnes, in the Department of Psychology at Queen's University in Kingston, Ontario.

**Overview of Research:**

The purpose of this study is to describe and understand the perspectives of AHPs working in Ontario schools with children with developmental delays and disabilities (DD) in the lower elementary school grades (kindergarten to grade 3) regarding their roles and responsibilities in supporting participation outcomes.

This study will use individual interviews to explore the roles, responsibilities, activities and approaches you use to support participation goals for children with DD at school. Interviews will be 45 minutes in length and will take place at a time and location that is most convenient for research participant.

All your responses will be kept confidential. To protect confidentiality of the data each interview will be assigned a numeric code, and a pseudonym name will be given to both the research participant and any names, or employers mentioned in the interview. Data collected from

interviews will be securely locked in a filing cabinet in a locked research office at Queen's University in the School of Rehabilitation Therapy

**Participants:**

You are eligible to participate in this study if you are:

- 1) Fluent in English
- 2) Currently work or have worked as a school-based therapist within the past 3 years.
- 3) Currently working with or have previously worked with children with developmental delays and disabilities on your caseload. The School Health Support Service (SHSS) Program provides services to three categories of students with disabilities (1) developmental disabilities, (2) physical/multiple disabilities, and (3) mild motor disabilities. This study will recruit school-based therapists who have worked with children in the first two categories *developmental disabilities* and *physical/multiple disabilities*.

**Contact Information:**

If you are interested in participating in this study, would like more information, or have any questions, comments or concerns, please contact:

Carrie Hunt, MSc (Candidate), School of Rehabilitation Therapy, Queen's University  
at (613)-583-7752

[1clh1@queensu.ca](mailto:1clh1@queensu.ca)

For more information you may also contact,

Dr. Michelle Villeneuve (Supervisor), Associate Professor School of Rehabilitation Therapy,  
Queen's University at (613)-533-6789

[michelle.villeneuve@queensu.ca](mailto:michelle.villeneuve@queensu.ca)

Dr. Patricia Minnes (Supervisor), Professor, Department of Psychology,  
Queen's University at (613)-533-2885

[patricia.minnes@queensu.ca](mailto:patricia.minnes@queensu.ca)

Dr. Albert Clark, Chair, Queen's University Health Sciences and Affiliated Teaching Hospitals  
Research Ethics Board at 613-533-6081

[clarkaf@queensu.ca](mailto:clarkaf@queensu.ca)

I look forward to hearing from you.

Sincerely, Carrie Hunt, *Principal Investigator*  
MSc Candidate, Rehabilitation Science,  
Queens University, Kingston, Ontario

## Appendix D

### Letter of Information/Consent Form

**Title of Project:** School-based allied health professionals' perceptions of their role and responsibilities in supporting participation outcomes for elementary school children with developmental delays and disabilities

**Background Information:**

You are being invited to participate in an interview to answer questions about your role as a school-based therapist in facilitating participation in school activities for children with developmental delays and disabilities (DD) and to share the successful experiences you have had working with others to achieve participation goals for children with DD in the school setting. This research is being conducted by, Carrie Hunt in fulfillment of a Masters of Science degree in Rehabilitation Science, under the supervision of Dr. Michelle Villeneuve, in the School of Rehabilitation Therapy and Dr. Patricia Minnes, in the Department of Psychology at Queen's University in Kingston, Ontario. This study has been reviewed for ethical compliance by, the Queen's University Health Sciences and Affiliated Teaching Hospitals Research Ethics Board.

In order to decide whether or not you wish to be a part of this study, you should understand what is involved, and the potential risks and benefits. This form provides detailed information about the study and whom to contact if you have any questions or concerns.

**Details of the Study:**

*Study Purpose*

The purpose of this study is to describe and understand the perspectives of allied health professionals (AHPs; which include occupational therapists, physical therapists and speech and language pathologists) working in Ontario schools regarding their roles and responsibilities in supporting participation goals for children with DD in the lower elementary school grades (kindergarten to grade 3). In Ontario, children with disabilities are being served in inclusive classrooms (Bennett, Weber, & Dworet, 2008; Hutchinson & Martin, 2012). Research has found

that physically placing children with disabilities in inclusive classrooms does not guarantee the child's participation in classroom activities (Hall & McGregor, 2000; Sapon-Shevin, Dobbelaere, Corrigan, Goodman, & Mastin, 1998). The literature on educational inclusion emphasizes the importance of providing occupational therapy (OT), physical therapy (PT) and speech and language pathology (SLP) services in the school setting to children with DD, as these services have been recognized as enabling inclusive education outcomes for children with DD. This study will document the mechanics AHPs are currently utilizing to enable participation goals in the school setting for children with DD.

#### *Participants*

Fifteen allied health professionals (5 OTs, 5 PTs and 5 SLPs) will be recruited for this study. Participants will be eligible to participate in this study if they are (a) fluent in English, (b) are currently working or have worked as a school-based therapist within the past 3 years. (c) are currently working with or have previously worked with children with DD on their caseload. Participants will be identified as working with children with DD as the School Health Support Service (SHSS) Program provides services to three categories of children with disabilities, (1) developmental disabilities, (2) physical/multiple disabilities, and (3) mild motor disabilities (Villeneuve, 2011). AHPs working with children with disabilities in the first two categories (1) developmental disabilities and (2) physical/multiple disabilities will be recruited for this study.

#### *Risks & Benefits*

There are no known physical, psychological, economic, or social risks associated with this study. Risks associated with this study are interview questions may evoke feelings of frustration and dissatisfaction in AHPs work setting. Anonymity and confidentiality will be maintained.

While you may not benefit directly from this study, findings from this study will provide a more complete understanding of participation in school contexts concerning the participation of students with DD at school and the role of AHPs in supporting participation goals. Further this study will describe the similarities and differences across three professions (OTs, PTs and SLPs) about how AHPs enable participation outcomes at school for children with DD. This study will also contribute to both the current practices of AHPs, the education of AHPs and to children with

DD who will be the beneficiaries of the strategies AHPs are using to facilitate participation in the school setting.

#### *Interview Process*

Allied health professionals working in schools in Ontario will be asked to participate in an in-depth semi-structured individual interview with the principal investigator, Carrie Hunt. Participants will be given the choice to have a face-to-face, telephone or skype interview. All interviews will take place in a quiet location of the participant's choice and at a mutually convenient time for the research participant. Interviews will be 45 minutes to 1 hour in length and will be audiotaped and transcribed.

#### *Compensation*

Participants will be entered in a draw to win a Chapters gift card (\$25). In addition, if you are interested you will be offered a copy of the final research report.

#### *Confidentiality*

Your responses will be kept confidential. Only Carrie Hunt, Principal Investigator and Thesis Supervisors Dr. Michelle Villeneuve and Dr. Patricia Minnes will have access to this information. In addition the researchers mentioned above will not discuss research participants' information or responses with any other researchers at Queens or elsewhere.

Research participants will not be asked to submit any personal information that will identify them or their workplace. To protect confidentiality of the data each interview will be assigned a numeric code, pseudonym name will be given to the research participant in the transcription and any names mentioned in the interview will also be assigned a pseudonym. For example, participants names and individuals the participants mentions during the interview will be replaced with their roles (e.g. regular education teacher, special educator, principal, vice principal, physical therapist) In addition, if the research participant mentions the school that they work at or their employer (Community Care Access Center) these will be removed from the transcripts and replaced with a pseudonym name.

Data collected from interviews (audiotapes, transcripts and field notes) will be securely stored in a locked filing cabinet in a locked research office at Queen's University in the School of Rehabilitation Therapy. Your consent forms and contact information will be kept in a separate locked file from the research data. When the researcher is working with the data, data will be

stored on a password-protected computer. Electronic data in the form of transcripts and analysis will be kept in secure networks and transcripts will be password protected. When results of the study are published or presented at scientific meetings the general findings will be presented and under no circumstances will breach individual confidentiality.

*Voluntary Nature of the Study/Freedom to Withdraw*

Your participation in this study is voluntary. You may withdraw from this study at any time and your withdrawal will not result in any consequence. You may also decline to answer any questions you do not want to answer and still remain in the study.

**Participant Statement and Signature**

I have read and understand the consent form for this study. I have had the purposes and procedures of the study explained to me. I have been given sufficient time to consider the above information and seek advice if I choose to do so. I have had the opportunity to ask questions which have been answered to my satisfaction. I am voluntarily signing this form. I will receive a copy of this consent form for my information. If at any time I have further questions or concerns, I can contact:

Carrie Hunt, MSc (Candidate), School of Rehabilitation Therapy, Queen's University  
at (613)-583-7752  
[1clh1@queensu.ca](mailto:1clh1@queensu.ca)

Dr. Michelle Villeneuve (Supervisor), Associate Professor School of Rehabilitation Therapy,  
Queen's University at (613)-533-6789  
[michelle.villeneuve@queensu.ca](mailto:michelle.villeneuve@queensu.ca)

Dr. Patricia Minnes (Supervisor), Professor, Department of Psychology,  
Queen's University at (613)-533-2885  
[patricia.minnes@queensu.ca](mailto:patricia.minnes@queensu.ca)

If I have questions regarding my rights as a research participant I can contact:

Dr. Albert Clark, Chair, Queen's University Health Sciences and Affiliated Teaching Hospitals  
Research Ethics Board at (613)-533-6081  
[clarkaf@queensu.ca](mailto:clarkaf@queensu.ca)



## **Appendix E**

### **Interview Guide**

You are being asked to answer questions about your role as a school-based therapist in supporting participation of children with developmental delays and disabilities (DD) in kindergarten to grade 3. You will also be asked to share your experiences working with others to achieve participation goals for children with DD in the school setting. I understand there are many challenges that you face in the work you do to support children with DD in the classroom. For example, I am aware that you have large caseload (Law, 2002), a limited number of visits, and the nature of your work means that you often travel between schools and communities to visit students at school. I also understand that your role in supporting a child's participation at school depends on collaboration with families, teachers, special educators, education assistants, education administrators, as well as other allied health professionals. However, today I want to concentrate on the successful experiences you have had working as a school-based therapist in facilitating participation in school activities for children with DD in kindergarten to grade 3 and how you work with others to support the participation of children with DD at school.

For this interview your responses will be recorded using an audio-recorder. I will turn on the recorder before I ask you the first interview question. I will notify you when I am going to turn on the recorder.

You should be aware that your responses will be kept confidential and anonymous. You will not be asked to submit any personal information. A pseudonym name will be assigned to you in the transcription and any names mentioned in the interview will also be assigned a pseudonym. For example, your name and any individual names mentioned will be replaced with their roles (e.g. regular education teacher, special educator, principal, vice principal, physical therapist) In addition, if you happen to mention the school that you work at or your employer these will be removed from the transcripts and replaced with a pseudonym name.

All information collected (audiotapes, transcripts) from you will be stored on a password-protected computer (when the researcher is working with the data) or in a locked filing cabinet in a locked research office at Queen's University in the School of Rehabilitation Therapy. Only myself (Carrie Hunt) and my thesis supervisors Dr. Michelle Villeneuve, Associate Professor in the School of Rehabilitation Therapy and Dr. Patricia Minnes, Associate Professor in the

Department of Psychology at Queens will have access to the audio recording and interview transcripts. You should also know that we will not discuss your personal information or responses with any other researchers at Queens or elsewhere. Your consent forms and contact information will be kept in a separate locked file from the research data.

When results of the study are published or presented at scientific meetings the general findings will be presented and under no circumstances will breach individual confidentiality. A pseudonym name will be assigned to you when results of study are reported in my thesis or published.

It is important for you to understand that your participation in this study is voluntary. You may decide to withdraw from this study at any time without any consequence. You may also decline to answer any questions you do not want to answer and still remain in the study. If there is a question(s) you do not want to answer let me know and we will skip over it. If you do decide to withdraw from the study the data collected from you will not be included in the study and the data will be destroyed.

Do you have any questions before we begin?

Let's get started then. I am going to turn on the audio-recorder now.

### **Demographic Questions**

Occupation (OT/PT/SLP) \_\_\_\_\_

1) How long have you worked as a school-based therapist? \_\_\_\_\_ years

2) How do you provide services at school? \_\_\_\_\_

(through the SHSS Program, through agency or by school board)

3) What is your highest level of education? \_\_\_\_\_

4 a) Have you participated in any training sessions or workshops in the area of:

-Developmental Delays and Disabilities (assessment/treatment or social inclusion)?

-School-based services

b) How do you feel your education or training has prepared you to work in schools with children with DD?

### **Interview Questions**

1) In your view, what does participation at school mean for children with developmental delays and disabilities?

- a) Probe: You probably have some ideas about the ideal situation and the reality of participation of children with DD at school can you share your thoughts about this?
- 2) How do you view your role in supporting participation of children with DD at school?
- a) Probes: Consider your role at each stage in the process of service delivery:
    - i) Referral
    - ii) Assessment
    - iii) Goal identification
    - iv) Case conference or other formal meetings to share information
    - v) Intervention approach (direct, indirect, consultation)
    - vi) Informal information sharing throughout the intervention process
    - vii) Communication with family
    - viii) Re-assessment or review of progress (determining need for ongoing services or planning for discharge)
- 3) Recognizing that consultation and communication with others is important in your role as a school-based therapist, I'd like you to reflect on a time when you were working successfully with others to support participation for a young child with DD at school. Think about a time when it was exciting, effective, productive and even fun. Describe this experience and the qualities that made it so satisfying.
- a) Probes:
    - i) What was the goal you were trying to achieve for the child?
    - ii) Who else was involved? How did you work together? How did you interact with each other?
    - iii) What role did each person play in supporting the child's participation? What were your expectations of other individuals (teacher, EA, special education teacher) role?
    - iv) What kind of information was shared? (e.g., about child's strengths/needs, context, tasks, goals, accommodations, etc.)
    - v) How did you share information with each other? (e.g., telephone, formal, informal meetings)
    - vi) What are two strategies you used to help promote a child's participation in the classroom?
    - vii) What constraints did you have to overcome?

- 4) I would like you to reflect on the objective of the SHSS program, which has been described in CCAC documents as: *“To support a child’s access and participation at school”* (Deloitte and Touche, 2010, p3). I want you to use your imagination to think about the future of your work as an AHP (OT, PT, SLP – depending on who participant is) in school settings. What is your vision for your work in the SHSS program to achieve this objective for students with DD?
- a) Probes:
- i) What do you envision for students with DD?
  - ii) What do you envision for your role/work?
  - iii) How do you imagine working with others?
  - iv) What resources/tools/supports do you imagine are available to support this work?
- 5) Are you willing to be contacted for another interview – to ask for further clarification of the information you have provided in this interview. If you are unable to participate in another interview, would you be willing to go over your interview transcript by email or phone to ensure that the information is accurate?
- 6) These are all the questions I have for you. Are there any other comments you would like to add about the successful experiences you have had in supporting participation of children with DD at school? Do you have any questions for me?

**Thank you for your participation in this study, your involvement is greatly appreciated.**

## Appendix F

### Important Quotations

Table 1

*AHPs views of participation of children with DD at school*

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Being in classroom to provide the opportunity for meaningful engagement with peers

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“I would like to see children with developmental delays being...being fully integrated into the classroom umm you know we can be doing activities that are working on the specific skills they you know should be working on but alongside and as a part of the group” (OT1, p2, line 49-51).

---

“The student is working in you know, in a class setting or peer setting alongside the other students or peers doing functional activities or functional work to the best of their potential” (OT6, p2, line 68-70).

---

“Participation means that he’s eating he or she is eating with her peers at the table. Being able to manage their food okay. That their actually sitting at circle time participating in class activities versus being off on their own somewhere else” (OT7, p2, line 80-82).

---

“Yeah and especially for the kindergarten to grade 3 kids I think it’s really important for them to be in the classroom setting...I think being in the classroom environment is essential for that age group. I think it’s essential to their participation” (OT7, p2, line 86-89).

---

“To some degree a level of engagement has to be meaningful to the students so simply putting them you know if they are having circle time simply having the student be seated in the proximity of other students is not participation definitely having the student being engaged attending to what’s going on. Interacting with the other students, interacting with the teacher, EAs and I think vice versa as well so having other student interact with the student. And yeah I think engagement and also meaningful engagement is really important” (OT11, p3, line 135-142).

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“I think that children that your seeing have to be able to do as much as possible with their peers” (PT,p1, line 50).

---

“At the very least they’ve got to be in the classroom with their peers. Because that’s you know sometimes I’ve seen kids who are who do a fair bit of work outside of the classroom or in the hallway and that certainly doesn’t help with participation” (SLP1, p5-6, line 223-228).

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Table 1 *continued*

Working on similar activities as peers to promote membership and belonging at school

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“Well working on activities that are similar like cause if your working on a task that’s completely different from what everybody else is doing it’s really hard to be a member of the class” (OT1, p2, 73-75).

---

“Having friends, doing what their doing, their colouring. I might not be colouring as well or the same picture but I am colouring. They might be forming number one’s. I might be forming number one or better but, in a different way or not to the same quality. But, I am still able to do a lot of the same things they are doing” (OT2, p4, line 163-166).

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“Feeling included socially umm that their feeling like they are part of a community. That is local that they go to locally see their friends see their neighbours kids, going to school they know their the same age and so their doing the same activities” (OT2, p3, line 128-131).

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“I think for children with developmental delays or disabilities that they are a meaningful members of their peer group at school. That they’re able to contribute in their own way. And that they really feel that they belong to a group and that they are part of the whole process of school I think” (OT3, p2, 44-47).

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“I think that children that your seeing have to be able to do as much as possible with their peers. So that they do feel part of their classroom and outside their classroom in the school setting as well” (PT,p1, line 50-51).

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“It’s not being in a mainstream classroom at the back of the class with an educational assistant and doing something different than what the rest of the class is doing. Participation is not being there but not connected with the rest of the classroom. Participation is having friends that are doing similar things to what the child with a developmental needs is doing” (SLP2, p2, line 82-87).

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Table 2

*AHPs role in supporting participation: modifying or adapting activities*

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AHPs role in supporting participation: modifying or adapting activities
“True inclusion you know if everyone is sitting at the tables your sitting at a table alongside everybody yeah maybe your EA probably has a chair at the table too. Umm but adapt the task the class is working on to your level. So for example, I work let’s say I am working on cutting with a student if everybody else is doing a cutting activity what I often end up recommending is okay everybody’s been given an 8 1/2 by 11 sheet of paper and it’s flimsy and it’s not appropriate well you know what cut it down to size glue it on to a piece of tag board and you know make the lines darker and heavier you know what the student can still be working on cutting at the same time as their classmates we’ve just graded it” (OT1, p2, line 84-96).
“Well, I think for kindergarten for example just from OT point of view going in one of the main things were always looking at is ways to adapt activities so that they can be sitting at the table with their peers doing the same activity that the other kids are doing even if it needs to be modified, adapted, whatever” (OT3, p2, 51-54).
“Participation in that if you have to modify the programming a little bit they can still do what the other kids in their class are doing” (OT4, p2, line 47-49).
So whether that’s adapting the class activity or creating a new activity” (OT6, p2, line 72).
“Yeah and really they are working on the same sort of skill set that the other kids at kindergarten to grade 3 are working on so it makes sense to be there and accommodate and adapt the program as needed” (OT7, p2, line 93-94).
“I’ve always approached my looked at the goal of being an OT being in the school system and working with children that I am able to enable their participation or their engagement in the activities and routines of their school day and their school program. So their participation means that they’re part of the learning activities and social experiences adapted to their level, level of function and their abilities” (OT8, p2, line 68-71).
“So being able to adapt outside as well at play time and so on” (PT, p1, line 52).
“Also I think you know really looking at being creative at how they can participate really using the same word but really in their regular activities of the classroom even if that needs to be modified significantly” (SLP1, p5-6, line 223-228).

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